Managing Inclusive Provision
for Pupils With Speech and Language Disorders
in Greek Mainstream Primary Schools.

Submitted by Efstathia Karakosta to the University of Exeter

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Abstract

There is a scarcity of research exploring the field of Speech and Language Disorders (SLD) in the Greek mainstream primary education context. Accordingly, the aim of this study was twofold: (i) to identify the nature and extent of speech, language and communication skills of Greek pupils with noticeably slow progress, and (ii) to examine the provision made for these pupils in Greek mainstream and inclusion classes.

The study was in two phases. For the first phase, pupils whose speech and language development was below expectations were assessed using a battery of tests. Data analysis indicated no significant differences in the language profile and non-verbal reasoning ability of the pupils with SLD, General Learning Difficulties (GLD) and other Special Educational Needs (SEN). The data also gave an indication of SLD incidence in Greek mainstream primary classrooms.

Phase two involved seven case studies. Together, these provided a rich profile of the speech/language and literacy functioning of the pupils identified with SLD, GLD and Specific Writing difficulties (SpWd) and the provision offered to them in Greek primary mainstream settings. The findings revealed that these pupils shared difficulties in the domains of speech/language and literacy, which impacted on their access to the curriculum and academic attainments. However, teaching practices were not differentiated according to the pupils’ specific needs or year group. Additionally, pupils’ difficulties in the above areas had a negative impact on their social participation and acceptance by peers.
Overall, the study highlights the complex nature of SLD, and the similarities in the language profile and the non-verbal reasoning skills of the SLD and other SEN subgroups. This raised questions about whether SLD, as used in these schools, is a distinct area of difficulty or on a continuum with other areas of difficulties. In addition, the study raised questions regarding the assessment and identification of SLD in the Greek context, as well as the practical teaching of pupils who experience such difficulties.

Key words: Speech and Language Disorders (‘SLD’); provision; identification; mainstream and inclusion classroom; teaching and learning practices; academic attainments; social participation; peer acceptance.
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Abbreviations of key terms

ADHD  Attention Deficit Hyperactivity Disorder
ASD   Autistic Spectrum Disorder
BAS II British Ability Scale II
BCRP  Better Communication Research Programme
CCC-2  Children’s Communication Checklist - 2 (latest version)
DCSF  Department for Children, Schools and Families
DfE   Department for Education
DfES  Department for Education and Skills
DSM-IV Diagnostic and Statistical Manual of Mental Disorders – 4th edition
DSM-V Diagnostic and Statistical Manual of Mental Disorders – 5th edition
EBD   Emotional and Behavioural Difficulties
EYFS  Early Years Foundation Stage
GAL   Greek as Additional Language
GCC   General Communication Composite
GLD   General Learning Difficulties
ICD-10 International Classification of Diseases – 10th version
ICOb  Inclusion Class Observation
ICTI  Inclusion Class Teacher Interview
IDEA  Individuals with Disabilities Education Act
IEP   Individual Educational Plan
KEDDY Centres for Differential Diagnosis, Diagnosis and Support
LAMP  Linguistic Assessment and Mapped Provision
LRB   Language Resource Base
MCOb  Mainstream Class Observation
MTI   Mainstream Teacher Interview
PATEM I How I Perceive Myself - Questionnaire for the Evaluation of Self-Perception (Part I)
PATEM II How I Perceive Myself - Questionnaire for the Evaluation of Self-Perception (Part II)
PLTA  School’s Literacy tasks/Pupils’ assignments
RD    Reading Difficulty
RTI   Response to Intervention
SEN   Special Educational Needs
SENCO Special Educational Needs Coordinator
SES   Socio-economic Status
SLD   Speech and Language Disorders
SLT   Speech and Language Therapist
SPQ   Social Participation Questionnaire for Teachers
SpWd  Specific Writing Difficulty
SSD   Speech Sound Disorder
TA    Teaching Assistant
TISLA Task for Informal Speech and Language Assessment
Language is an essential part of every social and intellectual experience as people use it to analyze, organise, discuss and communicate knowledge to the world (Webster and McConnell, 1987). The ability to use language as a learning and social tool for supporting academic performance and social interactions is central to children’s learning, social and emotional development (Tickell, 2011).

Studies have shown that the basis for language interactions can be found in very early infancy (Bruner, 1975; Schaffer, 1977; Trevarthen, 1979). Looking at the early origins of language in humans’ life, we can see the first signs that infants are able to understand the meaning of individual words spoken to them at 9 or 10 months (Fenson et al., 1994) and are already actively learning the language they are listening to. By the age of 4 or 5 the majority of children acquire speech and language in an effortless fashion (Dockrell and Messer, 1999). Some children start early and develop rapidly, other children who are late in the onset of language development do achieve normal levels of language by the mid-to-late preschool years (Paul, 2007; Whitehurst et al., 1994), however there remains a significant population of these children who, at school age, continue to manifest difficulties in their speech, language and communication skills (Bishop and Edmundson, 1987; Leitão and Fletcher, 2004; Tomblin et al., 1997). The language development for these children does not follow the typical pattern and therefore they experience communication problems, which affect radically their speech and language skills.

Various terms such as, ‘difficulty’, ‘delay’, ‘disorder’ or ‘impairment’ are met in the international literature and research, although they are often used inaccurately and interchangeably. They cover various conditions that are related to the problematic functioning of speech and/or language (Dockrell et al.,
Due to the diversity of the speech and language field it is not always easy to identify what constitutes a language problem. This particular study uses the term ‘Speech and Language Disorders' (SLD) which is used officially by the latest Greek Public Law of SEN (Greek Government Gazette, 2008) and is met frequently in the international educational contexts (Drakos, 1999; Johnson, 2007; Lindsay et al., 2010b; Martin and Miller, 2003; Stott et al., 2002) with the intention of implying a more persistent speech and language difficulty which develops unequally when compared with other aspects of a child’s development that follow a typical pattern.

Speech and Language Disorders (SLD) attracted my research interest during my postgraduate studies in the area of Special Educational Needs, where I had the opportunity to explore in depth the large amount of literature and empirical international studies that examine this complex area. During my systematic review, the range of evidence highlighted the diversity that characterises SLD, their various manifestations, the systemic aspects that impact on their identification, their influence on social competence and academic progress across the school years, and effective interventions (Dockrell et al., 2014; Durkin and Conti-Ramsden, 2010). In contrast to Dyslexia and Autism Spectrum Disorder, despite the growing body of research, SLD are considered ‘a neglected condition not only in research but also in debates about policy and practice’ (Conti-Ramsden et al., 2014, p. 144).

According to international studies, SLD are amongst the most common developmental problems of childhood affecting some 6% of children overall (Law et al., 2000a, 1998; Tomblin et al., 1996; Webster and McConnell, 1987), whereas according to the Bercow Report (2008) approximately 7% of five years old children who are entering school in England, have significant difficulties with speech and/or language. Though the primary problem in SLD pertains to poor spoken language development, there is a wider impact of SLD on other aspects of learning and development (Hartas, 2005; Lewis et al., 2002; Schuele, 2004; Vogindroukas et al., 2004), including the children’s social participation and peer acceptance (Avramidis, 2010; Koster et al., 2009; Koumpias and Foustana, 2003; Lindsay and Dockrell, 2000; Lindsay et al., 2002a; Savage, 2005).
Nevertheless, the lack of evidence about the rates of pupils who have SLD in Greece and the scarcity of studies examining key aspects, such as the policies and practices regarding the identification and teaching of children with SLD in the Greek context, highlighted the existing gaps that surround the SLD Greek research field and further increased my research interest in this area. So, aiming to address these gaps, my study sought to identify the nature and extent of speech and language skills of Greek pupils with notable slow progress, and to examine the educational provision offered to these pupils in the mainstream primary school context.

1.1 Thesis outline

The thesis contains six chapters. This introductory chapter is followed by a review of the literature focusing on issues such as speech and language development, identification and assessment of SLD in the international and Greek context, and educational provision for children with SLD. The third chapter explores the methodological framework of the study, the ethical considerations and the procedures followed for the analysis of the data. The fourth chapter involves the detailed description of the analysis of the quantitative and qualitative findings from both phases of the study. The Discussion, which is the fifth chapter, examines how the findings of the study relate to the existing literature from the SLD area, the strengths and limitations of the methodological framework applied in the study, and the original contribution to knowledge. The contribution to future research in the SLD field is also explored. In the final chapter, the Conclusion, the aims and findings of the study are briefly summarised, and the implications for the assessment and identification of SLD in the Greek context are further discussed, as are the implications for practical teaching of these children.
CHAPTER 2

Literature review

A substantial body of research has explored the field of SLD internationally, examining various aspects of this particular SEN type. The bodies of literature described in this chapter attracted my research interest as they constitute key issues in the SLD area, raising longstanding discussions and revealing contradictory evidence which demand further research internationally.

Due to the variation in the SLD terminology, this chapter begins with the examination of this term, and will describe the complexity that accompanies the nature of this SEN subgroup, it continues with the formulation of primary SLD, and provides a thorough description of the problematic key areas (e.g. phonological delay) of this disorder. In addition, due to the large amount of literature and the extensive discussion regarding the further classification of SLD into subgroups/subtypes, this point will also be discussed in this chapter.

Considering the lack of studies exploring the identification of SLD in the Greek educational context, the legislative framework, models of service delivery, teaching-learning practices and resources for children with SLD in Greece, this chapter also provides a thorough examination of these issues, while the description of the related UK system provide an interesting overview of both contexts.

Given the large amount of international research that explores the relationship between spoken and written language difficulties/disorders, I will discuss further the possible implications of SLD for literacy skills. Finally, taking into consideration the growing amount of evidence over recent decades that highlighted the impact of bilingualism and socio-economic status (SES) on SLD, this chapter will also provide a detailed examination of these issues, while the association between SLD, children’s self-esteem and social functioning, which
is highly discussed in the international body of research, will be explored in depth.

2.1 Identifying Speech and Language Disorders (SLD) – Terminology

Children vary in the rate and patterns of language development. Some children may start early and their acquisition of speech and language proceeds fast, some of them may start to talk late but then their speech and language development continues rapidly and there appears to be no need for further concern. Nevertheless, some of these children’s progress is problematic as their speech and language skills are delayed and therefore require further attention and consideration.

According to the evidence one in ten children, across the different age groups, experiences language and communication needs (Law et al., 2000a), and according to the Bercow Report (2008) approximately 7% of five years old children who are entering school in England, almost 40,000 in 2007, have significant difficulties with speech and/or language. Moreover, 1% of these children, more than 5,500 in 2007, have the most severe and complex SLD, while the rates are higher in areas of social deprivation, with up to 50% having speech and language skills lower than expected for their age. As it might be expected there is a high incidence of difficulties in preschool children, while the rates seem to decrease by the time of school entry (Frederickson and Cline, 2002; Law et al., 2000c; Martin and Miller, 2003). However, due to the variation in the severity of these difficulties and despite the likelihood that they will be overcome in early school years, some 30-60% of children have long-term difficulties which persist to adolescence and beyond, without other obvious developmental problems (Dickinson and Freiberg, 2009; Markovitis and Tzouriadou, 1991; Martin and Miller, 2003; Stothard et al., 1998). Moreover, as it is well known, pupils with SEN are more likely to be male, as according to the evidence (Department for Children, Schools and Families, 2007) one in every

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1 However, in Greece, due to the relatively small amount of literature and research studies related to the SLD field, it is difficult to have a clear view of the rates of pupils who experience this type of difficulties.
five boys and one in every eight girls were identified as having SEN, while one in 40 boys and one in 100 girls had a statement. This is also the case for the area of SLD as, according to the evidence, boys seem to be twice as likely to be identified as experiencing difficulties in their speech and language abilities as girls (Donaldson, 1995; Law et al., 2000a; Martin and Miller, 2003), while this particular field appears to be the most prevalent type of SEN among the primary school aged pupils with SEN statements in the UK\(^2\) (Department for Children, Schools and Families, 2007). Regarding the rates between the male and female pupils, Lindsay et al. (2010b) found that in a non-statemented group of pupils who had difficulties with their speech, language and/or communication skills only a third was female, while from the pupils who did have a statement in the designated area only a quarter was female, indicating males’ domination.

Speech and Language Disorders (SLD) cover a range of conditions which are also known by other terms internationally, such as Specific Speech and Language Difficulties (SSLD), Speech and Language Impairment (SpLI), Speech and Language Difficulties (SLD), and Speech, Language and/or Communication Needs\(^3\) (SLCN) (Adams et al., 1997; Bercow, 2008; Bishop, 1997; Dockrell et al., 2006a; Lee, 2008; Leonard, 1998; Martin and Miller, 2003). Some of the general terms ‘difficulty’, ‘impairment’, ‘deviance’ or ‘disability’ that are met internationally from various professionals may be often used imprecisely\(^4\), and can be explained due to the complexity and diversity of this particular field as they include various conditions that are linked to the problematic functioning/or non-typical development of speech and/or language.

\(^2\) Almost 23%.

\(^3\) This particular term is used as a broad umbrella term of one of the types of SEN (‘Communication and Interaction Needs’) in the national English educational system (Department for Education and Skills, 2003a).

\(^4\) The fact that these terms derive from various professionals and different areas of knowledge and study (and therefore are interpreted in different ways) often leads to terminology confusion, implying the existence of little consensus about the appropriate terminology (Dockrell and Messer, 1999) and a lack of coherence in the understanding of this particular SEN field.
In the last years, the term Speech, Language and Communication Needs (SLCN)\(^5\) which involves a broad range of difficulties that are associated with all aspects of communication (i.e. difficulties with fluency, structuring sounds, formulating words and sentences, understanding what other people say or using language in social contexts) is used quite often in three different ways. Although the Department of Education (UK) uses this terminology to refer to pupils who experience primary language difficulties, the same term is also used in a broader and inclusive way (Bercow, 2008; Lindsay et al., 2012; The Communication Trust, 2008), covering all children with any form of need associated with speech, language and/or communication, either as a primary speech and/or language difficulty or as secondary to another developmental factor (e.g. hearing impairment\(^6\) or cognitive impairment). SLCN constitutes a primary disorder when a person’s speech, language and/or communication skills do not develop at an expected rate (i.e. equally) compared to other skills, usually without a clear causation (Lindsay et al., 2010a; Tomblin and Pandich, 1999). However, the same term (i.e. SLCN) often applies to children whose SLCN derive from limited developmental opportunities (which affect children’s language learning) related to socioeconomic disadvantage (Hart and Risley, 1995; Lindsay et al., 2008a; Locke et al., 2002; Snow et al., 1998).

The above distinction in the use of the term SLCN implies a range of further implications. Firstly, there appears to be a high amount of co-morbidity and overlapping between the different subgroups that are associated with this particular SEN area (Lindsay et al., 2010a). Consequently further concerns are raised regarding the significance of diagnosis of primary speech and/or language disorders, the exact nature/basis of subgroups, as well as the overlap with ASD (Bishop et al., 2008; Lindsay et al., 2005). Secondly, as highlighted previously, there are various terms that are used for children who experience these needs as a primary difficulty. For example according to a national study by Dockrell et al. (2006a) speech and language therapy services in England

\(^{5}\) SLCN constitute along with the Autistic Spectrum Disorder (ASD) areas of SEN concern for the pupils who experience Communication and Interaction Needs (Department for Education and Skills, 2003a).

\(^{6}\) For example in the case of hearing impairment speech, language and communication difficulties are secondary to the primary difficulty which is the hearing impairment.
and Wales use various terms in order to describe the children and young people with SLCN (e.g. Specific Speech and Language Impairment or Specific Communication Difficulties). Finally, there are further concerns to what extent the difficulties that are raised by the children who belong to different subgroups require similar or different intervention practices (Lindsay et al., 2011).

However in order to avoid any confusion or misconception the current study uses the term ‘Speech and Language Disorders’ (SLD), a terminology that is established officially by the latest Greek Public Law of SEN (Greek Government Gazette, 2008 Article 3) and is also met frequently in the international educational contexts (Beitchman et al., 1986; Damico et al., 2010; Drakos, 1999; Hutaff-Lee, 2010; Law et al., 2003; Martin and Miller, 2003; Martin, 2000; Spanou and Tripodis, 2010; Stott et al., 2002). It encompasses pupils whose speech and language skills are considered problematic, due to the noticeably slow progress, and in the absence of other developmental difficulty (primary SLD). These children seem to skip steps in their speech and language development or simply stop developing before their linguistic system is fully acquired (Tommerdahl, 2009). Moreover, the term ‘disorder’ implies a more persistent speech and language difficulty which appears to develop unequally when compared with other aspects of a child’s development that follow the typical pattern (Martin and Miller, 2003).

As SLD constitute a heterogeneous condition, vary in severity, persistence and the pattern of speech and linguistic deficits, then they may be presented as a secondary need where ASD, hearing impairment, behavioural and emotional difficulties or other neuro-developmental impairment are accounted for a primary condition (Bishop, 1997; Law et al., 2000a; Leonard, 1998; Martin, 2000), or they might constitute the primary difficulty which is not related to any other condition (Plante, 1998; Stark and Tallal, 1981).

### 2.1.1 Understanding and formulating primary Speech and Language Disorders

As highlighted previously, SLD is a common developmental difficulty in childhood. Many children as they grow up tend to have problems in speech and language. It is not unusual for children of three or four years old when trying to
express themselves to go through a short period of stammering, to pronounce words wrongly, choose incorrect words when these sound similar to the word(s) they need, or to repeat many times a word or a sentence. It also happens often that children of the same age range misinterpret or mishear what they are told. In the absence of genetic or brain damage, physical impairment and more generalised cognitive difficulties, the above discrepancies are considered part of a child’s language development. However, they may be perceived as difficulties due to their persistence over time and the degree of severity which challenges the child’s communication skills. As will be further examined in a following section, identification of children who have SLD may vary by child’s age, however it is extremely critical around the age of 4 or 5 years old, when parents, teachers and/or other professionals from the health system, consider child’s readiness for formal schooling, relying heavily on a child’s oral communication/speech and language skills (Law et al., 2000c, 1998; Lindsay and Dockrell, 2004; McLeod and Harrison, 2009; Taylor and Zubrick, 2009).

Although SLD might be considered conceptually distinct, they do co-occur in children. Many children who experience evident speech disorders, when their linguistic skills are formally assessed, they also reveal language problems (Lewis and Freebairn, 1992; Lewis et al., 2000a; Tommerdahl, 2009). Lewis (1992) proposed that SLD might be different expressions of a common core verbal deficit, making it therefore challenging to identify whether literacy difficulties are highly associated with speech production difficulties or receptive and expressive language difficulties. The fact that SLD constitute a complex developmental condition indicate the existence of little consensus of how to define and identify this SEN field more appropriately (Nelson et al., 2006). Although two well-known diagnostic schemes (American Psychiatric Association, 2013, 2000; World Health Organization, 2010) provide definitions and criteria for a wide range of speech and language disorders, these are not completely in harmony with each other, and they seem to differ from the terms and criteria that are met quite often in related studies or in clinical practice (Johnson and Beitchman, 2006).

7 In order to identify this, as Bird et al. (1995) suggested, it is necessary to examine in depth speech and language difficulties that are not related.
Characteristic indications of the heterogeneity of the population of children who have SLD include the existence of a broad range of theoretical and clinical approaches that involve various classificatory terms and descriptors for this SEN area. The main theoretical approaches, according to Stackhouse & Wells (1997) are the medical, linguistic and psycholinguistic. The first perspective (i.e. medical) encompassed issues that are related to the diagnosis, etiology and prognosis of SLD, and aimed to the classification of such disorders strictly based on clinical entity (Crystal and Varley, 1993; Howard, 2010). Commonly used labels are ‘dysarthria’, a sensorimotor disorder of speech production which derives from impairment of movement and coordination of the muscles that are essential for speech due to an abnormality of the muscle tone (Milloy and Morgan-Barry, 1990), ‘verbal dyspraxia’, a very dyfluent subsyndrome with sparse output and very poor phonology (Rapin and Allen, 1987) and ‘stammering’ (or stuttering) which indicates a difficulty with the fluency of speech, so called ‘disfluency’ (Bothe et al., 2006; Herder et al., 2006). Stammering is characterised by persistent hesitations, monosyllabic whole and part repetitions, occasional sound prolongations and tense pauses and in quite severe cases failure to produce a single word, while it is possible to be associated with physical movements, such as blinking, which accompany speech (Conture and Curlee, 2007; Yairi and Ambrose, 2005). It is widely accepted that early diagnosis and treatment/intervention of stammering is the most effective way from preventing such a developmental disorder from becoming chronic and despite the variety of practices that are applied successfully to children (Curlee, 1999; Harrison et al., 2007), the majority of them seem to overcome this difficulty within the first one or two years of onset without any professional treatment (Conture and Curlee, 2007). However, it is possible for stammering to persist after adolescence, as a there is a rate of 20-25% of people who continue to experience this difficulty, which affects not only their academic progress but also their social and emotional development (Yairi and Ambrose, 2005).

The linguistic approach is mostly concerned with the description of spoken output and language behaviour, based on phonetic and phonological analyses. It is interested in the different but interrelated aspects of the language system (Form, Content and Use) and examines each of them independently in order to
acquire an overall idea of the speech and language framework. Based on this perspective, SLD may or may not be linked to a particular aspect of a child’s language performance, as there might be different aspects affected primarily or an interconnection between them, and thereby primary difficulty leads to secondary difficulties (Tommerdahl, 2009). However, this particular approach is mostly related to the systematic phonological description of the nature of SLD and the quality of communication between the learners and himself/herself (Martin, 2000), without giving explanations for the atypical behaviours of such disorders and taking into consideration the underlying cognitive processes (Howard, 2010; Stackhouse and Wells, 1997).

The psycholinguistic perspective, which is a rather recent approach in the conceptualisation and examination of SLD, appears to constitute the most well known and more frequently applied approach in the area of speech pathology. It focused on children’s skills to receive language input, store it, retrieve it and then use it either in spoken or written form (Martin, 2000), and sought to explain SLD by identifying the breakdowns in the interrelated processing skills (e.g. listening skills). Based on this approach Stackhouse and Wells (1997) developed a speech processing profile which analyses the process of using spoken and written forms of language and indicates a range of individualised abilities which can be separately assessed by a range of tasks (Howard, 2010). Instead of attempting to classify children into various subgroups of developmental speech disorders, this approach indicated the complexity and heterogeneity of this field by highlighting the individuality of each child’s profile and the significance of his/her abilities and weaknesses. Apart from the focus on speech production, auditory perception and discrimination, this approach gave further attention to a child’s metaphonological abilities and his/her understanding/knowledge of words’ phonological structure. Based on this perspective, Stackhouse and Wells (1997) suggested a ‘stage’ model/pattern of phonological development which although it was applied to children who have persistent speech disorders (Pascoe et al., 2006) and problems with prosody and intonation (Catterall et al., 2006), it may also be applied to children of various phases of speech and language development.

It is noteworthy that each of the above approaches, despite the fact that they were developed due to shortcomings of previous perspectives, did not
substitute each other, while today many of the practices that apply to children
with SLD use features from all the above approaches. However, there could be
also added the biopsychosocial perspective (McLeod, 2006).

2.1.2 Processing and producing speech sounds

Children who have SLD as a primary difficulty and in the absence of a medical
or neurological cause, may be delayed in the acquisition of developmentally
appropriate speech sounds. They find it difficult to process the speech sounds
that formulate words and consequently they are not able to identify easily which
sounds constitute the beginning of the words or split words into their component
features (Carroll and Snowling, 2004). Moreover, they may experience
difficulties in formulating sentences and following grammatical rules and they
may struggle to remember information or instructions that are given verbally
(Lee, 2008; Nation et al., 1999). Some developmental speech disorders have
an identifiable cause (e.g. cerebral palsy) but for a substantial population of
children who struggle to process and produce acceptable and intelligible speech
there appears to be no obvious reason (Howard, 2010). Speech disorder may
occur on its own in the linguistic system of a child or co-occur with
disorders/difficulties in other areas of language, such as stammering,
phonological difficulties/problems and speech sounds and grammar difficulties
(or phonological-syntactic deficit syndrome).

Speech and language disorder may be described and explained in various
ways. Undoubtedly it indicates that the development of a child’s speech and
language skills is different from the expected chronological and mental age of
the child. Ingram (1989) identified two groups of children who have speech
difficulties or, as he called them, phonological difficulties. The first group
involves children who, although they seem to follow the typical developmental
pattern, tend to maintain early patterns along with more mature speech
patterns, providing thereby an inconsistency in their speech. On the other hand,
the second group includes children who experience significant speech
difficulties developing speech in a way that cannot be compared with any other
child. Ingram (ibid.) used for this group of children the term ‘deviant’ speech,
while other professionals more recently apply to such difficulties the term
‘severe speech difficulties’ (Martin and Miller, 2003).
2.1.3 Phonological delay

Children who experience disordered phonological development find it difficult to produce sounds whereas their peers have acquired the sound system, fail to differentiate between target words, and therefore are misunderstood by the listener(s) (Yont et al., 2002). When such problems occur they might be referred to as ‘Phonological delay’ implying that although the pattern of speech is behind/interrupted, it follows the levels of typical development. In addition the term ‘Phonological disorder’, which was substituted by the term ‘Speech Sound Disorder’ (American Psychiatric Association, 2013), is used when the difficulty appears to persist and therefore deviates from the typical pattern of speech development (Stackhouse and Wells, 1997). As suggested previously by Ingram (1989), children who have phonological problems\(^8\) may continue using earlier speech processes/patterns along with later and more mature patterns. When there is no hearing, cognitive or neurological deficit that leads to phonological disorder there can be identified two kinds of functional articulation disorders (Dockrell and Messer, 1999). In the first one the difficulty lies in the production area, in organising and forming movements that produce sound, whereas in the second type there are involved ‘phonemic difficulties’ which imply difficulties with the articulation of specific sounds (usually with complex clusters of consonants). Although the child is able to produce the correct sound he/she does not use it correctly but replaces it with another sound in another word. Phonemic difficulties have further implications for the area of syntax due to the inadequate input that is received from the grammatical system (‘syntactic difficulties’).

2.2 Subgroups of SLD

Before examining the various attempts regarding the classification of children who experience disorders with their speech and language it is essential to

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\(^8\) Another distinction between terms that is necessary to be made is the ‘phonological problem’ and the ‘phonological processing problem’. The first term is applied to children who experience speech output difficulties, implying a linguistic sense of the term, while the second one describes the underlying cognitive deficits that may promote speech and literacy difficulties, implying a rather psycholinguistic sense of the specific term (Stackhouse and Wells, 1997).
identify why it is considered important to classify these children into further subgroups. Examining this issue in educational terms implies that each of the subgroups may require differentiation in teaching and learning practices (curriculum ‘tailoring’) and in treatment/intervention practices that are applied in the school setting from the teacher and other professionals (i.e. speech and language therapists). This means that analysis of each subgroup’s strengths and weaknesses not only determines the teaching and intervention practices that are considered the most efficient and successful (Crosbie et al., 2005; Dockrell and Messer, 1999) but on an individual level specifies the length of the time that is required for a child in order to receive the professional support he/she needs (Bishop and Edmundson, 1987). Examining this matter in terms of research, the attempts of SLD further classification seeks not only to assist clinicians and other professionals in the identification and in-depth understanding of the nature of this type of disorders, but also, in a broader sense, to enhance our knowledge about the essential processes that are associated with speech and language development.

Over recent decades there has been extensive discussion regarding the dynamic nature of SLD. Due to the frustration with the definition and identification of SLD, clinicians and researchers collaborated, leading to the development of SLD subtypes (Aram and Nation, 1980; Aram et al., 1984; Rapin and Allen, 1987; Rapin, 1996). The varied explanations concerning the types of difficulties/deficits that children have based on the different but highly interrelated components of speech and language system not only confirmed the multiplicity of SLD, but mostly indicated a range of sub-groups which provided further identification of the nature of difficulties that are associated with this SEN field. Recent studies, led to the development of subgroups based on different grounds and criteria, and relying heavily on the the medical, linguistic and psycholinguistic approaches that were examined previously. The majority of studies examined children on a cross-sectional basis, where the subtypes emerged from a group of children of different ages and the data were collected at a single point in time (Conti-Ramsden and Botting, 1999). This is an important factor which may provide a framework of child’s potential disorders/difficulties and be generalisable to various samples and ages. However, it raises concerns regarding the stability of subgroups over time.
Characteristically, Rapin and Allen (1987) proposed six subgroups on a clinical basis, having assessed children’s abilities in phonology, syntax, semantics and pragmatics in an interactive play setting and having contrasted the characteristics of their subgroups along with the patterns of aphasia. The six subgroups that they proposed are the following: (1) ‘Verbal auditory agnosia’, which indicates problems with comprehension due to ‘very deficient phonologic decoding with resultant severe expressive deficit’\(^9\) (Rapin and Allen, 1987); (2) ‘Verbal dyspraxia’, which involves limited speech and difficulty in sounds’ production; (3) ‘Phonological or speech programming deficit syndrome’, with fluent speech but difficulties in understanding; (4) ‘Phonological-syntactic deficit syndrome’ which appears to be the most commonly met subtype of SLD\(^10\) and indicates impaired phonological skills, limited vocabulary, while comprehension is equal or better than speech production; (5) ‘Lexical-syntactic deficit syndrome’ that involves word-finding problems and immature syntax (Dockrell et al., 2003) and (6) ‘Semantic-pragmatic deficit syndrome’ which is associated with the understanding and use of language. Rapin (1996) in an attempt to assist clinicians and professionals from various fields (e.g. education) in the identification of the above subtypes of SLD, broadened her previous classification by suggesting that the already identified sub-groups could be classified into three broader clinical groups: (a) receptive/expressive disorders, (b) expressive disorders, and (c) higher order processing disorders.

In an earlier study Aram & Nation (1975)\(^11\) identified six subtypes of children who have SLD, based on their performance on a battery of standardised psychometric tests which measured phonological, syntactic and semantic skills. The subgroups that they suggested are the following: (i) Repetition strength, (ii) Nonspecific formulation-repetition deficit, (iii) Generalised low performance,

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\(^9\) This particular disorder appears to apply more often to children who experience Autistic Spectrum Disorder (ASD).

\(^10\) This particular subtype applies frequently both in SLD and ASD.

\(^11\) However, as highlighted by Bishop (1997), Aram & Nation’s work, along with other studies of similar approach (Wolflus et al., 1980), despite the wide range of methods/techniques they applied, experienced limited clinical recognition due to important inadequacies (e.g. sample size).
(iv) Phonologic comprehension-formulation-repetition deficit, (v) Comprehension deficit and (vi) Formulation-repetition deficit.

As highlighted previously, aspects from all the three approaches (i.e. the medical, linguistic and psycholinguistic) are considered essential for the development of an adequate typology of SLD, because they offer clinical validation to the provided subtypes, they characterise them (i.e. the subtypes) based on their linguistic behaviour and consider them psychometrically acceptable (Conti-Ramsden et al., 1997). However, the majority of studies which sought to establish a valid, reliable and representative typology/classification of SLD subgroups (Crystal, 1986; Fletcher, 1992; Rapin and Allen, 1987; Wren, 1980) focused on only one approach\(^\text{12}\). In particular, Fletcher (ibid.) in a similar attempt worked only within the linguistic framework. Based on this, he proceeded in the following classification of four different groups: (1) semantic/referencing problems, (2) rate and fluency problems, (3) phonological/grammatical problems and (4) linguistic/structure building problems. A characteristic exception was considered in the study of Wilson and Risucci (1986) who attempted to validate clinical subtypes by applying a series of psychometric tests, in order to simplify the administration and clinical validity.

However, later studies which attempted to enhance our knowledge regarding the subgroups of children who experience disorders or difficulties with their speech and/or language, not only applied a combination of two or more of the above perspectives. They also focused on children of various ages and collected their data during a satisfactory period of time (i.e. longitudinal studies) with the complementary support of other professionals (e.g. teachers and/or speech and language therapists). Through comparisons with similar but previous studies which attempted to establish different subtypes of SLD, recent studies offered a better understanding of the nature of such difficulties and with particular reference to the classification of Rapin and Allen (1987) they confirmed and built on their work.

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\(^{12}\) Wren (1980) and Crystal (1986) sought the classification of SLD subgroups through the use of linguistic measures and therefore focused on this particular perspective.
Indicatively, Conti-Ramsden and colleagues’ (1997) assessment of 7 year old children who had difficulties with their speech and language through the use of a battery of psychometric tests, revealed six subtypes/clusters of SLD whose characteristics had many similarities with those of Rapin & Allen’s (1987) clinical subgroups\(^\text{13}\). In a later study, which followed the previous results, Conti-Ramsden and Botting (1999) sought to identify the stability of the subgroups as these were reported in their previous research. According to the results, although there appeared to be a significant level of stability in the types of difficulties which the sample experienced and similar stability of the proposed subgroups to Rapin’s (1996) further classification of three subgroups however, there was less stability in children’s classification over time.

Nevertheless, the World Health Organisation (ICD-10) (2010) and the American Psychiatric Association (DSM-IV-TR) (2000) recognised officially the existence of subgroups for children and young people who have difficulties with their speech and/or language. Additionally, in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) (American Psychiatric Association, 2013), Communication Disorders include the following subgroups: Expressive Language Disorder; Mixed Expressive-Receptive Language Disorder; Speech Sound Disorder (SSD) which constitutes a new definition for Phonological Disorder; and Childhood-onset Fluency Disorder which also constitutes a new definition for Stuttering. In addition, Social (Pragmatic) Communication Disorder is included, and concerns a new condition for persistent problems in the use of verbal and non-verbal communication for social purposes.

### 2.3 Identification and assessment for SLD

Identification and assessment constitute complementary concepts that are seen as individual processes. In particular, the aim of identification is to distinguish between children who may or may not have difficulties, in this case, with their speech and language development, while it deals with the two following points:

\(^{13}\) However, according to the study’s evidence only the cluster 2 (i.e. ‘verbal auditory agnosia’) did not match with any of Rapin and Allen’s schema.
(a) it seeks to evaluate a child’s progress comparing it with the norm and therefore focuses on differences in patterns of development and (b) it seeks to evaluate the types of skills the child has acquired (Dockrell and Messer, 1999). On the other hand, the aim of the assessment concerns a detailed and systematic examination that intends to explore and indicate the nature of the difficulties the child may have and probably to examine and analyse in depth the causal factors of the difficulties. Formal assessments require the use of psychometric tests which allow the examiner(s) to observe and explore aspects of speech and language function in a standardised setting and to relate and compare child’s performance to normative data.

It is widely accepted that early identification, assessment and provision for children who may have SEN, and in particular SLD, are of great importance, as the earlier action is taken the more effective/positive seem to be the outcomes for the child\(^{14}\), while appropriate support and guidance for parents in the early stages can improve the effect of intervention’ practices (Bercow, 2008; Goswami, 2008; Lewis \textit{et al.}, 2010). Early intervention is considered fundamental for children’s future learning and development, as characteristically was highlighted by the Every Child Matters strategy it enables some children to catch up with their classmates and for those who need support on a continuing basis it means that help is available as early as possible, reducing the risk of long term underachievement and disaffection (Department for Education and Skills, 2003b). Within the same framework act other European countries, such as Greece (Greek Government Gazette, 2000) and the USA (IDEA, 1997),\(^{15}\) emphasise the role of early intervention, appropriate SEN provision and

\(^{14}\) As was also highlighted by Snowling \textit{et al.} (2001), when children’s SLD are supported and resolved quite early their educational attainments during adolescence may be at average range, given that their speech development follows the same pace with that of their peers.

\(^{15}\) The Individuals with Disabilities Education Act (IDEA, 1997) is a US federal law enacted in 1990 and reauthorized in 1997 and 2004, while the provisions of this act became effective on 2005. It is the main federal programme that concerns the education of children with disabilities and authorizes state and local aid for special education and related services for these children (while it includes detailed due process protections for children who experience disabilities and their parents). It offers federal funding for the education of children with disabilities and in order to ensure such funds, it requires the provision of a free appropriate public education (FAPE) (Lee Jones and Apling, 2005).
responsibilities of health, social and educational services for children who experience disabilities.

The three Waves of Intervention model of the Primary National Strategy (Department for Education and Skills, 2003c) in the UK, expresses the idea of systematic intervention at different levels and progressive transition to differentiated/tailored teaching and provision in the school context of primary education. However, using the Waves model implies a graduated form of identification, not an all or nothing one as traditionally applied. In particular, Wave 1 (or Quality First Teaching) concerns the effective involvement of all children in high quality daily personalised literacy and mathematics teaching, through approaches which can reduce, from the start, the number of children who need further support with their learning and/or behaviour. Wave 2 Primary National Strategy intervention involves additional time-limited provision through small group intervention\(^{16}\), in order to support children’s progress, and help them to catch up with their peers. Moreover, it should be also mentioned that the Wave 2 intervention model does not involve primarily SEN interventions. It concerns mostly those children for whom a carefully structured short term programme (applied usually by a teaching assistant who works in close collaboration with the teacher) is considered the most appropriate approach that enables them to achieve age-related expectations. Wave 3 is considered the highly personalised and targeted intervention\(^{17}\) for children whose progress in literacy and/or mathematics is well below age-related goals. It aims to reduce the gaps in attainment and assist children’s access to Waves 1 or 2, whereas children who follow Wave 3 require a more intensive programme that includes individual support and usually a specialist involvement (e.g. SLT). However, it is noteworthy to mention that not all children who experience SEN do need Wave 3 provision, while children who experience more complex SEN may or may not need literacy intervention of this ‘wave’.

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\(^{16}\) For example, the literacy programmes Early Literacy Support (ELS), Further Literacy Support (FLS) or the Springboard mathematics programmes.

\(^{17}\) Wave 3 is focused on supporting children who experience difficulties in literacy and/or mathematics to acquire/achieve level 1 at the end of KS1 and level 3 at the end of KS2 in literacy and mathematics.
indicating that Wave 3 requires close collaboration of teachers and (external) specialists in decision making and framing of the teaching programmes.

When the Wave intervention model is applied effectively\(^{18}\) it creates a ‘funneling effect’, as high quality of Wave 1 (or Quality First Teaching) for all children reduces the number of pupils who need to follow the Wave 2 provision which consequently reduces the number of children who require individualised and intensive Wave 3 intervention.

The Wave model constitutes a useful approach that supports curriculum planning/development, inclusive teaching and personalised learning in order to meet diverse needs. Nevertheless, as already mentioned it is applied to the provision for successful learning of literacy and/or mathematics, without focusing on the fields of speech and language learning and development.

A point that must be made clear is that the relationship between Wave 3 and traditional identification of SEN, in this case SLD, remains uncertain, as often the identification is seen to be after the intervention offered by Wave 3 or the same as Wave 3\(^ {19} \). Similarly in Greece, despite the absence of an equivalent intervention model in the school context of primary education, there is no clear picture in the relationship between the intervention offered to pupils whose rate of progress is well below the age-related expectations and the identification of SEN. Acting within the same framework, identification of SEN, and in this case SLD, in the Greek educational context may ‘accompany’ (and therefore justify) the individualised intervention practices that can be offered in the school context or follow (i.e. be the next step of) the targeted and individualised support.

Despite the fact that in the USA the identification and diagnostic decision of SEN follows a different pattern, due to the changes in identification and intervention introduced by the IDEA (2004), the provided Response to Intervention model (RTI) constitutes the basis for the framework of the Wave model which is implemented in the UK. According to the IDEA (2004) having a

\(^{18}\) If Wave 1 is applied effectively, it may also prevent the need for Wave 2 or 3.

\(^{19}\) The children who receive this particular ‘wave’ support receive School Action, School Action Plus, or have a Statement of SEN.
disability does not mean necessarily that the child is eligible for special education, and therefore eligible under IDEA, but may be entitled for the protections afforded by other laws (e.g. Title 1 of the Elementary and Secondary Education concerns the academic improvement of the socially disadvantaged children). However, the initial assessment of a child is considered obligatory by IDEA before any special education and related services can be offered to the child. A full and individual assessment under IDEA determines whether the child has a disability that requires further educational support and appropriate/individualised educational programming/intervention.

Characteristically, the RTI model (or as it is also called the ‘Three Tier’ model), which was formally incorporated in the reauthorisation of the IDEA (2004), constitutes a multi-layer approach to the early identification and support of pupils who experience learning and behavioural needs, acting within the school framework. According to the definition provided by the National Research Center on Learning Disabilities (NRCLD) the RTI may be considered as pupil centred assessment models that apply problem solving and research-based methods in order to identify/detect learning difficulties (LD) and provide appropriate intervention practices (Johnson et al., 2006).

Apart from the differences, though, in the levels of intervention that are offered, in terms of the RTI implementation, schools can also use different approaches/formats (e.g. problem solving) in order to best support and improve pupils’ learning/development. Findings from schools, across the country, that have applied the RTI showed that it improves pupils’ academic attainment, especially those who are ‘at risk’ and reduces the number of children that

20 There are at least two ways for identifying whether a child needs an assessment under IDEA: (i) Parents request, which needs to be accompanied by the child’s school agreement that an assessment is necessary and (ii) the school system request, based on teacher’s recommendation, observation and child’s test scores, however the parents obtained permission (i.e. parental consent) before the assessment is considered essential (available at http://nichcy.org/schoolage/evaluation/, last accessed 20 June 2014).

21 This particular terminology indicates the link of this model with the three Waves model that is applied in the UK.

22 However, the implementation of the RTI models is not mandatory.

23 The related research focuses mostly on early childhood, while even on a theoretical basis the RTI models do not involve ‘the entire spectrum of grade levels’ (Berkeley et al., 2009, p. 94).
require special education support and placement (Brown-Childsey and Steege, 2005; Tilly, 2003).

Nevertheless, over the years there were several questions that are yet to be answered, regarding the feasibility of the RTI construct and the consequences surrounding this identification and intervention model. Further concerns were also raised regarding the capability and prospect of the RTI to differentiate between pupils with various disabilities\(^{24}\) (and not to focus only on the identification and intervention of pupils with Learning Disabilities (LD)), and the role of teachers (mainstream and special), school psychologists and stakeholders due to the significant demands of this model (Gerber, 2005; Mastropieri and Scruggs, 2005). Given the concerns that were expressed to date, further studies within the conceptualisation of the RTI models proposed alternative approaches that can be additionally used, although for some of them were raised enquiries regarding their practicability and effectiveness (Fuchs et al., 2002; Grimes, 2002; Mastropieri and Scruggs, 2005; O'Connor et al., 2005; Vaughn, 2003).

However, successful early identification and provision which is based on children’s individualised needs require the systematic and effective collaboration of services and agencies, which are entitled to deal with the needs of vulnerable groups of children and their families (Ofsted, 2010). In the UK, the recently published reviews of Field (2010), Allen (2011) and Tickell (2011) highlighted the need for reforming the framework in which the childcare services (and professionals) operate in early years provision, while they seem to have had an effect on the UK Government’s policy, considering its intentions and recommendations for changes in this field. In particular, as was emphasised in Allen’s review (2011), effective early intervention which takes place early in a child’s life promotes social and emotional development offering at the same time improvements (or “rewards” as stated by Allen, 2011, p. 4) not only to children and their families, but also to local communities and consequently to the wider society. On the other hand, the Tickell review (2011), underlined the

\(^{24}\) For example, Emotional and Behavioural Disorders (EBD) or Attention Deficit Hyperactivity Disorder (ADHD).
need for improvements in certain areas of Early Years Foundation Stage such as more active involvement of parents in child’s learning, as well as earlier assessments regarding child’s progress, in order for the quality and effectiveness of early intervention to be enhanced.

2.3.1 Early identification

The system applied currently in the UK is able to identify various and severe disabilities very early, even at birth or soon after that, and yet there continue to be improvements in identifying impairments of various origins at the early stages of a child’s life25 (Ofsted, 2010). Despite this, identification of SLD is a rather complex process as the fact that this particular field does not constitute a single condition (such as Down’s syndrome) and its manifestations vary over time26, make it difficult to establish a simple diagnostic model which will enable early identification (Lindsay et al., 2011, 2008a).

A child’s age appears to be a critical aspect/factor in the identification of such disorders, and although it is difficult to identify reliably in early childhood (Dale et al., 2003), delays or failure in producing the first words or putting two words together (in this period) attracts the parents’ attention who are usually the first who notice these. A mild or moderate delay of speech and language skills may raise concerns to parents or carers and yet in the pre-school period such delays are often linked to behavioural problems, social isolation or other symptoms27 which indicate that the child requires further attention (Beitchman et al., 1996; Bishop and Adams, 1990; Law et al., 2000a; Tomblin et al., 2003).

In the UK great reliance is placed on professionals in the health28 and other services29, in order for children’s needs to be identified at an early stage and

25 Apart from health screening/checks that are applied before and after birth or in infancy, there are continuing health and development reviews (by health practitioners) from the age of 2 – 2½ years old.

26 This can be partly explained due to the great diversity in the rates that children acquire language skills (Bates et al., 1995; Dockrell et al., 1997).

27 Such as ‘inability to attend’ or ‘failure to listen to instructions’ (Dockrell and Messer, 1999).

28 General practitioners (GPs), health visitors, clinical medical officers and community paediatricians.

29 For example, children’s centres.
ongoing support to be offered to their families. When parents do have further concerns regarding their child’s speech/language development and learning additional support that is provided to them, and in cases where it is necessary, they may seek another health’s professional advice, such as a speech and language therapist (SLT) and/or paediatrician (Department for Education, 2011a). Moreover, professionals in Early Years settings can assist in the detection of such disorders at an early stage and offer to the children various motivating learning opportunities (Department for Education, 2011b). Pre-school SENCOs (Special Educational Needs Coordinator) or pre-school SEN teams who work in early years education, along with family support workers from nurseries and primary schools, may also support early identification of a child’s difficulties/disorders (Lewis et al., 2010). The fact that assessment must not be regarded as a single event but as a continuous process (Department for Education and Skills, 2001; Department for Education, 2013a), makes the child’s ongoing observation necessary and requires the close collaboration of professionals from health services and local authorities.

Local authorities ‘retain the responsibility to specify the level of services’ and support provided, ‘even where it is envisaged the voluntary sector playing a greater role in this particular process’ (Lamb et al., 2012). Despite the fact that a formal statutory assessment might not be required for many of the children who experience delays in their speech and language skills, as these might proved to be transient, however an informal assessment may be beneficial for them in order to identify the support that can be provided and will probably enable them to overcome their delays.

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30 Characteristically, the Healthy Child Programme, implemented in the UK, is the public health programme (NHS) which offers child’s health and developmental reviews, screening assessments and further support for parents from the period of pregnancy until the age of 19. In the Early Years (until the age of 5) the programme is implemented by early years practitioners or health visitors who, through ongoing observation of child’s progress and a health and developmental review at the age of 2 or 2½ years, they assist in the identification of any additional physical, communication, social and emotional needs, in order for the appropriate provision to be offered as soon as possible and positive relationships to be promoted in families. Additionally, for the field of communication disorders, the Healthy Child Programme for the age range 5 to 19 underlines the necessity of screening assessment at the age of school entry in order for the intervention practices to be provided at this early stage (Department for Education, 2011).
Evidence from a population-based longitudinal research for children and parents in the UK highlighted the role of language skills at predicting a child’s educational progress and success, indicating that the development of language at the age of 2 – 2½ years may predict satisfactory progress and performance when entering primary years education (Department for Education, 2011a; Roulstone et al., 2011). Although, detection of SLD becomes extremely critical at the age of 4-5 years old where parents and teachers are able to identify a child’s school readiness, many professionals believe that the age of five appears rather late for this. Therefore various organisations and local authorities across the country, implement a variety of programmes which are planned with the intention to identify children’s abilities, detect possible difficulties and offer them, if required, further support. In addition to the children who have less obvious difficulties in the designated areas and therefore may be difficult to detect with certainty unless the child has to encounter the challenges posed by school, children with severe problems are usually identified before school entry (Frederickson and Cline, 2002).

Children’s poor development of their speech and language skills when entering school (or prior to it), places them at risk of associated literacy difficulties and consequently poor educational attainment (Catts et al., 1999; Conti-Ramsden et al., 2009; Dockrell et al., 2011; Heath and Hogben, 2004; Justice et al., 2002; Raitano et al., 2004; Snowling et al., 2000; Young et al., 2002).

SLD are met more commonly in males rather than females, while further research evidence for gender ratios from international studies showed that boys are more likely to experience difficulties/disorders with their speech and language development (Broomfield and Dodd, 2004; Cross et al., 2007; Cross et al., 2007; Cross et al., 2007).

31 As primary informants of child’s performance parents, teachers and speech and language pathologists (SLPs) have different expectations regarding child’s performance. SLPs apply an objective assessment of the measurable aspects of the disorder, while parents and teachers consider child’s speech and language skills compared to the expectations of a social or learning framework (McLeod and Harrison, 2009).

32 Findings from Beitchman et al. (1986) and Tomblin et al. (1997) which constitute exceptions to the general acceptance regarding the gender bias in SLD, may be partly due to the inadequacy of the liberal cut-off points, which seem to miss the ‘commonly observed discrepancy’ among the genders (Law et al., 1998, p. 14), or it might be due to the possibility
Harrison and McLeod, 2010; Law et al., 2000c; McLeod and McKinnon, 2010). In particular, there seem to be differences and variations across diagnostic categories, as boys tend to present higher prevalence rates than girls in articulation/phonology and in the areas of expressive and receptive language (Broomfield and Dodd, 2004; McKinnon et al., 2007; Petheram and Enderby, 2001; Shriberg et al., 1999) and consequently are at higher risk for poor later academic attainments (Lindsay et al., 2010a).

2.3.2 Approaches to language assessment for pre-school and primary school aged children

A child’s assessment should not be considered as a single entity in one context (Dockrell and Messer, 1999; Evangelou et al., 2009; Law et al., 1998), but involves a full appreciation of his/her skills and difficulties in various contexts (e.g. school, family), occasions (e.g. tasks at school, outdoor activities) and social circumstances (e.g. bilingualism). There is a wide range of assessment tools (standardised and non-standardised) and strategies for the examination of a child’s strengths and weaknesses in the areas of speech and language, which can be applied by various sources (e.g. parents, teachers, professionals). According to Harrison and McLeod (2010) the assessments that are applied from early years professionals for the detection of difficulties/disorders in speech and language tend to focus on (i) comparison with children of the same age range, (ii) parents’ concerns and (iii) checklists which examine certain aspects of speech and language functioning. After the information related to a child’s speech and language functioning in different contexts is gathered, the identification of a primary speech and language problem is the first step in the process of assessment, as the challenge is to specify the ways for examining a child’s use of language in depth.

Standardised Language tests received extensive criticism over the years as to whether or not they constitute valid and reliable ways of language assessment for children who may experience SEN. Nevertheless, those which are considered well structured and standardised continue to be applied widely by
various professionals (e.g. speech and language therapists or educational psychologists) for the examination of speech and language skills (Dockrell, 2001; Frederickson and Cline, 2002). In English speaking countries there is a wide range of standardised language assessment tools which can be used for early childhood (pre-school) and school age children, examining various areas or sub areas of speech and language functioning and are applied individually or in groups. In order to ensure, though, that the measurements (i.e. outcomes) which derive from the standardised tests provide a reliable profile of a child’s language skills, they are usually verified by information collected from other sources (e.g. discussions with parents, checklists from teachers or SLTs, or observation).

According to the evidence, standardised tests might fail to identify clinically essential aspects that imply speech and language difficulties or disorders (and therefore fail to distinguish clinically referred from non-referred cases of children experiencing SLD). They can also indicate children low functioning due to lack of concentration or motivation, although these children do not have problems with their speech and language skills that affect their communication in everyday life (Bishop and McDonald, 2009). Moreover, despite the fact that they are psychometrically acceptable, it is possible to indicate ‘false positive’ profiles of communication difficulties, as they might examine weaknesses-disorders that are not related to child’s everyday language.

However, children’s holistic development involves the strong interrelation between speech and language functioning and child’s social and emotional development. This indicates that it is essential when examining speech and language skills not to focus only on certain aspects (e.g. articulation, syntax or morphology) that are associated with these areas, but also to seek the examination of child’s physical, social and emotional abilities which are strongly interconnected and constitute prime areas of children’s learning and development.

Characteristically, the Early Years Foundation Stage Profile achievement (EYFS or EYFSP) that is applied in the UK to pupils aged between 3 and 5 years old (nursery and reception years), constitutes a well validated and widely used teachers’ (school-based) assessment focusing on six areas of learning
and concerning children’s physical, intellectual, emotional and social development (Department for Education, 2010). Specifically, the assessment of language, communication and literacy areas of the EYFS constitute essential predictors of a child’s academic attainment in literacy and mathematics at KS1 and year 3, while ratings of development in phonics seem to be highly linked to child’s later reading and writing progress (Dockrell et al., 2012b). Despite the high reliability of this particular measuring tool, when it is applied as a ‘one off’ screening assessment it leads a number of children to ‘fall through the net’ (Snowling et al., 2011, p. 42). Apart from this it also appears not to provide an adequate/satisfactory description of individual differences in early literacy progress (in the foundation stage) and children’s later language development, underscoring therefore the importance of a child’s progress assessment on a regular basis (or a model of assessment on a regular basis).

The arrangement of interview(s) with the child on his/her own (i.e. individually) and recording of his/her speech and language use is considered another possible way for drawing information regarding a child’s language functioning. In particular, this method of language assessment may be organised as (a) a ‘natural’/normal, unstructured conversation, (b) an interview where the adult-examiner has the main role as he/she leads the interview, and (c) an assessment which involves the adult-examiner’s probing or asking additional questions of a specific pattern, a child’s reply to this (i.e. probing in the same way) and then an adult-examiner’s evaluation of this response (Frederickson and Cline, 2002). Although an unstructured conversation or interview may be considered as a quite reasonable way of assessing a child’s communication skills as his/her language, in addition to a structured interview or a formal test, and appears more genuine, research evidence has questioned its importance.

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33 The EYFS profile includes 13 assessment scales each of which has 9 points.
34 Scoring below 6 points on the Language for Communication and Thinking scale of the EYFS indicates a lack of a good level of speech and language achievement for children aged 5 years old, while scoring between 1-3 reveals more severe speech and language disorders for the same age range.
35 According to research evidence (Lindsay et al., 2011), children whose ratings were below the national expected level in the area of reading at the end of KS1 progressed quite slowly at the end of early years, while their development in phonics was considered inadequate/poor both at the end of Reception year and year 1.
In particular, it was suggested that this type of assessment examines an inadequate sample of language functioning as it lacks essential information regarding a child’s pragmatic, conversational and sociolinguistic competence (Perrett, 1990). When children are actively engaged in meaningful participation (through the form of a semi structured or structured interview) the assessment focuses on their ability to evaluate and convey information, which is highly related to their age and level of maturity. The role of the adult-interviewer in this process is considered significant as through his/her ability to provide successful communication, assistance and support, as well as his/her flexibility to modify his/her plans and attitudes depending on the responses he/she receives. Children-interviewees not only think and edit/modify the information they hear, but also become aware of choices and different views (Owen et al., 2004).

Methodological issues that may be raised when using interviews for assessing children’s language skills usually concern the different position of the adult-interviewer and the child-interviewee. These informants might be unwilling to offer the requested information or be influenced by the interviewer’s intense effort to provide the correct answer (Ceci and Bruck, 1993; Spencer and Flin, 1990). Another issue which needs to be taken into consideration when using this particular method is a child’s cognitive abilities, as inadequate development affects highly his/her ability to express himself/herself or to understand other people.

Examining a child’s language in ‘natural’ settings through observation (‘naturalistic observation’) is another widely applied approach, which offers valuable information regarding not only a child’s communication skills, but also his/her social and emotional development. Observation can be participant or non-participant and take place in different settings (e.g. classroom, playground, home), different conditions (i.e. in a quiet and a noisy room), in groups or individually and in structured, semi structured or unstructured occasions (e.g. daily tasks and activities, occasions of particular interest) (Edwards and Westgate, 1994; Martin and Miller, 2003). Recording of a child’s speech and language skills can take different forms such as audio/video recording or narrative reports (i.e. written records), while repetition of observation and recording at regular intervals enable the adult/examiner to assess a child’s development and determine his/her progress in the designated areas. However,
in order to receive an adequate and clear picture of a child’s manifold language functioning, valuable information through this particular method may be collected not only by professionals (e.g. psychologists or health visitors), but also by parents or people who work closely with the child (e.g. teachers or SLTs), as they tend to know the child quite well and take different contexts into account.

Parents can provide valuable information regarding their child’s speech and language skills in various contexts, and especially in the home context, information which may act as supplements to observations and language tests conducted at school (Dale, 1996). The role of parents’ reports (or parental reports) as an accurate and valid source of information that concern children’s speech and language development, mostly for toddlers or preschool aged children, has been long established (Dale, 1991; Diamond and Squires, 1993; Thal et al., 1999; Thordardottir and Weismer, 1996; Weitzner-Lin, 1996). In addition to this, limited research has been conducted to date exploring the effectiveness and accuracy of parental reports (either used individually or in combination to standardized tests and/or teachers’ ratings) in the assessment of school age children language skills (Bishop and McDonald, 2009; Boynton-Hauerwas and Stone, 2000).

It is noteworthy to mention a well known, validated and widely used parental screening measure which was developed in the UK in an attempt to assess a wider range of children’s language development and to cover a quite broad age range (4-7 years old), the CCC-2 (Bishop, 2003a). This is the later version of the Children’s Communication Checklist (CCC) (Bishop, 1998). According to the evidence, this particular screening measure not only indicated that parents’ ratings complemented language test scores, but were equal or even better than the psychometric tests in differentiating between groups of children with difficulties in their communication skills (Bishop and McDonald, 2009) and could be effective in detecting children who should be examined in depth in terms of Autistic Spectrum Disorder (Norbury et al., 2004).

According to research evidence parent reports and checklists, which have been applied widely in recent years and are highly accepted, constitute essential indicators of children’s current speech and language status, particularly in for
younger age groups (Dockrell and Messer, 1999; Fischel et al., 1989; McLeod and Harrison, 2009). Although in many cases parents’ reports may be less preferable, as language tests tend to provide more direct information of a child’s skills, for pre-school children parent reports can provide a quite accurate pattern of a child’s strengths and weaknesses in the fields of speech and language (Fenson et al., 1994; Miller and Davis, 1992). Moreover, parental reports have been shown to be more effective in cases where the child is quite shy and hesitates to speak out and when the presence of an adult-examiner might affect or distort patterns of language development that are normal (Dale, 1996). As it was also suggested, parents’ reports can provide information that imply communication disorders when this relates to rare occurrences that are not easily identified by formal psychometric or language assessment, or which are difficult to detect in a standardized setting (Bishop, 1998).

Further evidence regarding the correlation between the parental report ratings, language tests and/or teachers’ ratings, is contradictory. In some cases mostly in the age range of pre-school children when the above methods were used, parents’ ratings complemented the scores emerging from language tests and/or teachers’ ratings36 (Bishop and McDonald, 2009; Bishop et al., 2006; Ferguson et al., 2011), while similar studies showed disagreement between the ratings/indices and the scores of the above methods (Boynton-Hauerwas and Stone, 2000; Massa et al., 2008). This lack of accurate correspondence between the above methods’ ratings-scores can be explained by the actual difference in the language demands in the home (i.e. everyday language skills) and the language skills that specific settings, such as the school environment, require. Parents’ and teacher-examiners’ questionable ability to comprehend the formats or screening measures that must be completed in order to assess a child’s communication development (Dale, 1996; Diamond and Squires, 1993), constitute another explanation for the absence of the above complete correspondence.

36 According to other findings, the parents’ ratings appeared to provide more adequate information than the language assessment (Bishop and McDonald, 2009).
Screening assessment of whole populations through observational checklists or rating scales, based on children’s developmental stages, constitutes another method which is widely used for the identification of children with learning and other educationally relevant difficulties, including SLD (Bishop, 2003a, 1998; Gipps and Goldstein, 1983; Law et al., 1998; Lindsay, 1984; Snowling et al., 2011). A number of such checklists are developed and published internationally (Bishop, 1998; Dewart and Summers, 1995, 1988; Ministry of Education and Religious Affairs and Pedagogical Institute, 2009; Rinaldi, 1992; Stott et al., 2002) and are applied by various professionals (e.g. health care professionals, psychologists, teachers, SLTs). Nevertheless, this kind of screening has some disadvantages, it appears to be quite prone to subjective interpretation more than other forms of screening, it involves selecting a cut-off point for identifying children who need further assessment, and it may be influenced by stereotyped concepts of language disorder (Bishop, 1998).

From time to time there were expressed further enquiries and doubts regarding the validation and efficiency of the screening tools applied for the identification of clinically significant SLD, due to mismatches between the children who were identified or diagnosed with SLD (assessed through standardised tests) and those who received clinical services (Bishop and McDonald, 2009). This may be explained due to poor awareness of SLD which leads to misidentification of children with such disorders and therefore to lack of appropriate support by authorised services, while another possible explanation may be that these cases are considered ‘false-positives’ as the psychometric tests that are applied have poor reliability. As ‘false-positive’ cases may also be considered those for whom the applied screening tools are ‘psychometrically acceptable’ (Bishop and McDonald, 2009, p. 602) but are not able to capture certain aspects of speech and language functioning. In addition, children who score below the cut-off point for deficit only in a one-off assessment do not constitute cases of genuine/further concern for SLD, as their (i.e. children’s) clinical picture may change over time (Adams, 2002; Bishop and Norbury, 2002; Conti-Ramsden and Botting, 1999).

On the other hand, screening assessment has the following important advantages: the checklists or rating scales only take a short amount of time, they are more likely to offer a representative frame of ‘typical’ or ‘non-typical’
behaviour when they are completed by someone who knows the child very well and has observed his/her behaviour over a period of time, while they offer the opportunity to evaluate behaviours and skills that are difficult to elicit through tests or they also do not occur frequently (Dewart and Summers, 1988). This means that this type of assessment is able to identify and rate a wider range of aspects related to speech and language development that are highlighted in clinical accounts, but are not easily detected by conventional tests/ways of assessment (Bishop, 1998; Nathan, 2002).

Within the framework of screening assessment a well known approach which is widely used for the detection of SLD is the implementation of screening within the school environment (Bishop, 1998; Nash, 2013). In particular, the Children’s Communication Checklist (CCC) developed by Bishop (1998) with the intention to assess features of communication that are clinically essential, but cannot be identified easily by the usual/conventional standardized tests. It constitutes a widely applied checklist which contributed highly to the assessment of communication functioning for children with difficulties in their language skills, while according to research evidence (Botting, 2004; Cohen et al., 1998; Geurts et al., 2004; Laws and Bishop, 2004) it was effective in identifying ‘distinct profiles for different disorders’ (Ketelaars et al., 2009, p. 954). An alternative option to the CCC appears to be the Language Acquisition Mapped Provision (LAMP) which was developed by Nash (2013) and constitutes a screening approach that seeks the assessment of a wider range of a child’s speech and language skills. Both checklists rely on teachers’ ratings, which derive from their knowledge of children in their class, indicating those whose speech and language skills require further assessment and investigation.

When the above types of assessment are not available or suitable to be applied in a specific educational context (or framework) then, as has been suggested (Justice et al., 2002), acknowledgement and detection of ‘known risk and protective factors’ might also constitute a possible way for the assessment of such disorders.

37 CCC proved to be able to discriminate between children who experience ADHD, Autism, Asperger’s syndrome, learning difficulties or emotional and behavioural problems.
A useful context which emphasises the risk and protective factors that are highly related to a child’s development is provided by the existing ecological/bioecological theories of development\(^{38}\) (Bronfenbrenner, 2005, 1979). This particular approach underlines the importance of the family as well as the child care/school contexts in children’s development and learning and suggests that their (children’s) experiences in the above contexts influence and form their lives significantly. Characteristically, Bronfenbrenner describes the interrelated and interacting sociocultural systems within which the child develops as ‘levels’ starting from the ‘micro level’, which constitutes the child’s closer context, and at the end reaching the ‘macro level’ which represents society/cultural heritage (Bronfenbrenner and Morris, 2006).

Speech and language therapy that applies intervention practices based on these ecological approaches suggests that when children’s development and learning occurs in isolation then these children cannot be successfully and meaningfully supported (Gascoigne, 2006). It is necessary to mention that Bronfenbrenner’s theory/ecological model and its framework have influenced the topics of EYFS (as these seem to derive from Bronfenbrenner’s ecological fields, i.e. family, care/school context and community). The child is placed at the central position empowered by various positive relationships, while there is highlighted the importance of supporting environments that promote positive development and learning (Tickell, 2011).

2.3.3 Identification policies and assessment of SLD in the Greek context

At the prime age of the child, doctors or other health services are able to identify the most severe difficulties in the areas of speech and language. Special agencies and support services offer advice to the families in order to take part in early intervention programmes when this is considered necessary. However, the fact that early intervention is not compulsory in Greece indicates that it is

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\(^{38}\) Bronfenbrenner’s ecological systems theory suggests the existence of complex layers of environment, where each of them highly influences a child’s development and learning. This is a framework of ‘nested systems’ or ‘levels’ which are presented as bio, micro, meso, exo, macro and chronosystem, where the learner is placed in the central part of the system, interrelated with the levels each of which constitute part of a broader system (Bronfenbrenner and Morris, 1998). This theory has been renamed a few years ago to ‘bioecological systems theory’ with the intention to underline the meaning/role of a child’s own biology in his/her development.
highly dependent on the family to decide whether or not there will be offered further assessment and support for the child (European Agency for Development in Special Needs Education, 2011). When a family shows interest and agrees to take part in such a programme, special services\textsuperscript{39} set up appropriate assessments and early intervention programmes based on a child’s strengths and weaknesses. Nevertheless, the highest proportion of pupils who have SLD is usually identified during pre-school education or during the first primary school years (as already mentioned in a previous section) by the child’s parents or teachers.

The absence, though, of an official instituted referral framework/system for the pupils who experience such disorders\textsuperscript{40}, and in particular the lack of an official provision which authorises the mainstream education teachers to refer directly to a child whose speech and language development falls well below age-related expectations for psychoeducational evaluation, indicates one of the most important deficiencies of the Greek SEN identification framework. In addition, this constitutes one of the most characteristic and essential differences between the Greek and the U.S. model of SEN identification, as in the latter one mainstream teachers’ referral is considered the first and substantive step which allows a child’s further psychoeducational assessment/examination (Gresham, 2002). According to the Greek legislation\textsuperscript{41} though, the only persons who are entitled to refer a child for further psychoeducational assessment by authorised services are his/her parents, as the role of school head teachers and teachers is limited only in informing parents about a child’s inadequate progress and encouraging them for a formal assessment of a child’s skills. It is noteworthy that the teaching staff of the child’s school does not take part in the identification

\textsuperscript{39} The special state services that are authorised to provide early intervention programmes to pre-school children (aged 4 until 7) are the Centres for Differential Diagnosis, Diagnosis and Support’ (KEDDY) or the Day care – Pedagogical Centres. However, it is necessary to make clear that although the Day care – Pedagogical Centres, in contrast to KEDDY, are not authorised to conduct formal assessment of a child’s development, they can provide individual preparation programmes that support and facilitate a child’s transition to nursery or primary school, with the close collaboration of the Centre’s scientific team and school’s teaching staff (Karampalis and Michaelidou, 2010; Syriopoulou-Delli, 2010).

\textsuperscript{40} This, also, applies to all fields of SEN.

\textsuperscript{41} (Greek Government Gazette, 2008).
process, which is carried out by authorised state services, but they may act as informants of a child’s strengths and weaknesses. Although a child’s parents hold the same role in this process, the most recent Greek Public Law of SEN (2008 article 5) enables them to appeal the examiners-professionals decision and seek for further examination by another authorised agency.\(^{42}\)

In the past the identification of SEN, and consequently of SLD, in Greece, included the cooperation of various medical and educational agencies\(^{43}\) (e.g. Child Mental Care Centres or specialised hospitals) which were supervised by the state and in particular, by the Ministry of Health and Social Solidarity. Nevertheless, according to the most recent Greek Public Law (\textit{ibid.}) ‘Special Education of Individuals with Disabilities or with Special Educational Needs’, assessment and official diagnosis of SEN is provided by state agencies which are called ‘Centres for Differential Diagnosis, Diagnosis and Support’ (KEDDY), and are supervised by the Greek Ministry of Education and Religious Affairs. Although the operation of these centres, which constitute community-based\(^{44}\) rather than school-based services, started after 2001 the changes that were emerged from the latest law (Greek Government Gazette, 2008) modified the process of identification, indicating a shift from a traditionally psychoeducational diagnostic model to a rather medical one (Anastasiou and Polychronopoulou, 2009). Characteristic indications of this differentiated orientation are the expansion of the multidisciplinary group format of KEDDY, including in the identification process an SLT and a child psychologist or neurologist, and consequently the renaming of old KDAY (Centres for Diagnosis, Evaluation and Support) service to KEDDY.

Nevertheless, assessment and diagnosis of SLD can be also be provided by the Special Committee for Diagnosis and Assessment (EDEA), and Medical-Pedagogical centres (IPD) which although they operate under the authority of

\(^{42}\) In this case, parents have the right to appeal to the 2nd Grade Special Committee for Diagnosis and Assessment (EDEA), which is convened after district’s Director of Education request (Greek Government Gazette, 2008 article 5).

\(^{43}\) In addition to this, SLD identification provided by private diagnostic centres is not officially recognised in Greece.

\(^{44}\) There are in operation 58 KEDDY services for the 54 prefectural districts of Greece (available at \url{http://www.pi-schools.gr/special_education_new/index_gr.htm}, last accessed 18 May 2014).
other Ministries\textsuperscript{45}, they are in collaboration with the Ministry of Education and Religious Affairs (Greek Government Gazette, 2008 article 4). In particular, the Special Committee for Diagnosis and Assessment which operates within the special school context and consists of a psychologist, a teacher of SEN and a social worker, focuses on the identification, supervision and assessment of a pupil’s development/progress through the close cooperation with the teaching and special teaching staff of the school (Syriopoulou-Delli, 2010). The Medical-Pedagogical centres may undertake or participate in the process of assessment in cooperation with the teacher of SEN. However, when the identification process is conducted by a Medical-Pedagogical centre and according to the diagnosis the pupil needs specialised educational provision and a structured intervention programme, then KEDDY’s staff is entitled to provide support services to the pupil (Greek Government Gazette, 2008 article 4).

The offered support services, such as the diagnosis and assessment of SEN, pedagogical and psychological support, speech therapy or physiotherapy, as well as the support measures, such as the planning and implementation of teaching programmes or educational materials and equipment, are funded by the Greek state and provided to the pupils according to their diagnosis, assessment and IEPs\textsuperscript{46} (Greek Government Gazette, 2000). This applies to the pre-school, mainstream and special school\textsuperscript{47} sector, as well as to the inclusion classes (or language units), while further educational support services are usually funded by parents’ associations and charity organisations, government or European programmes (Karampalis and Michaelidou, 2010).

It is worth examining further the role of KEDDY, as their duties and responsibilities were highlighted in the recently reformed law of SEN. KEDDY provide various and far ranging services which are not strictly restricted to the process of identification and assessment of SEN. They provide support and counselling to the pupils (aged from 4 until 22 years old) who experience SEN, their families and their school environment, while they also inform and educate

\footnotesize{\textsuperscript{45} For example, the Ministry of Health.\\ \textsuperscript{46} Individual Educational Plan.\\ \textsuperscript{47} This involves primary and secondary education.}
the wider society on issues related to the field of SEN (Christopoulou, 2009). Amongst other responsibilities KEDDYs are also entitled to provide continuous support and guidance to the teaching staff, and organise training programmes for informing and counselling families (Ranguelov et al., 2009). Their interdisciplinary staff includes nursery and primary school teachers, teachers of language (or literacy) and mathematics for secondary education, physical education teachers, Speech and Language therapists (SLTs) and as already mentioned, child psychologists or psychiatrists and social workers.

The assessment of pupils who experience difficulties with their speech and language skills is conducted by the staff of KEDDY, based on a pupil’s educational level (i.e. pre-school, primary or secondary education), through measuring instruments that aim to detect and evaluate a pupil’s strengths and weaknesses in a range of developmental areas. In particular, the professionals hold a meeting where they discuss the results of a pupil’s social, psychological and educational assessment and decide whether the pupil is diagnosed or not with SLD. Through a written evaluation report that follows this process, KEDDY’s staff informs the parents48 regarding the results of the pupil’s assessment. In cases where there is a diagnosis of SLD, the report involves recommendations of a pupil’s attendance at the appropriate school or programme and suggestions that concern the intervention practices that should be followed for the pupil and the teaching staff of the school that he/she attends. KEDDY’s staff in collaboration with the SEN advisor and the pupil’s teacher organise a differentiated educational programme (or as it is also called, Individualised Educational Programme/IEP), based on the pupil’s skills. They set short term and long term goals in different areas of development, propose suitable educational and technical materials that aim to support pupils’ educational needs, supervise and reassess the provided intervention programme (Anastasiou and Polychronopoulou, 2009). Moreover, it is important to mention that the information regarding a pupil’s identification, the instructions

48 The KEDDY’s written evaluation report is sent only to the pupil’s parents. It is usually after the parent’s notification when the pupil’s school is informed about this process, the results and, when needed, the recommendations of the evaluation.
of the intervention programme, and the IEP, are acknowledged only to the parents and teaching staff of the school that the child attends.

Nevertheless, the waiting time that is needed for the identification and evaluation process to be completed, and in particular from the time the parents request the assessment until they are invited to discuss along with the professionals of KEDDY for their child’s examination and evaluation prospects, varies from one month to one year. This is mostly the case in regions with larger populations, such as Athens or Thessaloniki, where the existence of pupils’ long waiting lists and the non-sufficient number of KEDDY staff delay the identification process (Anastasiou and Iordanidis, 2006). These issues reflect the inadequacies of the Greek educational system to respond in time and support effectively the pupils who need further educational and social support, as well as to provide the above state service with sufficient and appropriate personnel.

The measuring instruments or practices that are used in the process of formal identification and diagnosis of SLD by the multidisciplinary teams of the above state services have a strong reliance on psychometric testing, while they are approved by the Greek Ministry of Education and Religious Affairs and the Institute of Educational Policy. However, the lack of Greek standardised measures that examine different areas of development, has led to the use of practices and measures which are usually non-standardised or depend strongly on the clinical judgements of the multidisciplinary teams that constitute the authorised state agencies.

Bearing in mind the practices and approaches that are applied for the language assessment of pre-school and primary school aged children in an international context.

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49 This implies that these tests or practices focus mostly on the criterion of a significant discrepancy between the pupil’s intellectual skills and his/her academic achievements and less on possible exclusionary criteria/factors (i.e. hearing impairment) (Anastasiou and Polychronopoulou, 2009).

50 According to the Greek Public Law 3966 (Greek Government Gazette, 2011) established in 2011, the Pedagogical Institute was renamed the Institute of Educational Policy (IEP).

51 Without, though, the majority of these practices focusing only on examining the pupil’s language skills, but aiming to assess his/her strengths and weaknesses in various areas of
context, (and were mentioned in the previous section\textsuperscript{52}), at this point will be examined further the practices that seem to be differentiated when applied in the Greek context for the assessment of pupils with speech and language difficulties.

As mentioned previously, the inadequacy of the assessment tools (standardised and non-standardised) which are developed in Greece, to examine the full extent of a pupil’s speech and language skills and their impact on overall functioning, had as a consequence the majority of applied practices to be either non-standardised or if standardised, and their development to be based mostly on internationally applied tests or measures. Within the same frame acts the implementation of the screening assessment approach, as there is a scarcity of Greek developed observational checklists or rating scales (either standardised or non-standardised), which can be applied either individually or to the entire schools’ population (aiming to detect difficulties in different areas of development). A characteristic example of the individual use of this particular measure, although it appears not to be met often in practice, is the Checklists of Basic Skills (2009) which are an essential part of the Framework of SEN Analytic Programme (1996)\textsuperscript{53} that supports teachers and enables them to identify pupils who experience SEN. These non-standardised checklists, which are used by the SEN teachers, collect the information for the pupil through systematic empirical observation over a period of time and in cooperation with the mainstream class teachers and parents, document pupil’s skills and strengths in the areas of speech, psycho mobility, intellectual abilities and emotional development, along with his/her progress in literacy and numeracy.

Overall, apart from the absence of the appropriate assessment tools for the identification of SLD in the Greek context, the weakness of the existing ones to

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\textsuperscript{52} These are also applied in Greece, in terms of the official identification process of SLD (e.g. ‘naturalistic observation’ or parent’s report).

\textsuperscript{53} Enacted with the Presidential Decree ‘Analytic Programme of SEN’ (1996). The Framework of ‘Analytic Programme of SEN’ (PAPEA) constitutes the specialised curriculum for pupils who experience SEN, aiming to support academically and socially the inclusion classes (or language support units).
examine efficiently various areas of pupil’s development, underscore the limitations of the country’s system and highlight the need for further establishment of well developed and validated Greek measuring tools.

### 2.4 SLD and possible implications for literacy

Adequate spoken language development and subsequent literacy skills are essential for offering educational attainments, accessing the educational curriculum, achieving positive social and emotional development and improved life opportunities (Broomfield and Dodd, 2004; Lee, 2008; Snow and Powell, 2004; Snowling et al., 2001). The relationship between speech-spoken language and literacy has been explored in depth and discussed widely in the international literature, highlighting a strong interconnection between the above areas of development (Dockrell and Arfé, 2014; Ehren and Ehren, 2001; Hodson, 1994; Stackhouse, 1989). Before examining these associations in more detail it is essential to clarify that the area of literacy that is analysed here concerns the aspects of reading, comprehension, writing and spelling, taking thereby a rather ‘technical’ dimension which is widely met in the related literature and research in the UK and internationally (Martin and Miller, 2003).

When exploring the interrelation, the similarities and differences of speech and literacy, it is made clear that in addition to spoken language the aspects of reading and writing are associated with ‘a more conscious level of awareness’, requiring the function of orthographic representations in order to convey/transfer the information (Blood et al., 2010, p. 417), whereas the aspect of syntax is rather complex. However, due to the involvement of the same language components (i.e. pragmatic or semantic) and skills there appears to be a strong link between oral language and literacy development. The ‘Emergent Literacy’ perspective which argues that the development of literacy skills starts at preschool age highlights the intimate relation of oral language abilities, reading and writing. In particular, in an attempt to identify the emergent literacy skills in children, Whitehurst and Lonigan (1998) suggested the emergence of two
areas/domains, the ‘outside-in’ and the ‘inside-out skills’. These seem to be related to children’s later word decoding, as through the skills that are included in these domains children are able to not only ‘translate a written word into sounds and sounds into written words’ (Curran, 2004, p. 29), but also to accomplish reading comprehension.

In parallel with the literature concerning the link of speech and literacy skills, there is also considerable theoretical and empirical work which drew attention to the relationship between the difficulties that are related to spoken language and literacy deficits that may consequently arise. Studies in this field indicated that children who experience difficulties/disorders with their speech and language are at high risk for poor literacy outcomes, whereas gradually a growing body of researchers, educators, psychologists and SLTs raised points of a continuum among the above areas of development (Bird et al., 1995; Catts, 1993; Glogowska et al., 2006; Schuele, 2004; Scott and Windsor, 2000; Stackhouse and Wells, 1997; Vlassopoulou, 2007; Webster et al., 1997). In particular, studies that examined children experiencing difficulties in the areas of language and articulation phonology, while their cognitive abilities and sensory skills followed the typical development, indicated that these children are at risk for delayed acquisition of reading skills (Nathan et al., 2004a; Scarborough and Dobrich, 1990) and respectively those with reading problems are more likely to have SLD (Larrivee and Catts, 1999; Nathan et al., 2004a; Scarborough, 1990).

Characteristically, the Rose Report (Rose, 2006) in an attempt to provide ‘ways forward’ and recommendations in order to build ‘quality rather than capacity’ (Rose, 2006, p. 6) in the programmes and practices applied to literacy teaching of early years reading, emphasised the fundamental role of effective communication skills for children’s well being and the close relation between the spoken language and literacy skills. This is indicated not only through the development of phonic abilities but also for reading comprehension (Catts et al.,

54. Outside-in abilities involve information that is outside the printed word and affects the understanding of print, and oral language skills (e.g. semantics or vocabulary), whereas Inside-out abilities concern printed information, including phonemic awareness skills and letter knowledge (Curran, 2004).

55. Supporting, entirely, through this point the intentions of the Every Child Matters agenda (Department for Education and Skills, 2003b).
where inadequacies in these crucial aspects lead to drawbacks in curriculum access.

Although, an attempt to indicate the aspects that may increase the possibilities of the co-occurrence of these disorders is not a straightforward process, as the field of SLD involves a heterogeneous population (with a range of sub groups) and literacy constitutes a wide and quite complex framework, however the interactions of certain risk or protective factors in individual children may affect directly or indirectly\textsuperscript{56} the connection of the above disorders. The literature and studies sought to explore and indicate the causal factors that may influence the relationship of the above disorders. Specifically, it is suggested that in many cases poor phonological awareness and other phonological skills seem to be quite strong and consistent predictors of a child’s associated literacy difficulties (Cain \textit{et al.}, 2000; Carroll and Snowling, 2004; McDowell \textit{et al.}, 2007; Stackhouse and Wells, 2001; Stackhouse, 2000), whereas inadequacies at the level of phonological representation\textsuperscript{57} appear to have more effect on poor literacy skills than the difficulties that are related to peripheral (or not central) or articulatory aspects (Snowling, 2000). Additional support to the important role of phonological awareness is offered by Liberman's theory (1997), which argues that speech and language influence reading development through phonological awareness.

Non-phonological language aspects (e.g. inadequate vocabulary knowledge), seem also to be related with subsequent literacy weaknesses and particularly comprehension difficulties (Bishop and Snowling, 2004; Clarke-Klein, 1994; Francis \textit{et al.}, 2005; Nation, 2005; Snowling and Hayiou-Thomas, 2006), although this link is not as yet clear. Apart from the above linguistic aspects, a

\textsuperscript{56} Speech and language development, which constitutes a protective factor, may influence directly and indirectly reading acquisition. In particular, direct influences may occur when speech and language skills are highly supportive towards the development of reading comprehension, specifically at supralexical (i.e. semantic) level/layer (Storch and Whitehurst, 2002), while indirect influences might arise when fast growth in the development of vocabulary promotes the systematic division of 'underlying phonological representations for words', encouraging the development of decoding abilities (Rvachew, 2007, p. 268).

\textsuperscript{57} Difficulties in phonological processing and underlying phonological representations are highly related to weaknesses in the areas of reading accuracy, phonemic decoding and spelling (Leitão and Fletcher, 2004).
range of non-linguistic factors, such as non-verbal cognitive ability, have also an active role in the literacy development of children who have SLD (Catts et al., 2002). Factors that concern the child’s environment, such as school-educational support or family socioeconomic status appear to encourage or discourage the co-variation of SLD and literacy difficulties (Nathan et al., 2004a). Moreover, the nature (e.g. expressive and/or receptive), level of severity and persistence of speech and language errors, along with a child’s age, constitute factors that increase or decrease the above overlap (De Thorne et al., 2006; Larrivee and Catts, 1999; Leitão et al., 1998; Raitano et al., 2004) as is also indicated by the ‘critical age hypothesis’ (Bishop and Adams, 1990; Nathan et al., 2004a).

This particular hypothesis suggests that children who have speech problems to the level at which it is essential to apply phonological abilities in order to learn how to read, are highly likely to experience literacy problems, while children who manage to overcome their speech difficulties at an earlier age appears less likely to experience reading problems (Carroll and Snowling, 2004). This quite challenging relationship which appears to change over time indicates that phonological abilities may increase the risk of the above difficulties coexistence when children first learn to read and tend to rely heavily on ‘sounding out words’ (De Thorne et al., 2006, p. 1282), while later it appears to be the use of semantic and syntactic skills for reading comprehension which contributes to this overlap and vice versa.

Nevertheless, children who continue experiencing both expressive and receptive language difficulties in later childhood, tend to have more severe literacy problems than those children who have problems with either expressive or receptive language, while they seem to have difficulties specifically with word reading and reading comprehension skills (Simkin and Conti-Ramsden, 2006).

The enquiries regarding the exact nature of the relationship between SLD and literacy deficits seem to be highly related to the ability to predict children’s later or long term literacy outcomes based on their early speech and language skills. Additionally, the evidence of the related studies have implications not only for the early identification of children who are at high risk of experiencing SLD and subsequent literacy difficulties, but also highlight the importance of intervention approaches which may improve children’s speech and language skills and
address the associated literacy difficulties. The majority of studies which seek to identify children’s later literacy outcomes are longitudinal, while they vary in the nature and level of SLD severity, as well as children’s age. Children (at preschool years) who have difficulties with their articulation and phonological processing (Speech Sound Disorder / SSD) are at higher risk for literacy difficulties and particularly for Reading Difficulties (RD) or Developmental Dyslexia (Bird et al., 1995; Larrivee and Catts, 1999; Naucler and Magnusson, 1998; Vellutino et al., 2004).

Converging evidence from studies that examined children who have difficulties with phonological awareness at an early age (5-6 years old) indicated later poor reading and spelling skills (at the age of 7) (Leitão et al., 2000, 1998, 1997; Rescorla, 2002), while further findings suggested that environmental and genetic factors seem highly related to subsequent reading problems (Hayiou-Thomas et al., 2010; Plomin and Kovas, 2005). Despite the scepticism concerning the genetic influences on the relation of speech, language and reading skills (Olson, 2004), emerging findings from longitudinal studies of preschool twin, sibling and unrelated children underlined the genetic and environmental effects on literacy and particularly on pre-reading and early reading skills (Hohnen and Stevenson, 1999; Olson et al., 1994). Specifically, they suggested that in a positive learning environment the role of genes is responsible for a substantial rate of children’s differentiation in the above skills, while genetic limitations on linguistic rates for phoneme awareness and other language abilities, restrain the development of reading (Olson and Byrne, 2005).

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58 Children with Reading Difficulties (RD) experience problems with ‘accurate and/or fluent word recognition and spelling’, while they also experience ‘secondary difficulties in reading comprehension’ (Peterson et al., 2009, p. 1176). The coexistence of SSD and RD has a rate of nearly 25% - 30% (Gallagher et al., 2000; Lewis, 1996).

59 The role of genetics which implies a genetic continuity between speech and reading, as well as language and reading was expressed through the proposal of ‘generalist genes’ (Plomin and Kovas, 2005). According to this idea a substantial number of the genetic effects on challenging behaviours and frequently met disorders seem to be quite broad across the typical range of behaviour, and to the greatest degree across various aspects of a disorder and different disorders/difficulties.
Nevertheless, indicating the existence of a genetic or environmental link does not specify the underlying systems that are responsible for the relationship between speech and language skills and reading ability (Scarborough, 2005). Although genetic aspects may influence speech and language ability which lead consequently to the development of reading skills, it is also possible that genetic factors apply on a common shared resource which is used by speech, language and reading and in the absence of a clear causal or underlying relation of the above skills. Therefore, as highlighted by Hayiou-Thomas et al. (2010), a sufficient explanation of the above challenging relationships may be offered by collecting evidence from various methodologies.

Despite the intimate and quite complex or multifaceted relationship of speech, language and literacy skills, not all children or young people who have SLD have associated literacy weaknesses. This may be attributed to the causal factors that were examined previously, including the nature and level of SLD severity the individual might experience. However, when attempting to explore the long term literacy and academic outcomes for pupils with SLD and associated literacy difficulties, longitudinal studies indicate that speech and language skills are related to literacy outcomes throughout schooling, highlighting thereby the essential role of communication (Conti-Ramsden et al., 2001; Stothard et al., 1998). The Foundation Stage, the National Literacy strategy, the Speaking, Listening and Learning Guidance (Department for Education and Skills, 2003d) in the UK and the Analytical Programme of Studies (APS) for primary education (Greek Government Gazette, 2003) in Greece constitute a few examples which emphasise the above intimate relationship, indicating the applied practices and programmes within the existing educational teaching and learning frameworks.

2.5 Educational provision for SLD

Historically children who were identified as experiencing SLD received provision in special schools and units (Law et al., 2000b). Over recent decades there have been many contradictory discussions regarding the education of children and young people who experience SEN. The longstanding debates mainly concerned whether mainstream school is the most effective educational
placement to support children’s academic achievements and well being, and enable evidence-based pedagogical practices (Dyson et al., 2004; Lewis and Norwich, 2005; Lindsay, 2007, 2003). In the UK and other countries there was a strong educational and social impetus towards inclusive education, which is well documented in the related educational legislation, LEA\textsuperscript{60} policy statements and professionals’ views, reflecting the rights of individual children and young people who experience SEN to be educated in mainstream settings (Croll and Moses, 2000; Department for Education and Skills, 2004a, 2001; Department for Education, 1996, 1996, 1994; Greek Government Gazette, 2000).

Children who have SLD challenged the educational system of many countries as they raised concerns not only regarding the models of educational placement, but also the implementation of the appropriate model of services (Lindsay et al., 2005). There is a high level of variation in the educational placement and provision of these children based on the nature of their difficulties, their severity, complexity and presentation (Lindsay and Dockrell, 2002).

Currently in the UK and other countries children and young people who have SLD may be educated: in mainstream schools without any designated special provision; in mainstream schools with in-class support; in mainstream school settings receiving different levels of additional support (in the form of language or specialist units/LU and integrated resources); or in specialist residential settings/special schools. The ways in which this additional support may be provided to these children varies across countries, schools, educational tiers and services.

2.5.1 SLD provision in the UK

However, as Ofsted (2006, 2010) reported no particular type of educational placement (i.e. special schools, full inclusion in mainstream school provision or language/specialist unit in mainstream school) is considered the most efficient for meeting the needs of children who experience SEN, as the most important element is the quality of provision offered to them. In addition, there seem to be

\textsuperscript{60} LEA is Local Education Authority.
particular types of provision that can adequately support children and be required no matter their placement, such as specialist equipment (computer software) or input from specialist support services (i.e. SLTs) (Lamb et al., 2012).

In the UK, decision making for the educational provision of children who experience SEN is highly related to various factors. The systemic concept (Bronfenbrenner, 1992) may provide a useful framework in order to gain a better understanding of the role and the strong interrelations between these factors at different levels/systems. The macro level includes the legislative framework that concerns the education of children who experience SEN and in particular the policy and guidance that applies to the field of SLD. At the next level, the exo system, there are the LEAs that interpret the related legislation of special provision and have the main responsibilities of the related process and decision making criteria. At this level there is also the involvement of health and social services. The third level, the micro level, includes the educators and professionals/specialists who are actively involved in the SEN framework who with their cooperation with health and social services, have an essential role in the interpretation of policies and in a child’s assessment, provision and intervention.

When considering the educational provision of children who have SLD it is essential to take into consideration the different practices applied by LEAs, as they are highly related to the diversity of the placement patterns across a variety of provision, which may be either pre-planned, or result from problematic diagnostic assessment, or inadequate resources. Significant differences are also found in access to services, such as shortages in the provision of speech and language therapy, as well as a lack of local packages for support of children and families (Bercow, 2008; Gray, 2006). Despite Government initiatives to improve parents’ cooperation, they continue to be inadequately informed and excluded from their child’s education (Paradice and Adewusi, 2002), while a number of them argue that LEAs’ duties to ensure special

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61 LEAs also apply provision that is organised to meet the needs of a wider range of children who experience SEN and not particularly SLD (Lindsay et al., 2005).
educational provision for pupils alongside their responsibility of the assessment process may cause a conflict of interests in the decisions made for the appropriate support of children (Lamb et al., 2012).

The fact that the educational needs of these children sit at the interface between education, health and social services\(^{62}\) highlights the necessity of a ‘collaborative model of service delivery and professional practice’ (Edelman, 2004, p. 224). Effective, multi-disciplinary working is usually seen in services that support the needs of younger children and families and especially those at the preschool age range (Lewis et al., 2010). Problems and inadequacies in the development of speech and language may be resolved satisfactorily through effective early identification and appropriate provision when there is close collaboration of the involved services (Lindsay et al., 2005; Ofsted, 2010). Nevertheless, evidence provided from the Bercow Report (2008) indicated the difficulty of managing an assessment and the time consuming process of planning and offering the appropriate provision based on the nature of the child’s SLD.

In an attempt to bring together commissioning, provision, workforce, training and leadership, and comprehend the strong connections between these areas Gascoigne (2008) proposed the ‘Balanced system’\(^{63}\). This conceptual model describes the provision that may be offered across universal, targeted and specialist levels/layers by the workforce of the education, health, social field and family to the children and young people who experience difficulties with their speech, language and communication skills. In particular, the universal level includes all children whose communication skills are encouraged through the support of parents, schools and settings (e.g. community-based centres). Targeted level involves many children whose speech and language development is noticeably delayed. Early identification, professional support

\(^{62}\) The role of the voluntary sector (e.g. I CAN, AFASIC or talkingpoint) appears also to be highly important, as in the last decade the UK Government has recognised its role in framing policies and delivering public services through its participation in ‘national and local initiatives’ (Edelman, 2004, p. 225).

\(^{63}\) This conceptual framework was developed by Gascoigne (Royal College of Speech & Language Therapists, 2012) aiming to support service reorganisation and commissioning in more than 20 local areas in the UK the last 5 years.
and programmes of targeted speech and language interventions tailored to the child’s abilities and weaknesses, delivered by educators and specialists (e.g. SLTs) constitute the targeted support that children are expected to receive at this level. Moreover, additional support/training for parents will enhance their abilities as they are considered key communication partners. Many of the children who receive the targeted level provision will either step to the universal level, as they have overcome their difficulties and progressed satisfactorily, or will move to the specialist level, due to the persistent and complex nature of their speech and language difficulties. So, a number of children who are identified with SLD belong to the specialist level which requires specialist provision\textsuperscript{64}. This group of children requires multi-disciplinary and joined up support through health, social services and school, while further specialist support for their parents is considered essential not only in terms of increasing their confidence as active supporters, but also in enhancing their understanding regarding the nature and demands of their child’s needs.

The ‘Integrated Solution’ (Royal College of Speech & Language Therapists, 2012), which brought together the essential elements of the ‘Balanced system’, was developed with the intention to highlight the roles of speech and language therapy along with the broader workforce in achieving positive outcomes for children who have SLD. According to the overall framework (which involves early years and school age ranges), the outcomes are identified for every aspect of the Balanced system Core Specification (i.e. parents, environment, workforce, identification, intervention based on the universal, targeted and specialist levels) and for each of the outcomes offered by the workforce is identified the support and the related factors involved.

At this point it is important to note that the research focus of my study is on mainstream primary education provided for pupils with SLD. This involves the support offered by the professionals using various frameworks. In the UK, during the Early Years\textsuperscript{65}, individual monitoring of children’s progress is considered essential in order to identify the elements of communication that

\textsuperscript{64} In this particular level Gascoigne (2008) also includes children who have profound and multiple learning needs.

\textsuperscript{65} For children aged under 5.
progress inadequately in comparison with a child’s cognitive ability and other aspects of development. The SEN Code of Practice (Department for Education and Skills, 2001) and the new SEN Code of Practice (Department for Education, 2013a) suggest that in early education settings there must be a graduated response (strongly based within the setting) in order to secure specific help, and when needed, specialist support is to be provided for young children. Further assessment and identification of SLD might then indicate the necessity for implementation of intervention practices through Early Years Action and Early Years Action Plus, while in cases where this is proved ineffective then a statutory multi-disciplinary assessment may issue a statement of SEN

The assessment of these children in Early Years education, along with the health review conducted by health visitors around the child’s age of two or two and a half, indicate not only the necessity of health and early years professionals’ collaboration and joined-up way of working. They also highlight the importance of children’s difficulties to be satisfactorily supported before the school entry, minimising thereby the possibilities of requiring additional support at a later stage (Lamb et al., 2012).

The majority of children with SLD attend mainstream settings where specialist provision is offered to them via the form of language/specialist units and integrated resources (Dockrell et al., 2006a; Lindsay et al., 2002b). Mainstream schools differ widely in their levels of academic achievements, ‘ethos and levels of inclusion’, as their additional support and ‘integrated resources may vary in ‘size, admissions policy and working ethos’ (Dockrell and Lindsay, 2008, p. 133), indicating thereby their diverse nature. On entry to mainstream primary education, schools assess children’s progress in order to ensure that the teaching they will provide will ‘build upon the pattern of learning and experience already established during the child’s pre-school years’ (Department for Education and Skills, 2001, p. 21). There is a parallel system for children who enter primary education, ‘with Early Years Action similar to School Action and

66 As the Green Paper (Lamb et al., 2012) reports almost a quarter of SEN statements (not particularly for SLD) are issued before the child’s entry at primary education, as additional support and provision is required in Early Years setting. However, the majority of statements are made during the child’s schooling at primary education.
Early Years Action Plus similar to School Action Plus, as well as the SEN statements’ (Lamb et al., 2012, p. 22). Evidence from the Special Educational Needs Information Act (Department for Education, 2011c) indicated that Speech, Language and Communication Needs was the most commonly met type of primary need (27.9 %) in maintained primary schools in the UK for pupils at School Action Plus (aged between 4 and 10 years) or with statements of SEN. Additionally, at state-funded primary schools Speech, Language and Communication Needs was also the most commonly primary type of need (32%) at School Action Plus and statement of SEN (24.5 %) (Department for Education, 2013b).

When the child is already identified with SLD, the related information\(^{67}\) is transferred through the Early Years Action and Action Plus from the early years setting to the head teacher and teaching staff (i.e. the child’s mainstream class teacher, the SENCO and SLT). This is used in order to design the appropriate teaching and learning programme.

However, one of the key aspects in addressing children’s educational needs depends on teachers, as their commitment and attitudes influence highly the differentiation and tailoring of their teaching. It is widely suggested that teachers’ knowledge and understanding of SLD, their training and previous experience in identifying and supporting these children, as well as their perspectives and attitudes towards inclusive practices influence highly the quality and appropriateness of the offered educational provision and the implementation of effective programmes (Avramidis and Norwich, 2002; Dockrell et al., 2012b).

The situation in Greece is different from the UK, in that the profession of Speech and Language Therapist (SLT) does not constitute part of mainstream provision for pupils who have SLD. Service delivery may be applied ‘directly by the SLT or indirectly by the teacher or teaching assistant (TA), within or outside the mainstream class, individually or in groups, intensively or at regular

\(^{67}\) A child’s Individual Educational Plan (IEP) constitutes part of the provided information as it includes a child’s short term educational targets, the provision followed based on the differentiated and additional curriculum plan and the progress achieved.
intervals, for a limited or extended duration’ (Law et al., 2000b, p. 8), while it is also possible that children will visit their local health service in order to receive speech and language therapy (Wren et al., 2001). As regards speech and language therapy provision, it may involve a range of activities, such as a child’s SLD assessment and monitoring of attainment through ongoing observation within classroom, collaboration with the classroom teacher, teaching assistant or SENCO for planning appropriate teaching strategies. In addition, it may involve participation in an IEP’s preparation and review, in-service training/support to teachers and professional involved, as well as collaboration with parents in order to promote the continuum of the therapy approach at home (Department for Education and Skills, 2001).

In practice, the delivery of speech and language therapy is quite complex, as many LEAs find it difficult to ensure that children who need therapy will actually receive it, due to organisational barriers and lack of funding (Edelman, 2004; Lewis et al., 2010). Nevertheless, according to other evidence (Ofsted, 2010), in areas where therapy was funded both by education and health services access to it was available for a great range of pupils and especially those of primary education age.

2.5.2 SLD provision in the Greek context

The Greek educational system is a highly structured, centralized system where decision making follows a top down pattern (Zoniou-Sideri et al., 2006). Governmental educational resources are ‘traditionally allocated by central authorities based on complex criteria’, while no other sector of public life contributes to the educational expenses as schools operation constitutes the ‘exclusive obligation of the State’ (Agaliotis and Kalyva, 2011, p. 550). The history of Greek special education is characterised by many discontinuities and drawbacks as a number of policies were never actually enacted, whereas some of those that were implemented experienced practical difficulties or had not been appropriately assessed. Nevertheless, the SEN field has been established, developed and diffused into mainstream education within a period of twenty years.
Special education in Greece originated at the beginning of the 20th century with the foundation of private and charitable institutions, whereas in the following years the State’s active involvement in the field of SEN gradually increased (Zoniou-Sideri et al., 2006). In particular, the first law of SEN (Greek Government Gazette, 1981) established the different types of SEN and the range of provision that would be available for them based on the nature and severity of the difficulty/disorder. One of the 10 different types of SEN that were established through this law was the area of Speech Disorders, without though providing any further information and guidance regarding the educational support of this particular area of needs. The next law of SEN (Greek Government Gazette, 1985) aimed to restructure the framework of primary and secondary education with a structural modification that aimed to include the field of special education within the framework of mainstream education. It established the practice of ‘special classes’, as they were called, which were operated on a pilot basis in mainstream settings. However, pupils’ attendance at these settings did not follow formal assessment or further examination of their difficulties. It was not until a decade ago (Greek Government Gazette, 2000) after a time-consuming process of preparation and ‘negotiation’ (Zoniou-Sideri et al., 2006), when it was legally established that pupils who experience SEN should attend mainstream education, unless the type and severity of their difficulties require specialist provision within a special school setting or clinic.

Measures that concerned the official identification of SEN through diagnostic centres (KDAY68) were also introduced, along with public medical services, while the ‘special or integration classes’ were renamed ‘inclusion classes’. The modification of the terms were not welcomed in the Greek educational context as some considered that this class did not constitute the appropriate educational environment for providing efficient support for children, especially at the secondary level of education, while it contributes to the pupils’ discrimination and stigmatisation (Coutsocostas and Alborz, 2010; Zoniou-Sideri et al., 2005). Nevertheless, the inclusion class became the most commonly applied model of SEN provision in mainstream schooling in Greece despite there not being any

68 Centres for Identification, Assessment and Support.
assessment or research regarding its effectiveness (Agaliotis and Kalyva, 2011; Efstathiou, 2003, 2002; Vlachou, 2006).

The latest Public Law (Greek Government Gazette, 2008) was pro-inclusion, stating that free compulsory education must be offered to all children who experience SEN at every educational level\(^{69}\). It focused on structural issues, offering guidance for the educational placement and additional support of pupils, as well as the operational framework of the diagnostic centres, which are now renamed into Centres for Differential Diagnosis, Diagnosis and Support (KEDDY). This law established the term ‘Speech and Language Disorders’ (article 3), a terminology that is also used in international educational contexts (Martin, 2000; Spanou and Tripodis, 2010; Stott et al., 2002). However, this particular law does not provide any further references for this area of SEN or official guidance regarding the educational support of pupils who experience this type of disorder. On the contrary, the official information concerns the educational placement provided for pupils who experience a range of SEN and refers only briefly to the special educational programmes that may be implemented.

Similar to international policies and practices, the educational placement of pupils who have SLD within the Greek context depends on the nature, complexity and severity of their difficulties. In particular, pupils may attend: (i) a school classroom within a mainstream setting with the support of the classroom teacher (who collaborates with the KEDDY); (ii) a school classroom receiving additional support\(^{70}\) by an SEN teacher (i.e. in-class support\(^{71}\)); and (iii) an inclusion class that operates within the mainstream school setting and is equipped with the appropriate resources provided by specialists (in most cases

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\(^{69}\) Special education is provided to pupils aged from 4 to 22 years old.

\(^{70}\) According to the latest Greek Public Law of SEN (Greek Government Gazette, 2008), additional support within the mainstream school classroom is provided to the pupils who can follow the curriculum of the classroom if they receive appropriate individual support and guidance, or to the pupils who experience more severe difficulties in the absence of any other provision in their area. However, in some cases the support provided by an SEN teacher might be required on a permanent basis.

\(^{71}\) In Greece it is called ‘parallel support programme’.
SEN teachers). Additionally, in cases of severe SLD\textsuperscript{72} children and young people may be either placed in special schools or receive programmes of home tuition. By contrast with practices and educational programmes implemented by other European countries, in Greece pupils with SLD may receive systematic intervention programmes (either at pre-school, primary or secondary education), such as speech and language therapy, by the centres of diagnosis and support (KEDDY), special schools or private speech and language centres and SLTs\textsuperscript{73}.

Within the frame of the traditional Greek educational system, mainstream schools are required to follow a common policy for the implementation of the national curriculum, involving whole class instruction, providing the same textbooks for all pupils, ensuring a relatively demanding syllabus (especially at the secondary level) and a teacher orientated didactic philosophy, setting thereby obstacles to individualised teaching and learning (Vlachou, 2006). The ‘Cross-curricular Integrated Framework of Programmes of Study’, which was developed by the Greek Pedagogical Institute (2002) aimed to replace the existing national curriculum offering by a more flexible and easily adaptable model of teaching and learning for all pupils. However, it appears not to be adequately implemented.

In the past, the Ministry of Education and Religious Affairs, in an attempt to support the pupils who experience SEN, provided the ‘Analytic Programme of SEN’ (1996), which constitutes the first specialised curriculum of primary education for pupils who experience a range of SEN. The area of speech and language development constitutes one of the aims of this framework, as it offers to the teachers a brief outline that concerns the planning of their teaching aims, implementation of learning strategies, monitoring, regular assessment of pupils’ speech and language progress and re-evaluation of the individualised teaching programmes. This framework though, provides only a quite basic profile, while its implementation is limited to the inclusion class teaching context. A few years

\textsuperscript{72} Usually severe SLD occurs in relation to organic causes and cognitive disability.

\textsuperscript{73} However, in cases where the child receives further support/therapy through a private centre or SLT, the state has the responsibility to offer financial support only when the child is officially diagnosed with SLD by KEDDY or other public medical services (Greek Government Gazette, 2012).
ago, the Greek Pedagogical Institute aiming to support pupils’ learning within the framework of the existing national curriculum for literacy and numeracy, proposed a profile of teaching practices and resources which can be applied within the mainstream classroom for pupils who experience SEN (Karakitsios et al., 2011). Nevertheless, the provided resources which address various aspects of pupils’ learning (i.e. speech and language skills, reading, writing, or context understanding), aim to support a broader range of pupils who have Learning Difficulties, without focusing on children with SLD.

Although inclusive provision holds an essential role in the documents related to the Greek educational policy and practices, the daily school practice appears to be quite different (Zoniou-Sideri and Vlachou, 2006). Within the mainstream classroom there is limited guidance to the teachers regarding the identification of SLD, structuring of learning programmes and approaches that support pupils’ cognitive, intellectual and communication skills (Papadopoulos, 2008, 2001). At the secondary level, the weakness of the existing curriculum to meet adequately the pupils’ individualised needs, along with the classroom’s timetable restrictions, do not allow the learning needs of these children to be addressed in a substantial and efficient way.

Within the framework of mainstream education both mainstream classroom teachers and inclusion class teachers (i.e. SEN teachers), are challenged to meet the diverse needs of pupils with SLD. The fact that the role of SENCO has not yet been officially introduced and applied in the Greek educational system, while the SLTs are not entitled to provide their services in mainstream schools influences highly the provision available for pupils who have SLD within the mainstream school setting. As a consequence their duties are provided by mainstream teachers or SEN teachers who are required to support pupils either working with them in mainstream classrooms74 or inclusion classes, while it is often expected from them to offer guidance and specialised help to their colleagues.

Many teachers express their concerns regarding the feasibility of inclusive education arguing that the time shortage, highly demanding curriculum, lack of

74 As mentioned before, the so called ‘parallel support programme’.
specialised knowledge, training, resources, and collaboration with professionals and pupil’s parents constitute some of the main drawbacks that prevent differentiated teaching and learning (Agaliotis, 2002; Koutrouba et al., 2008). Moreover, they are highly concerned and in many cases dissatisfied from their collaboration with the professionals from KEDDY, whereas they often feel unaided and unprepared to provide adequate support to pupils with highly demanding needs (Agaliotis et al., 2009; Vagena, 2009).

Although the latest law encourages the cooperation between professionals from various disciplines, inadequate support from the State, in providing official educational guidelines for the implementation of this policy and insufficient opportunities for educators’ further professional development, not only perpetuate the current situation, but also increase the gaps between the existing policy and the applied practices.

2.6 Bilingualism and its relationship with SLD

Over recent decades the number of bilingual children requiring speech and language support has increased, leading to a growing body of international research that examines the association between speech and/or language disorders and bilingualism (Bedore and Peña, 2008; Crutchley et al., 1997). Within this field, a number of studies have examined children who experience this type of difficulties and learn a second language (Crutchley et al., 1997; Orgassa and Weerman, 2008), while others have focused on these children’s exposure to two languages since birth (Paradis et al., 2003; Stavrakaki et al., 2011).

‘A bilingual person may be considered anyone who knows and systematically uses two or more languages’ (Tzivinikou, 2004a, p. 467), while for others bilingualism is referred to as significant oral fluency in two languages (De Lamo White and Jin, 2011). The Royal College of Speech and Language Therapists (RCSLT) Clinical Guidelines defined bilingualism/multilingualism as the knowledge/use of two or more language codes (Taylor-Goh, 2005), while emphasising the criterion of use rather the level of languages’ proficiency.
The current concepts related to bilingualism recognize the complexity and diversity of this term (Martin, 2009). Bilingual and multilingual children constitute a quite diverse population, as they might vary in a range of aspects such as, sociolinguistic background, type of bilingualism, degree of proficiency, age and sequence of acquisition of languages or language specific elements (Ardila et al., 2000). However, usually researchers make a distinction between the simultaneous and sequential bilinguals. Simultaneous bilingual children acquire both languages either through their family or early childcare experiences usually from birth until the age of 3 years old, while sequential bilinguals have established but not entirely acquired their first language (L1) before they start learning the second language (L2), usually after the age of three (Paradis, 2010). Sequential bilinguals may also begin to acquire L2 when entering school. Children from immigrant families are usually considered sequential bilinguals as they tend to speak a minority language at home and acquire L2, which is considered the majority language, at school (ibid.). Nevertheless, both types of bilinguals are more competent in one of the languages they acquire, where the dominant language is considered the one that children were mostly exposed to (Genesee et al., 2004). However, it might be also the case, especially for the sequential bilingual children, where L2 gradually becomes the dominant language.

The majority of children who acquire two or more languages during childhood are considered ‘typical learners’, as through their continued language development and ‘communicative experiences’ they acquire the languages used constantly in their family and/or school environment (Kohnert, 2010, p. 457). Despite the fact that the two languages acquired by children may be functionally independent, cross-linguistic or transfer influences may exist in the aspects of phonology, lexical-semantics and morpho-syntax (Cunningham and Graham, 2000; Gildersleeve-Neumann et al., 2008). Bilingualism requires acquisition of the phonological knowledge base and use of system requirements for phonemes, syllables and word structures in both languages (Gildersleeve-Neumann et al., 2008). Although acquisition of language in bilingual children appears to follow the same rates and patterns of development of monolingual children, it is yet quite unclear how cross-language influences, amount of experiences/exposure to each language and contradictory properties of the
phonological and production system shape the bilingual speech sound acquisition (ibid.). Apart from the associations at the surface or structural level, there also seem to be interactions related to conceptual or cognitive structures that are essential for the acquisition of both languages (Bialystok, 2007; Kohnert, 2010).

The assessment of bilingual children skills in both languages raises great concerns, as it determines whether any language differences that children present are related to natural differences in language learning experiences (Kohnert et al., 2009), or are attributed to language difficulties which are systemic and influence the learning of both languages. It appears though that bilingualism solely does not put children who have language disorders in a rather advantageous or disadvantageous position from the monolingual children who experience the same type of disorders (De Lamo White and Jin, 2011; Kohnert, 2010; Paradis, 2010; Paradis et al., 2005).

Children who have difficulties with their language skills may acquire two languages, less efficiently though than their typically developed bilingual peers, as the underlying difficulties will manifest in both languages, while the level of competency in both languages varies depending on children’s learning opportunities and experiences provided by their social environment (Kohnert, 2010; Salameh et al., 2004). In any case though, due to the heterogeneous nature of SLD and bilingual children, as well as the difficulties and complexities in assessing their language skills, it is essential that any related evidence is regarded and interpreted with careful consideration.

International studies in the field which examined the language skills of bilingual children who progressed typically and bilingual children experienced difficulties with their language skills through a range of linguistic levels, revealed apparent and consistent differences between the above groups of children. Characteristically, studies with Spanish-English typically developed bilingual children and their bilingual peers who experienced difficulties in the field of language indicated that the latter group of children performed poorer than their peers in various grammatical assessment measures and non-word repetition tasks (Girbau and Schwartz, 2008; Gutierrez-Clellen and Simon-Cereijido, 2007; Restrepo and Gutierrez-Clellen, 2001). In the area of morphology an
examination of verb forms production by Spanish-English sequential bilingual children indicated that bilingual children with typical development had productive knowledge of the past tense while their bilingual peers with language difficulties tended to use the infinitive form of the verbs (Jacobson and Schwartz, 2005). Paradis (2008) on a study focusing on sequential bilinguals who experienced language difficulties revealed that the children were able to produce non-tense marking morphemes in English at a good level. On the contrary, findings from an earlier study that examined the area of morphology indicated very slow progress in the same domain from bilingual children with language difficulties (Steenge, 2006), while another study revealed children’s failure to produce adjectival gender inflection despite their five years exposure to Dutch in the school environment (Orgassa and Weerman, 2008). As far as concerns the semantic skills of bilingual children with language difficulties, cross-linguistic findings revealed that these were below the expected vocabulary levels, while deficits with word meaning, word retrieval and word learning seem to be related to processing-based models (Bedore and Peña, 2008).

Evidence from Greek and French children who had difficulties in the broader area of language indicated similarities and differences in their language skills. The main differences in their performance lay in the aspect of verb morphology and while in Greek the difficulty for these children manifests in the area of subject-verb agreement, in French language the difficulty lies in tense marking (Stavrakaki et al., 2011). In contrast to the object, which seem to constitute a problematic area in French language for these children (Paradis et al., 2006), Greek children’s performance in this domain appeared to be more complicated, as a number of children had difficulties in this area whilst others did not. This may be attributed to the severity of the difficulties that children experienced, as well as to the chronological, and subsequently language, age of children, as Greek pre-school age children tended to perform lower in this domain while during school age they achieved significantly higher performance (Stavrakaki et al., 2011).

Studies involving bilingual children with language difficulties and monolingual children (English as the first language) with the same type of difficulties indicated that the bilingual children performed poorer than their monolingual
peers on standardised language measures in the areas of vocabulary and grammar, while they tended to have difficulties in more complex linguistic skills such as, morphology and grammar rather than in phonological aspects (Crutchley, 1999; Crutchley et al., 1997). Similarly, a study conducted in the Netherlands revealed that bilingual children with language difficulties had lower scores on language assessment measures than their monolingual peers with the same type of difficulties, specifically in the aspects of lexicon and grammar (Verhoeven et al., 2011).

Evidence from the field of grammatical morphology revealed no difference in the rates and patterns of morpho-syntactic aspects’ acquisition (i.e. production of tense and non-tense morphemes) in the language produced by simultaneous French-English bilingual children who had language difficulties and by their monolingual peers who experienced the same type of difficulties (Paradis, 2005; Paradis et al., 2003). Further findings also indicated no difference in the severity between monolingual and sequential Spanish-English bilingual children with language difficulties and their typically developed peers with the same language backgrounds (Windsor et al., 2010).

Nevertheless, over-identification and under-identification or misidentification of bilingual children in the broader field of language difficulties is a well known problem internationally (Bedore and Peña, 2008; Klinger and Artiles, 2003). According to research evidence, both over-identification and under-identification of language difficulties in bilingual children may be attributed to the overlap of the language skills of bilingual children who progress typically and monolingual children with speech and/or language difficulties, and between bilingual children with difficulties in this domain and typically developed bilingual learners. Moreover, overrepresentation or misidentification of these children seem also to be related to the lack of valid and reliable standardised tools that assess speech and language skills of bilingual children.

The translation of such tests and the development of local norms are considered feasible, as not only do they provide evidence regarding the language competence of bilingual children, but also act as the impetus for the development of assessment measures in the language of other populations. However, concerns are raised regarding their use and interpretation (Stow and
Dodd, 2005, 2003). Specifically, in translated language assessment measures it is assumed that acquisition of speech and language in different languages follow the same developmental pattern, while these tests when translated may also fail to examine morpho-syntactic and vocabulary aspects or narrative elements of the target language that provide important evidence of bilingual children’s language skills.

Drawing parallels between typically developed bilingual children and monolingual children with speech and/or language difficulties, and between monolingual and bilingual children who have difficulties in this domain, provided important evidence regarding the underlying deficits and contributed to a better understanding of the difficulties in the complex field of language. As highlighted by Verhoeven et al. (2011) though, the number of studies that offer a full account of speech and language skills of monolingual and bilingual children who experience or not difficulties in this domain is still quite limited. More research in this area is required in order to identify how and when language development of bilingual children can be referenced to the development of monolingual children, as well as what can be expected from bilingual children with difficulties in the field of speech and language in terms of their dual language development (Paradis, 2010).

2.7 Socioeconomic status and SLD

It is widely accepted that social disadvantage influences significantly a child’s development, whether this is related to the social and emotional, cognitive, or speech and language development. Research over the last fifty years highlighted the strong relationship between language development and social disadvantage, focusing on the essential role and great influence of parental input on children’s communication skills development (Davis-Kean, 2005; Flouri and Buchanan, 2004; Hart and Risley, 1995; McClelland et al., 2003; Schatzman and Strauss, 1955). Social disadvantage constitutes a rather complex term, as it is usually defined in a range of ways. Socioeconomic status (SES) though, is the most commonly met criterion for the term’s definition, usually measured in terms of parental (often maternal) education level, ‘occupational prestige and income’ (Hoff, 2006, p. 60).
Research evidence indicated that lack of resources and opportunities due to a family’s low SES have a great effect on children’s speech and language competence, literacy and consequent academic attainedms (Clegg and Ginsborg, 2006; Hoff, 2006; Snowling et al., 2011). Differences in the language skills of children from different SES backgrounds may be attributed to different factors which are strongly interrelated, such as poverty (Evans, 2004; NICHD Early Child Care Research Network, 2005; Skiba et al., 2005), home environment (Evans and English, 2002; Evans et al., 2005), maternal education (Cambell et al., 2003; Dollaghan et al., 1999; Rowe et al., 2005), the quantity of child-directed speech (Hart and Risley, 1999), the relationship between mother and child, the interaction between them, as well as the language environment in general (Hoff, 2003).

Earlier international studies in the field highlighted the differences in the language skills of children with high SES and low SES (Bernstein, 1970). SES-related differences in children’s language competence were found from the age of 2 years, whereas children from low SES backgrounds usually start school with speech and language skills that develop unequally to their chronological age (Hoff, 2003). Findings from studies that examined the speech and language development of children from low, medium and high SES backgrounds, argued that children with low SES progressed slower in the area of vocabulary, which was related to limited cognitive skills during pre-school years and had poor educational attainments around the age of 10 years (Fish and Pinkerman, 2003; Hart and Risley, 1999). The grammatical complexity of school-aged children’s speech, and specifically syntactic knowledge, appears also to be influenced by SES, as children with high SES had better performance (at age 6) in productive and receptive syntax, however the SES-related differences mostly lay in the frequency with which children could structure and use complex speech (Huttenlocher et al., 2002). Regarding the relationship between SES and phonological awareness, this appeared to be moderated by children’s age, as in high SES backgrounds increases in age strengthened the changes in phonological processing skills (McDowell et al., 2007).

According to evidence, the child’s communication environment constitutes an essential predictor of the development of language skills at the age of two years (Roulstone et al., 2011).
SES is highly related to expressive and receptive language development (Raviv et al., 2004; Stipek and Ryan, 1997), as pre-school children from lower SES backgrounds are nearly twice as likely to experience receptive language deficits and five times more likely to have moderate or severe expressive language difficulties than children with mid or high SES (Peers et al., 2000). Children who start school with inadequate speech and language skills may also have literacy difficulties and consequently academic underachievement, raising concerns for educational policy (Dockrell et al., 2011). Studies in the field that examined the language development of children from socially disadvantaged areas indicated that the incidence of SLD is higher in these areas (Law et al., 2011; Locke et al., 2002).

Findings from the Better Communication Research Programme (Lindsay et al., 2009), conducted in the UK, revealed that children who are considered to be socially disadvantaged are more likely to be identified as experiencing difficulties with their speech, language and communication needs. Specifically, highlighting the ‘strong social gradient’ for SLD (Strand and Lindsay, 2012, p. 28) it was indicated that children who were entitled to Free School Meals were 1.8 times more likely to be identified with SLD, while children from socially disadvantaged areas were 1.3 times more likely to have SLD than their peers from not so socially disadvantaged areas (ibid.). Consequently, pupils who received Free School Meals and lived in more deprived areas were 2.3 times more likely to have SLD than children from less socially disadvantaged areas. The study also revealed that children were more likely to have SLD in primary schools where the majority of children were eligible to receive Free School Meals.

The study conducted earlier by Meschi et al. (2010) as part of the BCRP, indicated that there is great variability in the SLD incidence across schools, as the probability of experiencing SLD varies ‘by schools’ characteristics’ (ibid., p. 45). According to the findings, although children who were socio-economically disadvantaged were at high risk for being identified with SLD, when attending a

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school with higher rates of pupils receiving Free School Meals it was less likely for them to have SLD, due to differences in practice between the schools (APPG on Speech and Language Difficulties, 2013).

The research evidence provided above indicated the complex and multifaceted relationship between SLD and social disadvantage, examining a variety of factors that affect the development of speech and language skills. Children who are socially disadvantaged are at high risk of experiencing difficulties with their speech and language development, therefore it is essential for school systems to be aware that this has an effect on children’s academic performance, and to provide further support and effective intervention in order ‘a secure foundation for language and literacy development’ can be offered to them (Snowling et al., 2011, p. 43).

Given the significant role of parent-child interactions, parental involvement and the home learning environment in all forms (e.g. linguistic or social) of a child’s development in the early years (Hartas, 2011; Hills et al., 2010), a number of policy reports highlighted the necessity of early intervention programmes that aim to tackle both social disadvantage and child’s development and learning (Allen, 2011a; Allen and Smith, 2008; Field, 2010; HM Government, 2007). Despite the fact that the intergenerational transmission of disadvantage is different across countries, it appears that education is one of the most important contributors to it and the educational outcomes continue across generations (d’Addio, 2007). Within the European policy framework, the Social Protection Committee (2012) underlined the importance of empowering the early childhood education and care (ECEC) intervention policies in order to ‘help break the transmission of disadvantage across generations’ (p. 20-21). In addition, the Recommendation of the European Commission on ‘Investing in Children – Breaking the Cycle of Disadvantage’ (2013), recognised the significance of tackling disadvantage in the early years in order to minimise social exclusion and poverty, and emphasised the need for all families to be able to access inexpensive and high quality ECEC.

Considering that impoverished/poor learning environments appear to impact on children’s cognitive and language development (Feinstein, 2003), the parents’ role is crucial in breaking the intergenerational disadvantage and improving their
children’s life opportunities and social mobility through practices/strategies, such as active involvement in their (children’s) learning (Hartas, 2011).

Nevertheless, approaching parenting as a crucial social mobility practice might be quite challenging for the following reasons: Although in the existing policy (Allen, 2011b; Allen and Smith, 2008; Field, 2010) and related evidence (Ermisch, 2008) what parents do with the their children can have a significant impact on narrowing the achievement gap, a number of studies highlighted the weak direct effect of the learning support provided by parents (i.e. home learning activities) on children’s language and literacy skills (Hartas, 2012; Hill and Taylor, 2004; Lee and Bowen, 2006). On the other hand, the family’s social class, in terms of parental educational background, employment and income, continues to have a significant influence on children’s academic attainments and social wellbeing (Cregg, 2008; Dahl and Lochner, 2005; Hills et al., 2010). Further evidence indicates that the home learning environment (HLE) is not thought to be one of the systems that support the intergenerational transmission of advantages and disadvantages (Dearden et al., 2010). Despite that, parental learning support, contribution to cognitive stimulation, positive relationships and discipline improve children’s social wellbeing (Gutman et al., 2009), the quality of interactions between parent and child are highly associated with a family’s SES. As was highlighted by Hartas (2014) in a study about the social context of parenting, in spite of the resources that parents provide ‘their parenting is ‘malleable to the structures and socio-economic opportunities that surround their life’ (ibid, p.23).

In addition, the evidence from studies on intergenerational social mobility stressed the significance of a family’s SES in children’s wellbeing and life opportunities, while policy documents (Allen, 2011a, 2011b; Field, 2010) suggest that reducing educational inequality and supporting the cognitive and social development of children with low SES is crucial. However, it appears difficult to meet the above without addressing the sources/origins of inequality. Educational inequalities are highly interrelated with social inequalities and it is not possible to address them in isolation. Although most of the existing debate on making the educational system more equitable focuses on social mobility, currently we have only little evidence (Reay, 2012). A stronger focus on the educational and employment opportunities for parents, investment in social
support networks, parent driven family interventions and focus on parental practices/strategies and attitude, could provide possible ways for reducing inequalities and parents and children’s socio-economical disadvantage (Chowdry et al., 2010; Hartas, 2014, 2012).

2.8 Self-esteem, social participation and peer acceptance of children with SLD

Over recent decades, a substantial body of research has examined the association between SLD, self-esteem, social participation and peer acceptance of children and young people who experience this type of difficulties. Social difficulties are highly related to difficulties in the field of speech and language throughout childhood, adolescence and early adulthood (Brinton et al., 1998; Clegg et al., 2005).

Evidence revealed that children and young people with SLD experience various social difficulties, such as poor social competence and peer relations (Conti-Ramsden and Botting, 2004; Durkin and Conti-Ramsden, 2007), while they are at greater risk for lower self-esteem (Lindsay et al., 2002a; Wadman et al., 2008). Given children’s considerable language inefficiencies, they might themselves perceive their social skills as inadequate compared to those of their peers, a fact that possibly influences their peers’ behaviour towards them and consequently leads to poor social acceptance (Lindsay et al., 2002a).

Given that speech and language function appears to be highly associated with social competence in quite complex and dynamic ways (Fujiki and Brinton, 1994), it is not yet quite clear what is the relationship between social functioning and difficulties in the domain of language (Hart et al., 2004). However, considering the crucial role of speech and language in social interactions, it is rather obvious that difficulties in this area may influence highly such interactions. According to the social adaptation model, proposed by Redmond & Rice (1998), language inefficiencies lead to children’s avoidance or withdrawal from social situations and consequently to limited opportunities in developing their social skills. Nevertheless, given that their study focused mainly on the developmental period of children’s transition to primary education, Redmond
and Rice (ibid.) highlighted the need for further studies in the field in order to comprehend the association between SLD and social competence at different life stages.

Moreover, it may also be the case that communication and social difficulties are linked because they derive from the same underlying source. Characteristically, Bishop (1997) suggested a limited processing model where language and social difficulties may derive from ‘general and nonspecific cognitive limitation related to working memory and processing capacity’ (ibid., p. 211). This indicates that children who experience language difficulties may find it difficult to interact socially because they cannot process the language and social information required for a proper interaction.

Feeling self-confident is highly important for children in primary education (Lee, 2008). Taking into consideration the academic and social challenges that children with SLD usually experience, the development of self-esteem (Jerome et al., 2002) is particularly important as it assists children to adjust their behaviours and continue their efforts in spite of their difficulties.

Difficulties in interacting with peers and maintaining friendships may begin in pre-school years, where children might not take active part in conversational interactions or participate less often in social interactions, develop inadequate discourse skills and provide inappropriate oral responses, making it obvious that speech and language problems limit their social competence (Vallance et al., 1999). During primary education years, children with weaknesses in the domain of language may experience difficulties with social tasks and peer acceptance (Brinton et al., 2000). Considering that academic attainments and social skills are ‘highly valued’ (Jerome et al., 2002, p. 701) within the school context, inadequacies in these domains may influence negatively children’s self-esteem. Although younger children may not be aware of their inefficiencies due to the ‘unidimensional’ way they perceive themselves (ibid.), which is mainly positive in spite of their language difficulties (unless their experiences ‘dictate’ to perceive themselves in a negative way), when entering middle to later childhood they are able to use social comparisons to assess their own skills and to internalize the negative stance of their peers (Harter, 1999).
In addition to younger children whose low self-esteem is not quite obvious, older primary aged children with SLD tend to perceive themselves more negatively in scholastic competence and social acceptance than children who progress typically (Jerome et al., 2002; Lindsay and Dockrell, 2000). Robinson (2012) in a study regarding the social well-being of children with receptive language difficulties during their transition from primary to secondary education revealed that these children had higher rates of social anxiety than their typically developed peers and lower self-rated social acceptance (at Time 2 of the study). Although the findings did not indicate that transition to secondary schooling resulted in greater social difficulties, they did highlight the strong connection between social anxiety and social acceptance, and in agreement with other studies (La Greca and Lopez, 1998; Wadman et al., 2011b) suggested that the latter was a predictor of social anxiety.

A range of studies revealed that children who have difficulties in the wider domain of language seem to be less accepted by their typically developed peers, are invited to participate in social events less frequently, while they are at higher risk of being socially excluded or bullied (Conti-Ramsden and Botting, 2004). Despite the fact that bullying appears to cause great concerns for a number of children with SLD, not all children with difficulties in this domain experience bullying (Lindsay et al., 2008a; Savage, 2005), while evidence from studies which examined the effect of educational placement (i.e. mainstream school, LRB^77, special school) in relation to the level of bullying for children with SLD were conflicting (Knox and Conti-Ramsden, 2003; Laws et al., 2012).

Additionally, longer-term studies in the field indicated that in early adolescence young people with difficulties in this domain tend to have negative perception of their social skills, low self-esteem and poor quality friendships (Jerome et al., 2002; Snowling et al., 2006). In early adolescence and later, young people who experienced such difficulties were also reported with higher rates of social anxiety (Conti-Ramsden and Botting, 2008; Wadman et al., 2011a, 2011b) and depression (Conti-Ramsden and Botting, 2008) when compared with their typically developed peers. When their social difficulties continue in adulthood

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^77 LRB: Language Resource Base.
they seem to be at high risk for mental health problems (Whitehouse et al., 2009), including anxiety disorders and social phobia (Beitchman et al., 2001; Voci et al., 2006), as well as antisocial conduct disorders (Brownlie et al., 2004).

2.9 Brief summary of the chapter and connections with aims and RQs of the study

This chapter explored in depth the domain of SLD, drawing evidence from the international and Greek context. The issues that attracted my research interest and were discussed in depth, constitute essential and controversial aspects of the SLD body of international research.

Specifically, the examination of the SLD nature and the classification of children who have SLD into further subgroups indicated the multiplicity of this SEN area and highlighted the different grounds and criteria (e.g. medical or psycholinguistic) upon which these subgroups are developed, raising concerns about the stability of these subgroups over time. Although the description of the Greek system in terms of the identification policies and assessment of SEN provided a useful overview of the existing framework, the lack of Greek standardised assessment measures for the identification of SLD by the authorised diagnostic services (i.e. KEDDY or health centres) constitute an essential limitation of the Greek system and raise enquiries regarding the integrity of the SLD diagnosis.

In addition, the description of the SLD educational provision in the UK and Greek system in this chapter indicated the educational policies and the range of services and resources offered in both contexts. However, despite the fact that inclusive provision for SEN pupils has a significant role in the related Greek legislative framework, the review of the existing Greek policies indicated the weaknesses of the applied curriculum to meet the individualised needs of the SLD pupils, and the absence of policies focusing on the teaching of these pupils.

Apart from the above points this chapter also examined the intimate and complex relationship of speech, language and literacy skills, and the possible implications of SLD for literacy, while it highlighted the long term literacy and
academic outcomes for pupils who have SLD and associated literacy problems. Nevertheless, the scarcity of Greek studies focusing on this essential issue made it difficult to have an overview of the possible implications of SLD for the literacy skills of Greek pupils and their academic attainments. Although, the association between SLD, bilingualism and SES was explored in this chapter, the limited number of Greek studies in the context of SLD and bilingualism and the lack of Greek evidence regarding the influence of SES on children’s SLD did not allow us to identify the association between these aspects. In addition, although the influence of SLD on children’s self-esteem, social participation and peer acceptance was also discussed, it was not possible to explore the impact of SLD on children’s social competence within the Greek framework, due to the absence of related Greek studies.

Taking into consideration the above gaps which derived from the review of the SLD domain in the Greek educational context, and specifically the complexity that surrounds the SLD identification by the Greek system (the absence of educational policies that focus on the teaching of SLD pupils, the lack of evidence regarding the influence of SLD on pupils’ academic attainments, and the scarcity of findings about the impact of SLD on pupils’ social participation and peer acceptance), the aim of this study was to shed more light in these crucial issues.

So, in order to address these key points the study was organised in two phases:

Phase 1 comprised a systematic survey with the aim of identifying the pupils whose speech and language skills raised concerns to their teachers and at a second stage to examine further their language functioning.

In Phase 2 the study aimed to identify, through the purposeful selection of case studies pupils, the provision offered in mainstream and inclusion classrooms.

The purposeful selection of case studies pupils involved not only children who were formally diagnosed with SLD (by the KEDDY or health service) or informally diagnosed with SLD (based on teachers’ professional experience/personal judgement). The comparison SEN subgroups who were also involved, and specifically the pupils with General Learning Difficulties and
Specific Writing difficulties, made it possible to identify whether or not there were any differentiations in the educational provision offered to them.

Specifically, in this phase, in terms of the provision offered, the study aimed to answer the following research questions (RQs):

1. How did the case study pupils come to be identified as having SLD, General Learning Difficulties and Specific Writing difficulties?

2. Are there any differences between pupils having SLD, General Learning Difficulties and Specific Writing difficulties in terms of the support, and the teaching and learning practices provided to them at different years?

3. Are there any differences in the academic (i.e. speech/language and literacy) attainments of the case study pupils identified with SLD, General Learning Difficulties and Specific Writing difficulties?

4. To what extent do case study pupils’ social participation and peer acceptance relate to the difficulties they have?

The following chapter examines the methodological framework of the study and provides detailed information about Phase 1 and Phase 2, the participants and methods applied. The procedures followed for the data analysis are also discussed, while the ethical issues applied to both phases of the study are presented and justified.
CHAPTER 3

Methodology

3.1 Introduction

The intention of this particular study was to explore the field of Speech and Language Disorders (SLD) in Greek mainstream primary schools. Specifically it sought to identify and assess the extent and nature of speech, language and communication skills of pupils with noticeably slow progress in these specific domains, and to examine the provision made for pupils who experience this type of difficulties in inclusion classes and mainstream classrooms.

In order to address the above aims the study was designed in two phases. In the first phase, I identified some pupils whose speech and language development was not as anticipated which had raised concerns for their teachers. A sample of these was then assessed individually for a more detailed examination of their functioning across a range of areas. In the second phase, I examined the existing provision for a number of pupils who were identified formally or not as experiencing difficulties in their speech and language skills, in terms of the nature of their difficulties, the support provided for them in the mainstream primary school settings, the teaching and learning practices, the pupils’ academic attainments, their social participation and peer acceptance.

This research study involved a mixed-method research design whereby quantitative and qualitative data were combined, enabling thereby the researcher to expand the breadth and range of the enquiry by applying different methods for different enquiry elements (Greene et al., 1989). The use of mixed methods increases the chances of accuracy, corroboration, less bias and more
flexibility. An increased level of understanding\textsuperscript{78} is more likely because the limitations of one method can be strengthened with the implementation of another\textsuperscript{79}, adding weight and credibility to the research and enhancing the interpretation of findings (Gilbert, 2008; Johnson and Turner, 2003; Wellington, 2000).

However the word ‘methods’ is interpreted in its broader sense including the involvement of elements related to practice, such as the strategies and measures of data collection and the methods of research design, as well as the principles which concern philosophical approaches (Johnson and Onwuegbuzie, 2004). The pluralistic nature of the mixed methods design makes it possible to use a single methodology or multiple methodologies in sequence (Creswell, 2003). Various philosophical positions have advocated mixed methods designs, such as a critical realism perspective (Maxwell and Mittapalli, 2010), the transformative-emancipatory paradigm (Mertens, 2009, 2003; Sweetman et al., 2010) and pragmatism (Maxcy, 2003; Rocco et al., 2003). The latter position appears to justify adequately this particular approach and can be seen as its ‘philosophical partner’ (Johnson and Onwuegbuzie, 2004, p. 16).

An enlightening ‘definition’ of mixed methods methodological or research paradigm was offered by Johnson \textit{et al.} (2007, p. 129) who by summarizing the main themes that arose from definitions given by leaders in this field and formulating methodological domains from Greene’s (2006) ‘Mixed Methods Social Enquiry\textsuperscript{80}, provided the following:

\begin{quote}
Mixed methods research is an intellectual and practical synthesis based on qualitative and quantitative research; it is the third methodological or research paradigm (along with qualitative and quantitative research). It recognizes the importance of traditional quantitative and qualitative
\end{quote}

\textsuperscript{78} Onwuegbuzie & Leech (2004, p. 774) use the term ‘verstehen’ in order to express ‘the meaning that underlies the behaviour that must be understood’.

\textsuperscript{79} ‘Fundamental principle of mixed methods’ research (Johnson and Turner, 2003, p. 299) indicates combination of methods with complementary strengths and non-overlapping drawbacks.

\textsuperscript{80} It is a framework of mixed methods research approach, where she divided the mixed methods social enquiry into four areas of interest: (i) the ‘philosophical assumptions and stances’; (ii) ‘enquiry logics’; (iii) ‘guidelines for practice’; and (iv) ‘socio-political commitments’ (Johnson \textit{et al.}, 2007, p. 128).
research but also offers a powerful third paradigm choice that often will provide the most informative, complete, balanced, and useful research results.

The two phase mixed methods design of this study constituted an ‘explanatory design’ (or ‘explanatory sequential design’), where the study began with the collection and analysis of quantitative (i.e. numeric) data and was followed and strongly linked by the consecutive collection and analysis of qualitative data (Creswell, 2003; Tashakkori and Teddlie, 1998). The rationale of the ‘participant selection model’ that was applied to this study required the collection and subsequent analysis of quantitative findings in the first phase in order that the participants of the follow-up qualitative phase of the study could be identified, purposefully selected and their views explored in depth.

Within the framework of this particular mixed method study, not only from the perspective of the applied measures but also methodologically, the first phase of the study constituted a survey indicating an initial post-positivist leaning, while the second qualitative phase of follow-up case studies shifted to an interpretive approach. In longstanding debates post-positivism has been highly criticised as having a privileged position in mixed methods designs, with the interpretive approach (Denzin and Giardina, 2006; Howe, 2004) holding a secondary and supplementary role. However, the ‘explanatory sequential design,’ which was followed in this particular research as well as other studies from the field of social sciences (Creswell and Plano Clark, 2011; Ivankova et al., 2006), indicates a fruitful coexistence of both approaches, their mutual support and the establishment of rigorous and valid procedures.

3.2 Phase 1

Taking into consideration the heterogeneous nature of SLD, as it involves a wide range of subgroups\(^81\), and the likely relationship between them and literacy, the purpose of the systematic survey applied in this phase was the identification of pupils whose speech and language skills raised concerns for their teachers, offering also evidence from comparison SEN groups, and further

\(^81\) For more information see section 2.2 Subgroups of SLD.
examination of these pupils’ language functioning. In addition, through the applied measures, the issue of SLD identification was highlighted, and the current context of SLD and SEN in Greek mainstream primary schools was explored.

Initially the screening assessment which was provided to teachers revealed a useful portrayal of SLD in the Greek educational context. However, despite the fact that the screening process has the advantage of producing ‘information about day-to-day communication from someone who knows the child well’ (Bishop and McDonald, 2009, p. 604) (in this case the teacher), the inherent problem in a screening tool is that ‘the informants may vary both in their ability to understand the items and in their subjective interpretations and biases’ (ibid.). Therefore, a more in-depth examination of pupils’ skills in a range of areas, through the applied language assessment measure, was considered essential to supplement and give task performance-based analysis of pupils’ current speech and language functioning and potential literacy inefficiencies.

In the following sections of this chapter, a framework of the study’s design is presented. The sampling criteria and the procedures applied, the data collection methods for each phase, the procedures applied for data analysis and the ethical considerations are outlined.

3.2.1 Participants (all)

The reason for conducting the study in Athens and in primary mainstream schools particularly, was twofold. Firstly, because primary education for children with SEN is considered well developed in Athens (Drosinou, 2006), and secondly, because in a city such as Athens, with the highest population in Greece, it was expected that the number of children with SLD would be higher in comparison to a smaller city.

The sample of the study was not fully representative, as the mainstream primary schools invited to take part were located in two out of seven districts of Athens, thus the population of the schools that finally took part cannot be considered an entirely representative sample of children with SLD. This may be attributed to the fact that participation in the study depended exclusively on the willingness and consent of the participants, and specifically on the school head
Initially, the number of mainstream primary schools that were invited to take part in the study was thirty (N=30), randomly selected and located in the seven districts of Athens (i.e. North Athens, West Athens, Central Athens, South Athens, Pireaus, East Attica and West Attica). All schools were funded by the Greek state and involved children from various socioeconomic backgrounds. The schools were contacted by me and were fully informed about the aims of the study in both phases (see section 3.5.1 for further information about the process of gaining access to the schools). Nevertheless, given that the schools were recruited to this study on a voluntary basis, a number of them refused to get involved. So, the total number of mainstream primary schools that agreed to participate was twenty-three (N=23), fourteen (n=14) of them had an inclusion class attached to the school setting (cluster sampling) and nine (n=9) did not have an inclusion class. The 23 schools were funded by the Greek state, and located in two districts of Athens. Specifically, they were located in Central and South Athens, which are districts that involve children from various socio-economic backgrounds and ethnicities (e.g. Bulgarians or Albanians). So, although the aim was to include in the study 30 schools which were located in the seven districts of Athens, only those located in two districts agreed to participate and therefore the sample consisted of 23 mainstream primary schools from the districts of Central and South Athens.

During the six months period of this phase, the related data were collected gradually. Approximately thirty (N=30) mainstream class teachers agreed to take part, who taught either in year B, year C, year D or year E (ages approximately from 7½ to 11 years old), indicating the pupils who met the criteria that are presented below. Their daily and extensive experience of their pupils made them fully aware of whether or not they had an official SEN diagnosis, as well as their progress in the areas of speech and language, and
therefore they were able to indicate the pupils who would participate in this phase.

So, the mainstream class teachers were asked to nominate the pupils in their classroom who met one of the following criteria, however it was important that each nominated pupil met only one of these criteria in order to form distinct groups:

a. Any pupil who had an official diagnosis by the KEDDY service or a Greek health service, where SLD was the primary difficulty (classified into the group of pupils ‘Officially diagnosed with SLD’);

b. Any pupil who had made slow progress in the areas of speech and language such that the mainstream primary teacher had concerns, but the pupil had not been officially diagnosed as having SLD (classified into the group of pupils ‘Not officially diagnosed with SLD’);

c. Any pupil who had an official diagnosis by the KEDDY service or a Greek health service of another difficulty/SEN (classified into the group of pupils ‘Officially diagnosed with General Learning Difficulty’ or into the group of pupils ‘Officially Diagnosed with other SEN’);

d. Any pupil who had made slow progress in the area of literacy such that the mainstream primary teacher had concerns, but the pupil had not been officially diagnosed as having SEN (classified into the group of pupils ‘Not officially diagnosed with General Learning Difficulty’ or into the group of pupils ‘Not officially Diagnosed with other SEN’);

e. At least one pupil who had made typical (expected) progress as typically expected (classified into the group of pupils with ‘No Difficulty’).

Apart from the above essential criteria, there were also other characteristics which were required in the sample:

- Pupils attended either year B, year C, year D or year E. Year A pupils were excluded from the sample as these children need time to settle into their schools, while year F pupils were also not involved as they exceeded the age range of some of the applying measuring instruments;
- Pupils attended or did not attend an Inclusion class;
- Any gender;
- Monolingual or Greek was their Additional Language (GAL);
- No sensory-neural hearing loss;
- Various socio-economic backgrounds.

Given that the mainstream class teachers’ participation from the twenty three schools that took part was voluntarily, although all teachers from year B, year C, year D and Year E of these schools were asked to take part, a number of them were not willing to be involved in the study. So, the screening tool was not used as a whole school screen assessment. Instead, it was completed only by the teachers of the above years who agreed to participate and only for the pupils who met the above criteria. These aspects limited the sample size effectively and consequently the generalisability of the findings. As a result, from the twenty three mainstream primary schools, the screening tool was applied to one hundred and eleven pupils (N=111), as this was the number of children nominated by the mainstream class teachers who agreed to take part and completed the LAMP. The pupils age range was 7 years 3 months to 11 years 3 months and they consisted of seventy boys (n=70) and forty one girls (n=41).

3.2.2 Method / Measuring instrument

The teachers’ screening assessment – LAMP (Linguistic Assessment and Mapped Provision)

There is no official\textsuperscript{82} Greek standardised screening assessment measure focusing on childhood years (i.e. primary school years), which enables teachers, SLTs and other professionals to assess pupils' performance in a range of language areas (i.e. speech, syntax, semantic, use of context, non-verbal skills, inappropriate initiation and social skills). So, in this study I applied

\textsuperscript{82} ‘Official’ in terms of being examined, approved and licensed by the Greek Ministry of Education and Religious Affairs, and the Greek Pedagogical Institute (renamed Institute of Educational Policy) (Greek Government Gazette, 2011).
a systematic English screening assessment instrument, the LAMP (Nash, 2013) (see Appendix A for the LAMP English version). This teachers’ screening assessment tool was recently developed and tested in the UK, applied as a whole screen to four Plymouth mainstream primary schools of varied socio-economic backgrounds. Pupils in each school were examined at two points in the same school year, at time 1 (T1 N=676 pupils) and at time 2 (T2 N=419 pupils), with the aim of identifying those pupils showing indications of difficulties in the areas of speech, language and communication. Its structure was based upon the Communication Chain of the ELKLAN language courses (Elks and Mclachlan, 2003) which aims to help early years practitioners, teachers, parents and others, to promote and support the communication skills of all children and especially those with speech, language and communication needs.

The LAMP is easily understood and used without extensive training or specialized skills in test administration or structured observation. It is based on a simple numerical scale, where teachers make judgements of the 41 statements/items in the 4 language sections, ‘Expressive language skills’ (12 statements e.g. ‘sequencing the sounds’), ‘Receptive language skills’ (12 statements e.g. retaining auditory information’), ‘Behaviour related to SLCN’ (10 statements e.g. ‘initiating verbal communication with others’) and ‘Social skills’ (7 statements e.g. ‘maintaining a conversation with others’) between: ‘Never 0’, ‘Sometimes 1’, ‘Frequently 2’ and ‘Constantly 3’.

Teachers’ responses to the statements/items of the LAMP, elicited their assessment of pupils’ performance in speech, language and communication, based on close observation of the children and cooperation with them over a period of time (no less than 2 months). Moreover, they had to consider all the provided statements/items with regard to the developmental stage and age of the child. Scores from the above four examined areas were added to give a total score. A low total score indicated a child’s good performance and ‘typical’ development of speech, language and communication skills, while a high total score indicated difficulties in the designated areas and the need for a child’s further assessment.

Teachers were also requested prior to the statement ratings to complete a range of supplementary information for the examined child, such as a child’s
‘coded name’ or ‘year Group/Class’. Additionally, they also needed to choose (circle) their answers in the following questions: ‘Is English the first language? (yes/no)’, ‘Is there a hearing difficulty? (yes/no/unknown)’, ‘Are there difficulties with written literacy? (yes/no)’, ‘SEN status? (Universal / school action / school action + / statement)’.

Regarding the reliability of the LAMP screening tool when applied to four mainstream primary schools in Plymouth and specifically to 676 pupils at time 1 screen (T1) and 419 pupils at time 2 (T2), the Cronbach’s Alpha for the four scales of the LAMP screen showed high internal consistency level (Nash, 2013). In particular, for the ‘Expressive language skills’ scale the values were .96 for the T1 screen and .93 for the T2 screen, for the ‘Receptive language skills’ scale the value was .95 for both T1 and T2, for the ‘Behaviour related to SLCN’ scale the values were .92 for T1 and .88 for T2 and for the ‘Social skills’ scale the values were .92 for T1 and .96 for T2. The values were at least 0.91 for all scales, indicating that ratings on the LAMP items clustered coherently.

As far as concerns test Re-test reliability (Spearman's rho test retest) of LAMP over time, it was administered twice with a two week delay in Plymouth schools (during time 1 to 676 pupils and during time 2 to 419 pupils). Despite some variation in scoring individual statements/items for each subscale, the sum of screen 1 (T1) scores correlated with the sum of screen 2 (T2) scores, while the overall correlation between the screenings was highly significant at the .01 level (sig 2-tailed). Specifically, ‘Expressive language skills’ correlation coefficient was .83, ‘Receptive language skills’ correlation coefficient was .91, ‘Behaviour related to SLCN’ correlation coefficient was .77, ‘Social skills’ correlation coefficient was .86, while the mean correlation co-efficient was .84. The total comparison between screen 1 and screen 2 in all four schools where the LAMP was applied, revealed a significant mean score decrease from time 1 to 2 (p<.01), while the decrease was much larger for one particular school83 (Nash, 2013).

83 The total Mean score for the school which indicated the larger decrease from time 1 to time 2 was 32.13, while the total Mean scores of the other three schools were 9.28, 21.53 and 16.55.
Further, in the study for LAMP validation (Nash, 2013), the instrument’s validity was examined in relation to an established standardised assessment measure. Specifically, 21 children from a separate Plymouth mainstream primary school were assessed by their teachers through the LAMP and by their parents through the Children’s Communication Checklist – CCC-2 (Bishop, 2003b). The scores given by parents were totalled to form the General Communication Composite (GCC) score for each examined child. The GCC score is one of the two new composite scores of the CCC-2, is based on all of the subscales involved in the CCC-2 and is designed to identify children with clinically significant difficulties in communication (Norbury et al., 2004).

The GCC score for each child provided by parents was compared with the total LAMP score of each child. Despite the small sample (21 children), there were positive indications that the evaluations made by teachers were largely consistent with the parents’ viewpoints in 81% of cases (i.e. 17 out of the total sample of 21 children: 14 identified as having no concerns and 3 as having concerns). So, 81% of children identified/not identified through the LAMP as experiencing some communication difficulty were also identified/not identified through the GCC and by parents at a similar degree. Specifically, the statistical analysis (Pearson Rho) indicated a moderate to low correlation ($r = .491$) which was significant at the 0.05 level (2-tailed). Based on the above finding it is assumed that both teachers and parents partly observed similar indications of speech and language difficulties at school and home respectively, which indicates that the evaluations made by teachers through the LAMP screening measure were valid.

In using the LAMP, some cut-off point is required to identify children who may be considered to have a special educational need. Nash (2013) used two points as cut-off points, the top 10% and 20% of concern scores. Specifically, her cut-off score for the top 10% at T1 was 52 and for T2 was 47, while the cut-off score for the top 20% at T1 was 36 and 22 at T2 indicating thereby a significant decrease in the mean scores of children from T1 to T2. In my sample, I used Nash’s T2 cut off scores at the top 10% and 20% of concern scores. Further information regarding the cut-off points and pupils’ scores in this current study is provided in the ‘Findings’ chapter (see section 4.3).
As the instrument was administered to Greek teachers it was translated into Greek by a bilingual expert in the field of SEN and back into English, while the phrase-conceptual differences were resolved by consensus (see Appendix B for the LAMP Greek translated version). Particularly, in the section of supplementary information where the child’s coded name was requested, a footnote was added asking teachers to indicate the initials of the child’s name, as well as the gender. In the same section, two questions were also modified to fit the Greek context. So, the teachers were alternatively asked ‘Is Greek the first language? (yes/no)’ and ‘SEN status? (Official diagnosis/Non-Official diagnosis)’, as there is no Greek equivalent SEN level for universal, school action and school action plus. In addition, two questions were added. The first asked whether or not the pupil attended an inclusion class and the second question requested the type of SEN that pupils experienced (if any).

In addition, there were minor phrasing differences between the original LAMP and the Greek adjusted version, which were considered necessary in order for the LAMP to make sense in the Greek language and context. Specifically, in the scoring scale the option ‘frequently’ was translated into two similar words, in order for its meaning to be appropriately expressed into Greek. Furthermore, in the language section which concerns the ‘Behaviour related to SLCN’, the expression ‘passing on circle time’ (item No ‘e’) was omitted, as there is no relevant terminology in the Greek language. The item No ‘j’ in the same section was slightly altered and instead of ‘speaking out and is shy and over spoken’ the adjusted version stated ‘speaking out and without being shy’.

The Greek LAMP adjusted version maintained the original scoring system, with each item rated on a four point rating scale, as described in the original English LAMP. As far as concerns the validity and reliability of the translated LAMP, it was not standardised in Greek, therefore the interpretation of its findings/scoring was based on the cut-offs of the original English standardised version.

The LAMP was provided to the mainstream primary school teachers of the above years after prior agreement with the schools and having already ensured the head-teachers’, mainstream class teachers’ and parents’ consent and was collected the same way a week later. Prior to the LAMP administration, a short
written briefing about the screening tool and instructions for its completion were provided to the teachers and when requested to the parents.

### 3.2.3 Participants (sub-sample)

The LAMP revealed some essential information regarding the children’s speech and language skills and constituted an essential screening instrument for the identification of children who have difficulties in these areas. However, due to the fact that the LAMP subscales were completed only by teachers, after obtaining the LAMP scores I also examined the children’s speech and language skills directly through different measures. This was done not only in order to validate the initial LAMP identification, but also to obtain a richer profile of the children’s language functioning in a range of areas.

So, in order to proceed with pupils’ further examination, after further contact with the 23 schools, which had applied the LAMP, a number of them refused to continue and withdrew from the study. Despite all the schools being fully informed prior to the beginning of the study about its aims and what was asked of them throughout the research phases, some decided not to continue being part of this study. Although the school staff and parents were not required to justify their decision, some of the teachers suggested that their further involvement in the study could disrupt their, and their children’s, teaching programme. Additionally, some of the parents had the same concerns that children might be distressed by the examination process. This was despite reminders to all involved of the possible benefits of the children’s assessment, as they would have the opportunity to have an up-to-date profile of the child’s language progress in various areas and get feedback that could be helpful. Moreover, they were assured that the children’s assessment would take place in a quiet room in the school setting at a time when the children’s class teaching would not be disrupted. The assessment process would be conducted in a friendly environment where the pupils would feel comfortable. Despite this reassurance, 11 schools decided to withdraw from the study, which limited the power of my sample size and the generalizability of my findings.

Twelve (n=12) of the initial total of 23 schools which had applied the LAMP, agreed to continue with the study, giving their consent, along with pupils and
their parents, to the further examination of these children through language assessment measures. These mainstream primary schools were located in the same two districts, Central and South Athens, which means that the children involved had various socioeconomic backgrounds and different ethnicities, so some children had Greek as their additional language (GAL). Eight (n=8) of these schools had an inclusion class attached to the school setting (cluster sampling) and four (n=4) of them did not have an inclusion class.

Although at this point the mainstream class teachers did not take an active part in the study, their cooperation was essential as they facilitated the pupils’ examination. In close collaboration, the pupils’ individual assessment was arranged at a convenient time, where the pupils’ school programme was not disrupted. In particular, eighteen (n=18) mainstream class teachers of the initial total of 30 (approximately) who applied the LAMP and taught either in year B, year C, year D or year E, agreed to continue participating in the study.

Table 1. Phase 1 sample, measures and range of LAMP total scores.

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>SAMPLE (ALL)</th>
<th>SUB-SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instruments</strong></td>
<td>Teachers’ screening assessment (LAMP) (Nash, 2013)</td>
<td>Athena Test (Diagnosis of Learning Difficulties) (Paraskevopoulos and Paraskevopoulou, 2011) &amp; Matrices/BAS II (Elliot et al., 1997)</td>
</tr>
<tr>
<td><strong>Schools</strong></td>
<td>23 mainstream primary schools funded by the Greek state, from 2 out of 7 districts of Athens</td>
<td>12 mainstream primary schools funded by the Greek state, from 2 out of 7 districts of Athens</td>
</tr>
<tr>
<td><strong>Schools with/without inclusion classes</strong></td>
<td>Inclusion classes: 14</td>
<td>Inclusion classes: 8</td>
</tr>
<tr>
<td></td>
<td>No Inclusion classes: 9</td>
<td>No Inclusion classes: 4</td>
</tr>
<tr>
<td><strong>Teachers</strong></td>
<td>30 mainstream class teachers of year B, year C, year D and year E</td>
<td>18 mainstream class teachers of year B, year C, year D and year E</td>
</tr>
<tr>
<td><strong>Pupils</strong></td>
<td>111 pupils (70 boys / 41 girls)</td>
<td>45 pupils (27 boys / 18 girls)</td>
</tr>
<tr>
<td></td>
<td>Age range: 7;3 to 11;3</td>
<td>Age range: 7;3 to 11;3</td>
</tr>
<tr>
<td><strong>Minimum total score (LAMP)</strong></td>
<td>3 (‘No difficulty’ group of pupils)</td>
<td>4 (‘No difficulty’ group of pupils)</td>
</tr>
<tr>
<td><strong>Maximum total score (LAMP)</strong></td>
<td>113 (‘other SEN’ group of pupils)</td>
<td>97 (‘SLD’ group of pupils)</td>
</tr>
</tbody>
</table>
Forty-five pupils (N=45) of the initial total of 111 pupils for whom the LAMP was initially applied, were further assessed. Twenty seven (n=27) of these pupils were boys and eighteen (n=18) girls, while their age range was 7 years 3 months to 11 years 3 months. Table 1 summarises the details of the schools and participants who agreed to continue participating in the study, together with details of the schools who only applied the LAMP. Additionally, the minimum and maximum LAMP total scores of pupils who took part in the first phase of the study are provided, as well as the groups of pupils who received these scores.

As indicated in Table 1, the minimum LAMP total score of pupils to whom the LAMP was applied was 3, received by two pupils who progressed as typically expected, and the maximum LAMP total score was 113, received by a pupil who was indicated by her teacher as having SEN but who did not have an official diagnosis. Additionally, the minimum LAMP total score of pupils who were further examined through the Athena Test and Matrices task (BAS II) was 4, which was received by a pupil whose speech and language functioning followed the typical development, while the maximum LAMP total score was 97 received by a pupil who was indicated by his teacher as experiencing SLD, but was not officially diagnosed.

As in the LAMP sample, the pupils who were further assessed met only one of the following criteria:

a. Any pupil who had an official diagnosis by the KEDDY service or a Greek health service, where SLD was the primary difficulty (classified into the group of pupils ‘Officially diagnosed with SLD’);

b. Any pupil who had made slow progress in the areas of speech and language such that the mainstream primary teacher had concerns, but the pupil had not been officially diagnosed as having SLD (classified into the group of pupils ‘Not officially diagnosed with SLD’);

c. Any pupil who had an official diagnosis by the KEDDY service or a Greek health service of another difficulty/SEN (classified into the group of pupils ‘Officially diagnosed with General Learning Difficulty’ or into the group of pupils ‘Officially Diagnosed with other SEN’);
d. Any pupil who had made slow progress in the area of literacy such that the mainstream primary teacher had concerns, but the pupil had not been officially diagnosed as having SEN (classified into the group of pupils ‘Not officially diagnosed with General Learning Difficulty’ or into the group of pupils ‘Not officially Diagnosed with other SEN’);

e. At least one pupil who had made typical (expected) progress as typically expected (classified into the group of pupils with ‘No Difficulty’).

Apart from the above criteria, there were also other characteristics which were required in the sample:

- Pupils attended either year B, year C, year D or year E. Year A pupils were excluded from the sample as these children need time to settle into their schools, while year F pupils were also not involved as they exceeded the age range of some of the applying measuring instruments;

- Pupils attended or not attending an Inclusion class;

- Any gender;

- Monolingual or Greek was their Additional Language (GAL);

- No sensory-neural hearing loss;

- Various socio-economic backgrounds.

Taking into consideration that factors related to the children’s environment, such as the socio-economic context of the family, may influence their speech and language profile and educational attainments (Roulstone et al., 2011; Snowling et al., 2011), the pupils who were examined in depth in this phase were subclassified into groups based on their socio-economic status (SES). Given that the mainstream primary schools involved in the study did not have any official data, derived from any national surveys, which would verify pupils’ socio-economic status, the schools relied on parental education and/or occupation, which were made known to them through personal communication with the pupils’ parents.
As a result the socio-economic groups formed in this study were based on head teachers’ and mainstream class teachers’ information regarding parental education and occupation of parents of the pupils who were further examined in this phase. Three groups were identified based on this information regarding parental education and occupation. The ‘low socio-economic status’ group involved pupils whose parents received basic education (i.e. primary and secondary), were unemployed, or at least one of them worked part-time or full-time. The ‘medium/average socio-economic group’ involved pupils whose at least one of their parents received tertiary education and at least one of them worked part-time or full-time and in the ‘high socio-economic status’ group were included pupils whose parents (both) received tertiary education, at least one of them received postgraduate education, and both of them worked full-time.

3.2.4 Methods / Measuring instruments

Athena Test - Diagnosis of Learning Difficulties

As analysed previously, the LAMP provided an important overview of the pupils’ speech and language functioning, identifying at the same time the pupils whose performance indicated inefficiencies in these domains. However, it was considered important to go beyond the teachers’ reports on the LAMP, to identify performance on various aspects that are intimately related to speech and language development, in line with similar studies in the field of SLD (Conti-Ramsden and Hesketh, 2003; Goodson, 2011). So, it was decided to examine further the children’s intellectual ability, phonological, semantic and morphosyntactic skills, auditory verbal short-term memory, neuropsychological maturity and non-verbal reasoning ability.

There is a great range of well known and reliable English language assessment measures, such as the Clinical Evaluation of Language Fundamentals III and IV (CELF-3\textsuperscript{UK} and CELF-4\textsuperscript{UK}) (Semel et al., 2003, 1995), the British Picture Vocabulary Scale: Second Edition (BPVS II) (Dunn et al., 1997), the Word Finding Vocabulary Test (Renfrew, 1995) or the Test for Reception of Grammar (TROG-2) (Bishop, 2003c) designed to examine specific components (e.g. receptive and expressive vocabulary) and to provide an accurate and complete picture of language functioning for a wide age range. Nevertheless, translating a
measure developed in English posed problems as translating a language test from one language to another raises further problems about appropriateness given the language differences. In the Greek context there is a lack of standardised quantitative measures with known validity and reliability which focus entirely on speech and language evaluation. This presented a problem in selecting an appropriate measure. There are a few existing measures which are developed and standardised in Greece or adapted for the Greek language (Mouzaki et al., 2006; Zakopoulou, 2003). But, these focus on speech and language evaluation of preschoolers, they are not easily accessible and their administration requires a speech and language therapist or extensive training.

Given these problems, the Athena Test – Diagnosis of Learning Difficulties (Paraskevopoulos and Paraskevopoulou, 2011) (see Appendix C for an overview of the Athena Test subscales) was finally selected and administered in this study, as the best available measure. Although it does not provide a thorough assessment of speech and language functioning like the range of international assessment measures that were mentioned above, it is a measure widely used in the Greek system (Agaliotis and Kalyva, 2008; Kalyva and Agaliotis, 2009; Koumoula et al., 2004; Rekalidou and Pliogou, 2006; Zisimopoulos and Galanaki, 2009). It provides ‘a detailed picture of the child’s present situation in vital sectors of growth and located concrete areas that are deficient, and require particular teaching/therapy intervention’ (Toki and Pange, 2012, p. 842). In particular, the Athena Test assesses the level and rate of children’s development in terms of intellectual ability, memory of sequences, completion of representations, writing-phonological awareness and neuro-psychological maturity.

The design of the Athena Test, was based on two other tests, the Illinois Test of Psycholinguistic Abilities (ITPA) (Kirk et al., 1968) and the Aston Index (Newton and Thomson, 1982, 1976). The ITPA was designed in the USA as a battery of psycholinguistic and communication functioning, highly influenced by Osgood’s theory of language84, while various studies provided useful information

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84 According to Osgood’s (1957) model, language is divided into three levels, projection, integrational and representational, and into three processes decoding, association and encoding. The ITPA test applied two of the above levels, the integrational and representational
regarding children’s language functioning through the administration of ITPA’s subtests (Bonica et al., 2003; Botting et al., 2001; Estil et al., 2003; Lahey and Edwards, 1999; Ottem and Jakobsen, 2004; Stowe et al., 1999). Despite the popularity of the test for the examination of children’s psycholinguistic abilities and difficulties, the identification of its predictive and concurrent validity remained highly questionable (Newcomer et al., 1975). Further weaknesses have been identified with the three levels of language, which arose from the model of language that was used in the ITPA, to explain adequately the hierarchy in the process of learning, as well as to identify the underlying language deficits (Kass and Maddux, 2005).

In contrast to the ITPA, the Aston Index (Newton and Thomson, 1982, 1976) was not based on a specific psycholinguistic model/approach of language development. It constitutes a battery of tests designed to screen and identify children who may experience written language difficulties and particularly dyslexia (Brookes and Stirling, 2005; O’Hare, 2010; Undheim, 2009). Although the Aston Index along with the ITPA focused mostly on the sequencing and auditory processes offering a broad indication of language skills, they both enable the capture of essential aspects of language development.

The version of the Athena Test (2011) applied in this particular study was re-standardised in a national sample eleven years after its development and initial standardisation (Paraskevopoulos et al., 1999). The sample involved in the re-standardisation process consisted of 587 children, aged approximately from 5 years to 9 years and 11 months, attending the two years of nursery school and year A, year B, year C and year D of mainstream primary education, from various areas of Greece. The Athena Test indicated high internal validity and split-half reliability (between .80 and .90) (Kalyva and Agaliotis, 2009). In the latter standardised version of the Test, minor phrasal modifications were made in a few items of the subscales and the assessment material. Further, the tables in the formulation of subtests which examined children’s skills, while it also involved subtests for the above processes. According to Kirk and McCarthy, two of the ITPA authors, every subtest in the ITPA ‘tests for a level, a process and a sensory channel in psycholinguistic functioning’ (Kass and Maddux, 2005, p. 84).
related to the raw scores, ability scores and age equivalents were modified based on the findings emerged from the re-standardisation of the Test.

The Athena Test consists of fifteen psychometric subscales which can be administered to children aged from 5 years to 9 years and 11 months. The test can be administered individually in its full, short or a selective form, according to the examiner’s intentions. In this particular study, the Athena Test was administered in a selective form, where 10 of the overall 15 subscales were applied to the children, as the aim was to identify various aspects of the children’s language-related functioning. Overall, all five developmental areas provided by the test were examined: intellectual abilities; memory of sequences; completion of representations; writing-phonological awareness; and neuro-psychological maturity. The 10 subscales provided in the selective form of the Test used in this study were as follows:

**Linguistic/Language proportions** subscale, which constitutes a verbal analogies test and was selected because it assessed children’s intellectual functioning level. In particular, it examined children’s ability to analyse and link words logically (e.g. *The desk has drawers, the trousers have ...* the child was asked to answer what the trousers have i.e. *pockets*),

**Vocabulary** subscale, which is also a verbal ability test showing children’s understanding of abstract word meanings, was selected because, similarly to the previous subscale, it examined children’s intellectual ability. Specifically, it assessed children’s word concept organisation, in terms of the semantic variety and deduction-generalisation of meanings/concepts (the children were asked to explain the meaning of the provided words e.g. *neighbours, or coward*),

**Memory of numbers** subscale, which required digits recall, and **Common sequences** subscale, which asked the children to name days/months and count the scale up and down, were selected as they measured children’s short-term memory, processing speed, sequencing ability and retrieval of information from long-term memory,

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85 For example, when the examiner seeks to identify a child’s intellectual ability the scales Linguistic proportions, Copying shapes, Vocabulary and Memory of numbers are administered.
Sentence completion subscale was selected because it measured children’s expressive language, as well as decoding and comprehension abilities. Specifically, the children were asked to complete the missing part from each phrase they heard (e.g. In the ending of a fairytale we say: And they both lived happily... the child should answer ever after),

Word completion subscale was selected because it examined children’s expressive language and semantic knowledge. In particular, it assessed the children’s ability to ‘utilize’ their ‘linguistic experience’ and language’s redundancies to complete gaps in linguistic material (the children were asked to guess and articulate the incomplete word e.g. iver instead of river),

Discrimination of graphemes subscale was selected as it examined children’s writing-phonological skills. Specifically, the children were asked to look carefully at each pair of pseudo words and check with the pencil the letters of the words which were different in the pair (e.g. κύση – κόση the child should check κύση – κόση),

Discrimination of sounds / or Phonetics discrimination subscale, the children were asked to identify whether the pseudo words of each pair he/she heard were similar or different to each other (e.g. asimas – azimas)\(^86\) and Composition of sounds / or Phonetics composition subscale assessed children’s ability to connect graphemes and form words (the children were asked to articulate the word by composing the graphemes he/she hears e.g. s-t-a-r). Both subscales were selected because they assessed children’s phonological awareness and phoneme/grapheme knowledge.

Perception of right-left subscale was selected because it examined children’s neuropsychological maturity. Neuropsychological assessment was considered important as it provides critical information regarding the integrity of children’s central nervous system and reveals processing deficiencies that could contribute to developmental and learning difficulties (Black and Stefanatos, 2000; Stefanatos and Black, 1997). This particular task assessed the children’s

\(^86\) However a distinctive difference of this subscale was the fact that each child was asked to sit with his/her back to me in order to avoid the possibility of lip-reading.
ability to distinguish the right and left part of his/her body (e.g. the child was asked which one is your left hand?).

The majority of the above scales require the oral examination of each child\textsuperscript{87}. Regarding the evaluation of responses, most of the subscales have a quantitative scoring, with the child’s responses graded with ‘1’ point when correct and ‘0’ points when incorrect. Nevertheless, the subscales Vocabulary, Memory of numbers and Discrimination of graphemes have a differentiated scoring, as a child’s correct answer can either receive ‘1’, ‘2’, ‘3’ or ‘0’ points. Further, the child’s performance on subscales Common sequences and Perception of right-left was not evaluated through definite numerical rates but was mostly based on qualitative descriptions, such as efficient / not efficient performance or efficient / not efficient perception of right-left.

To get the total scores of each of the quantitative subscales, the examiner adds the subscale item scores to calculate the total score for each of them. The total scores constitute the raw scores of each subscale which are converted to ability scores and then to age equivalent for each subscale, based on the tables provided in the examiner’s scoring manual supplied with the test. Higher total scores in each subscale indicate a good or exceptional performance, while lower total scores indicate low or inadequate performance. Apart from the Vocabulary subscale, where the total score is 40, the total score for the remaining quantitative subscales is 32\textsuperscript{88}. Unlike other standardised, international tests, norms provided in the Athena Test are not age specific, but generalised across the age range. As the Athena Test did not provide T-scores and percentiles equivalents of children’s scores, children’s performance in the subscales was reported in terms of the age equivalents of their scores. However, this reduces the sensitivity of the Test to children who belong in different age levels.

\textsuperscript{87} The only subscales which require a child’s written involvement is the Discrimination of graphemes and Visual coordination.

\textsuperscript{88} Apart from the Vocabulary subscale, the total score of the Copying shapes subscale, which was not applied in the study, is 36.
I was authorised to administer the Athena Test after receiving extensive training by the Athena Test authors and obtaining the required ‘certificate of efficiency’. The test was administered individually to the 45 pupils, while the duration of administration for each pupil varied from 45 to 55 minutes. Although this particular test, as already mentioned, can be administered to children from 5 years to 9 years and 11 months, it can be also applied to a broader age range (all years of primary school and early secondary school) when pupils experience moderate or serious difficulties in learning (Paraskevopoulos and Paraskevopoulou, 2011). Since in this study the age range of the pupils examined with this test, as mentioned in the previous section was 7 years and 3 months to 11 years and 3 months, special care was given in the interpretation of the test scores of children older than 10 years old as there was limited standardised information available.

The test was administered in any quiet room in the school settings at a time where the pupils’ school programme was not disrupted, having previously obtained the head-teachers’, mainstream class teachers’, parents’ and pupils’ approval. Prior to the administration of each subscale pupils were given clear oral instructions regarding their completion, while two sample items were also provided before the administration of each subscale as practice items to ensure that the pupils understood what was required.

**The Matrices / British Ability Scale (BAS II)**

The School Age British Ability Scale / BAS II (Elliot et al., 1997), developed in the UK, has achieved great acceptance and applicability, especially by psychologists, in the assessment of children’s general cognitive abilities (Pollock et al., 2004; Turk et al., 2007). Designed for children and young people aged from 5 years to 17 years and 11 months, it examines cognitive functioning which is essential for children’s learning performance, in a range of scales measuring verbal ability, non-verbal reasoning ability and spatial ability.

Although the scores from the abilities measured in the test can be combined, providing thereby an overall General Conceptual Ability (GCA), BAS II can also be administered in a shorter form, selecting particular tasks based on the examiners’ aims (Chiat and Roy, 2008; Dockrell and Shield, 2012; Dockrell et
Due to lack of a task, within the Athena Test framework, that measures children’s non-verbal reasoning, the administration of the Matrices task from the BAS II enabled the assessment of this ability (see Appendix D for a sample item). Non-verbal reasoning was assessed for two reasons. Reasoning abilities have been assessed when examining speech and language difficulties to see if these difficulties are specific and not part of wider learning and conceptual/intellectual difficulties (associated with the area of General Learning Difficulties). Non-verbal reasoning skills are also seen as less influenced by language proficiency, so the use of a figural analogies measure is also appropriate (Lindsay and Dockrell, 2000; Lindsay et al., 2010a; Messer and Dockrell, 2011).

BAS II for Early Years and School Age was standardised in 1995, with a sample of 1,689 children. Construct validity of the test was supported by confirmatory and exploratory factor analyses, while its data clearly supported the three factor model (i.e. verbal, non-verbal, spatial) for children of School Age (Kaufman and Kaufman, 2001).

Applied in addition to the Athena Test, the Matrices task, which was administered individually, is designed to measure figural analogical reasoning. This involves the person in identifying patterns/abstract figures, formulating and testing the rules governing the relationships of figures. Specifically, in this task, children were shown an incomplete matrix of black and white abstract figures, with each matrix consisting of either four or nine cells. They were required to select the most appropriate pattern to complete the matrix from six potential tiles by pointing to or reading the number of the tile that best completed the matrix (perception of size, shape and orientation). Less than three failures on all items given to the children indicates that they should continue to the next ‘Decision Point’ of the scale, while less than three passes on all items given indicate going back to the previous ‘Starting Point’. The test is discontinued if the children make five failures out of six consecutive items.

As the test was not standardised in Greek, the interpretation of its findings/scoring was based on the values of the English standardised version. Each correct response was given ‘1’ point and ‘0’ points for every incorrect response. At the end of the test, an ability score for each child, which was
taking into account the number and level of difficulty of the test items completed by the child, was converted to age equivalent, T-score and percentile, indicating the children’s performance on the task.

The Matrices task was administered to the pupils individually, after the completion of the Athena Test and having ensured in advance their approval for completing this test, along with the pupils mainstream class teachers’ and parents’ approval. Prior to its administration, pupils were given clear instructions regarding the task including four practice items. Pupils were examined under the same conditions for the Athena Test.

3.3 Phase 2

The overall purpose of the explanatory sequential design of this study and specifically of the applied participant selection model\(^9\) (Creswell and Plano Clark, 2011), was the identification of children experiencing SLD in the first phase and the description of the provision offered to these pupils in the second phase. The quantitative results from phase one were used to guide purposeful sampling for the second, qualitative phase. So, having completed, in the first phase, the analysis of the teacher-reported SEN types of pupils screened through LAMP and the analysis of the results that emerged from the assessment of a number of these pupils using the Athena Test and Matrices task, I moved to the ‘point of interface for mixing’ (Creswell and Plano Clark, 2011, p. 83), the second phase of the study. In this design the emphasis in the qualitative phase of the study was on in-depth description of the provision offered to pupils with SLD, but it also used quantitative results from the previous phase for additional explanations regarding the nature of these pupils’ difficulties. During the two months period of this phase, the related data were collected gradually.

This phase involved a qualitative multiple (or comparative) case study design, where more than one case is studied (Stake, 1995; Yin, 2009). Creswell described case study as ‘an exploration of a bounded system or a case (or

\(^9\) Alternatively it is called Quantitative preliminary design (Morgan, 1998).
multiple cases) over time through detailed, in-depth data collection involving multiple sources of information rich in context' (1998, p. 61). The multiple case study framework which was applied in this study, enabled the examination of several cases in order to understand the similarities and differences within and between them (Baxter and Jack, 2008). According to Yin, it is important to carefully select each case in order ‘to predict similar results (a literal replication) or to predict contrasting results but for anticipatable reasons (a theoretical replication)’ (2009, p. 54). In this study the purposeful selection of pupil-case studies and their in-depth examination enabled important comparisons between pupils with SLD, and pupils with General Learning Difficulties (GLD) and Specific Writing difficulties (SpWd), while further comparisons were also drawn between those pupils who were formally diagnosed or not. Within this framework the study aimed to provide supplementary but significant information that concerned the nature of pupils’ difficulties and to identify the provision offered to the pupils with SLD in the primary mainstream settings, drawing comparisons within and between the cases.

In particular in terms of the provision context, the study aimed to explore:

1. How did the case study pupils come to be identified as having SLD, General Learning Difficulties and Specific Writing difficulties?

2. Are there any differences between pupils having SLD, General Learning Difficulties and Specific Writing difficulties in terms of the support, and the teaching and learning practices provided to them at different years?

3. Are there any differences in the academic (i.e. speech/language and literacy) attainments of the case study pupils identified with SLD, General Learning Difficulties and Specific Writing difficulties?

4. To what extent do case study pupils’ social participation and peer acceptance relate to the difficulties they have?

In this study the inclusion of similar and contrasting multiple cases enabled the exploration of the existing Greek educational framework for pupils with SLD and offered details of the participants’ perspectives through the use of different sources of data and data collection procedures in a real world setting.
Moreover, there was little or no control by myself of the participants or situations studied (Creswell, 1998; Hall, 2008), as I endeavoured to minimise the impact of my presence in the mainstream and inclusion class.

This kind of multiple case study design enabled not only the data selection from multiple sources for this phase (including teacher interviews and questionnaires, pupil questionnaires and informal assessment tasks, documents related to school tasks and observation notes), it further enabled the incorporation of qualitative evidence with the quantitative data derived from the first phase of the study (using these particular pupils’ screening assessment and in-depth examination of their language functioning), thus allowing a detailed comparison of the cases.

Yin (2004) argued that case studies rely on various sources of evidence, ‘with data needed to converge in a triangulation fashion’ (2004, p. 13). The benefits from various and different sources of evidence in this study enabled ‘cross-case and inter-site comparisons’ (ibid.), corroborating the findings that emerge from one case with more than a single source of evidence and comparing these findings across the cases. So, this data triangulation, combining ‘within-case’ and ‘cross-case’ analyses, enhanced the construct validity and stability of the findings, while illuminating meanings and offering insights that can be interpreted as tentative hypotheses assisting future research in the field of SLD (Merriam, 2001).

3.3.1 Participants

As discussed previously, the sample of this phase was purposefully selected, based on the initial quantitative results, in order to reflect the research aims that were explored at this stage of the study. An essential parameter of this phase was to define what quantitative results from the initial stage, would be further explored through the qualitative data collection. So, the follow-up case studies framework enabled in-depth examination of the quantitative statistical findings, which concerned the nature of the pupils’ SEN and their language profile.

So, in order to identify the children who would constitute the case studies in this phase, teachers’ reports about pupils’ SEN type were used, in addition to the pupils’ scores from the Athena Test and Matrices task. Consequently, seven
pupils (n=7) from six (n=6) mainstream primary schools of the initial total of forty five (N=45) pupils from twelve (N=12) schools who were further examined in the previous phase, located in two out of seven districts of Athens, were purposefully selected and constituted the case studies of this phase.

Later in this section further explanations are provided regarding why each of the seven pupils was purposefully selected as the cases studies in Phase 2. Nevertheless, at this point it is necessary to mention that the six mainstream primary schools which continued to be part of the study in this phase were located in the same two districts, Central and South Athens, involving children from various socio-economic backgrounds. Nevertheless, children whose Greek was their additional language were excluded from the sampling of this phase, as despite Phase 1 finding that no significant differences in the language profiles of the monolingual and bilingual children who were involved in the study, it was essential to ensure that this factor would not have an effect on pupils' language profile.

In addition, it should be made clear that although the intention was to include both males and females pupils in the sample of this phase, so that to have a good/fair corresponding between them, only one girl was included in the case studies, a point which is a limitation of the study. Although involving more than one female pupils, either identified with SLD, GLD or SpWd, could provide more evidence regarding the speech/language profile of girls and possibly shed more light onto the findings of Phase 1 which revealed no significant differences in the language functioning of boys and girls, the time framework of the study did not allow this.

The pupils who constituted the cases studies are given in Table 2.

Table 2. Phase 2 case study pupils.

<table>
<thead>
<tr>
<th>Case studies</th>
<th>SLD</th>
<th>General Learning Difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Officially Diagnosed</strong></td>
<td>Nick</td>
<td>John</td>
</tr>
<tr>
<td></td>
<td>Helen (attended the same school with Nick)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jim</td>
<td></td>
</tr>
<tr>
<td><strong>Not officially diagnosed</strong></td>
<td>Simon</td>
<td>George*</td>
</tr>
<tr>
<td></td>
<td>Steven</td>
<td></td>
</tr>
</tbody>
</table>

NOTES: *Specific Writing difficulties
There were also other characteristics that were required in the sample that constituted the case studies:

- Attended either year B, year C, year D or year E,
- Attended or not an Inclusion class,
- Any gender,
- No sensory-neural hearing loss,
- Greek was their first language,
- Any socioeconomic background

In the following paragraphs, I outline the nature of the pupils’ difficulties based on their mainstream and SEN teachers’ descriptions, and the key criteria for selecting them. All names have been anonymised. Further information about these pupils scores from LAMP, Athena Test and Matrices test is provided in the ‘Findings’ chapter.

**Three pupils (n=3) who were officially diagnosed with SLD**

*Case study: Nick*

Nick was a 7 years and 5 months old boy attending year B of a mainstream primary school. He was selected as one of the case studies as he had an official diagnosis of SLD, assessed by a health service in 2010 and it was the 2nd year for him attending the inclusion class. Apart from his noticeable difficulties with his expressive and receptive language skills (for example, poor language, when narrating he stammered or hesitated), he found it difficult to distinguish certain letters, and he experienced problems with literacy and especially writing and comprehension/text understanding. In particular, he could not follow grammar rules or instructions, his handwriting was wobbly, he could not keep appropriate distance between words when writing a sentence and he made spelling mistakes.
Case study: Helen

Helen was a 7 years and 5 months old girl, who attended year B. She was selected as one of my case studies because she attended the same mainstream primary school as Nick and co-attended the inclusion class with him for a second year (they did not attend the same mainstream class). Her selection enabled me not only to identify the nature of her difficulties and the provision offered to her, but also to compare these aspects with Nick’s profile. Another key criterion for her selection was her official diagnosis of SLD, assessed by KEDDY in 2010. According to her SEN teacher, when Helen attended the nursery school teachers suggested to her parents that she repeat the 2nd year of nursery school\(^{90}\), as her speech and language development was extremely slow. However, her parents did not agree and therefore she proceeded to year A of primary education without any delay. According to the diagnosis made by KEDDY she had SLD and, in particular, difficulties in processing information (lack of coherence/facts reasoning). Her vocabulary was very poor, she could not form more complex sentences while she often struggled to find the appropriate words and structure simple sentences. She also struggled with her reading and written language skills as she could not read fluently words and small texts. It was difficult for her to form simple sentences by following the rules of grammar and syntax, she made spelling mistakes and sometimes she could not follow the proper direction of letters when writing. According to the suggestions made by KEDDY, Helen could benefit from speech and language therapy, enhancement of emotional organisation, emotional abilities, and academic skills and ‘smooth’ inclusion to the social environment.

Case study: Jim

Jim was an 8 years and 7 months old boy who attended year C of a mainstream primary school. He was selected as one of my case studies, because he was officially diagnosed with SLD, assessed in 2011 by a health service when he attended year B, after his mainstream class teacher’s continuous

\(^{90}\) According to the Greek educational system the nursery school requires two years of attendance.
recommendations to his parents (especially his mother). So, Jim contrasts with Nick and Helen who were officially diagnosed with SLD before attending year A. Despite his difficulties, he attended the inclusion class when he was in year B, unlike Nick and Helen who attended the inclusion class earlier than him, in year A. He did not attend the inclusion class earlier because of his parents’ refusal to give their permission for this. According to his SEN teacher, the reason that led Jim’s parents to refuse his attendance in the inclusion class in the past, was the fact that when Jim attended the nursery school he used to attend the inclusion class the school had, but according to his mother, his peers were quite critical towards him because of the communication difficulties that he experienced. According to the diagnosis made by the health service, Jim experienced difficulties with his expressive and receptive language skills. Despite the essential recommendations made by the health service for Jim’s further educational support, such as a certain number of hours for speech and language therapy, according to Jim’s mainstream class teacher his family did not follow the service’s recommendations and as a result most of the time he could not follow his classmates. Jim also experienced difficulties with his reading, writing and maths, memorising troubled him and his knowledge regarding the taught curriculum was quite poor.

Two pupils (n=2) who progressed quite slowly in the areas of speech and language but they had not been officially diagnosed as having SLD

Case study: Simon

Simon was an 8 years and 2 months old boy who attended year B of a mainstream primary school. He was selected as one of my case studies because although he experienced difficulties with his speech and language functioning he was not assessed by a diagnostic or health service, while he attended a school that did not have an inclusion class. This meant that despite his difficulties he did not receive any specialised support within the mainstream school setting. According to his mainstream teacher he did not receive any further speech and language support outside the school, although she discussed this possibility with his mother who insisted on supporting Simon herself. Another reason for selecting him was that although his total score in LAMP was quite high (79), his performance in the Athena Test subscales was
below his age or within the average, while in the Matrices task his performance was slightly above his age. He experienced difficulties with his speech and language skills (expressive and receptive).

Simon often tried unsuccessfully to express himself, failing to structure appropriately his expressive language, therefore his language was often quite simplistic, his vocabulary quite poor, while sometimes he was not able to follow his teacher’s instructions and answer her questions. Although his reading and spelling skills were improved, his handwriting was quite immature, while he struggled with essay’ writing. Particularly, his texts and assignments included only a few sentences, their syntactic structure similarly to his oral language had a very simple, pared down structure (i.e. only subject, verb and object, no adjectives or adverbs) and were not enhanced with new words (i.e. words taught in the classroom).

**Case study: Steven**

Steven was an 8 years and 11 months old boy who attended year C of a mainstream primary school. He was selected as one of my case studies because his LAMP total score (59) was within the top 10% concern scores and his performance in the Athena Test was rather low. Moreover, Steven’s mainstream teacher and SEN teacher recommended his attendance in the inclusion class, while his parents’ were doubtful and so prevented this move. This difference of view made him an ideal candidate for inclusion in the case studies.

Steven experienced difficulties with his expressive and receptive language skills, as sometimes he could not express himself properly (e.g. he could not choose the appropriate words or could not use the appropriate verb tense), link his language/phrasing appropriately (i.e. correct syntactic structure), comprehend the speaker (e.g. unable to follow a task’s instructions that are provided orally by the teacher) or maintain a conversation. Further, he struggled with writing and reading. Specifically he made grammar mistakes (e.g. missed the proper ending in verbs tenses), it was difficult for him to form appropriately a text or enhance a sentence (e.g. he often did not use commas or the grammar character ‘and’), while the content of his sentences was not always coherent,
especially in longer and more complex texts. As far as concerns his reading skills, he tended to stammer in longer words or words that he did not meet often in texts or in everyday life.

One pupil (n=1) who was officially diagnosed with General Learning Difficulties (GLD)

Case study: John

John was an 8 years and 8 months old boy who attended year B of a mainstream primary school. He was selected as one of my case studies because he has been officially diagnosed with General Learning Difficulties since 2010 (before entering primary education) by a health service, after his mother’s referral. Although he was also examined by KEDDY service in 2011, during the period of the study he had not received the KEDDY diagnosis. He repeated year A, after his teachers’ and family agreement, in an attempt to be further supported in literacy. However, it was notable that he did not like repeating the same year and as a result, according to his mainstream teacher and SEN teacher, when asked by them he insisted that this repeating never happened again. It was the second year of him attending the inclusion class.

Despite his fluency, John struggled to set his thoughts in the right order and as a result sometimes he could not express himself properly in oral language, while it was also difficult for him to maintain a conversation or keep to a joint topic of conversation. He had serious problems in written language, he made spelling mistakes, used to skip letters, attach words or mix diphthongs, while he struggled to follow grammar rules. Although when writing simple sentences he often formed them properly (i.e. syntactically), it was very difficult for him to structure more complex sentences. Although his teachers highlighted his improvement in reading, stammering was still evident for him. Apart from the difficulties he experienced across the curriculum, memorising appeared to be problematic for him. Although he was a very social child quite often his behaviour towards his peers could be contentious.
One pupil (n=1) whose literacy level was low but had not been officially diagnosed as having Specific Writing difficulties (SpWd)

**Case study: George**

George was a 9 years and 8 months old boy who attended year D of a mainstream primary school. He was selected as one of my case studies due to his performance in Phase 1 of the study - specifically, the fact that his LAMP total score was rather low (27), his performance in a number of the Athena Test subscales was below his age, while his non-verbal reasoning skills (i.e. Matrices task) were above his age. In 2011 his parents applied to the KEDDY service to examine his difficulties in writing skills. During the period of the study George had not been assessed and therefore he did not have an official diagnosis of SEN, while he attended the school's inclusion class.

George did not have SLD, however his expressive language was inadequate as sometimes he could not pronounce clusters of consonants or use the correct verb tense in narrations. His difficulties concerned the field of Specific Writing difficulties, as he experienced serious problems with his writing skills. Specifically, George experienced difficulties in structuring sentences as he tended not to follow the rules of grammar and syntax and consequently difficulties in organising and structuring the sentences’ meaning, especially in his assignments. Apart from his struggle with areas of grammar such as verbs (e.g. proper tense and ending) or pronouns, his handwriting was also problematic. In contrast his reading skills were improved however, he tended to stammer over complex or unknown words.

**Other participants**

Apart from the above pupils, other participants in this phase were the mainstream class teachers and SEN teachers who were teaching these pupils in the mainstream classroom and the inclusion class respectively. Therefore, seven (N=7) mainstream class teachers and four (N=4) SEN teachers, who were teaching the pupils who attended an inclusion class, took part in this phase, providing essential information related to the existing Greek educational framework for pupils with SLD. Moreover they provided evidence regarding the teaching practices applied by them in the mainstream and inclusion class, while
they also offered important information related to the pupils’ difficulties, their academic achievements, social participation and relationships with their peers.

### 3.3.2 Assessments / Measuring instruments

The quantitative results that emerged from the first phase not only guided the purposeful sampling of cases for Phase 2, but were also used as further evidence about the nature of difficulties experienced by the case study pupils. So, in Phase 2 the use of multiple data sources and triangulation of these sources enabled corroboration of the data sources.

As mentioned in a previous section, the multiple case study design employs a range of different methods of data collection. Although this design usually relies on qualitative data, its flexibility allows also the use of various methods, either quantitative, qualitative or both (Cassell and Symon, 2004; Hall, 2008).

Table 3 summarises the aims of Phase 2 and the data collection instruments used:

**Table 3. Phase 2 Research Questions and data collection instruments.**

<table>
<thead>
<tr>
<th>Phase 2 Research Questions</th>
<th>Phase 2 Data Collection Instruments</th>
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</table>
| 1. How did the case study pupils come to be identified as having SLD, General Learning Difficulties and Specific Writing difficulties? | • Pupil case studies scores (quantitative data) from LAMP, Athena Test and Matrices test/BAS II (obtained in Phase 1)  
• Mainstream class teachers’ and SEN teachers interviews  
• Schools’ literacy tasks/pupils’ assignments  
• Task for informal speech and language assessment (Karakitsios et al., 2011) |
| 2. Are there any differences between pupils having SLD, General Learning Difficulties and Specific Writing difficulties in terms of the support, and the teaching and learning practices provided to them at different years? | • Mainstream class teachers’ and SEN teachers interviews  
• Observation (mainstream and inclusion class) |
| 3. Are there any differences in the academic (i.e. speech/language and literacy) attainments of the case study pupils identified with SLD, General Learning Difficulties and Specific Writing difficulties? | • Mainstream class teachers’ and SEN teachers interviews  
• Observation (mainstream and inclusion class)  
• Schools’ literacy tasks/pupils’ assignments |
| 4. To what extent do case study pupils’ social participation and peer acceptance relate to the difficulties they have? | • Mainstream class teachers’ and SEN teachers interviews  
• Social Participation Questionnaire for Teachers (SPQ) (Koster et al., 2009) |
<p>| | |</p>
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<tbody>
<tr>
<td>PATEM I &amp; PATEM II</td>
<td>(Makri-Mpotsari, 2001a, 2001b)</td>
</tr>
<tr>
<td>Observation</td>
<td>(mainstream and inclusion class)</td>
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The methods used to collect data are outlined below.

**Interviews**

Interviews enable the researcher to gain a greater richness of responses (Gilbert, 2008; Powney and Watts, 1987) and allow the participants to further discuss or clarify points (Cohen et al., 2007). Using semi structured, face-to-face, individual interviews of the mainstream and SEN teachers who were teaching the pupil case studies in the mainstream and inclusion class respectively, enabled the selection of essential data.

In order to ensure that all the points which concerned the current provision framework, (and specifically the applied teaching practices, pupils’ educational attainments and social participation) would be considered and the related data would be collected, prior to the interviews certain topic headings and key questions under these headings were formulated. In particular, the three topic themes were:

a. The teaching and learning practices for the pupils experiencing difficulties with their speech and language development,

b. The pupils’ educational attainments and

c. The pupils’ social participation

Based on the above key themes, I designed an interview schedule (see Appendix E for the interview schedule for mainstream class teachers and SEN teachers) which involved a set of questions that aimed to reveal information for each of the aims of this phase. The questions that emerged concerned both the mainstream and inclusion class context. The interview schedule enabled the collection of evidence related to teachers’ perceptions, beliefs and attitudes which were not otherwise accessible and revealed in-depth information regarding the nature of the pupils’ difficulties, their academic performance and progress. Nevertheless, the teachers’ beliefs regarding the pupils’ social participation were complemented by the related questionnaires offering a better insight of this particular aspect.

The question sets for each of the three themes are given in Table 4 (p. 125).
At the beginning of the interviews, a set of introductory questions asked the teachers to provide information regarding the pupils’ difficulties and their own experience of teaching children with the examined type of difficulties. Although the above set of areas informed the questions asked in interviews for these three key headings, occasionally some of the questions were slightly modified, in order to provide further explanations to the teachers when needed. Additional questions were developed, depending on the appropriateness of the educational and placement context (e.g. mainstream or inclusion class, group work or individualised teaching).

Apart from the interview protocols, which were based on the aims of the second phase of this study, two questionnaires were used to supplement the interview questions. Specifically the first questionnaire, which was developed in Greece by Padeliadu & Patsiodimou (2007) as part of mainstream teachers’ self-assessment of teaching, supplemented the question regarding the implementation of ‘specialised’ practices. In particular, it aimed to provide a
better insight into the teaching practices and strategies applied in the mainstream and inclusion class environment for the learning support of pupils in the case studies. This involved asking teachers to indicate how often (never, rarely, sometimes, often, always) they applied the provided practices (e.g. ‘use concept maps during the teaching process’ or ‘provide opportunities to the pupils for active involvement to the class’) (see Appendix F for questionnaire A).

The second questionnaire, which was also developed in Greece, constitutes part of the Checklists of Basic Skills (Ministry of Education and Religious Affairs and Pedagogical Institute, 2009), that concerns the field of oral language and literacy (Presidential Decree, 1996). It examines pupils’ skills in various areas of learning. It supplemented the question about pupils’ academic strengths and weaknesses and was completed by mainstream and SEN teachers in order to reveal the pupils’ performance on certain tasks and learning areas. However, the structure of the questionnaire employed in this study was slightly modified from the original version. The original version asked teachers to tick one of the provided boxes with learning goals based on whether the examined pupils had achieved each goal or not. In the modified version used in this study, teachers were asked to tick one of the boxes based on how often (never, rarely, sometimes, often, always) the particular pupils achieved the provided educational goals (e.g. ‘enhance speech with new words’ or ‘spell, read and compose syllables’) (see Appendix G for questionnaire B). Given that teachers’ responses to the above questionnaires were not based on a numerical scale, no scores were totalled and their responses were analysed qualitatively.

Overall, eleven (n=11) interviews were conducted in this study, seven (n=7) interviews with mainstream class teachers and four (n=4) with SEN teachers. They took place in a quiet room of the school settings, at a time convenient to the teachers’ school timetable, while their duration varied from 25 to 80 minutes. The teachers’ responses were kept in the form of written field notes\(^1\), following the interviewees’ wishes, as audio recording made them feel more distressed, a point which reflected their lack of experience in participating in such studies.

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\(^1\) The Greek Ministry of Education and Religious Affairs and the Pedagogical Institute do not allow interviews to be audio or video recorded, unless the interviewee(s) decide(s) otherwise.
Although this practice increased the potential for important data loss, distortion and reduction of complexity (Cohen et al., 2011), it should not be overlooked that during the interview process I tried to keep full details of the teachers’ responses, as well as other contextual aspects, such as visual and non-verbal communication features of the interview (e.g. certain gestures when the teachers were expressing their views, such as vigorous shaking of the head) which could not be possible through audio recording. Prior to the interviews, the study’s demands for frequent contact with the teachers created a rather good rapport with most of them, and a pleasant atmosphere during the interviews with a good flow in their responses.

**Social Participation Questionnaire for Teachers (SPQ)**

Friendships and social participation are essential for children’s social and emotional development. However, for children who have considerable difficulties with their speech and language skills making and maintaining relationships with peers and taking active part in social interactions can be quite challenging (Botting and Conti-Ramsden, 2000; Hart et al., 2004; Hutaff-Lee, 2010; Wadman et al., 2008). In the part of this study that aimed to identify the social participation of the pupil case studies, the Social Participation Questionnaire for Teachers (SPQ) was applied (see Appendix H for the English version of the SPQ). This is a recently developed tool created and standardised in the Netherlands (Koster et al., 2009).

SPQ aims to support teachers by providing accurate assessments regarding social participation of pupils experiencing SEN in mainstream primary education and to assist them in detecting related problems in time. Its framework was based on the social participation model, developed by the same research team (*ibid.*), which after extensive review and analysis of the international literature related to the concept of social participation, identified the following four key themes which describe efficiently and clearly this concept: ‘friendships/relationships’, ‘interactions/contacts’, ‘social self-perception of pupil’ and ‘acceptance by classmates’ (Koster et al., 2008).

The questionnaire comprises 24 statements on ‘aspects of social participation’ in four subscales, which were named after the four key themes of social
participation. Specifically, the ‘contacts/interactions’ subscale involved 9 items, while each of the other three subscales i.e. ‘acceptance by classmates’, ‘friendships and relationships’ and ‘pupil’s social self-perception’, each involved 5 items.

Mainstream class teachers were requested to rate to what degree the 24 statements applied to particular pupils who have difficulties with their speech and language skills in their class, by ticking one appropriate box for each statement. The responses were provided on a five point Likert scale that ranged from “this does not apply at all” point 1 to “this strongly applies” point 5. When answering the questions, teachers were reminded to bear in mind the particular pupil in comparison with other pupils. The questionnaire contained aspects that were both positive and negative indicators (contra-indications) of social participation. The positive aspects indicated the pupil’s social participation, the negative aspects revealed lack of social participation, while the raw scores from these were reversed for working the total scores. A high total score was a sign of pupils’ active social participation, while a low total score a lack of it.

As far as concerns the psychometric properties of this questionnaire, due to practical reasons its administration took place in two periods where 119 mainstream primary schools from the wider area of Groningen, Netherlands participated. Overall, 580 pupils (the mean age was 7 years and 7 months) were involved, while the types of SEN involved were Behavioural Disorder, Autistic Spectrum Disorder, Motor Disability, Intellectual Disability and Speech/Language Disabilities. The SPQ and its scales are efficiently reliable, as comparisons were made for the scores on the total SPQ between groups of pupils experiencing the types of SEN which were mentioned above, as well as for the scores from each of the four subscales of the questionnaire. In particular, the \( \rho \) coefficient of the total SPQ \((r=.95)\) and for each of the subscales\(^{92}\) indicated good levels of reliability and coherent clustering of the subscales’ statements (Koster et al., 2009).

\(^{92}\) The \( \rho \) coefficient for ‘Friendships/Relationships’ subscale was .80, .95 for ‘Contacts/Interactions’ subscale, .82 for ‘Pupil’s Social Self-Perception’ subscale and .83 for ‘Acceptance by Classmates’.
Further, for the purposes of this study the instrument was translated into Greek, the target language, by a bilingual expert in the field of SEN and back into English\textsuperscript{93}, without any conceptual differences. The only difference concerned the modification of the word ‘student’ in order for both genders to be involved in every statement. The Greek SPQ for Teachers adjusted version, maintained the original scoring system and as it was not standardised in Greek the interpretation of its findings/scoring was based on the values of the Dutch standardised version. The short briefing regarding the teachers’ and pupils’ personal information, and the instructions for the SPQ completion, which were included in the original version were also translated into Greek without any phrase differences (see Appendix I for the Greek translated version of the SPQ). The SPQ was administered exclusively to the mainstream class teachers\textsuperscript{94} (n=7) after obtaining their approval, as their extensive and daily communication with the particular pupils made them well aware of their (i.e. the pupils’) social skills and relationships with their peers, and was collected in the same way a week later.

\textit{How I Perceive Myself part I (PATEM I) – Questionnaire for the Evaluation of Self-Perception}

Taking into consideration the growing body of evidence over recent decades (Fujiki, \textit{et al.}, 2001; Harter, 1999) that revealed a strong link between self-esteem and academic and social functioning in children who have speech and language difficulties, it was considered necessary to examine children’s own perceptions regarding their general competence and social acceptance. The administration of PATEM I\textsuperscript{95} (Makri-Mpotsari, 2001a) (see Appendix J for PATEM I administered subscales and items), which constitutes the Greek standardised version of ‘Pictorial Scale of Perceived Competence and Social Acceptance for Young Children’ developed and standardised by Harter & Pike (1983), enabled the identification of pupils’ self-reported feelings regarding their cognitive competence and peers acceptance.

\textsuperscript{93} The SPQ was already translated into English prior to this study by one of its authors.

\textsuperscript{94} When requested, the SPQ was also provided to parents for informative reasons.

\textsuperscript{95} The abbreviation ‘PATEM’ represents the initials of the instrument’s Greek title.
The Greek version of the above instrument, focused on pupils of an extended age range than the original version\(^{96}\), as it can be applied to children from 7 to 9 years old who attend year A, year B, and year C of primary education. However, it maintained the four subscales, the ‘Cognitive competence’ subscale, the ‘Physical competence’, ‘Peer acceptance’ and the ‘Maternal acceptance’ and the pictorial form of Harter’s and Pike version (1983). In order to ensure the reliability and factorial validity of the Greek version, the number of statements in each scale was reduced from six to five, providing a total of 20 statements/items\(^{97}\), while some of them were differentiated from the original version as they were reformulated or replaced by others (Makri-Mpotsari, 2001a).

In addition, PATEM I was standardised in a national sample, where 345 pupils were examined at two points, within a period of three months. Regarding the reliability of the instrument, the values for each subscale ranged from .72 to .80, indicating good levels of internal consistency. Further, test-retest reliabilities ranged from .78 to .85. The factor patterns for each of the 20 statements/items of PATEM I had, in general, moderate to high loadings on their designated factor, despite the fact that the values for four of them were less than .50 but above .40.

PATEM I maintained the same design and type of responses as indicated in the original version for Grades 1 and 2. Specifically, although the set of pictures accompanying each of the statements are different for each gender, as the examined child is asked to respond to the same gender child provided in the set of pictures, the activities described in each statement are the same for boys and girls. Two pictures are presented for each item and the examiner or the child reads two brief statements, one positive and one negative, for each of the pictures. The child then is asked to choose which of the children from the two statements (that are represented in the pictures, depicting the positive or the negative statement) is most like him/her, and is further asked to indicate by

\(^{96}\) The original instrument provided by Harter and Pike (1983) focused on pupils aged from 4 to 7 years old, covering thereby the age groups of Pre-school/Kindergarten, Grade 1 and Grade 2.

\(^{97}\) Each subscale of the original version of this instrument included 6 items, providing a total of 24 items.
pointing to the appropriate circle whether the child is a *lot like him/her* (by pointing the big circle) or a *little like him/her* (by pointing the small circle).

Further, PATEM I maintained the scoring of the original version and the same process for obtaining the total scores for each subscale. Each item is scored on a 4 point scale, where 4 represent the highest degree of perceived acceptance or competence. The scores obtained from the subscales are calculated by adding the values of the child’s responses of each subscale separately and then dividing each total by the number of statements provided in each subscale, offering thereby the scores of the child’s performance in each subscale. The total values from subscales range from 5 to 20, with higher scores reflecting a greater sense of competence or social acceptance.

This particular instrument can be administered either in complete or shortened form. Accordingly, due to the aims of this phase only the ‘cognitive competence’ and ‘peer acceptance’ subscales (i.e. 10 items, 5 from each subscale) were administered. The 2 subscales were administered to six (n=6) out of seven pupils who constituted the case studies sample of this phase, specifically Nick, Helen, Jim, Simon, Steven and John, who attended year B and year C and whose age was within the age range of this instrument.

After obtaining the teachers, parents and pupils’ consent, and without disrupting the pupils’ teaching programme, PATEM I was administered individually to the pupils in any quiet room in the school settings, and was completed by me, the researcher, according to the children’s responses. Its duration did not exceed 15 minutes per pupil. Prior to the instrument’s administration, oral guidelines were given to the pupils regarding the purpose of the instrument and its completion format, while it was made clear to them that there were no right or wrong answers. Further, a practice item was provided to them at the beginning of the administration process, while after the instrument’s completion the child’s personal information and scores from the subscales were documented in a data coding sheet, provided with the instrument’s manual.
How I Perceive Myself part II (PATEM II) – Questionnaire for the Evaluation of Self-Perception and Self-Esteem

The administration of PATEM II (Makri-Mpotsari, 2001b) (see Appendix K for PATEM II administered subscales and items) enabled the identification of aspects of self-perception that are related to academic competence and social acceptance of a case study child, whose age was beyond 9 years old. PATEM II constitutes the Greek standardised version of Self-Perception Profile for Children (Harter, 1985), however the age range of children examined through the Greek standardised version is slightly differentiated from the original version98, as it covers ages from approximately 10 to 12 years old and consequently year D, year E and year F of primary education.

Although PATEM II maintained the six subscales of the original version (the ‘Scholastic competence’, ‘Social acceptance’99, ‘Athletic competence’, ‘Physical appearance’, ‘Behavioural conduct’ and ‘Self-esteem’100 subscales), the number of items was reduced from six to five, giving a total of 30 items/statements101, the same for both genders. Similarly to the practice followed in PATEM I, some of the items provided in the original version (Harter, 1985) were modified or replaced by others in the Greek standardised version, in order to increase the reliability and factorial validity of the instrument.

PATEM II was standardised in a national sample of 454 children aged approximately from 10 to 12 years old, attending year D, year E and year F of mainstream primary education, examined at two points, within a period of three months. The analysis indicated that the majority of mean scores for self-perception and self-esteem of the above pupils were higher than 3.00, therefore

98 The original version of this instrument examines children aged from 8 to 13 years old.
99 In the Revision of Self-Perception Profile for Children (Harter, 2012) the term ‘acceptance’ in this subscale was replaced by the term ‘competence’ (i.e. ‘Social competence’), as according to the instrument’s author the modified term elicited adequately characteristics of the self, defining the child’s success or competence in this domain (ibid.).
100 ‘Self-esteem’ replaced the term ‘Global self-worth’, which is used in the original version, in order not only to avoid any conceptual misunderstandings but also because it is a term widely accepted and used in the international and Greek literature (Makri-Mpotsari, 2001a).
101 The number of items in each subscale of the instrument’s original version is 6, providing a total of 36 items.
higher than the average value which is 2.50, while standard deviation values indicated variances between the pupils within the same subscales. The internal consistency levels of PATEM II subscales were high, ranging from .67 to .74, while test-retest reliabilities ranged from .70 to .82 (Makri-Mpotsari, 2001b). The factorial analysis of the above five subscales and the 25 provided items revealed moderate to high loadings on their designated factor, indicating statistically significant findings.

PATEM II maintained the same dual structure with the original version, in terms of the provided responses of children, while it can be administered in groups or individually and be completed by the child. There is a two way process that the child has to follow when responding to the instrument, as at first the child decides whether he/she is more like the child described on the first half of the provided item on the left side or more like the second half of the item provided on the right side. Then for that half of the item where the child is more like him/her, the child decides whether the provided item is ‘Really true’ for him/her or ‘Sort of true’ for him/her and marks the appropriate box.

The Greek standardised instrument maintained the scoring system of Harter’s version (1985), where the items are scored on a 4 point scale, 4 constitute the most efficient self-evaluation and 1 the least adequate self-evaluation. The higher scores indicate higher levels of self-perception and self-esteem and consequently lower scores, reveal lower levels of child’s self-perception and self-esteem. Moreover, the process for obtaining the total scores for each scale is similar to the process analysed in PATEM I (see PATEM I for further details).

In this study, PATEM II was administered in its short form, similarly to PATEM I, examining aspects of self-perception that concern academic competence and peers relationships. In particular, PATEM II was administered

102 Following Harter’s (1985) pattern in factor analysing this instrument, the ‘Global self-worth’ subscale was not included as the judgments raised by this subscale were qualitatively different from the self-perceptions/descriptions described in the remaining five domains/subscales and it was quite questionable that this particular subscale could be provided as a distinctive factor (Harter, 1985).

103 According to Makri-Mpotsari (2001a), the instrument’s author, PATEM II similarly to PATEM I, may be administered in its full or shorter form depending on the examiner’s purposes.
to one pupil, George, whose age (i.e. 9 years and 8 months) was within the age range of this version of the instrument. Specifically, the subscales provided to him were the ‘Scholastic competence’, ‘Social acceptance’ and ‘Self-esteem’. Overall, 15 items were administered to the child, five from each subscale.

The instrument was completed by the child himself after the pupil agreed and the parents’ and mainstream class teachers’ consent was obtained. Prior to the completion of PATEM II, the purpose of the instrument was explained to the child and it was made clear to him that the provided instrument did not constitute an assessment and therefore there were no correct or wrong answers. Further, a practice item was provided in order to ensure that the child comprehended that for any provided statement he should check only one box on the side that is more like him, as checking both sides would create scoring problems and misinterpretations.

The administration, which lasted approximately 15 minutes, took place in a quiet room of the school setting and at a time convenient to the pupil’s school timetable. After the instrument’s completion, the child’s personal information and his scores from the three subscales were documented in the data coding sheet which was provided with the instrument’s manual.

**Task for informal speech and language assessment**

Although the Athena Test enabled the detailed assessment of pupils’ language functions in a range of developmental areas, the administration of a supplementary task provided additional assessment of different elements of pupils’ speech and language skills, such as vocabulary, spoken sentence structure, understanding of single words, concepts, grammatical structures and reasoning in context.

The task for informal speech and language assessment (see Appendix L for the task) which was applied in this phase, constitutes part of the mainstream primary education supportive material for pupils experiencing SEN and specifically General Learning Difficulties, provided by the Greek Ministry of Education and the Pedagogical Institute (Karakitsios et al., 2011). Specifically, it is included in a school textbook that aims to support mainstream class teachers and SEN teachers of inclusion classes. This textbook offers guidelines
regarding the modification of national curriculum for the fields of literacy, speech and language and provides indicative informal tasks that assess pupils’ skills in these domains.

The applied task involved the oral description and narration of stories through a series of pictures examining different aspects related to speech and language performance, such as speech production, word finding skills, text comprehension and story grammar, as well as problem solving skills. The task involved two different stories, the first story included four coloured pictures and the second story five coloured pictures. According to the instructions provided in the teachers’ textbook, pupils should be guided through simple questions in order to (i) identify the main aspects of each narrative story, which concerned their basic idea and target related to the problem that each of the story characters had, their efforts to encounter it, the result and ending of their efforts, and consequently to (ii) set the pictures in the right order.

Following the guidelines and aiming to promote dialogue at the beginning of the task, the pictures of each story were provided one by one to the pupils, and they were asked to observe carefully and to describe each picture for a short amount of time. Then pupils were asked to set the pictures in the right order, promoting thereby the rational succession of events described in each story, through active discussion and efficient reasoning.

Prior to the beginning of this task, the pupils, the mainstream class teachers and the parents gave their consent for the children to participate. The assessment took place in a quiet room within the school settings without causing any disruption to the pupils’ school timetable. The task was applied individually and the time needed for its completion was approximately 10 to 15 minutes per pupil. During the assessment process the pupils’ oral descriptions and narrations were kept in the form of written field notes, recording as far as possible the exact wording of each pupil’s responses.104

104 The Greek Ministry of Education and Religious Affairs and the Greek Pedagogical Institute do not allow children’s video or audio recording for research purposes.
Observation

Observation constitutes a widely applied and effective measure for collecting essential information and forming an overall and complete profile of the child’s development (Tzivinikou, 2004b). In this study non-participant, semi structured direct observations were employed in the mainstream school settings and particularly in the mainstream and inclusion classes that pupils attended, once a week for two weeks in each class (i.e. mainstream and inclusion class). Non-participant observation constitutes a very common type of observational method used in applied social research and educational contexts. It allows the personal and direct observation of conditions and incidents related to the field of study (Hall, 2008; Robson, 2007), while it is often used to conquer the issue of social desirability bias\textsuperscript{105} which is commonly met in self-report measures. In this study the applied type of observation enabled me to gather detailed information as they happened, in natural situations and record it in an observation schedule, without involving any interactions between the observer and the observed and without influencing the situations being observed in any way.

The three key themes that were explored through the observations are the following:

- The pupils’ performance and active engagement during the teaching process in the mainstream and inclusion class (if attended),
- The pupils’ initiatives and responses to peer interactions,
- The teachers’ applied teaching practices for these pupils in the mainstream and inclusion class

So, the information obtained from observations, which was coded in the form of written field notes\textsuperscript{106}, involved detailed record keeping of the pupils’

\textsuperscript{105} Social desirability bias (SDB) is individuals’ inclination to present themselves in an appealing or socially accepted way instead of acting based on their own viewpoints. It is considered a threat of self-reported methods’ validity, therefore researchers in order to avoid this possibility, prefer the method of observations when applicable in their field of study (Hall, 2008).

\textsuperscript{106} As mentioned previously the Greek Ministry of Education and Religious Affairs and the Greek Pedagogical Institute do not allow children’s video or audio recording for research purposes, therefore the observational data were kept in the form of written field notes.
performance, types of behaviour, engagement in social interactions, as well as applied teaching and learning activities and practices both in mainstream and inclusion class. The framework of observations was based on the templates for documentation of incidents and behaviours through observation, provided for Greek teachers as part of their self-evaluation regarding the applied teaching and pupils’ responses to it (Padeliadu and Patsiodimou, 2007). Specifically, I the researcher recorded systematically on one side of the observational record sheet aspects of the teaching process, practices and resources employed by the teachers in the mainstream and inclusion classes, and on the other side the pupils’ responses to the teaching process, their performance in applied tasks, behaviours and social interactions (see Appendix M for an example of an observation record sheet). As far as concerns the interpretation of observational data, taking into consideration the mainstream and inclusion classrooms’ operation in all their complexity, I was adequately prepared in advance focusing merely on the information related to the above three key areas.

For the mainstream and inclusion classroom observations, the teachers were asked not to modify their usual teaching due to my presence. I also did not disrupt classrooms activities. Prior to the process my attendance in the classrooms and the aims of observations were made clear not only to the pupils and their teachers (mainstream class and SEN teachers), but also to the pupils’ classmates (of mainstream and inclusion classrooms), who became indirectly involved in this process. Prior to the observations, consent was obtained from the teachers, the parents, the participating pupils and their classmates.

The observations were conducted for five of the case studies (Jim, Nick, Helen, George and John) in the mainstream and inclusion classrooms, for four teaching hours, spending one hour in every class, once a week for two weeks, while the duration of each observation was approximately 45 to 60 minutes, overall 3½ hours per child. The remaining two pupils who attended only the mainstream classroom and not the inclusion class, Steven and Simon, were followed there for one teaching hour, once a week for two weeks, the duration of each observation was approximately 45 to 60 minutes, while the overall time of observation for each of them was approximately 2 hours. Due to the focus of this particular study on speech and language functioning, and the aim being to examine the pupils’ performance in this course and the practices applied by
teachers for the support of pupils’ literacy learning, the observations’ timetable involved only the teaching hours where the course of literacy was taught in the mainstream and inclusion classrooms. Another factor that needs to be accounted for in the observation of the pupils during the literacy hour was that in the inclusion classes the only courses that were taught were literacy and maths.

Despite the amount of essential and diverse information provided by this particular measure, it is important to be aware of some potential practical difficulties. For example, in the absence of the researcher, prior to or after the observation schedule, important events might occur related to the key areas of the observations’ focus, which I could not know or record. Moreover, it is important to recognise that what was observed may not have been typical of what was generally going on in the classrooms, while there was always the possibility that my presence may have influenced the teachers and pupils interactions and communication. This means that during the observations the teachers might have modified their teaching by applying practices that were not usually part of their everyday teaching process (e.g. sat next to the case study pupil when doing a complex task, repetition of tasks’ answers or tasks’ instructions for the case study child). In a similar way, the case study pupils might have behaved or responded in a different way than they usually did (e.g. were more spontaneous or self-conscious during the teaching process). Accordingly, the interpretation of the collected observational data had to take these potential weaknesses into account.

**School tasks**

A selection of documents of the pupils’ responses to school literacy tasks and assignments, acted as a supplementary source of evidence about the nature of the pupils’ difficulties and their academic attainments (see Appendix N for a few samples of such documents).

The collected documents were provided by the mainstream and SEN teachers in the form of photocopies of pupils’ original literacy tasks. These documents had the form of pupils’ assignments and their own responses in different curriculum-based literacy tasks (e.g. vocabulary, spelling or grammar) from their literacy school textbooks or handouts, provided to them by their teachers either
in the mainstream or inclusion class, the examined school year. Moreover, these tasks constituted indicative records of pupils’ progress in the field of literacy, as the existing Greek educational system does not involve national compulsory assessments for pupils attending mainstream primary education. Further, official progress of pupils attending year B is provided merely through ‘oral descriptive assessment’ at the end of each term, therefore the pupils who attended year B, Nick, Helen, Simon and John, did not have an official record of their literacy progress. However, pupils attended year C, Jim and Steven, and year D George, had an official progress record based on curriculum informal oral and written assessments, which according to the Greek educational system involved text scoring for each course (i.e. grades A’, B’, C’ or D’).

These documents were provided to me after pupils, mainstream class teachers, SEN teachers and parents’ approval. Any personal information, such as pupils’ names, were removed and replaced by codes and pseudonyms in order to ensure participants’ anonymity and promote confidentiality of their responses.

3.4 Procedures for data analysis

The analysis of the data collected in both phases of the study included the following steps:

3.4.1 Phase 1

In the first phase, the data from the LAMP screening assessment for the pupils whose speech and language skills raised concerns to their teachers and the data from pupils’ detailed examination through the Athena Test and the Matrices task were analysed through the SPSS 19 statistical software.

1. Data from the LAMP screening assessment were coded, entered into an SPSS file and analysed.

Various statistical tests were used for identifying the profiles of pupils who were examined in the first phase of the study and comparing their scores. At the beginning of the analysis, cross-tabulation and case summaries provided an overview of the profiles and LAMP scores of 111 pupils who were initially assessed through the LAMP screening tool. The above tests provided
evidence for the different subgroups based on the collected data such as gender, GAL (Greek as Additional Language), year of attendance (i.e. year B, year C, year D or year E), official diagnosis, inclusion class attendance and literacy difficulty (i.e. difficulties with written literacy). Further, teachers’ reports on pupils’ LAMP screening assessment formed the following four SEN subgroups: SLD, General Learning Difficulties (GLD), other SEN (e.g. ADHD) and No difficulty.

In order to understand the way that the four SEN subgroups were formed, it is important to highlight that part of the LAMP supplementary information asked teachers to report the pupils SEN status (i.e. if they had an official diagnosis or not) and the type of difficulties they had (if so). So, the teachers had to consult their files for the pupils who had an official diagnosis by the KEDDY service or a Greek health service/centre in order to provide clear information about the type of SEN that these children had (a and c criteria). For the pupils who had no official diagnosis but the teachers had concerns about the slow progress they made, they also had to describe the type of difficulties they experienced (b and d criteria) based on their own professional experience/personal judgement and the progress the pupils made the period they were teaching them. The teachers who had experience of children diagnosed officially with SLD by the KEDDY or a Greek health service, would have compared these children’s language profiles with those who were not officially diagnosed but showed similar difficulties. Additionally, the teachers were also asked to complete the LAMP at least for one pupil in their classroom who did not have any difficulties with his/her speech/language skills. So, the provided responses gave the data to establish the following four SEN subgroups: SLD, General Learning Difficulties (GLD), other SEN (including pupils with ADHD, EBD and other difficulties/disorders) and No difficulty (including pupils who followed the typical pattern of development).

Continuing the descriptive statistics analysis, a frequency analysis enabled the identification of cut-off points for LAMP at the top 10% and 20% of concern scores for the 111 pupils who were screened, while these scores were compared with the cut-off scores of Nash’ sample at T1 and T2 of her screening assessment (Nash, 2013). Additionally, her T2 cut-off scores were
also used in this study in order to identify the pupils who had difficulties with their speech and language skills. Further information regarding these cut-off scores is given in the Findings chapter.

MANOVA and one-way ANOVA were performed in order to identify the performance of the four SEN subgroups in the LAMP (four subscales and total lamp scores), revealing significant or non-significant differences. Multivariate analysis (MANOVA) of LAMP scores and univariate analysis (two-way ANOVA) of LAMP scores in individual scales and including all four subscales and total LAMP scores, for the 111 pupils who were initially screened, allowed comparisons between the pupils who belonged in the above four SEN subgroups and were officially or not diagnosed, indicating significant and non-significant differences and interaction effects between them. The advantage of using MANOVA is that it ‘controls or adjusts for the increased risk of a Type 1 error’ (the more analyses the more likely it is to find a significant finding, even if there are no differences between the examined groups) (Pallant, 2007, p. 275). Line graphs provided useful information regarding the LAMP mean scores of pupils from different SEN subgroups, offering at the same time a quick summary of the distribution of LAMP total scores for the four SEN subgroups.

MANOVA and two-way ANOVA and were also applied for examining the LAMP performance (four subscales and total LAMP scores) of the four SEN subgroups and other subgroups which were formed (e.g. GAL/No GAL or gender), revealing significant or non-significant differences and interaction effects between them. Further, MANOVA and one-way ANOVA for LAMP scores (four subscales and total LAMP scores) and different subgroups (e.g. gender), without differentiating pupils according to the SEN type they experienced, indicated significant and not significant differences in the LAMP scores between these subgroups.

2. Data from the Athena Test and Matrices task were coded, entered into an SPSS file and analysed (pupils’ LAMP scores were also included in this file).

Further examination was then undertaken with 45 pupils (of the initial total of 111 pupils for whom the LAMP was initially applied) using the Athena Test
and the assessment of their non-verbal reasoning ability through the Matrices task. However, as already mentioned, due to the fact that the norms provided in the Athena Test are generalised across the age range and not age specific, and no T-scores and percentiles equivalents of pupils’ scores are provided, their performance in the 8 out of 10 applied subscales of the Athena Test was reported in terms of the age equivalents of their scores. Unlike the majority of applied subscales which required quantitative scoring, pupils’ performance in the Common sequences and Perception of right-left subscales of the Athena Test was reported based on qualitative descriptions (e.g. efficient/not efficient performance or efficient/not efficient perception of right-left). Therefore pupils’ performance on these subscales was not included in the statistical analysis of pupils’ scores. It is reported though in the Findings chapter.

Unlike the Athena Test, the Matrices task involved age specific norms, T-scores and percentile equivalents of pupils’ scores, and therefore this type of information was obtained and reported along with pupils’ age equivalents of their task scores.

The same analysis was made for the 45 pupils who were further assessed. Cross-tabulation and cases summaries provided an overview of the profiles and scores of pupils in the above tests (pupils’ LAMP scores were also included), while revealed evidence regarding the different subgroups (i.e. gender, GAL, year of attendance, official diagnosis, inclusion class attendance and literacy difficulty). Additionally, given that these 45 pupils were already screened through the LAMP, the same four SEN subgroups were formed (i.e. SLD, General Learning Difficulties (GLD), other SEN and No difficulty), while the pupils’ socio-economic status (SES) was also examined in an attempt to identify whether or not socio-economic background (low socio-economic status, medium/average socio-economic status and high socio-economic status) had an influence on the pupils’ speech and language development.

MANOVA and one-way ANOVA which were conducted between the four SEN subgroups compared their performance in the Athena Test subscales, Matrices task and LAMP (four subscales and total LAMP scores), indicating
significant and non-significant differences and interaction effects between
the four SEN subgroups. Given that the four SEN subgroups, officially and
not officially diagnosed, included a quite small number of pupils (e.g. n=2 of
pupils officially diagnosed with General Learning Difficulties and n=7 of
pupils not officially diagnosed with General Learning Difficulties), MANOVA
and two-way ANOVA were not conducted for these subgroups performance
on the Athena Test subscales and Matrices task. However, MANOVA and
two-way between-groups ANOVA were applied for the four SEN subgroups
in order to identify the impact of GAL/No GAL, gender, year of attendance
and inclusion class attendance/non-inclusion class attendance in their
performance in the above tests.

Further, without differentiating the pupils by SEN subgroups, MANOVA and
one-way ANOVA were used for comparing pupils’ scores in Athena Test
subscales, Matrices task, LAMP (four subscales and total LAMP scores) and
different subgroups, such as gender or GAL, revealing significant and not
significant differences in the scores between these subgroups.

3.4.2 Phase 2

The statistical analysis of the data collected in the first phase of the study,
enabled the purposeful sampling of pupil case studies of the second phase. The
incorporation of various and different sources of evidence in this phase enabled
corroborateation of the findings emerged from one case with more than a single
source of evidence and comparisons of these findings across the cases.

The technique of thematic analysis was selected as the most appropriate
method for the data analysis of this Phase. It provides a flexible and useful
research technique that allows a sensitive, insightful and detailed exploration of
a text’s structures and underlying patterns (Attride-Stirling, 2001; Braun and
Clarke, 2006). It is considered a widely applied method for identifying, analysing
and reporting themes within data, while it often goes beyond this point and
interprets various areas of the research topic (Boyatzis, 1998; Braun and
Clarke, 2006). In addition, thematic analysis can be an essentialist or realist
method, as it ‘works both to reflect reality and to unpick or unravel the surface of
reality’ (Braun and Clarke, 2006, p. 82). Given that in this current study, my
coding concerned specific research questions (which acted as starting themes), themes, sub-themes or patterns within the data were identified in a theoretical, deductive ‘top-down’ way (Boyatzis, 1998; Hayes, 1997). This means that the analysis was driven by my theoretical or analytic interest in the area, and therefore it is considered ‘more explicitly analyst-driven’ (Braun and Clarke, 2006, p. 85). Additionally, this type of thematic analysis offers not such a rich description of the data overall, but a more thorough analysis of some parts/aspects of the data. So, thematic analysis in this study was theory driven, focused on the evaluation of specific themes (starting themes in this study) through interrogation of the related literature.

Despite the absence of clear and concise guidelines around the thematic analysis, most of the steps/phases that were followed in this process are similar to other techniques of qualitative research analysis. In this study, the thematic analysis used the phases that were provided by Braun and Clarke (2006) guidelines. Nevertheless, at the beginning of this process I already had starting themes, which were formed based on the four RQs of Phase 2, but I was also open to emergent themes or sub-themes. Specifically, the first category/theme concerned how the case study pupils came to be identified with SLD, GLD and SpWd. The second category/theme concerned the support, as well as the teaching and learning practices applied to these pupils at different years. The third category/theme was focused on the pupils’ progress. And the last category/theme on the influence of the pupils difficulties on their social participation and peer acceptance (see Appendix E2). The themes were identified at the latent/interpretive level, which indicates that the thematic analysis went beyond the semantic content of the data and examined ‘the underlying ideas, assumptions, and conceptualisations…that are theorised as shaping or informing the semantic content of the data’ (ibid. p.86).

Below are summarised the steps/phases that I followed for the thematic analysis, based on Braun and Clarke’s (ibid.) guide:

1. Familiarising myself with the data: Careful reading and re-reading of textual data from teachers’ interviews (including the two questionnaires), observations, task for informal speech and language assessment (Karakitsios et al., 2011), pupils’ school literacy tasks and assignments,
SPQ for teachers (Koster et al., 2009), PATEM I and PATEM II (Makri-Mpotsari, 2001a, 2001b). In addition, there was no need to transcribe the teachers’ responses in the interviews into written form as they were kept initially in the form of written field notes and were not audio recorded (see section 3.3.2). However, at this point I translated the interviews and observation data into Greek trying to keep as far as possible the exact wording of the teachers’ responses and my observations’ notes without losing the contextual meaning of the data.

2. Generating initial codes: At this point I had read and familiarised myself with the data, and as Braun and Clarke highlighted (2006), I had generated an initial list of ideas about what my data involved and the aspects that are quite interesting. I gave ‘full and equal attention to each data item’ (ibid. p.91) and identified interesting points in the data that could be the basis of repeated themes/patterns across my data set. Given that I was doing my coding manually, I coded the data by writing brief notes/headings next to the texts I was analysing by using different highlighters. At this stage the important point was to ensure that all data extracts were coded and then collated together within each related code. Nevertheless, given that I had already starting categories/themes I coded features of my actual data in a systematic way, collating data relevant to each of the four starting themes/categories.

3. Starting themes/main themes - Searching for additional themes or sub-themes: Prior to this phase all my data have been initially coded and collated. At the beginning of this stage, I started analysing my codes in order to consider how these could be combined in order to go/to be allocated into my four starting themes. So, some of the codes ‘worked’ in relation/fitted to my four main, starting themes and other codes formed sub-themes. So, this phase was ended, according to Braun and Clarke’s guidelines (ibid.) with a range of themes, the starting/main themes, the sub-themes and the extracts of data that have been coded in relation to these themes.

4. Reviewing themes: This phase involved two levels of reviewing and refining my themes. In the first level I reviewed the coded data extracts,
so I read carefully the collated extracts for each theme in order to consider whether or not they form a coherent pattern. After ensuring that my themes formed a coherent pattern, I proceeded to the second level. Specifically, at this point I re-read the entire data set in order to make sure that the themes ‘worked’ in relation to the data set and to code any further/additional data within the themes, as I might have missed these in the earlier coding phases. The fact that my ‘thematic map’ worked enabled me to have a good idea of my different themes and sub-themes, and an overall view of my data story.

5. Defining and naming themes: At this stage I defined and further refined the starting/main themes and sub-themes, which means that I identified the core of the starting/main themes and sub-themes and determined the points/aspects of the data that each of the themes captured. I identified the ‘story’ of each of the themes and how this was related to the four research questions of Phase 2. So, at the end of this stage my starting/main themes and sub-themes were clearly defined.

6. Producing the report: This last stage involved the final analysis and write-up of the report. It was important the analysis, as highlighted by Braun and Clarke (ibid.), provided a coherent, non-repetitive and interesting account of the story that my data gave ‘within and across themes’ (p.96). Additionally, my write-up provided adequate evidence of the themes within the data, while I went beyond the description of the data and provided arguments related to my research questions.

During the process of coding and categorising/collating the data it was important not to lose their contextual and descriptive aspects which added to the transferability of the research. Additionally, as analysed in a previous section, the two questionnaires which supplemented the interview questions that concerned (i) the specialised practices applied in the mainstream class and (ii) pupils’ academic strengths and weaknesses as described by the mainstream class and inclusion class (SEN) teachers, were analysed qualitatively. Both supplementary measures provided evidence regarding the nature of support provided in the mainstream school settings for the case studies and the teaching and learning practices applied in the mainstream class environment,
as well as the pupils’ strengths and weaknesses in the field of speech and language.

3.5 Ethical considerations

The study adhered to the revised guidelines of the British Educational Research Association (2004) and to the standards required by the University of Exeter – Graduate School of Education ethical procedures. Prior to the process of data collection the Certificate of Research Ethical Approval by the University of Exeter was already obtained, while due to the fact that the study was conducted in Greece it was also necessary to obtain the Certificate of Research Approval by the Greek Ministry of Education and Religious Affairs and the Greek Pedagogical Institute (see Appendix O and P for Research Ethical Approval forms).

3.5.1 Phase 1

In order to gain access to mainstream primary schools, with and without inclusion classes, which were located in two out of seven districts of Athens, covering letters were sent to the head teachers in advance (see Appendix Q for a covering letter sample). This involved details of my professional identity and informing them of the intentions and purposes of the study, as well as their right to refuse to take part or to withdraw their involvement. After obtaining the head teachers’ consent from the 23 mainstream primary schools who agreed to apply the LAMP, and further personal contact with them, in order to ensure that they were fully aware of the study’s intentions and demands, covering letters were given to the above schools’ mainstream class teachers of year B, year C, year D and year E informing them about the aims of the study in both phases and particular requirements from them, and requesting their participation.

After ensuring the consent from the teachers’ of the above schools, covering letters were also sent to the pupils’ parents or carers\textsuperscript{107}, informing them about the study’s aims, the children’s essential role, as well as their right to refuse to

\textsuperscript{107} Parents’ consent was considered significant as the age range of pupils involved in the study ranged approximately from 7 to 11 years old.
take part or to withdraw at any point during the study. Further, my personal contact details were made available to the participants (i.e. head teachers, teachers and pupils' parents) throughout the study, in order to make sure that any possible difficulties that might occur or any enquiries regarding each research phase demands and applied procedures, could be adequately resolved.

In order to ensure that the participants who agreed to take part were fully informed about the aims of the research project, as well as their right to withdraw from it, a voluntary consent form was also provided to them (see Appendix R), attached to the covering letters, which they were asked to read and sign.

The same process was followed for the pupils' in-depth assessment through the Athena Test and the Matrices task. Specifically, after further personal contact with the mainstream schools and particularly with mainstream class teachers who applied the LAMP and the pupils' parents, the pupils further involvement in the study was explained to them in covering letters. As already discussed in the previous section, 45 pupils from the 111 of those who were initially assessed through the LAMP were examined in depth, as their parents approved their further involvement in the study. In cases where, although the parents had approved their children’s participation, the pupils themselves were unwilling or reluctant to be examined, these pupils were not included in the study.

3.5.2 Phase 2

In the second phase of the study further contact with the parents of pupils who constituted the cases studies, through personal contact, enabled me to ensure that they were fully aware of the study’s aims and their children’s essential role. Additionally, their approval was reassured either through the consent forms which they had already signed in the previous phase of the study or orally after personal contact with them.

Further due to the fact that the classmates of pupils who constituted the case studies, were indirectly involved in the research process through the observations, their participation was also requested from their parents through the mainstream teachers’ contact with them. However, personal contact was
requested from a number of parents in order to further explain the purpose of the study and to be assured of their children’s ‘silent’ involvement and anonymity.

At this phase the participation of mainstream teachers and SEN teachers who were teaching the pupils in the mainstream and inclusion classes respectively was also requested. Therefore after further personal contact with them, where the purpose of this study was explained, their rights and their role, their participation was ensured. SEN teachers were requested to sign a voluntary informed consent form, while mainstream class teachers had already signed this form in the first phase of the study.

3.5.3 Ethical issues applied to both phases

In addition to voluntary consent given by head teachers, mainstream class and SEN teachers and parents/carers, since pupils who constituted the sample were underage, while the majority of them experienced SEN, it was vital to ensure that they fully understood what was requested from them throughout the study and that they were readily able to signal a wish for non-participation or withdrawal. Therefore in both phases of the study, at first I explained clearly to the pupils whose parents approved their participation, my professional identity, the purpose of the study and their essential role and then I requested from them, to decide and state themselves whether or not they agreed to take part and to be individually examined through particular measures. Additionally, I requested from the pupils of the second phase to accompany them in the mainstream and inclusion (when attended) classrooms due to the study’s purposes, and received their agreement.

During the process of the pupils’ assessment in both phases, I ensured that the environment was quite friendly and that pupils were feeling comfortable and safe. It was clearly explained to them at the beginning of the process that if at any point they felt tired or unable to continue they could inform me in order to stop the examination. Nevertheless, this did not happen in any assessment, as all children who were examined were willing to be part of this study, while the non-strict and neutral atmosphere during the assessments, appeared to make them quite friendly and chatty.
Further, due to the fact that the process of a voluntary consent in a written form is not commonly met in the Greek research context, although a number of participants agreed to take part in the study, they did not return the signed form, despite the repeated requests. In cases where the consent forms were not signed by the participants, I obtained their oral approval after further personal contact with them in order to certify that they were aware of the study’s intentions, their own rights during the research process, as well as the fact that they agreed to participate.

3.5.4 Participants’ anonymity and data management

As a researcher I had the ethical and scientific obligation (Porpodas, 2003) not only to ‘utilize’ the information that resulted from the measures in the interest of/for the benefit of the participants, but also to ‘frame up’ the operational procedures with confidentiality. However, confidentiality was required not only regarding the findings that emerged from the various measures employed in this study, but also about participants’ individualised behaviours and responses when being assessed or interviewed. Therefore in order to ensure schools’ and participants’ anonymity and confidentiality (Gilbert, 2008; Oliver, 2003), their identities remained anonymous and pseudonyms were used instead of their real names throughout the study. Sensitivity to participants and caution regarding the relevance of questions was employed throughout the questionnaires, as it was important that any questions asked or topics discussed, would not in any way, distress or make any participants feel uncomfortable (Cohen et al., 2007; Mauthner et al., 2002).

Specifically, prior to the interviews apart from reassuring teachers (of mainstream and inclusion classes) about the confidentiality of their responses, the purpose of the interviews and the content of questions (e.g. elicit their views regarding particular pupils’ progress or make known the teaching practices and resources they applied in their classroom), particular ethical issues were efficiently explained to them. They were reassured that they were not obliged to respond to questions they did not want to, when responding there were no right or wrong answers, while the information obtained would be kept locked up and available only to me.
As far as concerns the pupils’ participation, after ensuring their willingness to take part and being individually assessed, they were also reassured about the anonymity of their identities and confidentiality of their responses to the measures applied to them.

Given that the parents were informed through the covering letters that the results of their children’s screening assessment, as well as their language and non-verbal reasoning testing, would be available to them if requested, a small number of them asked for feedback from the Athena Test and the Matrices task. So, after personal contact with me, they received a copy of their child’s results, describing their non-verbal reasoning skills, as well as the speech/language areas that appeared to be problematic for the child and/or the aspects that the child made satisfactory or very good progress. It is important though to highlight the fact that the parents who requested feedback from the testing were already aware of their child’s limitations in the above areas as they had already an official SEN diagnosis. However, in order to alleviate their stress or anxiety about the results, when discussing with them either through personal or phone contact, I provided some feedback by suggesting key aspects (e.g. grapheme/phoneme knowledge) that they needed to focus on (along with teachers or other professionals, such as speech and language therapists) in order to support effectively their children’s weak linguistic areas/aspects.

Further, although according to the Greek Ministry of Education and Religious Affairs and the Greek Pedagogical Institute\(^\text{108}\) when conducting a research study each participant should not be ‘occupied’ for more than 2 hours, due to the study’s framework this was not fully applicable. As in Phase 2 of this study particular pupils and their teachers would be additionally ‘occupied’ through a range of measures, after further discussions and arrangements with the schools head teachers, mainstream class teachers, SEN teachers and pupils’ parents I ensured each participant’s involvement in the study for more than two hours, without disrupting at any point their school programme.

3.5.5 Data storage

During the data collection, data analysis and write up, in order to maintain high quality ethical standards, all identifying information on schools and participants which emerged from the measuring instruments of both phases was securely stored in a locked cabinet, while such information was not published or identifiable by any means throughout the study. The electronic information was stored on a secure system and was only accessed by me, where a username and password was required. Further, the participants of the study were aware of the fact that copies of the measures which were applied in both phases, such as assessments, questionnaires and interviews' transcripts, would be destroyed after the publication of the study.
Phase 1: Findings

In this section are presented the findings from Phase 1 of the study, based on the statistical analysis of the data collected initially through the LAMP and consequently through the Athena Test and Matrices task.

The aim of Phase 1 of this study was the identification of pupils who had SLD in Greek mainstream primary schools. The LAMP screening assessment provided a useful portrayal of SLD in Greek mainstream primary schools and along with the Athena Test and Matrices task indicated the framing of SLD and SEN in the Greek educational context.

4.1 Descriptive statistics for LAMP

Initially, twenty three (N=23) mainstream primary schools took part in this phase, fourteen (n=14) of them had an inclusion class attached to the school setting and nine (n=9) did not have an inclusion class. Approximately thirty (n=30) mainstream class teacher agreed to participate, while the overall sample consisted of 111 children (N=111) who were screened through the LAMP and ranged in age from 7 years and 3 months to 11 years and 3 months.

Cross-tabulation of LAMP data indicated the following analysis: The majority of pupils were males (n males= 70, 63.1% n females= 41, 36.9%), twenty-three (n=23, 20.7%) pupils had Greek as Additional Language (GAL) and eighty-eight (n=88, 79.3%) had not GAL. Further, of the initial total of 111 pupils, thirty-four (n=34, 30.6%) of them attended year B, twenty-eight (n=28, 25.2%) attended year C, twenty-six (n=26, 23.4%) attended year D and twenty-three (n=23,
Eighty-five (n=85, 76.6%) pupils had a literacy difficulty (i.e. difficulties with written literacy) and twenty-six (n=26, 23.4%) did not have a literacy difficulty, while sixty-one (n=61, 55%) pupils attended an inclusion class and forty-eight (n=48, 43.2%) did not attend an inclusion class.

Teachers’ reports on pupils’ LAMP assessment formed the following four SEN subgroups (or SEN types): SLD, General Learning Difficulties (GLD), other SEN (e.g. ADHD) and No Difficulty (i.e. typical development). Cross-tabulation analysis which is summarised in Table 5 (p.155), revealed that forty-nine (n=49, 44.1%) pupils had SLD, twenty six of them (n=26, 66.7%) were officially diagnosed and twenty-three (n=23, 31.9%) were not officially diagnosed, eighteen (n=18, 16.2%) had General Learning Difficulties, four (n=4, 10.3%) were officially diagnosed and fourteen (n=14, 19.4%) were not, twenty-five (n=25, 22.5%) experienced other SEN, nine of them (n=9, 23.1%) were officially diagnosed and sixteen (n=16, 22.2%) were not, while nineteen (n=19, 26.4%) pupils had No Difficulty. Overall, thirty-nine (n=39, 35.1%) pupils had an official diagnosis of SEN and seventy-two (n=72, 64.9%) had not an official diagnosis.
Table 5. Profiles of pupils screened through the LAMP.

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
<th>Boys</th>
<th>Girls</th>
<th>GAL¹</th>
<th>No GAL¹</th>
<th>year B</th>
<th>year C</th>
<th>year D</th>
<th>year E</th>
<th>Official Diagnosis</th>
<th>Non-Official Diagnosis</th>
<th>Inclusion class attendance</th>
<th>No Inclusion class attendance</th>
<th>Literacy Difficulty</th>
<th>Non-Literacy Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLD³</td>
<td>49</td>
<td>44.10%</td>
<td>33</td>
<td>16</td>
<td>10</td>
<td>39</td>
<td>14</td>
<td>15</td>
<td>9</td>
<td>11</td>
<td>26</td>
<td>23</td>
<td>37</td>
<td>12</td>
<td>47</td>
<td>2</td>
</tr>
<tr>
<td>GLD⁴</td>
<td>18</td>
<td>16.20%</td>
<td>11</td>
<td>7</td>
<td>5</td>
<td>13</td>
<td>7</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>14</td>
<td>11</td>
<td>6</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>other SEN⁵</td>
<td>25</td>
<td>22.50%</td>
<td>17</td>
<td>8</td>
<td>6</td>
<td>19</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>9</td>
<td>16</td>
<td>13</td>
<td>11</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>No Difficulty</td>
<td>19</td>
<td>17.10%</td>
<td>9</td>
<td>10</td>
<td>2</td>
<td>17</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>19</td>
<td>0</td>
<td>19</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>N</td>
<td>111</td>
<td></td>
<td>70</td>
<td>41</td>
<td>23</td>
<td>88</td>
<td>34</td>
<td>28</td>
<td>26</td>
<td>23</td>
<td>39</td>
<td>72</td>
<td>61</td>
<td>48</td>
<td>85</td>
<td>26</td>
</tr>
<tr>
<td>%</td>
<td></td>
<td></td>
<td>63.10%</td>
<td>36.90%</td>
<td>20.70%</td>
<td>79.30%</td>
<td>30.60%</td>
<td>25.20%</td>
<td>23.40%</td>
<td>20.70%</td>
<td>35.10%</td>
<td>64.0%</td>
<td>55.00%</td>
<td>43.20%</td>
<td>76.60%</td>
<td>23.40%</td>
</tr>
</tbody>
</table>

NOTES: ¹ GAL = Greek as Additional Language. ² Missing n=2. ³ SLD = Speech and Language Disorders. ⁴ GLD = General Learning Difficulties. ⁵ other SEN includes ADHD, EBD etc.
4.2 Incidence of SLD in Greek mainstream classrooms

As analysed in the Methodology chapter, the LAMP was not applied as a whole school screen assessment, but only to pupils whose inadequate speech and language development raised concerns to their teachers. However, the fact that for each pupil who was screened the total number of pupils attending his/her mainstream classroom was also obtained enabled an estimation of SLD incidence in Greek mainstream classrooms. So, the incidence of pupils who had SLD and were officially diagnosed was 4.96%, while the incidence of pupils who were not officially diagnosed with SLD was 5.09%. Given the lack of official statistical evidence regarding the frequency of SLD pupils in Greek mainstream primary education, the above rates provide a useful estimate of SLD incidence in the Greek educational context.

4.3 LAMP cut-off scores

A frequency analysis (Nash, 2013) enabled the identification of cut-off points for LAMP at the top 10% and 20% of concern scores for the pupils who were screened, providing thereby an estimate of the level of pupils with the least and most difficulty with their speech and language skills. In the current study Time 2 (T2) screen cut-off scores at the top 10% and 20% concern scores were used, rather than Time 1 (T1) ones, as Nash (2013) T2 cut-off scores compared to T1 were lower. This was interpreted as showing that, at the T2 screening, the teachers’ ratings were more confident in identifying whether or not speech and language skills were of concern. As a result the mild category has been raised to include the pupils initially classified in the moderate to severe categories (Nash, 2013). According to her T2 screen frequency analysis, the cut-off score for top 10% was 47 and for top 20% was 22.

Accordingly, using Nash’ T2 cut-off scores in this study revealed that the majority of pupils from the SLD, General Learning Difficulties and other SEN subgroups were in the top 10% of concern scores.

Table 6 and Table 7 (p.158) show pupils in the top 10% and 20% concern scores based on the SEN subgroup they were classified. Most of the pupils
from these subgroups (formally or informally identified) scored above 47 in LAMP, confirming their identification in the Greek system. Specifically, 73% of the SLD pupils were in the top 10%, 72% of the pupils with General Learning Difficulties and other SEN were in top 10% of LAMP, while no pupils (n=0) from the No Difficulty (without SEN) subgroup were in top 10% of LAMP concern scores (Table 8, p.159). In addition, the analysis indicated that 93% of SLD pupils were in top 20% of concern scores, 97% of the pupils with General Learning Difficulties and other SEN and 5% from the No Difficulty subgroup were also in top 20% of LAMP (Table 9, p.159). The above findings also indicated that the LAMP did not distinguish between the SLD and the SEN subgroups involved in the study. It highlighted the similarities in the speech/language profile of the pupils identified officially or not with SLD, General Learning Difficulties and other SEN.

Additionally, based on the 10% and 20% cut-off scores, further analysis was conducted in order to identify: (i) the number of pupils that the LAMP identified at these cut-offs regardless of the SEN subgroup to which they were classified, and (ii) where the SEN formal/informal identification and LAMP 10% and 20% groups were consistent and where they were not.

So, similar to the process I followed for the identification of the SLD incidence in the sample mainstream classrooms, the analysis for the incidence of pupils at the two cut-offs revealed that the incidence for top 10% cut-off was 5.8% and for top 20% was 10.8%. Further, the analysis indicated 77% correspondence between LAMP 10% cut-off and SEN formal/informal identification and 95% correspondence between LAMP 20% cut-off and SEN formal/informal identification. This means that 77% of the pupils who had SEN formal/informal identification were in the top 10% of concern scores (Table 10, p. 159) and 95% of the pupils who had an SEN formal/informal identification were in the top 20% of concern scores (Table 11, p. 159). The above evidence indicated a good correspondence between LAMP 10% and 20% concern scores and formal/informal identification. In addition, only 4% of the pupils with an SEN official / non-official identification were below the LAMP top 20% and 1% were not identified but they were above top 20%.
Table 6. SEN subgroups and the top 10% and 20% of LAMP concern scores.

<table>
<thead>
<tr>
<th>N = 111</th>
<th>SLD(^1) officially diagnosed</th>
<th>SLD(^1) non-diagnosed officially</th>
<th>GLD(^2)</th>
<th>other SEN(^3)</th>
<th>No Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scores at Top 10%</td>
<td>57, 54, 60, 67, 68, 74, 78, 81, 70, 48, 75, 65, 92, 89, 60, 55, 61</td>
<td>50, 52, 97, 48, 108, 74, 52, 57, 70, 79, 77, 66, 70, 67, 58, 94, 59, 79, 84</td>
<td>67, 53, 70, 52, 66, 54, 79, 52, 54, 74, 80, 98, 56, 75, 47</td>
<td>79, 71, 82, 89, 113, 71, 53, 60, 49, 80, 60, 90, 49, 80, 54</td>
<td></td>
</tr>
<tr>
<td>Scores at Top 10-20%</td>
<td>34, 31, 27, 43, 42, 44</td>
<td>22, 42, 41, 45</td>
<td>40, 29, 27</td>
<td>45, 44, 46, 41, 42, 43, 41, 44</td>
<td>45</td>
</tr>
<tr>
<td>Rest of scores</td>
<td>14, 5, 16</td>
<td></td>
<td>19</td>
<td></td>
<td>8, 7, 12, 5, 8, 9, 12, 10, 7, 4, 6, 3, 3, 7, 6, 9, 5, 5</td>
</tr>
<tr>
<td>Total n</td>
<td>26</td>
<td>23</td>
<td>18</td>
<td>25</td>
<td>19</td>
</tr>
</tbody>
</table>

NOTES: \(^1\) SLD = Speech and Language Disorders. \(^2\) GLD = General Learning Difficulties. \(^3\) other SEN includes ADHD, EBD etc..

Table 7. SEN subgroups officially/not officially diagnosed at the top 10% and 20% of LAMP concern scores.

<table>
<thead>
<tr>
<th>N = 111</th>
<th>SLD(^1) officially diagnosed</th>
<th>SLD(^1) non-diagnosed officially</th>
<th>GLD(^2) officially diagnosed</th>
<th>GLD non-officially diagnosed</th>
<th>other SEN(^3) officially diagnosed</th>
<th>Other SEN non-officially diagnosed</th>
<th>No Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>N of pupils at top 10%</td>
<td>17</td>
<td>19</td>
<td>4</td>
<td>11</td>
<td>4</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>N of pupils at top 10-20%</td>
<td>23</td>
<td>19</td>
<td>4</td>
<td>11</td>
<td>4</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>N of pupils for rest of scores</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>18</td>
</tr>
</tbody>
</table>

NOTES: \(^1\) SLD = Speech and Language Disorders. \(^2\) GLD = General Learning Difficulties. \(^3\) other SEN includes ADHD, EBD etc.
Table 8. Pupils with formal/informal identification of SLD, and other SEN and pupils with No identification at the top 10% LAMP/not top 10% LAMP

<table>
<thead>
<tr>
<th></th>
<th>Formal/informal SLD* identification</th>
<th>Formal/informal other SEN* identification</th>
<th>No identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAMP top 10%</td>
<td>36</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>Not LAMP top 10%</td>
<td>13</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Total n</td>
<td>49</td>
<td>43</td>
<td>19</td>
</tr>
</tbody>
</table>

NOTES: * SLD = Speech and Language Disorders. * other SEN includes General Learning Difficulties, ADHD, EBD etc..

Table 9. Pupils with formal/informal identification of SLD, and other SEN and pupils with No identification at the top 20% LAMP/not top 20% LAMP

<table>
<thead>
<tr>
<th></th>
<th>Formal/informal SLD* identification</th>
<th>Formal/informal other SEN* identification</th>
<th>No identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAMP top 20%</td>
<td>46</td>
<td>42</td>
<td>1</td>
</tr>
<tr>
<td>Not LAMP top 20%</td>
<td>3</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>Total n</td>
<td>49</td>
<td>43</td>
<td>19</td>
</tr>
</tbody>
</table>

NOTES: * SLD = Speech and Language Disorders. * other SEN includes General Learning Difficulties, ADHD, EBD etc..

Table 10. LAMP 10% cut-off group and pupils with SEN formal/informal identification and No SEN formal/informal identification.

<table>
<thead>
<tr>
<th></th>
<th>N of pupils with Formal/informal identification</th>
<th>N of pupils with No formal/informal identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAMP 10% cut off group</td>
<td>67</td>
<td>0</td>
</tr>
<tr>
<td>Not in LAMP 10% cut off group</td>
<td>25</td>
<td>19</td>
</tr>
<tr>
<td>Total n</td>
<td>92</td>
<td>19</td>
</tr>
</tbody>
</table>

Table 11. LAMP 20% cut-off group and pupils with SEN formal/informal identification and No SEN formal/informal identification.

<table>
<thead>
<tr>
<th></th>
<th>N of pupils with Formal/informal identification</th>
<th>N of pupils with No formal/informal identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAMP 20% cut off group</td>
<td>88</td>
<td>1</td>
</tr>
<tr>
<td>Not in LAMP 20% cut off group</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>Total n</td>
<td>92</td>
<td>19</td>
</tr>
</tbody>
</table>

159
The following graph (Figure 1) shows the distribution of LAMP total scores for the four SEN subgroups, based on the top 10% and 20% of concern scores.

Figure 1. Distribution of LAMP total scores for the SEN subgroups based on the top 10%, 20% and rest of scores.

4.4 LAMP scores and Subgroups of SEN (SLD, General Learning Difficulties, other SEN and No Difficulty)

Case summaries indicated the scores’ range for each of the four SEN subgroups in LAMP subscales (i.e. Expressive language, Receptive language, behaviour language and Social language skills), as well as their total LAMP scores. Specifically, the LAMP total scores for the SLD subgroup ranged from 5 to 108, for the General Learning Difficulties ranged from 27 to 98, for the other SEN subgroup ranged from 19 to 113 and for the No difficulty subgroup ranged from 3 to 45.
One-way ANOVA and MANOVA between the four SEN subgroups were performed to identify the impact of SEN Type in LAMP scores. There was a statistical significant difference at the \( p < .01 \) in the total LAMP scores between the four SEN subgroups: \( F(3, 107) = 34.5, p = .000 \). There was also statistical significant difference at the \( p < .01 \) in each of the four LAMP subscales between the four SEN subgroups: Expressive language \( F(3, 107) = 29.7, p = .000 \), Receptive language \( F(3, 107) = 35.3, p = .000 \), Behaviour Language \( F(3, 107) = 20.9, p = .000 \) and Social language skills \( F(3, 107) = 19.3, p = .000 \). A MANOVA was conducted for the four SEN subgroups and LAMP (four subscales and total LAMP scores) in order to avoid Type 1 errors. It indicated a statistical significant effect between the scores of the four SEN subgroups in the four subscales of LAMP and total LAMP scores, Wilks’ Lambda = .436, \( df = 3, 107, p = .000 \).

An inspection of the mean scores indicated that the actual differences between the SLD, General Learning Difficulties and other SEN subgroups were small, while the No Difficulty subgroup reported significantly lower levels of LAMP scores compared with the three subgroups. Post-hoc comparisons using Tukey HSD test revealed that the mean scores of the No difficulty subgroup in each LAMP subscale and in LAMP total were significantly different from the mean scores of the other three SEN subgroups. Further, the effect size, calculated using eta squared was quite large in each subscale and total LAMP: LAMP total .492, Expressive language .454, Receptive language .498, Behaviour language .370 and social language skills .352. In the following table (Table 12, p. 162) are summarised the values reported above, the means and standard deviations of the four SEN subgroups LAMP scores.
Table 12. Results from analysis of SEN subgroups and LAMP scores.

<table>
<thead>
<tr>
<th></th>
<th>No Difficulty</th>
<th>F</th>
<th>Sig P</th>
<th>PEsq</th>
<th>Post-hoc analysis (Tukey HSD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LAMP Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N = 111</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLD^{1}</td>
<td>M=59.20</td>
<td></td>
<td>&lt;.01**</td>
<td>.492</td>
<td>No difficulty with all the other groups:</td>
</tr>
<tr>
<td></td>
<td>SD=22.20</td>
<td></td>
<td></td>
<td></td>
<td>N with SLD: 50.20408</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N with GLD: 50.61111</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N with other SEN: 51.20000</td>
</tr>
<tr>
<td>GLD^{2}</td>
<td>M=59.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD=18.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>other SEN^{3}</td>
<td>M=60.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD=21.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Difficulty</td>
<td>M=9.00</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>SD=9.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>34.5</td>
<td>3,107</td>
<td>&lt;.01**</td>
<td>.492</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>LAMP Expressive</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>M=18.89</td>
<td></td>
<td>&lt;.01**</td>
<td>.454</td>
<td>No difficulty with all the other groups:</td>
</tr>
<tr>
<td></td>
<td>SD=7.86</td>
<td></td>
<td></td>
<td></td>
<td>N with SLD: 16.21375</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N with GLD: 14.48246</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N with other SEN: 15.31579</td>
</tr>
<tr>
<td></td>
<td>M=17.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>SD=6.24</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>M=18.00</td>
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<tr>
<td></td>
<td>SD=6.22</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M=2.68</td>
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</tr>
<tr>
<td></td>
<td>SD=2.49</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>29.7</td>
<td>3,107</td>
<td>&lt;.01**</td>
<td>.454</td>
<td></td>
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</tr>
<tr>
<td><strong>LAMP Receptive</strong></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>M=18.44</td>
<td></td>
<td>&lt;.01**</td>
<td>.498</td>
<td>No difficulty with all the other groups:</td>
</tr>
<tr>
<td></td>
<td>SD=6.50</td>
<td></td>
<td></td>
<td></td>
<td>N with SLD: 15.78477</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N with GLD: 15.31579</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N with other SEN: 16.47579</td>
</tr>
<tr>
<td></td>
<td>M=18.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD=6.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M=19.16</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>SD=6.74</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M=2.88</td>
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<tr>
<td></td>
<td>SD=2.86</td>
<td></td>
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<tr>
<td></td>
<td>35.3</td>
<td>3,107</td>
<td>&lt;.01**</td>
<td>.498</td>
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</tr>
<tr>
<td><strong>LAMP Behaviour</strong></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>M=12.04</td>
<td></td>
<td>&lt;.01**</td>
<td>.370</td>
<td>No difficulty with all the other groups:</td>
</tr>
<tr>
<td></td>
<td>SD=5.98</td>
<td></td>
<td></td>
<td></td>
<td>N with SLD: 9.9881</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>N with GLD: 12.55848</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>N with other SEN: 10.38737</td>
</tr>
<tr>
<td></td>
<td>M=14.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD=4.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M=12.44</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>SD=6.22</td>
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</tr>
<tr>
<td></td>
<td>M=2.05</td>
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<tr>
<td></td>
<td>SD=2.59</td>
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<td></td>
<td>20.9</td>
<td>3,107</td>
<td>&lt;.01**</td>
<td>.370</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>LAMP Social skills</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
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<td></td>
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</tr>
<tr>
<td></td>
<td>M=9.77</td>
<td></td>
<td>&lt;.01**</td>
<td>.352</td>
<td>No difficulty with all the other groups:</td>
</tr>
<tr>
<td></td>
<td>SD=5.14</td>
<td></td>
<td></td>
<td></td>
<td>N with SLD: 8.19656</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N with GLD: 8.25439</td>
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<td></td>
<td></td>
<td></td>
<td>N with other SEN: 9.02105</td>
</tr>
<tr>
<td></td>
<td>M=9.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD=3.45</td>
<td></td>
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<tr>
<td></td>
<td>M=10.60</td>
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<tr>
<td></td>
<td>SD=4.89</td>
<td></td>
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<tr>
<td></td>
<td>M=1.57</td>
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<tr>
<td></td>
<td>SD=1.50</td>
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<tr>
<td></td>
<td>19.3</td>
<td>3,107</td>
<td>&lt;.01**</td>
<td>.352</td>
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<tr>
<td><strong>Total</strong></td>
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<tr>
<td></td>
<td>49</td>
<td>18</td>
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<td></td>
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<td>25</td>
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<td>19</td>
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<td></td>
<td></td>
<td></td>
<td>44.10%</td>
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<td></td>
<td></td>
<td></td>
<td>16.20%</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>22.50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17.10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Types of SEN</strong></td>
<td>MANOVA Wilks’ Lambda = .436, df = 3, 107, p = .000</td>
<td></td>
<td></td>
<td></td>
<td>Statistically significant effect.</td>
</tr>
</tbody>
</table>

NOTES: ^1 SLD = Speech and Language Disorders. ^2 GLD= General Learning Difficulties. ^3 other SEN includes ADHD, EBD etc..<br>* Mean difference is significant at the .05 level. ** Mean difference is significant at the .01 level.
The following graph (Figure 2) shows the distribution of LAMP total scores for the four SEN subgroups. The LAMP total scores for the majority of pupils from the SLD subgroup ranged from 41 to 60, while the total score for a number of pupils from the SLD subgroup ranged from 61 to 80. The higher LAMP total scores which ranged from 101 to 120, reported by a quite small number of pupils from the SLD and other SEN subgroups.

Figure 2. Distribution of LAMP total scores’ range and SEN subgroups.

Further, one-way ANOVA and MANOVA were performed only for the three SEN subgroups, SLD, General Learning Difficulties and other SEN in order to identify the differences in the LAMP scores of pupils who were classified into these subgroups. The analysis revealed no statistical significant difference ($p>.05$) between the selected three SEN subgroups in the four LAMP subscales scores, and in total LAMP score: Expressive language $F (2, 89) = .418$, $p = .659$, Receptive language $F (2, 89) = .176$, $p = .839$, Behaviour language $F (2, 89) = 1.29$, $p = .279$, Social skills language $F (2, 89) = .260$, $p = .772$ and LAMP total
MANOVA indicated no statistical significant effect between the scores of the three SEN subgroups in the four subscales of LAMP and total LAMP scores, Wilks’ Lambda = .883, df = 2, 98, p = .210.

The above analysis indicated that the LAMP scores of the subgroups SLD, General Learning Difficulties and other SEN did not differ significantly. On the contrary, the LAMP scores of the pupils from the No Difficulty subgroup created the statistical significant result. Therefore the LAMP did not reveal any significant differentiation of speech and language skills between the pupils from the SLD, General Learning Difficulties and other SEN subgroups, however it indicated the differences in speech and language progress of pupils who progressed typically and pupils who performed low in these domains.

4.5 LAMP scores and Types of SEN (SLD, General Learning Difficulties, other SEN and No Difficulty) Officially and Not Officially Diagnosed

Case summaries indicated the scores range for each subscale of LAMP (i.e. Expressive language, Receptive language, Behaviour language and Social language skills), as well as the total LAMP scores for each of the four SEN subgroups, officially and not officially diagnosed. Table 13 (p.165) summarises the range of LAMP total scores for the SEN subgroups, officially and not officially diagnosed.

A two-way ANOVA and MANOVA were performed in order to identify the impact of SEN subgroups, officially and not officially diagnosed, in LAMP scores. Each SEN subgroup was divided into two groups, one group for pupils who were officially diagnosed and the other group for pupils who were not officially diagnosed (Table 14, p. 166). However, the No Difficulty subgroup included only one group, as the pupils classified into this group followed the typical development. The interaction effect between official/no official diagnosis and SEN subgroups in LAMP scores indicated no statistically significant results (p>.05) for the Expressive language F (2, 104) = .807, p = .449, Receptive language F (2, 104) = 1.91, p = .152, Social skills language F (2, 104) = .405, p = .668, and LAMP total scores F (2, 104) = 1.78, p = .173.
Table 13. Range of LAMP total scores for the SEN subgroups, officially and not officially diagnosed.

<table>
<thead>
<tr>
<th>N = 111</th>
<th>SLD(^1) / Diagnosed</th>
<th>SLD(^1) / Not diagnosed</th>
<th>GLD(^2) / Diagnosed</th>
<th>GLD(^2) / Not Diagnosed</th>
<th>other SEN(^3) / Diagnosed</th>
<th>other SEN(^3) / Not Diagnosed</th>
<th>No Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of LAMP total scores</td>
<td>5 - 92</td>
<td>22 - 108</td>
<td>47 - 98</td>
<td>27 - 80</td>
<td>41 - 90</td>
<td>44 - 113</td>
<td>3 - 45</td>
</tr>
</tbody>
</table>

NOTES: \(^1\) SLD = Speech and Language Disorders. \(^2\) GLD = General Learning Difficulties. \(^3\) other SEN includes ADHD, EBD etc.
Table 14. Analysis for officially and not officially diagnosed SEN subgroups in each LAMP subscale.

<table>
<thead>
<tr>
<th></th>
<th>N = 111</th>
<th>n</th>
<th>LAMP Total</th>
<th>LAMP Expressive</th>
<th>LAMP Receptive</th>
<th>LAMP Behaviour</th>
<th>LAMP Social skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLD(^1)</td>
<td>26</td>
<td>66.70%</td>
<td>M=54.23</td>
<td>M=17.76</td>
<td>M=17.07</td>
<td>M=10.26</td>
<td>M=9.03</td>
</tr>
<tr>
<td>Diagnosed</td>
<td></td>
<td></td>
<td>SD=22.97</td>
<td>SD=8.75</td>
<td>SD=6.53</td>
<td>SD=5.85</td>
<td>SD=5.24</td>
</tr>
<tr>
<td>Not Diagnosed</td>
<td>23</td>
<td>31.90%</td>
<td>M=64.82</td>
<td>M=20.17</td>
<td>M=20.00</td>
<td>M=14.04</td>
<td>M=10.60</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SD=20.33</td>
<td>SD=6.67</td>
<td>SD=6.25</td>
<td>SD=5.60</td>
<td>SD=5.01</td>
</tr>
<tr>
<td>GLD(^2)</td>
<td>4</td>
<td>10.30%</td>
<td>M=69.00</td>
<td>M=19.25</td>
<td>M=20.50</td>
<td>M=18.75</td>
<td>M=10.50</td>
</tr>
<tr>
<td>Diagnosed</td>
<td></td>
<td></td>
<td>SD=22.58</td>
<td>SD=7.27</td>
<td>SD=7.85</td>
<td>SD=4.11</td>
<td>SD=3.87</td>
</tr>
<tr>
<td>Not Diagnosed</td>
<td>14</td>
<td>19.40%</td>
<td>M=56.92</td>
<td>M=16.57</td>
<td>M=17.28</td>
<td>M=13.42</td>
<td>M=9.64</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SD=16.89</td>
<td>SD=6.08</td>
<td>SD=6.35</td>
<td>SD=4.41</td>
<td>SD=3.45</td>
</tr>
<tr>
<td>other SEN(^3)</td>
<td>9</td>
<td>23.10%</td>
<td>M=53.77</td>
<td>M=16.33</td>
<td>M=16.00</td>
<td>M=11.88</td>
<td>M=9.55</td>
</tr>
<tr>
<td>Diagnosed</td>
<td></td>
<td></td>
<td>SD=18.36</td>
<td>SD=3.84</td>
<td>SD=4.27</td>
<td>SD=8.11</td>
<td>SD=4.77</td>
</tr>
<tr>
<td>Not Diagnosed</td>
<td>16</td>
<td>19.40%</td>
<td>M=63.81</td>
<td>M=18.93</td>
<td>M=20.93</td>
<td>M=12.75</td>
<td>M=11.18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SD=22.25</td>
<td>SD=7.17</td>
<td>SD=7.32</td>
<td>SD=5.15</td>
<td>SD=5.09</td>
</tr>
<tr>
<td>No Difficulty</td>
<td>19</td>
<td>26.40%</td>
<td>M=9.00</td>
<td>M=2.88</td>
<td>M=2.68</td>
<td>M=2.05</td>
<td>M=1.57</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SD=9.10</td>
<td>SD=2.49</td>
<td>SD=2.86</td>
<td>SD=2.59</td>
<td>SD=1.50</td>
</tr>
<tr>
<td>F</td>
<td>1.78</td>
<td></td>
<td>0.807</td>
<td>1.91</td>
<td>3.76</td>
<td>0.405</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>2, 104</td>
<td></td>
<td>2, 104</td>
<td>2, 104</td>
<td>2, 104</td>
<td>2, 104</td>
<td></td>
</tr>
<tr>
<td>Sig p</td>
<td>.173</td>
<td></td>
<td>.449</td>
<td>.152 p&lt;.05 NS</td>
<td>.026 p&lt;.05*</td>
<td>.668 p&gt;.05 NS</td>
<td></td>
</tr>
<tr>
<td>Interaction effect</td>
<td></td>
<td></td>
<td>.067 or 6.7%</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>P Esq</td>
<td>No Difficulty</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>with all the other groups:</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>N with SLD(^1) = 9.9882</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>N with GLD(^2) = 12.5585</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>N with other SEN(^3) = 10.3874</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Post-hoc analysis</td>
<td>Tukey HSD</td>
<td>Diagnosis &amp; Types of SEN</td>
<td>No significant interaction effect (p=.173)</td>
<td>No significant interaction effect (p=.449)</td>
<td>No significant interaction effect (p=.152)</td>
<td>Significant interaction effect (p=.026)</td>
<td>No significant interaction effect (p=.668)</td>
</tr>
<tr>
<td>Diagnosis &amp; Types of SEN</td>
<td>MANOVA Wilks’ Lambda = .873 df= 2, 104 p=.085</td>
<td>No statistically significant effect</td>
<td>166</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTES: \(^1\) SLD = Speech and Language Disorders. \(^2\) GLD= General Learning Difficulties. \(^3\) other SEN includes ADHD, EBD etc..

* Mean difference is significant at the .05 level.
However, there was a statistically significant effect at the p<.05 for the Behaviour language and the SEN subgroups officially/not officially diagnosed $F(2, 104) = 3.76$, $p = .026$, while the effect size, calculated using eta squared, was .067. Post-hoc comparisons only for the four SEN subgroups using the Tukey HSD test indicated that the mean score of No Difficulty subgroup in the Behaviour language subscale was significantly different from the mean scores of the other three SEN subgroups.

MANOVA revealed no statistically significant difference between the pupils who were officially and not officially diagnosed with SLD, General Learning Difficulties, other SEN and pupils with No Difficulty in the four subscales of LAMP and total LAMP scores, Wilks’ Lambda = .873, df = 2, 104, $p = .085$.

The above analysis revealed that the four SEN subgroups, officially and not officially diagnosed, did not differ significantly in their LAMP total scores and their scores from the Expressive language, Receptive language and Social skills language subscales. However, the Behaviour language scores of the four SEN subgroups, officially/not officially diagnosed, indicated a significant interaction effect, while post-hoc tests revealed that in this subscale the mean scores of No Difficulty subgroup were significantly different (M = 2.05) from the scores of SLD (M = 10.26 and M = 14.04), General Learning Difficulties (M = 18.75 and M = 13.42) and other SEN (M = 11.88 and M = 12.75) subgroups, officially and not officially diagnosed.

Further, a two-way ANOVA and MANOVA were conducted only for the SLD, General Learning Difficulties and other SEN subgroups, officially and not officially diagnosed, in order to identify any significant differences in the LAMP scores of pupils who were classified into these subgroups and were officially or not officially diagnosed. There was no significant interaction effect in the Expressive language $F(2, 86) = .684$, $p = .507$, Receptive language $F(2, 86) = 1.65$, $p = .198$, Social skills language $F(2, 86) = .34$, $p = .711$ and LAMP total scores.

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109 Post-hoc tests were not performed for the factor Official/Not official diagnosis, as it included fewer than three groups.
scores $F(2, 86) = 1.53$, $p = .222$. However, similarly to the analysis conducted for the four SEN subgroups, there was a statistically significant effect at the $p<.05$ in the Behaviour language $F(2, 86) = 3.24$, $p = .044$. So, in this subscale the scores of pupils from the SLD, General Learning Difficulties and other SEN subgroups, who were officially and not officially diagnosed, differed significantly. The actual difference in the mean scores between the three SEN subgroups was quite small for the SLD ($M = 10.26$) and other SEN ($M = 11.88$) subgroups officially diagnosed and larger for the General Learning Difficulties subgroup officially diagnosed ($M = 18.75$). MANOVA indicated no statistical significant effect between the scores of the three SEN subgroups officially and not officially diagnosed, in the four subscales of LAMP and total LAMP scores, Wilks’ Lambda = .87, $df = 2, 86$, $p = .161$.

4.6 Additional analysis for SEN subgroups and Gender, Greek as Additional Language (GAL), year of attendance, Inclusion class attendance and Literacy difficulty

Additional analysis was also conducted for the identification of significant differences and interaction effects between the four SEN subgroups and other subgroups, formed from additional data obtained from LAMP. Specifically, it was performed analysis for LAMP scores, SEN subgroups and gender, GAL (Greek as Additional Language), year of attendance (i.e. year B, year C, year D and year E), inclusion class attendance and literacy difficulty (i.e. difficulties with written literacy).

A two-way ANOVA which was performed to identify the impact of literacy difficulty/no literacy difficulty and SEN subgroups in LAMP scores revealed significant interaction effects ($p<.05$) for pupils who had a literacy difficulty (i.e. difficulty in written literacy) and pupils who did not have a literacy difficulty and SEN subgroups in Expressive language $F(3, 103) = 2.72$, $p = .048$, Receptive language $F(3, 103) = 3.20$, $p = .026$ and LAMP total scores $F(3, 103) = 3.15$, $p = .028$ (see Appendix S). Specifically, the pupils with literacy difficulty from the SLD, General Learning Difficulties and other SEN subgroups had higher mean
scores in the above subscales than the pupils with literacy difficulty from the No Difficulty subgroup. The LAMP total mean score of the pupils who had literacy difficulty from the No Difficulty subgroup was lower (M= 45) than the mean score of the SLD (M= 57.85), General Learning Difficulties (M= 58.47) and other SEN (M= 59.55) subgroups. There was no statistically significant difference for pupils who had a literacy difficulty and pupils who did not have a literacy difficulty and SEN subgroups in Behaviour language $F(3, 103) = 2.37, p = .075$ and Social skills language scores $F(3, 103) = 1.61, p = .190$. So, there was no difference in the performance of the SEN subgroups in these two subscales. MANOVA revealed no statistically significant differences between these subgroups, Wilks Lambda = .843, $df = 3,103, p = .135$.

Nevertheless, a two-way ANOVA and MANOVA indicated no significant interaction effect ($p>.05$) for SEN subgroups and gender (males and females), year of attendance (i.e. year B, year C, year D and year E), inclusion class attendance / no inclusion class attendance and GAL (Greek as Additional Language) / No GAL in LAMP scores (see Appendix S). As a result it was assumed that there was no impact in LAMP scores for the SEN subgroups and males/females, for the SEN subgroups and pupils who attended year B, year C, year D and year E, for the SEN subgroups and pupils who attended or not attended an inclusion class and for the SEN subgroups and pupils who had GAL or did not have GAL.

Despite the non-statistically significant results from the analysis of the above subgroups it is worth mentioning that there were differences in the performance of males and females from the General Learning Difficulties subgroup in all LAMP subscales. Characteristically, the LAMP total mean score of females was M= 75.42, while the score of males was M= 49.54, revealing thereby that females had higher LAMP total scores than males. Although there were no significant differences in the LAMP performance of pupils in year B, year C, year D and year E who were classified in the SEN subgroups, there were differences in the LAMP total mean scores of the SLD and the other three SEN subgroups. So, the pupils from the SLD subgroup had higher LAMP total mean scores in most of the year groups (M for year B= 63.14, M for year C= 62.13
and M for year D= 52.77) than the pupils in the same year groups from the General Learning Difficulties (M for year B= 59.71, M for year C= 60.66 and M for year D= 48.20), other SEN (M for year B= 58.42, M for year C= 45.83 and M for year D= 74.33) and No Difficulty (M for year B= 8.00, M for year C= 6.50 and M for year D= 13.83) subgroups. Nevertheless, the analysis indicated that year E pupils from the General Learning Difficulties subgroup had the higher LAMP total mean scores (M for General Learning Difficulties = 77.33 , M for SLD= 55.45, M for other SEN= 62.50 and M for No Difficulty= 4.66).

Additionally, the analysis revealed no significant differences in the LAMP performance of pupils who attended or not an inclusion class classified into the four SEN subgroups. However, it is necessary to highlight that the No Difficulty subgroup did not have any pupils who attended an inclusion class. A noteworthy difference was revealed in the LAMP total mean score of the pupils from the SLD subgroup, as the mean score of the pupils who did not attend an inclusion class was higher (M= 67.16) than the mean score of the same group from the General Learning Difficulties (M= 58.66), other SEN (M= 62.90) and No Difficulty (M= 9.00) subgroups.

Despite the non-significant differences in the LAMP performance of the SEN subgroups for pupils with GAL and no GAL, there were variations in the LAMP total mean scores of these groups. Specifically, the mean score of SLD pupils with GAL was lower (M= 47.60) than the score of SLD pupils with no GAL (M= 62.17). Similarly the LAMP total mean score of pupils with GAL from the General Learning Difficulties subgroup was lower (M= 53.2) than the score of pupils with General Learning Difficulties and no GAL (M= 62.07). Pupils with GAL from the other SEN subgroup had also lower mean score (M= 49.00) than the pupils with no GAL from the same subgroup (M= 63.73), while a smaller difference was revealed in the mean scores of the No Difficulty pupils with GAL and no GAL, as the first group performed slightly lower (M= 7.50) than the latter (M= 9.17). Overall, although there was no statistical significance, the difference in the mean scores indicated that the LAMP total performance of pupils with GAL was slightly better than the performance of pupils with no GAL.
Additional analysis for Gender, Greek as Additional Language (GAL), year of attendance, Inclusion class attendance and Literacy difficulty without SEN subgroups differentiation

A one-way ANOVA and MANOVA were performed to explore the impact of gender, year of attendance (i.e. year B, year C, year D and year E), inclusion class attendance / no inclusion class attendance, GAL (Greek as Additional Language) / No GAL in LAMP scores, without differentiating the pupils of the above subgroups according to the SEN type they experienced (SLD, General Learning Difficulties, other SEN and No Difficulty).

The one-way ANOVA revealed significant interaction effects at the \(p<.05\) for the pupils who attended an inclusion class and pupils who did not in Expressive language \(F(2, 108) = 4.03, \ p = .020\), Receptive language \(F(2, 108) = 3.7, \ p = .026\) and social skills language scores \(F(2, 108) = 3.3, \ p = .039\) and a statistically significant difference at the \(p<.01\) for the pupils who attended an inclusion class and pupils who did not in Behaviour language \(F(2, 108) = 8.1, \ p = .001\) and LAMP total scores \(F(2, 108) = 5.03, \ p = .008\) (see Appendix T).

Characteristically, the LAMP total mean score of pupils who attended an inclusion class was significantly higher (M= 57.13) than the mean score of pupils who did not attend an inclusion class (M= 42.10). In total the analysis revealed that the pupils who attended an inclusion class received higher scores than the pupils who did not, in all LAMP subscales. A MANOVA revealed a statistically significant difference between the pupils attended an inclusion class and pupils who did not attend an inclusion class in the four subscales of LAMP and total LAMP scores, Wilks’ Lambda = .805, \(df = 2, 108, \ p = .003\).

Moreover, a one-way ANOVA revealed a statistically significant difference at the \(p<.01\) for the pupils who had a literacy difficulty and pupils who did not have a literacy difficulty in Expressive language \(F(1, 109) = 25.1, \ p = .000\), Receptive language \(F(1, 109) = 32.3, \ p = .000\), Behaviour language \(F(1, 109) = 32.07, \ p = .000\), social skills language scores \(F(1, 109) = 21.0, \ p = .000\), and LAMP total scores \(F(1, 109) = 34.0, \ p = .000\) (see Appendix T). In addition, the LAMP total mean score of the pupils with literacy difficulty was significantly higher (M=
than the mean score of the pupils with no literacy difficulty (M= 29.96) indicating thereby that the LAMP total scores of the latter group were better than those of the first group. Similar differences were also revealed in the mean scores of the two subgroups in the Expressive language (M for literacy difficulty= 17.74 and M for no literacy difficulty= 8.76), Receptive language (M for literacy difficulty= 18.08 and M for no literacy difficulty= 8.50), Behaviour language (M for literacy difficulty= 12.61 and M for no literacy difficulty= 5.03), and Social skills language (M for literacy difficulty= 9.76 and M for no literacy difficulty= 4.65). A MANOVA also indicated a statistically significant difference between the pupils who had a literacy difficulty and those who did not in the four subscales of LAMP and total LAMP scores, Wilks’ Lambda = .745, df = 1, 109, p = .000.

A one-way ANOVA and MANOVA indicated no statistically significant difference (p>.05) in LAMP scores for gender (males and females) and no noteworthy differences were revealed in the mean scores of these groups (see Appendix T). A one-way ANOVA revealed no statistically significant differences (p>.05) in the LAMP scores of pupils in year B, year C, year D and year E. Nevertheless, the LAMP total mean score of pupils in year E was slightly higher (M= 53.52) than the mean score of pupils in year B (M=51.73), year C (M=50.53) and year D (M= 47.88). A MANOVA, though, revealed a statistically significant effect between the pupils attended year B, year C, year D and year E in the four subscales of LAMP and total LAMP scores, Wilks’ Lambda = .765, df = 3, 107, p = .005 (see Appendix T). As a result it was assumed that there was a statistically significant effect between pupils who attended year B, year C, year D and year E in the four subscales of LAMP.

The analysis for the latter subgroup, pupils with GAL and pupils with no GAL, despite not revealing statistical significance (p>.05), indicated that the pupils with GAL had slightly lower LAMP total mean scores (M= 45.69) than the pupils with no GAL (M= 52.26) (see Appendix T). Small differences were also revealed in the LAMP Behaviour language mean scores of the two subgroups, with the mean score of the pupils with GAL to be lower (M= 8.65) than the score of pupils with no GAL (M= 11.40). Consequently, it was assumed that pupils with
GAL performed slightly better in the LAMP subscales and received lower LAMP total scores than pupils who had not GAL.

4.8 Descriptive statistics for Athena Test and Matrices task

LAMP screening assessment provided an important overview of pupils’ speech and language skills, identifying the pupils whose performance/progress in these areas was insufficient. However, further assessment of a number of pupils through the Athena Test and Matrices task provided evidence regarding the pupils’ current speech and language functioning, literacy inefficiencies and non-verbal reasoning ability.

Twelve (n=12) mainstream primary schools agreed to continue participating in this phase, eight (n=8) of them had an inclusion class attached to the school setting and four (n=4) did not have an inclusion class. Forty-five pupils (N=45) of the initial total of 111 pupils for whom the LAMP was initially applied, were further assessed and ranged in age from 7 years and 3 months to 11 years and 3 months.

Cross-tabulation of Athena Test and Matrices task data indicated the following analysis: The majority of pupils were males (n males= 27, 60% and n females= 18, 40%), ten (n=10, 22.2%) pupils had Greek as Additional Language (GAL) and thirty-five (n=35, 77.8%) had not GAL. Further, thirteen (n=13, 28.9%) pupils attended year B, eleven (n=11, 24.4%) attended year C, thirteen (n=13, 28.9%) attended year D and eight (n=8, 17.8%) attended year E. Thirty-nine (n=39, 86.7%) pupils had a literacy difficulty (i.e. difficulties with written literacy) and six (n=6, 13.3%) did not have a literacy difficulty, while twenty-three (n=23, 51.1%) pupils attended an inclusion class and twenty-two (n=22, 48.9%) did not attend an inclusion class. Cross-tabulation of pupils’ socio-economic status (SES), which was also examined, indicated that three (n=3, 6.7%) pupils had high SES, thirty-one (n=31, 68.9%) pupils had medium/average SES and eleven (n=11, 24.4%) pupils had low SES.
Similarly to LAMP, the following four SEN subgroups were formed: SLD, General Learning Difficulties, other SEN (e.g. ADHD) and No Difficulty (i.e. typical development). Cross-tabulation analysis revealed that seventeen (n=17, 37.8%) pupils had SLD, eleven of them (n=11, 61.1%) were officially diagnosed and six (n=6, 22.2%) were not officially diagnosed, nine (n=9, 20%) pupils had General Learning Difficulty, two (n=2, 11.1%) were officially diagnosed and seven (n=7, 25.9%) were not, thirteen (n=13, 28.9%) pupils experienced other SEN, five of them (n=5, 27.8%) were officially diagnosed and eight (n=8, 29.6%) were not, while six (n=6, 13.3%) pupils had No Difficulty. Overall, eighteen (n=18, 40%) pupils had an official diagnosis of SEN and twenty-seven (n=27, 60%) had not an official diagnosis. Table 15 (p. 175) summarises the cross-tabulation analysis of the above data.
Table 15. Profiles of pupils assessed through the Athena Test and the Matrices task.

| N = 45 | n | Boys | Girls | GAL¹ | No GAL¹ | year B | year C | year D | year E | Official Diagnosis | Non-Official Diagnosis | Inclusion class attendance | No inclusion class attendance | Literacy Difficulty | Non-Literacy Difficulty | SES² | SES² | SES² |
|--------|---|------|-------|------|---------|--------|--------|--------|--------|-------------------|-------------------------|------------------------|------------------------|--------|--------|--------|
|        |    |      |       |      |         |        |        |        |        |                   |                         |                        |                        |        |        |        |
| SLD³   | 17 | 11   | 6     | 4    | 13      | 7      | 4      | 4      | 2      | 11                | 6                       | 12                     | 5                      | 17     | 0      | 0      |
| GLD⁴   | 9  | 7    | 2     | 4    | 5       | 4      | 2      | 3      | 0      | 2                 | 7                       | 5                      | 4                      | 9      | 0      | 1      |
| other SEN⁵ | 13 | 8   | 5     | 2    | 11      | 2      | 2      | 4      | 5      | 5                 | 8                       | 6                      | 7                      | 13     | 0      | 2      |
| No Difficulty | 6  | 1   | 5     | 0    | 6       | 0      | 3      | 2      | 1      | 0                 | 6                       | 0                      | 6                      | 0      | 6      | 0      |
| Total  | 45 | 27   | 18    | 10   | 35      | 13     | 11     | 13     | 8      | 18                | 27                      | 23                     | 22                     | 39     | 6      | 3      |

NOTES: ¹ GAL = Greek Additional Language. ² SES = Socio-economic Status. ³ SLD = Speech and Language Disorders. ⁴ GLD = General Learning Difficulties. ⁵ other SEN includes ADHD, EBD etc.
4.9 Types of SEN (SLD, General Learning Difficulties, other SEN and No Difficulty) and Athena Test, Matrices task and LAMP scores.

As mentioned before, unlike the Matrices task which involved age specific norms, T-scores and percentiles equivalents of pupils’ scores, the norms provided in the Athena Test are generalised across the age range and not age specific, and no T-scores and percentiles equivalents of pupils’ scores are provided. Therefore, pupils’ performance in the 8 out of 10 applied subscales of the Athena Test (i.e. Language proportions, Vocabulary, Memory of Numbers, Sentence completion, Words completion, Grapheme discrimination, Phonetics discrimination and Phonetics completion) was reported in terms of the age equivalents of their scores. Unlike the above subscales, which required quantitative scoring and were statistically analysed, pupils’ performance in the Common sequences (Days/Months and Counting) and Perception of right-left subscales of the Athena Test was reported based on qualitative descriptions (i.e. efficient / not efficient performance).

Case summaries indicated the age equivalents (in months) of pupils’ scores for each of the four SEN subgroups in the eight subscales of Athena Test, the Matrices task, as well as their LAMP scores (i.e. four subscales and total LAMP scores).

One-way ANOVA and MANOVA between the four SEN subgroups were performed to identify the impact of SEN Type in the Athena Test, Matrices task and LAMP scores (four subscales and total LAMP scores) (Table 16, p. 178). There was a statistical significant difference at the $p<.01$ between the four SEN subgroups in the following subscales of the Athena Test: Language proportions, $F (3, 41) = 6.4$, $p = .001$, Memory of numbers $F (3, 41) = 5.6$, $p = .003$, Sentence completion $F (3, 41) = 5.2$, $p = .004$, Words completion $F (3, 41) = 12.04$, $p= .000$, Phonetics discrimination $F (3, 41) = 9.2$, $p= .000$, Phonetics completion $F (3, 41) = 5.20$, $p = .004$ and in LAMP Expressive language $F (3, 41) = 10.3$, $p= .000$, LAMP Receptive language $F (3, 41) = 12.09$, $p = .000$, LAMP Behaviour language $F (3, 41) = 7.8$, $p = .000$, LAMP Social skills
language $F(3, 41) = 9.6, \ p = .000$ and LAMP total scores $F(3, 41) = 12.9, \ p = .000$. There was also a statistically significant difference at the $p<.05$ in Vocabulary $F(3, 41) = 4.1, \ p = .012$ and Grapheme discrimination $F(3, 41) = 2.8, \ p = .047$ of the Athena Test. Nevertheless, the pupils' performance in the Matrices task did not indicate any statistically significant difference between the four SEN subgroups ($p>.05$).

A one-way between-groups MANOVA was conducted with the eight subscales (see the beginning of this section) of the Athena Test. MANOVA was used in order to identify any differences between the four SEN subgroups in the Athena Test, Matrices task and LAMP scores (four subscales and total LAMP scores). Analysis revealed a statistically significant difference in the scores of the four SEN subgroups in the above measures, Wilks’ Lambda = .112, $df = 3, 41, \ p = .000$. 

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Table 16. Analysis of SEN subgroups performance in the Athena Test, Matrices task and LAMP.

<table>
<thead>
<tr>
<th>Type of SEN</th>
<th>MANOVA Wilks' Lambda</th>
<th>df</th>
<th>p &lt; .001</th>
<th>Statistically significant effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matrices BASII</td>
<td>0.112</td>
<td>37.8%</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>9</td>
<td>13</td>
<td>6</td>
</tr>
</tbody>
</table>

**NOTES:** 1) SLD = Speech and Language Disorders. 2) GLD= General Learning Difficulties. 3) other SEN includes ADHD, EBD etc.. 4) Mean difference is significant at the .05 level. ** Mean difference is significant at the .01 level.
An inspection of the mean scores indicated that the actual differences between the SLD, General Learning Difficulties and other SEN subgroups were small, while the No Difficulty subgroup reported significantly lower levels of mean scores compared with the three SEN subgroups in LAMP scores and higher in the subscales of Athena Test and the Matrices task. Further, post-hoc comparisons using Tukey HSD test revealed that the mean scores of the No difficulty subgroup in the above measures were significantly different from the mean scores of the other three SEN subgroups. The effect size, calculated using partial eta squared was large in each subscale of LAMP (P Esq varied from .366 to .486), while in the Athena Test had variations. Specifically, the largest effect size in the Athena Test was made in the Words Completion subscale (P Esq= .468) and the smallest was made in the Grapheme Discrimination subscale (P Esq= .174).

The above analysis indicated that the LAMP and Athena Test scores of the four SEN subgroups differed significantly. Post-hoc analysis revealed that the No Difficulty subgroup created the statistically significant results. Therefore, neither measures revealed any significant differentiation of speech and language skills between the pupils from the SLD, General Learning Difficulties and other SEN subgroups. Nevertheless, they indicated the differences in the performance of pupils who progressed typically (i.e. No Difficulty subgroup) and pupils who performed low in these areas and literacy. In addition, SEN subgroups’ performance in the Matrices task did not reveal any significant differences. Although it would be expected that the non-verbal reasoning skills of pupils with SLD would be similar with the pupils from the No Difficulty subgroup and higher from the pupils experiencing General Learning Difficulties the analysis indicated no significant differences in their scores. Specifically, the mean score of the SLD subgroup was slightly higher (M = 100.24) from the mean score of the General Learning Difficulties subgroup (M = 97.56) and the mean score of the No Difficulty subgroup (M = 123.00) was higher than the mean score of the latter subgroup.

Further, cross-tabs analysis indicated SEN subgroups performance in the Common sequences (Days/Months and Counting) and Perception of right-left
subscales of the Athena Test and Chi-square tests had no significant associations between them. Given that the Common sequences subscale included two parts, one part that examined days and months and the second part that assessed counting, pupils’ performance in these parts was analysed and reported separately. According to the Chi-square tests, in the Days/Months part of the Common sequences subscale \( p = .163 \), in other words there was no significant difference \( (p>.05) \) in the SEN subgroups’ performance in this part. However, there was a significant difference \( (p<.05) \) in the SEN subgroups performance in the counting part of this subscale \( p = .009 \) and in the Perception of right/left subscale \( p = .048 \). Table 17 (p. 181) summarises SEN subgroups’ performance in these subscales. Specifically, in the counting part of Common sequences subscale the analysis indicated that the majority of the pupils from the SLD subgroup did not perform efficiently, while in the Perception of right/left subscale the majority of pupils with General Learning Difficulties did perform efficiently.
Table 17. Performance of SEN subgroups in the Common sequences and Perception of right/left subscales of the Athena Test.

<table>
<thead>
<tr>
<th>N = 45</th>
<th>Common sequences for Days/Months</th>
<th>Common sequences for Counting</th>
<th>Perception of Right/Left</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Efficient performance</td>
<td>Not efficient performance</td>
<td>Efficient performance</td>
</tr>
<tr>
<td>SLD(^1)</td>
<td>17</td>
<td>37.8%</td>
<td>10</td>
</tr>
<tr>
<td>GLD(^2)</td>
<td>9</td>
<td>20%</td>
<td>4</td>
</tr>
<tr>
<td>other SEN(^3)</td>
<td>13</td>
<td>28.9%</td>
<td>7</td>
</tr>
<tr>
<td>No Difficulty</td>
<td>6</td>
<td>13.3%</td>
<td>6</td>
</tr>
</tbody>
</table>

NOTES: 1 SLD = Speech and Language Disorders. 2 GLD = General Learning Difficulties. 3 other SEN includes ADHD, EBD etc.
One-way ANOVA and MANOVA were also conducted only for the three SEN subgroups, SLD, General Learning Difficulties and other SEN in order to identify any differences in the scores of pupils who were classified into these subgroups. The analysis revealed no statistical significant difference ($p > .05$) between the selected three SEN subgroups in the Athena Test, Matrices task and LAMP scores (four subscales and total LAMP scores). Cross-tabs analysis and Chi-square tests was also conducted in order to identify any significant associations between these subgroups and Common sequences and Perception of right/left subscales of the Athena Test. However, the analysis revealed no significant differences between the scores of the three subgroups in the above subscales ($p > .05$). MANOVA, indicated no statistical significant effect between the scores of the three SEN subgroups in the above measures, Wilks’ Lambda = .395, $df = 2, 36$, $p = .386$. So, the analysis indicated that, despite the pupils’ classification to different subgroups their performance in the domains of speech, language and literacy, as well as their non-verbal reasoning ability did not differ significantly.

4.10 Types of SEN (SLD, General Learning Difficulties, other SEN and No Difficulty), officially and not officially diagnosed, and Athena Test, Matrices task and LAMP scores

Case summaries indicated the age equivalents (in months) of pupils’ scores, for each SEN subgroup officially and not officially diagnosed, in the eight subscales of Athena Test and the Matrices task, as well as their LAMP scores.

Due to the fact that the SEN subgroups, officially and not officially diagnosed, included a quite small number of pupils (Table 18, p. 183), univariate and multivariate analysis of variance was not conducted for these subgroups. Further, cross-tabs analysis and Chi-square tests of the Common sequences (Days/Months and Counting) and Perception of right-left subscales of the Athena Test were also not performed for the diagnosed and not diagnosed SEN subgroups.
Table 18. Number of pupils classified into the four SEN subgroups, officially and not officially diagnosed.

<table>
<thead>
<tr>
<th></th>
<th>SLD(^1)</th>
<th>SLD(^1)</th>
<th>GLD(^2)</th>
<th>GLD(^2)</th>
<th>other SEN(^3)</th>
<th>other SEN(^3)</th>
<th>No Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diagnosed</td>
<td>Not Diagnosed</td>
<td>Diagnosed</td>
<td>Not Diagnosed</td>
<td>Diagnosed</td>
<td>Not Diagnosed</td>
<td></td>
</tr>
<tr>
<td>N = 45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>11</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>5</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>%</td>
<td>61.1%</td>
<td>22.2%</td>
<td>11.1%</td>
<td>25.9%</td>
<td>27.8%</td>
<td>29.6%</td>
<td>22.2%</td>
</tr>
</tbody>
</table>

NOTES: 1 SLD = Speech and Language Disorders. 2 GLD = General Learning Difficulties. 3 other SEN includes ADHD, EBD etc..
4.11 Additional analysis for SEN subgroups and Gender, Greek as Additional Language (GAL), year of attendance, Inclusion class attendance, Literacy difficulty and Socio-economic status (SES)

Additional analysis was conducted initially for the identification of significant differences and interaction effects between the SLD, General Learning Difficulties, other SEN and No Difficulty subgroups and other subgroups, formed from additional data obtained from LAMP and Athena Test.

Specifically, two-way ANOVAs which were performed to identify the impact of gender, GAL (Greek as Additional Language), inclusion class attendance and SES (socio-economic status), and SEN subgroups in Athena Test, Matrices task and LAMP scores (four subscales and total LAMP scores) revealed no significant interaction effects ($p>.05$) (see Appendix U).

So, according to the analysis, there were no statistically significant differences between the SEN subgroups in the scores of males and females. Despite the slight variations in their mean scores, the males from the SLD, General Learning Difficulties, other SEN or No Difficulty subgroups did not perform higher or lower than females in any of the LAMP and Athena Test subscales or the Matrices task.

No statistically significant differences were revealed for the pupils with GAL and pupils with no Gal from the four SEN subgroups, while it should be mentioned that the No Difficulty subgroup did not have any pupils with GAL ($n=0$). Despite the non-significant differences in the performance of the above groups, the mean scores of the SLD pupils with GAL were higher than the scores of the pupils with no GAL from the same subgroup in the Athena Test and the Matrices task and lower in the LAMP subscales. For example the mean score of SLD pupils with GAL in the Grapheme Discrimination subscale was $M= 108.00$, while the mean score of SLD pupils with no GAL was $M=81.92$. Overall, the analysis indicated that the SLD pupils with GAL performed slightly better than the SLD pupils with no GAL in the LAMP, Athena Test and Matrices task.
Despite the non-statistically significant differences in the performance of pupils attending or not an inclusion class from the four SEN subgroups, there were slight variations in the mean scores within the SEN subgroups. Specifically, the pupils with SLD and the pupils with General Learning Difficulties who attended an inclusion class performed slightly better than the pupils who did not attend an inclusion class in the Matrices task and the majority of the Athena Test subscales (e.g. in the Language Proportions subscale the mean score for SLD pupils who were in an inclusion class was M = 94.75, while the mean score for the SLD pupils who were not in an inclusion class was M = 82.80). Moreover it should be mentioned that the No Difficulty subgroup did not have any pupils who attended an inclusion class (n=0).

Although the analysis indicated no significant differences in the performance of pupils with low SES, medium/average SES and high SES from the four SEN subgroups in any of the measures, there were slight variations in the mean scores within the SEN subgroups. For example, in the Vocabulary subscale of the Athena Test the pupils with medium/average SES from the General Learning Difficulties subgroup performed slightly better (M= 90.60) from the pupils with low SES (M= 71.00) and high SES (M= 85.00). Additionally it is noteworthy to mention that the SLD and No Difficulty subgroups had no pupils with high SES (n=0).

Nevertheless, a statistically significant interaction effect was revealed at the p< .05 for the pupils attended year B, year C, year D and year E only in Grapheme Discrimination scores F (7, 31) = 2.83, p = .021 (see Appendix U). Specifically, the Grapheme Discrimination mean score of the pupils in year C, year D and year E from the No Difficulty subgroup was higher than the mean scores of the pupils in the same year groups from the SLD, General Learning Difficulties and other SEN subgroups. A two-way ANOVA and MANOVA could not be performed though for the SEN subgroups and literacy difficulty / no literacy difficulty factor, as the no literacy subgroup had no pupils from the SLD (n=0), General Learning Difficulties (n=0) and other SEN (n=0) subgroups and the literacy difficulty subgroup had no pupils from the No Difficulty subgroup (n=0).
MANOVA was also performed in order to examine any differences in the scores of the four SEN subgroups and each of the above subgroups. A MANOVA indicated that there were no statistically significant differences between the SEN subgroups and gender, year of attendance, inclusion class attendance and SES in the Athena Test, Matrices task and LAMP scores (four LAMP subscales and total LAMP scores) (\(p>.05\)) (see Appendix U). In contrast to the two-way ANOVA which indicated no significant differences in the scores (Athena Test, Matrices task and LAMP) of the four SEN subgroups between pupils with GAL and pupils with no GAL, MANOVA revealed that there was a statistically significant difference between these groups, Wilks’ Lambda = .285, \(df = 2, 38, p = .043\).

Cross-tabs analysis and Chi-square tests indicated the performance of SEN subgroups for males and females, GAL and no Gal, year B, year C, year D and year E, inclusion class attendance and no inclusion class attendance, literacy difficulty and no literacy difficulty, low, medium/average and high SES, in the Common sequences (Days/Months and Counting) and Perception of right-left subscales of the Athena Test (see Appendix U for crosstabs analysis).

In addition, Chi-squares tests (Pearson Chi-Square) revealed that in the Counting part of Common sequences subscale females performed significantly different (i.e. lower) from males (\(p = .011\)), while the performance of pupils with no GAL in the same part of Common sequences subscale was significantly lower than pupils with GAL (\(p = .001\)). Further, the performance of pupils in year C was significantly lower (\(p = .051\)) than the performance of pupils in year B, year D and year E in the Counting part, while in the Perception of right/left the pupils in year D performed significantly lower (\(p = .030\)) than year B, year C and year E. The pupils who did not attend an inclusion class performed significantly different (i.e. higher) from the pupils attended an inclusion class in the Days/Months part (\(p = .048\)) and the Counting part (\(p = .032\)) of the Common sequences subscale. The performance of pupils with literacy difficulty did not differ significantly from the performance of pupils with no literacy difficulty in any subscale, while pupils who had low SES performed significantly different (i.e.
lower) from pupils with medium/average and pupils with high SES only in the Perception of right/left subscale ($p = .044$).

### 4.12 Additional analysis for Gender, Greek as Additional Language (GAL), year of attendance, Inclusion class attendance, Literacy difficulty and Socio-economic status (SES) without SEN subgroups differentiation

Further, one-way ANOVAs and MANOVA were performed to explore the impact of gender, GAL (Greek as Additional Language) / No GAL, year of attendance (i.e. year B, year C, year D and year E), literacy difficulty / no literacy difficulty, inclusion class attendance / no inclusion class attendance, Socio-economic status (SES) (i.e. low, medium/average, high) in the Athena Test, Matrices task and LAMP performance, without differentiating the pupils to SEN subgroups (SLD, General Learning Difficulties, other SEN and No Difficulty).

A one-way ANOVA revealed statistically significant differences at the $p<.05$ for males and females in LAMP Behaviour scores $F(1, 43) = 4.6$, $p = .036$, Language proportions scores $F(1, 43) = 4.7$, $p = .034$, Sentence completion scores $F(1, 43) = 5.3$, $p = .02$ and at the $p<.01$ in Words completion scores $F(1, 43) = 8.24$, $p = .006$ (see Appendix V). This indicated that females performed better than males in the above subscales. The effect size, calculated using eta squared, was .098, .100, .111 and .161 respectively. Post-hoc comparisons were not performed because the gender factor included less than three groups. MANOVA revealed a statistically significant effect in the scores of males and females Wilks’ Lambda= .531, $df = 1, 43$, $p = .044$, indicating that females performed higher than males.

Although, a one-way ANOVA indicated no significant differences between pupils with GAL and pupils with no GAL in the Athena Test, Matrices task and LAMP scores (four subscales and total LAMP scores), MANOVA, revealed a statistically significant effect between the scores of pupils with GAL and pupils with no GAL: Wilks’ Lambda= .534, $df = 1, 43$, $p = .046$ (see Appendix V). As a result it was assumed that there was a statistically significant effect between
pupils with GAL and no GAL in the above measures, as pupils with GAL had better performance.

A one-way ANOVA and MANOVA, which were conducted in order to identify the impact of year of attendance in the Athena Test, Matrices task and LAMP performance indicated statistically significant differences between the scores of pupils from year B, year C year D and year E (Table 19, p. 189). Specifically, there was a statistically significant difference at the $p<.05$ in the LAMP total scores $F(3, 41) = 4.3, p = .010$, and LAMP Receptive language $F(3, 41) = 3.7, p = .018$, and at the $p<.01$ in the LAMP Behaviour language $F(3, 41) = 8.5, p = .000$, as pupils in year B had higher scores than pupils in year C, year D and Year E. There was also a significant difference at the $p<.05$ in the Sentence completion $F(3, 41) = 4.02, p = .013$, Words completion $F(3, 41) = 3.2, p = .031$ and Phonetics discrimination $F(3, 41) = 2.8, p = .048$, and at the $p<.01$ in the Memory of numbers $F(3, 41) = 5.47, p = .003$, Grapheme discrimination $F(3, 41) = 5.2, p = .004$, Phonetics completion $F(3, 41) = 5.05, p = .005$ and in the Matrices task $F(3, 41) = 5.6, p = .002$. So, according to the analysis, the pupils in year E performed better in the above subscales than the pupils in year B, year C and year D. In addition, the effect size, calculated using eta squared, was .240 for LAMP total, .215 for LAMP Receptive, .384 for LAMP Behaviour, .286 for Memory of numbers, .227 for Sentence completion, .192 for Words completion, .279 for Grapheme discrimination, .173 for Phonetics discrimination, .270 for Phonetics completion and .293 for the Matrices task. Moreover, post-hoc comparisons using the Tukey HSD test indicated that the mean scores for year B in the above subscales were significantly different from the other years.
Table 19. Analysis of year B, year C, year D and year E performance in the Athena Test, Matrices task and LAMP.

<table>
<thead>
<tr>
<th></th>
<th>N total = 45</th>
<th>YEAR B</th>
<th>YEAR C</th>
<th>YEAR D</th>
<th>YEAR E</th>
<th>F</th>
<th>df</th>
<th>Significance</th>
<th>PEsq</th>
<th>Post-hoc analysis (Tukey HSD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LAMP total</strong></td>
<td>M = 82.92</td>
<td>M = 93.82</td>
<td>M = 97.54</td>
<td>M = 99.63</td>
<td></td>
<td>1.4</td>
<td>3.41</td>
<td>p&lt;.05*</td>
<td>.240 or 24%</td>
<td>year B with year C = 31.13 &amp; year D = 26.92</td>
</tr>
<tr>
<td></td>
<td>SD = 22.56</td>
<td>SD = 16.85</td>
<td>SD = 26.01</td>
<td>SD = 14.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Language Proportions</strong></td>
<td>M = 79.08</td>
<td>M = 91.36</td>
<td>M = 96.85</td>
<td>M = 99.88</td>
<td></td>
<td>2.7</td>
<td>3.41</td>
<td>p&lt;.05 NS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD = 20.63</td>
<td>SD = 17.86</td>
<td>SD = 20.69</td>
<td>SD = 13.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Memory of Numbers</strong></td>
<td>M = 67.38</td>
<td>M = 88.27</td>
<td>M = 97.62</td>
<td>M = 98.38</td>
<td></td>
<td>5.47</td>
<td>3.41</td>
<td>p&lt;.01**</td>
<td>.286 or 28.6%</td>
<td>year B with year D = 30.23 &amp; year E = 30.99</td>
</tr>
<tr>
<td></td>
<td>SD = 18.06</td>
<td>SD = 19.67</td>
<td>SD = 27.87</td>
<td>SD = 15.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sentence Completion</strong></td>
<td>M = 80.54</td>
<td>M = 96.27</td>
<td>M = 100.38</td>
<td>M = 104.75</td>
<td></td>
<td>4.02</td>
<td>3.41</td>
<td>p&lt;.05*</td>
<td>.227 or 22.7%</td>
<td>year B with year D = 19.85 &amp; year E = 24.21</td>
</tr>
<tr>
<td></td>
<td>SD = 21.91</td>
<td>SD = 18.86</td>
<td>SD = 15.48</td>
<td>SD = 11.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Words Completion</strong></td>
<td>M = 76.00</td>
<td>M = 88.82</td>
<td>M = 85.46</td>
<td>M = 101.50</td>
<td></td>
<td>3.2</td>
<td>3.41</td>
<td>p&lt;.05*</td>
<td>.192 or 19.2%</td>
<td>year B with year E = 25.50</td>
</tr>
<tr>
<td></td>
<td>SD = 12.12</td>
<td>SD = 23.23</td>
<td>SD = 19.29</td>
<td>SD = 17.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grapheme Discrimination</strong></td>
<td>M = 76.92</td>
<td>M = 100.00</td>
<td>M = 105.77</td>
<td>M = 113.13</td>
<td></td>
<td>5.2</td>
<td>3.41</td>
<td>p&lt;.01**</td>
<td>.279 or 27.9%</td>
<td>year B with year D = 28.85 &amp; year E = 36.20</td>
</tr>
<tr>
<td></td>
<td>SD = 27.34</td>
<td>SD = 24.26</td>
<td>SD = 21.98</td>
<td>SD = 12.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phonetics Discrimination</strong></td>
<td>M = 68.31</td>
<td>M = 89.45</td>
<td>M = 87.38</td>
<td>M = 101.75</td>
<td></td>
<td>2.8</td>
<td>3.41</td>
<td>p&lt;.05*</td>
<td>.173 or 17.3%</td>
<td>year B with year E = 33.44</td>
</tr>
<tr>
<td></td>
<td>SD = 25.01</td>
<td>SD = 35.40</td>
<td>SD = 23.36</td>
<td>SD = 19.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phonetics Completion</strong></td>
<td>M = 75.85</td>
<td>M = 89.45</td>
<td>M = 86.54</td>
<td>M = 109.75</td>
<td></td>
<td>5.05</td>
<td>3.41</td>
<td>p&lt;.01**</td>
<td>.270 or 27%</td>
<td>year B with year E = 33.90</td>
</tr>
<tr>
<td></td>
<td>SD = 22.06</td>
<td>SD = 19.08</td>
<td>SD = 19.62</td>
<td>SD = 14.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Matrices BASII</strong></td>
<td>M = 85.15</td>
<td>M = 101.91</td>
<td>M = 111.77</td>
<td>M = 124.50</td>
<td></td>
<td>5.6</td>
<td>3.41</td>
<td>p&lt;.01**</td>
<td>.293 or 29.3%</td>
<td>year B with year D = 26.62 &amp; year E = 39.35</td>
</tr>
<tr>
<td></td>
<td>SD = 13.70</td>
<td>SD = 13.65</td>
<td>SD = 34.07</td>
<td>SD = 21.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>11</td>
<td>13</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Mean difference is significant at the .05 level. ** Mean difference is significant at the .01 level.

MANOVA Wilks' Lambda = .138 df = 3, 41 p = .002 Statistically significant effect
A MANOVA revealed a statistically significant difference between the scores of pupils from year B, year C, year D and year E in the above measures, Wilks’ Lambda = .138, df = 3, 41, p = .002.

A one-way ANOVA and MANOVA were also conducted to explore the impact of literacy difficulty in the Athena Test, Matrices task and LAMP scores (four subscales and total LAMP scores). The analysis revealed statistical significant differences at the p<.05 for the pupils who had a literacy difficulty and the pupils who did not in the Grapheme discrimination $F(1, 43) = 6.2, p = .016$ and Matrices task $F(1, 43) = 3.9, p = .054$, and at the p<.05 for the rest of Athena Test’ subscales, and LAMP110 (Table 20, p. 191). So, according to the above findings the pupils who had a literacy difficulty had higher scores in the LAMP subscales and performed lower in the Athena Test and Matrices task than the pupils who had no literacy difficulty. The effect size was calculated using eta squared. MANOVA revealed a statistically significant effect between the scores of pupils who had a literacy difficulty and the pupils who did not: Wilks’ Lambda= .277, df = 1, 43, p = .000.

A one-way ANOVA revealed a statistically significant difference at the p<.05 for the pupils who attended an inclusion class and the pupils who did not attend an inclusion class in the Phonetics completion scores $F(1, 43) = 6.9, p = .012$, as the pupils who did not attend an inclusion class performed higher in this subscale (see Appendix V). Additionally, the effect size, calculated using eta squared was .139. However, the analysis did not reveal any statistically significant differences (p>.05) for the pupils who attended an inclusion class and the pupils who did not in the scores of LAMP, Matrices task and for the rest of Athena Test subscales. MANOVA, which was also performed, revealed no statistically significant effect: Wilks’ Lambda= .579, df = 1, 43, p = .103.

---

110 Post-hoc comparisons were not performed as the literacy difficulty factor included less than three groups.
Table 20. Analysis of pupils with literacy difficulty and pupils with no literacy difficulty performance in the Athena Test, Matrices task and LAMP.

<table>
<thead>
<tr>
<th>N total = 45</th>
<th>Literacy Difficulty</th>
<th>No Literacy Difficulty</th>
<th>F</th>
<th>df</th>
<th>Sig p</th>
<th>PEsq</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAMP total</td>
<td>M=58.31</td>
<td>M=6.17</td>
<td>37.7</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.468</td>
</tr>
<tr>
<td></td>
<td>SD=20.57</td>
<td>SD=1.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M=17.97</td>
<td>M=2.33</td>
<td>26.7</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.384</td>
</tr>
<tr>
<td></td>
<td>SD=7.32</td>
<td>SD=1.816</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Receptive</td>
<td>M=17.79</td>
<td>M=1.83</td>
<td>35.7</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.454</td>
</tr>
<tr>
<td></td>
<td>SD=6.47</td>
<td>SD=.753</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M=12.54</td>
<td>M=1.17</td>
<td>24.3</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.362</td>
</tr>
<tr>
<td></td>
<td>SD=5.58</td>
<td>SD=.408</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Social skills</td>
<td>M=10.00</td>
<td>M=.83</td>
<td>27.04</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.386</td>
</tr>
<tr>
<td></td>
<td>SD=4.26</td>
<td>SD=.753</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language Proportions</td>
<td>M=88.46</td>
<td>M=120.83</td>
<td>15.5</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.266</td>
</tr>
<tr>
<td></td>
<td>SD=19.49</td>
<td>SD=10.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td>M=10.79</td>
<td>M=114.50</td>
<td>12.06</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.219</td>
</tr>
<tr>
<td>Memory of Numbers</td>
<td>M=82.00</td>
<td>M=117.50</td>
<td>14.2</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.249</td>
</tr>
<tr>
<td></td>
<td>SD=22.58</td>
<td>SD=8.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sentence Completion</td>
<td>M=90.77</td>
<td>M=118.17</td>
<td>12.8</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.230</td>
</tr>
<tr>
<td></td>
<td>SD=18.45</td>
<td>SD=5.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Words Completion</td>
<td>M=81.41</td>
<td>M=118.83</td>
<td>31.5</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.424</td>
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<td>SD=15.31</td>
<td>SD=14.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grapheme Discrimination</td>
<td>M=93.72</td>
<td>M=120.83</td>
<td>6.2</td>
<td>1.43</td>
<td>&lt;.05*</td>
<td>.127</td>
</tr>
<tr>
<td></td>
<td>SD=25.98</td>
<td>SD=11.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phonetics Discrimination</td>
<td>M=77.97</td>
<td>M=130.17</td>
<td>28.5</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.399</td>
</tr>
<tr>
<td></td>
<td>SD=23.13</td>
<td>SD=14.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phonetics Completion</td>
<td>M=84.05</td>
<td>M=115.83</td>
<td>14.08</td>
<td>1.43</td>
<td>&lt;.01**</td>
<td>.247</td>
</tr>
<tr>
<td></td>
<td>SD=20.32</td>
<td>SD=8.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matrices BASII</td>
<td>M=101.00</td>
<td>M=123.00</td>
<td>3.9</td>
<td>1.43</td>
<td>&lt;.05*</td>
<td>.084</td>
</tr>
<tr>
<td></td>
<td>SD=26.68</td>
<td>SD=10.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>6</td>
<td>39</td>
<td>6</td>
<td>13.30%</td>
<td></td>
</tr>
<tr>
<td>Literacy Difficulty</td>
<td>MANOVA Wilks' Lambda=.277</td>
<td>df= 1, 43</td>
<td>p=.000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Mean difference is significant at the .05 level. ** Mean difference is significant at the .01 level.
A one-way ANOVA and MANOVA were also performed in order to explore the impact of pupils’ socio-economic status (SES) in the Athena Test, Matrices task and LAMP performance (four subscales and total LAMP scores) (see Appendix V). According to the analysis there were no statistically significant differences in the scores of pupils who had low, medium/average and high SES \((p>.05)\). Similarly, a MANOVA revealed no statistically significant effect between the scores of pupils who had low, medium/average and high SES: Wilks’ Lambda= .657, \(df = 2, 42, p = .957\).

Further, cross-tabs analysis and Chi-square tests revealed the performance of males and females, pupils with GAL and pupils with no GAL, pupils attended year B, year C, year D and year E, pupils attended the inclusion class and pupils who did not, pupils who had a literacy difficulty and pupils who did not, and pupils from the low SES, medium/average SES and high SES, in the Common sequences (Days/Months and Counting) and Perception of right-left subscales of the Athena Test (see Appendix V for cross-tabs analysis).

Chi-squares tests (with Yates Continuity Correction) indicated no significant differences \((p >.05)\) between males and females, or between pupils with GAL and pupils with no GAL performance on both subscales. However, according to the analysis the performance of pupils attended year B, year C, year D and year E differed significantly in the Counting part of Common sequences subscale \((p = .014)\) (with Pearson Chi-Square), as pupils in year B performed lower than the pupils in year C, year D and year E. Their performance though in the Days/Months part and in the Perception of right/left subscale was not significantly different \((p>.05)\). Moreover, there was a significant difference in the Counting part between the pupils who had a literacy difficulty and pupils who did not \((p = .006)\) (with Yates Continuity Correction), as the pupils with literacy difficulty did not perform efficiently, while their performance in the Days/Months part and in the Perception of right/left was not significantly different \((p>.05)\). Finally, the performance of pupils who attended an inclusion class and pupils who did not, as well as the performance of pupils who had low, average and high SES was not significantly different in any subscale \((p>.05)\) (with Yates Continuity Correction).
4.13 Rationale of Phase 2

As reported at the beginning of this chapter, the aim of Phase 1 of this study was the identification of pupils with SLD in Greek mainstream primary school settings. The data provided through the LAMP screening assessment offered an overview of pupils’ language skills in a range of areas such as expressive, receptive, behaviour and social skills language, while the scores of concern indicated the level of pupils with least and most difficulty with their speech and language skills. However, the statistical analysis of the pupils’ performance in the LAMP revealed that despite the pupils’ classification into different SEN subgroups, which was based either on official diagnosis or teachers’ evaluation, the speech and language skills of pupils from the SLD, General Learning Difficulties and other SEN subgroups did not differ significantly. Unlike these subgroups, the LAMP scores of pupils from the No Difficulty subgroup indicated that their language skills were significantly different (i.e. lower) from the other three SEN subgroups, confirming that they followed a typical pattern of development.

Further, in-depth assessment of a number of pupils, through the Athena Test and Matrices task, validated the initial identification through the LAMP and offered additional information regarding the profile of pupils’ language functioning in a range of areas, as well as their non-verbal reasoning skills. However, similarly to the LAMP, the statistical analysis of the Athena Test scores revealed that the performance of pupils classified into the SLD, General Learning Difficulties and other SEN subgroups did not differ significantly in any of the applied subscales. So, according to the findings it is assumed that despite the pupils’ classification into different SEN subgroups their language and literacy skills did not differ significantly as would be expected, especially for the pupils with SLD. Nevertheless, the analysis revealed statistically significant differences only between the performance of pupils classified into the No Difficulty subgroup and the three SEN subgroups in the applied subscales of the Athena Test. This indicated that the pupils who followed the typical pattern of development performed at a significantly higher level than the pupils with SLD, General Learning Difficulties or other SEN.
The statistical analysis of the Matrices task scores revealed no significant differences between the performance of pupils from the No Difficulty (i.e. typical development), and the SLD, General Learning Difficulties and other SEN subgroups. Specifically, it was expected that the non-verbal reasoning skills of pupils with SLD would be similar with those of pupils with typical development and significantly higher from the pupils with General Learning Difficulties. Nevertheless, the analysis indicated that the mean score of the No Difficulty subgroup (M = 123.00, SD = 10.04) was higher from the mean score of the General Learning Difficulties subgroup (M = 97.56, SD = 16.40), while the mean score of pupils with SLD (M = 100.24, SD = 35.12) was slightly higher than the mean score of the latter subgroup.

So, according to the findings from the analysis of LAMP, Athena Test and Matrices scores, the speech and language skills of pupils with SLD did not differ from the language profiles of pupils with General Learning Difficulties and other SEN. Given the non-significant differentiations in the SEN subgroups’ performance in the language assessment methods of Phase 1, the study proceeded to Phase 2 and the case study framework in order to identify a richer profile of pupils’ functioning. Specifically, the aims of this phase are outlined as follows: (i) the study sought to identify whether there was any basis to differentiating SLD from other areas of SEN and (ii) to examine the existing educational provision for pupils with SLD in Greek mainstream primary schools.

Seeking answers on the SEN subgroups’ differentiation and specifically on how the case-studies pupils came to be identified with SLD, General Learning Difficulties (GLD) and Specific Writing difficulties (SpWd), the quantitative statistical results which emerged from Phase 1, acted as supplementary evidence. These findings not only revealed the speech and language skills of the above subgroups, but also guided the purposeful sampling of cases for Phase 2. Regarding the identification of the existing educational provision for pupils with SLD in Greek mainstream primary schools, comparisons were drawn between and within the cases of SLD, General Learning Difficulties and Specific Writing difficulties, formally diagnosed or not, in order to identify the support
offered to them, the applied teaching and learning practices, their academic attainments, social participation and peer acceptance.

Specifically, Phase 2 of the study sought answers to the following research questions:

1. How did the case study pupils come to be identified as having SLD, General Learning Difficulties and Specific Writing difficulties?

2. Are there any differences between pupils having SLD, General Learning Difficulties and Specific Writing difficulties in terms of the support, and the teaching and learning practices provided to them at different years?

3. Are there any differences in the academic (i.e. speech/language and literacy) attainments of the case study pupils identified with SLD, General Learning Difficulties and Specific Writing difficulties?

4. To what extent do case study pupils’ social participation and peer acceptance relate to the difficulties they have?

The multiple case study design of this phase enabled the use of multiple sources of data collection and triangulation of them in order the research aims of this phase to be efficiently addressed. Table 21 summarises the research questions of Phase 2 in two parts and the range of data collection instruments applied for each of them.

Table 21. Research questions and data collection instruments of Phase 2

<table>
<thead>
<tr>
<th>Research Questions of Phase 2</th>
<th>Data Collection Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part 1</td>
<td></td>
</tr>
<tr>
<td>1. How did the pupil case studies come to be identified as having SLD, General Learning Difficulties and Specific Writing difficulties?</td>
<td>• Pupil case studies scores (quantitative data) from LAMP, Athena Test and Matrices task/BAS II (obtained in Phase 1)</td>
</tr>
<tr>
<td></td>
<td>• Mainstream class teachers’ and SEN teachers’ interviews about pupils’ difficulties</td>
</tr>
<tr>
<td></td>
<td>• Schools’ literacy tasks/pupils’ assignments</td>
</tr>
<tr>
<td></td>
<td>• Task for informal speech and language assessment (Karakitsios et al., 2011)</td>
</tr>
</tbody>
</table>

111 Based on Table 3 (p. 122).
2. Are there any differences between pupils having SLD, General Learning Difficulties and Specific Writing difficulties in terms of the support, and the teaching and learning practices provided to them at different years?

- Mainstream class teachers’ and SEN teachers’ interviews about pupils’ nature of support, as well as the teaching and learning practices provided to them
- Observation (mainstream & inclusion class) of the applied teaching practices

3. Are there any differences in the academic (i.e. speech/language and literacy) attainments of the case study pupils identified with SLD, General Learning Difficulties and Specific Writing difficulties?

- Mainstream class teachers’ and SEN teachers’ interviews about pupils’ academic attainments (e.g. academic progress' assessment or pupils’ strengths and weaknesses)
- Observation (mainstream & inclusion class) of pupils’ performance and active engagement during the teaching process
- Schools’ literacy tasks/pupils’ assignments

4. To what extent do case study pupils’ social participation and peer acceptance relate to the difficulties they have?

- Mainstream class teachers’ and SEN teachers’ interviews about pupils’ social participation and peer acceptance (e.g. willingness for collaboration with peers, preference for certain peers, rating of pupils’ confidence level in mainstream and inclusion class, if the latter is attended)
- Social Participation Questionnaire for Teachers (SPQ) (Koster et al., 2009)
- PATEM I & PATEM II (Makri-Mpotsari, 2001a, 2001b) for children
- Observation (mainstream & inclusion class) of pupils’ initiatives and responses to peers’ interactions

The key findings of this Phase which revealed considerable similarities in the speech/language profile and non-verbal reasoning ability of the pupils from the SLD, General Learning Difficulties and other SEN subgroups called for further and thorough examination of pupils’ language functioning. So, the study moved forward to Phase 2 in order to address the above research questions. The following chapter reveals the findings from each RQ, separately for each case study pupil, while a summary at the end of each RQ offers an overall description of the evidence and enables comparisons between the pupils with SLD, General Learning Difficulties and Specific Writing difficulties.
CHAPTER 5

Phase 2: Findings

The findings from Phase 2 of the study are presented in this chapter. The findings for the case studies are presented separately, according to the different SEN subgroup (i.e. SLD, GLD and SpWd) and whether or not they had an official diagnosis. As various data collection methods were used in this phase for each RQ, I inserted next to the findings the relevant sources from where the evidence was derived (see footnote 133, p.244). At the end of each RQ is also provided an overall description of the related findings and the comparisons made between the involved SEN subgroups.

At this point I should make clear that, for RQ4, mainstream and SEN teachers’ quotes, that express their views regarding pupils’ social skills and relationships with peers, are also presented at the start of each case study pupil section. The reason for presenting these quotes is to provide vivid examples of children’s social profile and skills. This does not mean that I adopted unquestionably teachers’ views/assessment. On the contrary, the use of abbreviations next to the findings as an indication of the sources from where the findings derived (e.g. ‘MCOb’ for mainstream class observation or ‘ICTI’ for inclusion class teacher interview), confirmed the range of methods used in this phase for each RQ and consequently for RQ4.
5.1 RQ1. How did the case study pupils come to be identified as having SLD, General Learning Difficulties and Specific Writing difficulties?

5.1.1 Pupils Officially Diagnosed with SLD

*Nick*

Nick was a 7 years and 5 months old boy, officially diagnosed with SLD by a health service in 2010. He attended year B of a mainstream primary school and he also attended the school’s inclusion class. His performance in the assessment methods of Phase 1 provided an overview of his difficulties. Specifically, his substantial difficulties with expressive and receptive language skills were indicated through his high expressive and receptive language scores in the LAMP (i.e. expressive: 34 and receptive: 25) and his total score (i.e. 92), which was within the top 10% of concern scores. Nick’s performance in all the applied subscales of the Athena Test was below his chronological age level, highlighting the literacy difficulties (i.e. spelling, writing and reading skills) that he also experienced. Specifically, in the Vocabulary and Grapheme discrimination subscales his performance was equal to 3 years below his age, in the Memory of Numbers and Phonetics composition subscales his scoring was equal to 4 years below his age, while his lowest performance was in the Phonetics discrimination subscale (5 years below his age).

Overall, Nick’s considerably low performance in the previous subscales revealed his substantial weaknesses in the domains of semantics, short-term memory, processing speed, writing-phonological awareness and grapheme/phoneme knowledge. His performance in the Matrices task (BAS II), indicated well below age figural analogical reasoning skills (approximately 1 year below i.e. 6 years; 1 month), raising questions of whether his SLD reflected wider cognitive or language weaknesses rather than limitations in speech and language per se.

Having examined Nick’s development in a range of language areas in Phase 1, in Phase 2 the use of various assessment methods provided supplementary evidence regarding his SLD and a thorough description of his literacy
Weakeness. Specifically, Nick had serious difficulties with his expressive and receptive language skills, his vocabulary was limited, he could not express his thoughts in a cohesive way, he struggled to form short sentences by following grammar rules and it was difficult for him to answer questions that concerned text comprehension (‘MTI’, ‘ICTI’, ‘MCOb’, ‘ICOb’ and ‘TISLA’). He experienced articulation problems, as he tended to distort or substitute certain letters when talking (e.g. ‘ξ’/’ks’ with ‘ψ’/’ps’) and struggled to pronounce diphthongs (e.g. ‘ει’ ‘ei’) (‘MTI’, ‘ICTI’, ‘MCOb’, ‘ICOb’ and ‘TISLA’). His considerable difficulties with oral language had implications for his literacy progress as he had serious difficulties with spelling (e.g. verbs’ endings), writing (e.g. incomplete sentence structure), handwriting (less legible and tendency not to keep the proper distance between words in a sentence) and reading (e.g. wrong accent when reading words), while text comprehension was another weak area for him (‘MTI’, ‘ICTI’, ‘MCOb’ ‘ICOB’ and ‘PLTA’).

Overall, Nick had considerable difficulties with his expressive and receptive language and serious problems with articulation, while there were also significant concerns about his spelling, writing, reading and text comprehension skills.

Helen

Helen was 7 years and 5 months old, attended year B and was officially diagnosed with SLD in 2010 by KEDDY. She attended the same mainstream school with Nick and co-attended the same inclusion class with him. LAMP screening assessment revealed her serious difficulties with expressive and receptive language skills (LAMP expressive: 23, LAMP receptive: 19), while her

112 Considering the wide range of assessment methods that were applied in Phase 2, next to the evidence are provided the related sources (i.e. the methods from which the evidence derived from) in the form of abbreviations (and in brackets). So, for each method are used the following abbreviations: Mainstream teacher Interview: ‘MTI’, Inclusion class teacher interview: ‘ICTI’, School’s literacy tasks/pupils’ assignments: ‘PLTA’, Task for informal speech and language assessment: ‘TISLA’, Mainstream class observation: ‘MCOb’, Inclusion class observation: ‘ICOb’, Social Participation Questionnaire (SPQ) for Teachers: ‘SPQ’, while the evidence from PATEM I and PATEM II for children preserved the same abbreviations.
total score (i.e. 65) was within the top 10% of concern scores. Her performance in all the applied subscales of the Athena Test was below her chronological age, while receiving her lowest scoring (4 and 5 years below her age) in the Grapheme Discrimination, Phonetics Completion and Phonetics Discrimination subscales, indicated significant limitations in her phonological skills. Her non-verbal reasoning skills were well below her age as her performance was equal to 1 year and 10 months below her age (i.e. 5 years; 7 months), raising great concerns regarding the nature of her difficulties.

Further assessment of Helen’s difficulties in Phase 2 provided essential evidence regarding her significant problems in the domain of speech and language, as well as serious weaknesses in the area of literacy. In particular, Helen had difficulties with her expressive and receptive language, articulation, as she substituted certain letters/sounds with others (e.g. ‘κ’/‘k’ with ‘χ’/‘ch’), while her vocabulary was very limited for her age. She could form quite simple sentences without being time specific, therefore usually she could not use the proper verb tense, often she could not understand the meaning of individual words (i.e. semantics) and organise her wording/phrasing properly (‘MTI’, ‘ICTI’, ‘ICOb’ and ‘TISLA’). She struggled in processing information (lack of coherence/facts reasoning) and as a result it was difficult for her to comprehend the rationale of a story and answer related questions (‘ICTI’, ‘MCOb’ and ‘TISLA’). Her difficulties in speech and language had implications for the development of her literacy skills and particularly her spelling (e.g. mistakes to already known/taught or unknown words), writing (i.e. not following the rules of grammar and syntax and her texts usually lacked punctuation) and reading skills (i.e. could not read fluently words with consonant’ clusters e.g. ‘κτ’/‘kt’, diphthongs e.g. ‘αυ’/‘au’ and small texts) (‘MTI’, ‘ICTI’, ‘MCOb’, ‘ICOb’ and ‘PLTA’). Maths was also a struggle for her (e.g. simple mathematical calculations) (‘MTI’ and ‘ICTI’).

Overall, Helen had significant difficulties with her expressive and receptive language, articulation and comprehension skills. She experienced serious problems with her spelling and writing skills, as she struggled to follow the grammatical and syntactical rules when structuring sentences in tasks or
assignments. Her reading was also problematic as she tended to stammer when reading texts, while she had many deficiencies in maths.

Jim

Jim was an 8 years and 7 months old boy, officially diagnosed with SLD by a health service in 2011. Jim attended year C of a mainstream primary school, while he also attended the school’s inclusion class. His assessment in Phase 1 of the study highlighted his significant weaknesses in the domains of speech/language and literacy. His high scoring in the LAMP expressive and receptive language (LAMP expressive: 18, LAMP receptive: 20), indicated his serious problems in his expressive and receptive language development, while his score in the behaviour related to language skills (LAMP Behaviour related to SLCN: 15) also highlighted his weakness in engaging effectively with others (e.g. co-operative activities) or maintaining concentration on instructions. His LAMP total score was 61 and within the top 10% of concern scores.

His performance in all the applied subscales of the Athena Test was equal to 1, 1½ or 2 years below his chronological age revealing the literacy difficulties that he also experienced (i.e. reading and writing skills). Specifically, receiving the lowest scores (performance equal to 2 years below his age), in the Words completion, Grapheme Discrimination and Memory of Numbers subscales indicated his weaknesses in the domains of writing-phonological skills, expressive language and semantic knowledge, as well as his limitations in short-term memory and processing speed. Jim’s non-verbal reasoning skills were equal to 1½ years below his age (i.e. 7 years; 1 month), raising questions of whether he might have been identified with General Learning Difficulties. Moreover, my observation evidence questioned further his diagnosis of SLD, as during the task’ administration (i.e. Matrices) Jim appeared unable to follow the instructions, despite the examples/samples provided. As a result I had to repeat the instructions a few times and explain the samples in the simplest way in order to ensure that he understood what was he was required to do.

A detailed description of his language functioning was provided through Phase 2. Specifically, Jim had difficulties with his expressive and receptive language
as although he could form simple sentences, sometimes he could not apply appropriate syntactic structure, struggled to choose the appropriate vocabulary or use the correct verbs’ tense, while hesitation repetitions were regular for him when he was not sure about his answers (‘MTI’, ‘ICTI’, ‘TISLA’, ‘MCOb’ and ‘ICOb’). Understanding text’s questions and providing correct answers was also one of his weaknesses, while he also had difficulties in memorising (e.g. for his history course) (‘MTI’ and ‘MCOb’). In addition, he had problems with articulation (substituted certain letters/sounds with others e.g. ‘β’/’b’ with ‘δ’/’d’ or mixed diphthongs e.g. ‘μπ’/’mp’) (‘ICTI’ and ‘ICOb’). Regarding his literacy progress, he had difficulties mainly in reading (e.g. struggled to distinguish diphthongs or clusters of consonants) and writing (nor correct grammatical and syntactic structure) (‘MTI’, ‘ICTI’, ‘ICOb’ and ‘PLTA’). He also had difficulties in maths (‘MTI’ and ‘ICTI’).

In conclusion, Jim had problems with his expressive and receptive language skills, articulation, texts’ comprehension and memorising, while he struggled with reading, writing and maths.

5.1.2 Pupils Not Officially Diagnosed with SLD

Simon

Simon attended year B of a mainstream primary school that did not have an inclusion class. His age was 8 years and 2 months, and despite his considerable difficulties in the domain of speech and language he was not officially examined (by KEDDY or a health service) and diagnosed with SLD, despite his teacher’s recommendations to his mother that he should receive professional support. Specifically, although his teacher discussed with Simon’s mother his speech/Language and literacy difficulties and suggested to her that it would be better for him to receive further (professional) support in these areas, his mother insisted on helping him herself (i.e. the mother). LAMP assessment indicated his difficulties with expressive and receptive language skills (LAMP expressive: 21, LAMP receptive: 23), while his behaviour related to SLCN also revealed serious weaknesses in this domain (LAMP behaviour: 21). His LAMP total score was quite high (i.e. 79) and within the top 10% of concern scores.
Further assessment of his speech and language development through the Athena Test revealed that his performance in most of the applied subscales was slightly below his age level, while his performance in the Common sequences subscale (Days/Months) and in the Perception of Right/Left was efficient. His lowest scoring in the Memory of Numbers subscale (approximately 2 years below his age) revealed his weaknesses in short-term memory, processing speed and sequencing ability, while in the Language proportions and Phonetics composition his performance was equal to 1 and 1½ years below his chronological age, highlighting his weakness in analysing and linking words logically, as well as his lack of phoneme'/grapheme' knowledge. His non-verbal reasoning ability was equal to 7 months above his age (i.e. 8 years; 9 months), indicating his ability to understand and analyse visual information, as well as to identify the relationships between the provided patterns by using visual reasoning, without being limited by his inadequate speech and language skills.

The range of methods applied in Phase 2 revealed Simon’s expressive and receptive language weaknesses. In particular, his language had a very simple structure e.g. he used no relative pronouns or conjunctions, while he often appeared confused with the meaning of words (semantic aspect) (‘MTI’, ‘MCOb’ and ‘TISLA’). Moreover, he tended not to follow instructions or answer to questions related to the taught material (‘MTI’ and ‘MCOb’). He also experienced difficulties in writing (i.e. the structure of his tasks or assignments was very simple and often lacked a coherent meaning), while his handwriting was slightly illegible (‘MTI’ and ‘PLTA’).

In general, Simon had difficulties with his expressive, receptive language skills and comprehension. His literacy weaknesses concerned mostly the domain of writing. Similarly to his expressive language, his written language relied strongly on short and simple sentence constructions, while his phrasing usually appeared rambling and lacked articulate meaning.

**Steven**

Steven was an 8 years and 11 months old boy who attended year C of a mainstream primary school and he did not attend the school’s inclusion class.
LAMP highlighted his expressive and receptive language weaknesses (LAMP expressive: 22, LAMP receptive: 13), while his LAMP total score (i.e. 59) was within the top 10% of concern scores. Detailed examination of his language functioning through the Athena Test revealed Steven’s efficient performance in the Common Sequences (Days/Months and Counting) and in the Perception of Right/Left subscales indicating his processing speed, sequencing ability and retrieval of information from long-term memory. On the contrary, his performance in the rest of the applied subscales of the Test (i.e. 8 subscales) was below his chronological age. Specifically, his lowest scoring (approximately 2½ years below his age) in the Phonetics composition, Vocabulary, Words completion, Grapheme Discrimination and Phonetics discrimination subscales revealed his difficulties in the domains of writing-phonological skills, expressive language and semantic knowledge. In addition, his non-figural reasoning skills were equal to 8 months below his age (i.e. performance equal to 8 years; 3 months).

Thorough examination of his speech and language development through various methods in Phase 2 provided a detailed description of his expressive, receptive and social skills language. Specifically, Steven experienced difficulties in expressing his thoughts appropriately (e.g. not choosing the correct words or inappropriate structure in order to provide coherent meaning) (‘MTI’, ‘MCOb’ and ‘TISLA’). He made hesitations and repetitions, had difficulties with comprehension (i.e. could not follow instructions or answer to tasks’ related questions), while he could not engage actively in class discussions, keep to the topic, initiate or maintain conversation with his peers (‘MTI’, ‘MCOb’ and ‘TISLA’). He also had difficulties with his spelling (e.g. he mixed the proper ending in verbs’ tenses, such as in imperfect, past tense or continuous future tense), writing (e.g. the content of his texts/assignments was not coherent) and reading skills (e.g. he stammered in words with many syllables) (‘MTI’, ‘MCOb’ and ‘PLTA’).

Overall, Steven had serious difficulties with his expressive, receptive language and comprehension skills, initiating and maintaining conversation with peers.
was a struggle for him, while the development of his spelling, writing and reading skills was also highly problematic.

5.1.3 Pupil Officially Diagnosed with General Learning Difficulties

John

John attended year B of a mainstream primary school, his age was 8 years and 8 months and was officially assessed and diagnosed with General Learning Difficulties by a health service in 2010. He also attended the school’s inclusion class.

The LAMP screening assessment detected his weaknesses with expressive and receptive language skills (LAMP expressive: 12, LAMP receptive: 12), while his behaviour related to SLCN also revealed difficulties in this domain (LAMP behaviour: 16). His LAMP total score (i.e. 47) was within the top 10% of concern scores. In the Athena Test his lowest scores (approximately 1½ and 2 years below his chronological age) in the Memory of Numbers and Phonetics Composition subscales indicated his limited short-term memory skills and his difficulty in connecting graphemes and forming words. However, in the majority of the applied subscales of the Test and particularly in the Phonetics discrimination, Sentence completion, Vocabulary, and Graphemes discrimination subscales, he performed above his age (approximately 1 year, 1½ years and 3½ years above his age) revealing his phonological awareness skills, expressive language, decoding, and comprehension abilities and semantic knowledge. His performance in the first part of Common sequences subscale (Days/Months) and in the Perception of Right/Left was efficient, while his scoring in the Matrices task (BAS II) revealed that his non-verbal reasoning skills were equal to 1 month above his age (performance equal to 8 years; 9 months).

Further assessment of his language skills in Phase 2 revealed that his weakness to set his thoughts in the right order occasionally influenced his expressive language skills. Despite his oral language fluency, sometimes he did not form his expressive language correctly from a syntactic perspective, and he
struggled to maintain a conversation keeping to the topic or take active part in class’ discussions (‘MTI’, ‘MCOb’, ‘ICOb’ and ‘TISLA’). Apart from his comprehension difficulty (i.e. could not answer to text questions when he was reading the text himself) (‘MTI’, ‘ICTI’, ‘MCOb and ‘ICOb’) his problems concerned mostly the domain of literacy and specifically his spelling, writing and to a lesser degree his reading skills. In particular it was difficult for him to follow grammar rules, he made many spelling mistakes (e.g. in verbs’ endings or tended to skip letters in words’ spelling) and although he could structure short sentences, when he was writing assignments he failed to form and link his phrases correctly (grammatically and syntactically) (‘MTI’, ‘ICTI’, ‘ICOb’ and ‘PLTA’). When reading he tended to stammer slightly (‘MTI’, ICTI’ and ICOb’), his memorising skills were problematic (in courses that required memorising e.g. history), while he also experienced difficulties in maths (‘MTI’ and ICTI’).

In conclusion, John’s difficulties concerned mostly his literacy development and specifically his spelling, writing and less his reading skills. Although he appeared to have fluent and clearly articulated expressive language, his oral language weaknesses were mostly related to the pragmatic/social use of language.

5.1.4 Pupil Not Officially Diagnosed with Specific Writing difficulties

George

His age was 9 years and 8 months, he attended year D of a mainstream primary school, while he also attended the school’s inclusion class. George was not assessed or officially diagnosed with SEN, however his considerable weaknesses were related to the area of Specific Writing difficulties as he had serious problems with his writing skills.

Initially the LAMP did not detect any significant difficulties with his language and communication skills, but it highlighted a few weaknesses in the domain of social language skills, where he received his higher score (i.e. 8). His LAMP total score (i.e. 27) was within the top 20% of concern scores. His performance in the majority of the applied subscales of the Athena Test was below his
chronological age level (approximately 1 or 1½ year below his age), while in the Sentence completion and Language proportions subscales he performed slightly above his age level (i.e. 4 months and 7 months respectively). This indicated that his decoding and comprehension abilities, as well as his intellectual functioning level (assessed through Language proportions subscale where he had to analyse and link words logically) were progressing at a level similar to the children who followed the typical development. Moreover, his performance in the Counting part of Common sequences subscale and in the Perception of Right/Left subscale was efficient. His non-verbal reasoning skills were equal to 1 year and 7 months above his age (i.e. performance equal to 11 years; 3 months), indicating his ability to analyse and resolve complex problems by using visual reasoning, without relying on his language skills.

The evidence provided in Phase 2 indicated that George had some weak areas in the development of his expressive language skills. In particular, sometimes it was difficult for him to pronounce words that contained clusters of consonants (specifically, words with three consonants in a row), while in narrations he tended not to use the correct verb tense (‘MTI’, ‘MCOb’, ‘ICOb’ and ‘TISLA’). His serious problems though, concerned his literacy skills and mostly his spelling and writing. He tended to make spelling mistakes (e.g. verbs’ endings), and his handwriting was not age appropriate. In his assignments or tasks he usually could not follow the rules of grammar (e.g. verbs’ proper tense and ending in active or passive voice), and syntax and consequently he struggled with the meaning of sentences, providing thereby a rather fragmentary narration (‘MTI’, ‘ICTI’, ‘ICOb’ and ‘PLTA’). Despite some slight difficulties when reading complex or unknown words, his reading skills appeared to progress well, while he experienced difficulties in maths (‘MTI’, ‘ICTI’ and ‘ICOb’).

Apart from his weaknesses in the domain of expressive language, overall his difficulties concerned mainly the area of literacy and specifically spelling and writing.
5.1.5 Overall description and comparison of pupils’ current functioning and difficulties

The range of assessment methods that were applied in both phases offered in-depth descriptions of pupils’ current speech and language functioning and useful evidence regarding the identification of their difficulties.

Initially, the LAMP total scores provided a useful overview of pupils’ speech and language skills and revealed the pupils with least and most difficulty with their speech/language and communication needs. Specifically, the fact that the pupils who were officially diagnosed or not with SLD were within the top 10% of concern scores indicated the high level of their speech/language difficulties, which was further verified through the outcomes of both phases. The LAMP revealed that for Nick, Helen and Jim, who had an official diagnosis of SLD, their higher scores concerned the expressive and receptive aspects of language. Steven received his highest score in his expressive language, Simon, who similarly to Steven was not officially diagnosed with SLD, received his highest score in his receptive skills, while he had the same level of scores in his expressive language and behaviour related to SLCN. Although John was officially identified with General Learning Difficulties, his total LAMP score was within the top 10% of concern scores, revealing thereby a high level of speech/language difficulties, which was also confirmed through additional evidence from both phases. By contrast to John who received his highest score in the behaviour related to SLCN subscale, George who had Specific Writing difficulties without being officially diagnosed, received his highest score in his social language skills. In addition, he was the only one of the case studies pupils whose LAMP total score was within the top 20% of concern scores.

Characteristic indications of Nick’s, Helen’s, Jim’s, Steven’s and Simon’s speech and language disorders were their serious problems with semantics knowledge, their limited and more basic vocabulary (language aspects) in comparison to children of a similar age, and their considerable difficulties with
phonological processing and articulation\textsuperscript{113} (speech aspects - the latter two aspects constitute indications of Speech Sound Disorders). Further, they had difficulties with the grammatical aspects of oral language, as they usually failed to use the correct verb tense (or combining the pronoun with the correct verb form), and consequently linking words in order to structure and provide age appropriate sentences and phrases with coherent meaning (expressive difficulties). In addition, it was difficult for them to remember information and answer text-related questions, while Jim, Steven and Simon were usually unable to follow verbal instructions (receptive difficulties).

Taking into consideration the great heterogeneity and the degrees of severity that are reflected in the various domains of General Learning Difficulties, the pupils who fall into the broad umbrella of this definition may experience different language problems. The range of evidence from both phases revealed that John, who was officially diagnosed with General Learning Difficulties and George, not officially diagnosed with Specific Writing difficulties, experienced associated difficulties in the domain of expressive language. Specifically, John often struggled to put words and sentences together in order to express his thoughts, while along with Steven they had difficulties with the pragmatic/social use of language, as it was difficult for them to initiate or hold a conversation keeping to a joint topic. The speech production difficulties that George had concerned his phonological and articulation skills, which were below the expected level for his age, while his expressive language weaknesses concerned the grammatical errors (i.e. did not to use the correct verb tense) that he usually made when structuring his sentences in oral language (especially in narrations).

The literacy problems that John and George had were mostly related to the domain of spelling and writing, indicating their difficulties with the orthographic/phonological aspects of language and the production of short, poorly organised sentences that lacked appropriate grammatical and syntactical

\textsuperscript{113} Their problems with articulation concerned mostly distortions and constitutions of certain speech sounds.
structure and consequently coherent meaning. In addition, George had further difficulties with his handwriting fluency, as his handwriting skills were not age appropriate, John had difficulties with reading comprehension, another highly problematic domain for pupils who have Learning Difficulties, while both of them had problems with maths. However, along with Simon and Steven, they (i.e. John and George) performed well in tasks that examined their sequencing skills, as well as their ability to retrieve information from long-term memory.

Nevertheless, considering the strong interrelation between speech/language and literacy development and the continuum that appears to connect these essential domains (Catts et al., 2002; Lewis et al., 2006), the pupils who were diagnosed with SLD, officially or not, experienced considerable limitations with their literacy skills and specifically with spelling, writing, reading and text comprehension. The evidence indicated that lack of phonological awareness and other phonological skills influenced Nick’s, Helen’s and Steven’s reading, spelling and writing development, Jim’s writing and reading skills and Simon’s progress in writing. The lack of phonological and phonemic awareness (also the role of semantic and syntactic skills should not be ignored according to Hagtvet (1993)) was highly related to the limitations that the above pupils had in reading fluency and reading comprehension of texts. Impaired non-phonological language aspects, such as lack of semantic knowledge or limited vocabulary, underpinned the subsequent weaknesses of these pupils in the domains of writing and comprehension. The difficulties they had at the word and sentence level affected their production of written language (e.g. simple sentences that lacked prepositions or inflectional morphology and consequently coherent meaning). In addition, Nick’s and Simon’s poor transcription skills were indicated not only through spelling but also handwriting. Further, the limitations that Nick, Jim and Simon experienced, along with John and George, in verbal short-term memory skills and processing speed, were considered highly associated with the field of speech and language difficulties. Nevertheless, Helen and Jim had also weak numerical skills, an aspect that usually constitutes part of wider cognitive and language impairments, related highly to the field of General Learning Difficulties.
Both phases’ data revealed pupils’ serious limitations in the areas of expressive and/or receptive language, phonological awareness, vocabulary, syntactic and semantic knowledge, comprehension, literacy and verbal short-term memory\textsuperscript{114}. Non-linguistic factors, such as non-verbal reasoning ability also had an active role in pupils’ language/literacy development, especially in those who were officially identified with SLD. Specifically, the evidence of Nick’s and Jim’s well below chronological age level non-verbal reasoning skills (i.e. Matrices) raised questions about their SLD official identification. Their speech and language difficulties might be seen to co-occur as part of wider cognitive or language learning problems. Further concerns were also raised about Helen’s official SLD identification as her serious delays in processing information were well below Nick’s and Jim’s figural reasoning ability, suggesting (the occurrence) of moderate General Learning Difficulties. In addition, Steven’s non-verbal reasoning skills was slightly below his age level and Simon’s equivalent skills were slightly above (both pupils were not officially diagnosed with SLD). This revealed that their cognitive ability was less influenced by their speech/language deficits. John’s figural reasoning skills were almost equal to his chronological age, indicating that despite his official identification with General Learning Difficulties his cognitive ability was not limited by his language problems. In contrast to the above pupils, George performed well above the expected level for his age, indicating that his literacy (i.e. writing) difficulties were language specific (occurred in relative isolation) and his non-verbal reasoning skills progressed sufficiently, without being affected by his language weaknesses (see Appendix W for a summary of RQ1 findings).

\textsuperscript{114} Weak short-term memory skills were revealed for Nick, Jim, Simon John and George.
5.2 RQ2. Are there any differences between pupils having SLD, General Learning Difficulties and Specific Writing difficulties in terms of the support, and the teaching and learning practices provided to them at different years?

5.2.1 Pupils Officially Diagnosed with SLD

**Nick**

In the mainstream classroom Nick’s difficulties in the domains of speech/language and literacy prevented him from following the pace of teaching (‘MTI’ and ‘MCOb’). His teacher, in order to support his learning, modified slightly her teaching pattern. In particular, during the teaching process she used many examples, often sat next to him in order to explain individually the teaching material or to provide instructions for new tasks, while the class worked in groups or pairs (‘MTI’ and ‘MCOb’). In addition, fewer tasks were given to him in the classroom and less homework, more time when completing tasks, while she was offering him opportunities for active involvement in tasks (e.g. reading task) (‘MTI’ and ‘MCOb’). It is noteworthy that the SEN teacher sometimes provided additional support in the mainstream classroom when the new teaching material was more demanding. This was after the mainstream class teacher's request for her to provide parallel support to Nick (‘MTI’ and ‘ICTI’).

He attended the inclusion class for a second year (since year A), three hours a week along with Helen. The teaching provided to him focused on oral language and literacy (‘ICTI’ and ‘ICOb’). The SEN teacher provided tasks related to the production and development of oral language, syntactic structure of texts and text understanding (‘ICTI’ and ‘ICOb’). The teaching material was based on the curriculum taught in the mainstream class adjusted to both the pupil’s language

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115 Considering the wide range of assessment methods that were applied in Phase 2, next to the evidence are provided the related sources (i.e. the methods from which the evidence derived from) in the form of abbreviations (and in brackets). So, for each method are used the following abbreviations: Mainstream teacher Interview: ‘MTI’, Inclusion class teacher interview: ‘ICTI’, Mainstream class observation: ‘MCOb’, Inclusion class observation: ‘ICOb’.
and literacy needs (‘ICTI’ and ‘ICOb’). The SEN teacher provided to him tasks from the literacy textbook appropriate for his year group and the previous year (i.e. year A), as well as handouts, computer grammar tasks and educational games focusing on the production of speech/language and the improvement of his literacy skills (‘ICTI’ and ‘ICOb’). Moreover, the SEN teacher used to apply a range of practices when teaching Nick, aiming to support his learning in the inclusion class, working with him in tasks individually or, usually with Helen. In particular, she often used the board when writing the correct answers to tasks or analysing the spelling of words, always repeated task instructions and gave him more time to think before answering tasks or text-related questions (‘ICTI’ and ‘ICOb’). She used to set examples, especially when Nick appeared confused and unable to follow her teaching, while she always praised his correct answers (sometimes she rewarded him with stickers) (‘ICTI’ and ‘ICOb’). Nick had also an IEP set at the beginning of the school year and organised by both teachers, including literacy and maths curriculum-based goals adjusted to his speech/language and literacy difficulties. In addition, his IEP was used as an informal progress record and reviewed frequently by both teachers (‘MTI’ and ‘ICTI’).

Overall, it was difficult for Nick to follow the mainstream classroom’s pace of teaching. His teacher, through different practices, tried to improve his learning and help him not to lose interest during the teaching process. He received specialised support in the inclusion classroom. In contrast to the mainstream classroom though, his learning was focused on the improvement of oral language and literacy, while the material provided to him was curriculum-based for the year attended and the previous year, tailored according to his speech/language and literacy needs.

**Helen**

Helen could not follow the pace of teaching process in the mainstream classroom, while it was obvious that her classmates made more progress than she did. (‘MTI’ and ‘MCOb’). Although her teacher argued that usually he did not modify his teaching in order to support Helen’s learning due to his classroom’s
high demands, the ‘specialised’ practices that he applied appeared to improve Helen’s learning and active involvement in class (‘MTI’ and ‘MCOb’). In particular, he tended to slow down his teaching pace when providing new teaching material, often he was sitting next to her in order to explain the teaching material or task instructions in a simpler way, encouraged and helped her to read small texts in front of the class, praised her efforts, helped her when writing small texts in group work and usually he provided to her fewer sentences in the spelling task (‘MTI’ and ‘MCOb’). Helen also had an IEP\textsuperscript{116} which was organised by the SEN teacher, developed and reviewed regularly by both teachers. It included academic (i.e. literacy and maths) curriculum-based goals tailored according to her difficulties and social goals, as in line with KEDDY’s recommendations she needed to boost/enhance her emotional organisation, emotional abilities and ‘smooth’ inclusion to the social environment (‘MTI’ and ‘ICTI’).

Helen received further support in the inclusion class for the second year (since year A). She co-attended the class with Nick and therefore had the same SEN teacher. Similarly to Nick her teaching focused on the production and development of oral language (e.g. improvement of vocabulary or appropriate syntactic structure of sentences), as well as the improvement of her written language (e.g. segmentation of words into phonemes, composition of sentences with words from the curriculum or text understanding) (‘ICTI’ and ‘ICOb’). The teaching material (which included school literacy textbooks, handouts, grammar computer tasks and educational games) was based on the curriculum of the year she attended as well as on the previous year, adjusted to her needs (e.g. tasks related to semantic knowledge or grapheme/phoneme knowledge) (‘ICTI’). The SEN teacher believed that both pupils’ (i.e. Nick and Helen) official diagnoses were important to her because apart from the fact that it offered the pupils the right to attend the inclusion class for a certain amount of hours, it also helped her to ‘know how to teach each child, which areas had to focus on’

\textsuperscript{116} It was provided at the end of the school year to KEDDY, as it constituted an annual confidential evaluation of Helen’s progress.
(‘ICTI’). As Helen co-attended the inclusion class with Nick the SEN teacher applied the same practices to both of them. However, considering Helen’s low profile and lack of confidence, the teacher always encouraged her to express her thoughts and praised her efforts when doing tasks (‘ICTI’ and ‘ICOb’).

In conclusion, it was difficult for Helen to follow the teaching pace of the mainstream classroom, although her teacher was trying to encourage her active engagement and to support her individually in order to respond efficiently to the tasks’ demands. In addition, the specialised support she received in the inclusion class, similarly to Nick, was focused on the improvement of her oral language and literacy skills, and formed according to the curriculum goals of the year attended, the previous year and her weaknesses. Due to her introvert behaviour, the SEN teacher also aimed to improve Helen’s social and emotional development.

**Jim**

Jim, similarly to Nick and Helen could not follow the pace of mainstream classroom’ teaching, he needed more time in order to familiarise himself with the teaching material and tasks, while according to his mainstream class teacher this was more evident at the beginning of the school year (‘MTI’ and ‘MCOb’). The fact that the same mainstream class teacher also taught him the previous year, while his referral to the health service, assessment and official diagnosis were made after the teacher’s strong recommendations to his parents, indicated that she was well aware of Jim’s difficulties. Aiming to support his weaknesses in the mainstream classroom, she used to apply a range of practices, for example, given that he had a slower pace than most his classmates when completing tasks, often the class waited for him (‘MTI’ and ‘MCOb’). Moreover, she moved Jim’s seat to the front row in order to watch him more carefully during teaching, she usually explained to him the tasks’ instructions individually, checked his writing regularly, praised his efforts, urged him to become involved in class discussions, and often used educational equipment to facilitate the teaching of demanding tasks (e.g. the display of a grammar task by projector) (‘MTI’ and ‘MCOb’).
Jim also had an IEP, developed jointly by his mainstream and SEN teacher and reviewed by them regularly (at the end of the term or at the end of a number of textbook’ units). It involved literacy and maths curriculum-based goals and problematic areas that both teachers needed to work with Jim (e.g. appropriate grammatical structure of sentences in oral and written language), while his IEP also constituted a record of his progress in the designated areas (‘MTI’ and ‘ICTI’).

Additional support was provided to him in the inclusion class three hours a week, while he attended the class with three more children who had similar difficulties. It was the second year for him attending the inclusion class (i.e. since year B) and with the same SEN teacher (‘ICTI’). As the pupils of his group experienced similar problems (two pupils in the group had only literacy difficulties, while another child similarly to Jim had SLD and literacy problems), they were either doing the same tasks or worked individually (‘ICTI’ and ICOb’).

However, the teaching provided to Jim focused mainly on the improvement of his speech/language, literacy skills and maths. Specifically the teacher persisted on certain, problematic areas for him (e.g. distinguishing diphthongs, using properly conjugations in oral and written language, forming sentences with proper syntactic structure), without following necessarily the curriculum of the year attended (‘ICTI’ and ICOb’).

Regarding the practices applied, the SEN teacher often used the board herself, for example when analysing a task, sometimes the pupils were also writing on the board (e.g. word spellings), she offered more thinking time to Jim when he was doing tasks and encouraged him to express himself when doing group tasks (‘ICTI’ and ICOb’). The teaching material provided in the inclusion class involved literacy handouts based mostly on the previous year’s curriculum (grammar, spelling and reading tasks), handouts and group activities displayed in the classroom’s wall (e.g. preparing a map with the multiplication table) (‘ICTI’ and ICOb’). Moreover, Jim’s SEN teacher believed that the official diagnosis was helpful as it made her aware of the ‘exact problem that the child has’, while she criticised the quality of the diagnosis in terms of the recommendations made by the diagnostic centres. Specifically, she argued that a well written
diagnosis involved useful guidelines regarding the intervention programme that should be followed, in contrast to a ‘clean-cut’ diagnosis which simply stated the pupil’s difficulty without providing any teaching suggestions and guidelines (‘ICTI’).

Overall, it was difficult for Jim to follow the teaching pace, while he needed more time compared to his classmates, in order to comprehend the provided teaching material and related tasks. His mainstream teacher applied a range of specialised practices in order to support his learning and to improve his involvement in the mainstream classroom. Additionally, his SEN teacher structured his teaching on the improvement of certain weak areas in oral language and literacy, focusing mostly on the previous year’s curriculum goals.

5.2.2 Pupils Not Officially Diagnosed with SLD

Simon

In general, Simon was able to follow the pace of teaching, either when doing tasks or when listening and attending to his teacher providing new teaching material (‘MCOb’). His teacher, aiming to support his learning and help him to keep up with the curriculum’ demands, applied different teaching practices (‘MTI’). In particular, she provided many examples, or moved step-by-step when teaching something new or when doing a task related to new and previous/past knowledge, she encouraged him to take active part in tasks, she prompted him to answer questions and usually repeated tasks\textsuperscript{117} that required his writing skills (‘MTI’ and MCOb’). Furthermore, given his slight difficulty in maintaining self-directed work\textsuperscript{118}, his teacher always gave him more time when doing informal tests or assignments in the classroom, while he also needed more time in order to complete them (‘MTI’ and MCOb’).

\textsuperscript{117} For example, Simon usually could not keep up with the teacher’s pace when reading the ‘spelling task’ or dictating a small text, so she always repeated it whether he asked her or not.

\textsuperscript{118} Characteristically, before starting to write a task or an assignment often he would lose time for unimportant reasons, for example in order to sharpen his pencil or search for his notebook.
In contrast to Nick, Helen and Jim, he did not have an IEP or a similar teaching/progress plan, as according to his teacher this applied mostly to pupils who were officially diagnosed as experiencing SEN and their teaching framework (‘MTI’). In addition, Simon’s school did not have an inclusion class so no specialised support was provided to him there while, according to his teacher, he also did not receive any further speech and language support outside the school (‘MTI’).

In conclusion, Simon could follow the classroom’s pace and, despite his noticeable difficulties in the domains of oral language and literacy (specifically in writing), he was supported only by his mainstream class teacher, who through different teaching practices was trying to help him to respond adequately to the curriculum’s learning goals.

**Steven**

Although his mainstream teacher, who also taught him the previous year (i.e. year B), argued that in general, the boy could follow the pace of her teaching (‘MTI’), it was doubtful that he was able to comprehend her teaching at all times and respond efficiently to tasks (despite his willingness to take part) (‘MCOb’). The range of the teacher’s practices applied mostly to the whole class, for example she analysed the process of doing a grammar task in steps (task analysis) and when correcting pupil assignments she discussed with them individually their grammar and syntactic mistakes (‘MTI’ and ‘MCOb’). Occasionally she would repeat a task’s rationale or instructions (‘MCOb’). Steven did not have an IEP or a similar teaching/progress plan as according to his teacher it was not necessary for him (‘MTI’).

Although his mainstream teacher and SEN teacher from the school’s inclusion class recommended his attendance there (i.e. in the inclusion class), his parents’ were doubtful and so prevented this move. As a result Steven, similarly to Simon, did not receive any further speech/language and literacy support within the mainstream school setting or professional support outside the school (‘MTI’).
Overall, Steven despite his considerable oral language and literacy difficulties did not receive any specialised support in the mainstream school setting, while he appeared unable to follow the pace of teaching all the time or comprehend the provided teaching material. In addition, the lack of individualised practices by his mainstream teacher indicated that his language needs were not supported adequately in the mainstream class environment.

5.2.3 Pupil Officially Diagnosed with General Learning Difficulties

John

Although during the teaching process he was willing to listen and attend to his teacher as well as do the tasks, his difficulties in comprehending the new teaching material or responding sufficiently to the assignments' demands, usually resulted in him being unable to follow the lesson's pace ('MTI' and 'MCOb').

Despite his teacher, who also taught him in year A\textsuperscript{119}, reporting that it was difficult for her to modify her teaching due to a highly demanding class of 20 pupils, she tried to support his learning. As she argued, she wanted to ‘make things easier for him’ in the mainstream classroom ('MTI'). Some of the practices that she applied during the teaching process included regular repetitions that she would make when providing new teaching material, especially tasks related to grammar (e.g. appropriate use of punctuation marks) or text comprehension asking from John to listen/pay attention to her, while she often repeated tasks’ answers or tasks' instructions for him ('MTI' and 'MCOb'). In literacy and maths she usually gave him fewer or easier tasks to do, as well as less homework and she tried to encourage him to participate in group work, as due to his literacy difficulties he sometimes preferred not be involved ('MTI' and 'MCOb'). In addition, he did not have an IEP, while his SEN teacher prepared at the end of the school year (without mainstream class teacher’s

\textsuperscript{119} He repeated year A, after his teachers and family agreed, in an attempt to be further supported in literacy. However, it appeared that this was not a pleasant experience for him as when asked he insisted that this repeating never happened.
involvement) a confidential evaluation of John’s progress for the health service and KEDDY\textsuperscript{120}. In this evaluation she reported his strengths, weaknesses, areas that required further support the following year, as well as any information related to his social skills and behaviour (‘MTI’).

He received further support in the inclusion class, 3 hours a week, working in a group with two more children, who similarly to John, had General Learning Difficulties and attended the same year\textsuperscript{121}. It was the second year for him attending the inclusion class and with the same SEN teacher who argued that teaching a pupil who had an official diagnosis of SEN was making a great difference in terms of the provided support, as the diagnosis made her fully aware of the areas that she had to focus on and helped her to ‘set with certainty the child’s intervention targets’ (‘ICTI’).

The teaching provided to John, which had a slower pace compared to the mainstream class (‘ICOb’), was organised according to the curriculum of the year attended (i.e. year B), adjusted to his literacy difficulties (‘ICTI’). Specifically, his teaching was focused on certain aspects of literacy such as tasks related to spelling, appropriate grammatical and syntactic composition of sentences, text reading and comprehension and maths (e.g. simple calculations, especially multiplication) (‘ICTI’ and ‘ICOb’). The teaching material included the school’s literacy textbook of the year attended or older textbooks, handouts and small assignments, while John liked to do literacy and maths tasks on the computer (‘ICTI’ and ‘ICOb’). Regarding the practices applied, apart from the fact that they usually worked as a group (i.e. not individual tasks), his teacher usually repeated the task instructions and afterwards tended to ask the children what they were required to do (‘ICTI’ and ‘ICOb’). Additionally, she guided them when doing tasks and praised their efforts, while she often used the board for analysing grammar tasks (‘ICTI’ and ‘ICOb’). Moreover, John’s

\textsuperscript{120} Although John was officially diagnosed with General Learning Difficulties by a health service, he was also examined by KEDDY in 2011. However, during the period of the study he had not received the KEDDY diagnosis.

\textsuperscript{121} One of the children also attended the same mainstream class with John.

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weakness in keeping to a joint topic of conversation or to maintain focused on tasks that troubled him, was an issue that his SEN teacher was dealing with by reminding him what he was required to do and by encouraging his efforts (‘ICOb’).

To conclude, John’s serious difficulties in the domain of literacy usually made him unable to follow the pace of mainstream class’ teaching. Apart from his mainstream teacher’s efforts to support his learning, his SEN teacher ‘specialised’ focus on the areas of spelling, writing, reading and text' text comprehension aimed to improve his skills in these areas, enhancing at the same time his confidence which appeared to be affected by his difficulties.

5.2.4 Pupil Not Officially Diagnosed with Specific Writing difficulties

George

Usually George\textsuperscript{122} could follow the pace of teaching in the mainstream classroom whether this involved new teaching material provided by his teacher, or active participation in individual and group tasks (‘MTI’ and ‘MCOb’). The teaching practices applied to the whole class, for example when doing tasks the teacher usually repeated the instructions to the pupils, or when doing a task that involved past/previous knowledge e.g. about conjunctions or reflexive pronouns, she would briefly remind the class about these grammar parts before doing the task (MCOb’). Occasionally, though, she applied ‘specialised’ practices aiming to support George’s learning in challenging tasks. So, she was standing next to him, checking his writing and trying to help him when writing grammar tasks or answering to text comprehension questions, she usually gave him less work to do in the classroom (in literacy and maths) in comparison with the other pupils and less homework (‘MTI’ and ‘MCOb’). John did not have an IEP or a similar plan, as according to his mainstream class teacher and SEN teacher (both of

\textsuperscript{122} His parents applied to the KEDDY service to examine his difficulties in writing skills. However, during the period of the study George had not been assessed and therefore he did not have an official diagnosis of SEN.
them taught him the previous year), it would not be useful to him or make any difference in his learning (‘MTI’ and ‘ICTI’).

George attended the inclusion class for a second year, 3 hours a week, while he co-attended the inclusion class with another boy who had difficulties in the domain of written language. The teaching hours were split between literacy and maths, and despite his slight difficulties in expressive language the teaching provided to him was organised based on his difficulties in written language and the curriculum taught in the mainstream classroom (‘ICTI’ and ‘ICOb’). Specifically, they focused on areas of grammar that George struggled with (e.g. verbs’ endings in different tenses or voice, comprehension and use of the subjunctive and imperative structure/mood, nouns’ endings in different forms or case) and on the syntactic structure of his assignments, as he could not link his phrasing in a legible way (‘ICTI’ and ‘ICOb’). As far as concerns the teaching material, apart from the school literacy book of the year he attended, they also used older school literacy books, handouts and occasionally worked on the computer (‘ICTI’ and ‘ICOb’).

Along with his classmate they worked mostly in pairs, his SEN teacher praised George’s efforts, and usually guided him when doing tasks. Nevertheless, sometimes George would do tasks on his own and then he would check them with his teacher, commenting each time on his correct or false answers (‘ICOb’). In addition, the SEN teacher believed that the official diagnosis was very helpful in terms of the support provided to the pupil as not only offered to the teachers ‘a rounded picture of child’s weaknesses, as the child is examined by a group of professionals who come from various backgrounds’, but it also provided to them useful guidelines regarding the practices and resources they could apply in the mainstream and inclusion classes (‘ICTI’).

Overall, George appeared able to follow the mainstream classroom’s pace, while his teacher tended to apply individualised practices in literacy tasks that

123 Specifically, he struggled to pronounce words with three consonants in a row, while he tended not to choose the correct verb tense when narrating.
were quite demanding for him. Additional support in the inclusion class focused mostly on the improvement of his writing difficulties, following at the same time the curriculum demands of the year attended.

5.2.5 Overall description and comparison of the support, and the teaching and learning practices provided to the pupils with SLD, General Learning Difficulties and Specific Writing difficulties

Mainstream and inclusion classes’ observation during the literacy hour and teachers’ semi-structured interviews offered essential evidence regarding the teaching, and learning practices provided to the pupil case studies and enabled important comparisons of the support offered to them.

The majority of pupils were unable to follow the teaching pace of their mainstream classroom, either because it required their active involvement in tasks or comprehension of the provided teaching material. Specifically, for Nick, Helen and Jim their considerable difficulties in the domain of expressive and receptive language, as well as their difficulties in literacy and text comprehension prevented them from responding adequately to the learning demands of the mainstream classroom. Similarly to them, John who had problems with his comprehension skills and his literacy progress usually could not keep up with his teacher’s and peers’ pace, while in contrast to his teacher’s beliefs Steven’s expressive and receptive language difficulties as well as his literacy problems appeared to hold him back from being actively involved in the teaching process.

Consequently, a range of specialised practices was applied by the mainstream class teachers in order these pupils’ learning needs be adequately met. However, similar individualised practices were also applied to the pupils who appeared to respond to the pace of their class, Simon and George, in order to be supported effectively in challenging tasks and to keep up with the curriculum demands. So, characteristically, Nick, Jim and Simon were given more time in order to complete their assignments, the teachers usually helped Nick, Helen and George when doing tasks (individually or in groups) in the classroom, while they often provided opportunities for active involvement in tasks or class
discussions for Nick, Helen, Jim, Simon and John. Moreover, less homework was given to Nick, John and George and fewer tasks were also provided to them and Helen in the classroom. In contrast to the above pupils, the practices of Steven’s mainstream class teacher applied to the whole class and it appeared that no individualised teaching was offered to him. Nevertheless, Nick was the only pupil who occasionally received parallel support in the mainstream classroom, in order to be effectively supported in challenging tasks.

Simon and Steven despite their considerable weaknesses in the domains of speech/language and literacy, had not been examined by a diagnostic service or been officially diagnosed. They did not receive any further language support in their mainstream schools, while the rest of the pupils attended an inclusion class. Although the pupils were in different years (i.e. Nick, Helen, and John year B, Jim year C and George year D) it was the second year for all of them in which they attended the inclusion class. All of them also had the same amount of teaching hours per week (i.e. three hours a week), while with the exception of Nick and Helen the same SEN teachers taught them both years.

The teaching provided to Nick and Helen who co-attended their school’s inclusion class, was focused on the development of their oral language, as well as the improvement of their written language and text understanding skills, while the material provided to them was based on the curriculum of the year attended and the previous year. Jim who attended the inclusion class with three more children who had similar difficulties was further supported in his oral language (i.e. articulation), written language (i.e. appropriate grammatical and syntactical structure of sentences) and maths, following mostly the previous year’s curriculum. Further, John who attended his school’s inclusion class with two more children with similar weaknesses, received additional support in spelling, grammar and syntax, reading, text comprehension and maths, organised according to the curriculum of the year attended. Although George was not officially diagnosed with Specific Writing difficulties, in contrast to Simon and Steven, he attended his school’s inclusion class along with a boy with similar difficulties. In spite of his slight weaknesses in his expressive
language skills, the teaching focused mainly on the improvement of his writing skills and maths, following the curriculum goals of the year attended.

A range of practices were also applied by the SEN teachers so that these pupils were efficiently supported in the domains of speech/language and literacy. Apart from John and George, who were mostly working in group tasks, they worked either individually or in pairs/groups. Meanwhile, with the exception of George’s SEN teacher, the other SEN teachers often used the board when analysing spelling/grammar tasks or providing the correct answers of assignments. Additionally, repetition of task instructions was another specialised practice applied often for Nick and Helen and additional time was given to them and Jim when completing literacy tasks, especially grammar and text comprehension tasks which constituted weak areas for them. All the SEN teachers praised pupils’ efforts and some of them (specifically, Helen’s, Jim’s and John’s SEN teachers) tried to encourage pupils’ participation in tasks that were challenging for them.

In contrast to Simon, Steven and George, who did not have an IEP or a similar teaching/progress plan, the mainstream and SEN teachers of Nick, Helen and Jim organised a plan that involved oral language, literacy and maths curriculum-based goals adjusted to their difficulties, while the same plan also constituted a progress record for them. Similarly to Helen, whose IEP was provided at the end of each school year to the KEDDY service by request at an annual confidential evaluation of her progress, John’s SEN teacher also prepared an evaluation of his progress. It was addressed both to the health service and KEDDY, informing them about John’s progress and learning areas that he should be further supported the following school year.

It is also worth mentioning that although SEN teachers’ everyday contact with these pupils and their own experience of pupils’ strengths and weaknesses through teaching over a period of time, made them well aware of their difficulties

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124 Helen’s IEP also included social goals as due to her introvert character and low confidence the KEDDY service made specific recommendations for the improvement of her social skills.
and the support that should be provided to them, they were highly dependent on pupils’ official diagnosis by the diagnostic services. Specifically, they strongly relied on professionals’ identification of the pupils’ nature of difficulties, their recommendations regarding the educational support that should be provided in the mainstream school environment and the intervention goals, questioning in a way their own skills and knowledge as SEN experts (see Appendix X for a summary of RQ2 findings).

5.3 RQ3. Are there any differences in the academic (i.e. speech/language and literacy) attainments of the case study pupils identified with SLD, General Learning Difficulties and Specific Writing difficulties?

Before examining the pupils’ academic attainments, it is essential to briefly analyse the Greek mainstream primary education policy of pupils’ academic assessment. According to the Presidential Decree125 (1995), the assessment of pupils who attend mainstream primary education is conducted by the mainstream teachers (in collaboration with SEN teachers when pupils receive further support in the mainstream school environment). The assessment is based on the children’s everyday oral and written work, active engagement during the teaching process, as well as on their attainments in the individual assessment tasks and curriculum-based assignments or handouts, provided by the teacher.

In year A and year B pupils’ assessment is purely ‘descriptive’126, there is no official record of their progress, while parents/carers are informed only orally by the mainstream and SEN teachers about pupils’ attainments, at the end of each term or after agreement with them. However, depending on the child’s progress during the school year, teachers and parents decide jointly whether the child is upgraded to the following year or not. In year C and year D, apart from the

125 The Presidential Decree 8/1995 was enacted in 1995.
126 The term ‘descriptive assessment’ which is met in the Presidential Decree (1995), indicates pupils’ learning and social behaviour.
‘descriptive’ evaluation a text scale is used that indicates the pupils’ level of progress in each course (e.g. language/literacy, maths or history): ‘Extremely Well’ (A), ‘Very Good’ (B), ‘Good’ (C) and ‘Almost/Nearly Good’ (D). Pupils’ progress is documented in an individual progress record\textsuperscript{127}, provided at the end of each term to parents/carers. Moreover, in year E and year F (the last two years of primary education) apart from the ‘descriptive’ assessment, the following numerical scale reveals pupils’ performance in each course: ‘Extremely Well’ (9-10), ‘Very Good’ (7-8), ‘Good’ (5-6) and ‘Almost/Nearly Good’ (1-4). Similarly to year C and year D, the pupils’ progress is documented in an individual progress record which is provided at the end of each term to their parents/carers. Furthermore, according to the Presidential Decree (1995), the marking ‘Almost/Nearly Good’ applies mostly to pupils who have moderate/severe learning difficulties.

Due to the time framework of the study’s second phase, only the first term’s text scores were available from the official progress records of the pupils who attended year C and year D (i.e. Jim, Steven and George).

5.3.1 Pupils Officially Diagnosed with SLD

\textit{Nick}

His teachers in the mainstream and inclusion classroom applied curriculum-based assessment of his speech and language skills, which was made through his engagement in everyday teaching and related tasks (that required his oral assessment) (‘MTI’, ‘ICTI’, ‘MCOb’ and ‘ICOb’)\textsuperscript{128}. In the inclusion class, his

\textsuperscript{127} Pupils’ progress is assessed and documented by the mainstream teacher. However, when the child receives further support in the mainstream school (i.e. inclusion class attendance or parallel support), then his/her progress in the related course is examined jointly by the mainstream and SEN teacher.

\textsuperscript{128} Given the wide range of assessment methods that were applied in Phase 2, next to the evidence are provided the related sources (i.e. the methods from which the evidence derived from) in the form of abbreviations (and in brackets). So, for each method are used the following abbreviations: Mainstream teacher Interview: ‘MTI’, Inclusion class teacher interview: ‘ICTI’, Mainstream class observation: ‘MCOb’, Inclusion class observation: ‘ICOb’ and School’s literacy tasks/pupils’ assignments: ‘PLTA’.
SEN teacher examined his literacy progress through the school language/literacy textbook tasks of the year he attended or related handouts (that involved spelling, grammatical and syntactical tasks) in every session (‘ICTI’, ‘ICOb’ and ‘PLTA’). In the mainstream classroom his spelling, writing and reading skills were assessed through everyday assignments from the literacy textbook, handouts, or informal tests and individual assessment tasks provided on a regular basis (‘MTI’, ‘MCOb’ and ‘PLTA’). Although there was no official record of his progress, his IEP, which was formed and reviewed by both teachers constituted an informal record of his attainments and weaknesses in the speech/language and literacy domains (‘MTI’ and ‘ICTI’).

The range of assessment methods applied in this phase indicated his attainments in speech/language and literacy and his significant limitations in these domains. His mainstream and SEN teacher highlighted the fact that in the six months period during which they had taught him he had made slight improvements. Specifically, his speech appeared to be more coherent, his articulation and comprehension skills were slightly improved, while he also made small progress in the domain of reading (e.g. when his homework concerned reading practice of a text, his reading flow appeared quite improved) and spelling, especially in words that he met in everyday teaching (‘MTI’, ICTI’, ‘MCOb’ and ‘ICOb’).

Nevertheless, although he used everyday language expressions, there was no variety in his language use, while it was difficult for him to find the proper words when trying to express his thoughts (‘MCOb’ and ‘ICOb’). He struggled in pronouncing certain speech sounds (i.e. letters, clusters of consonants and diphthongs), when narrating a story he tended to stammer or hesitate, while he usually did not use the correct verb tense (‘MTI’, ICTI’, ‘MCOb’ and ‘ICOb’). He rarely asked questions to his teachers during the teaching process, he was not always willing to take part in assignments (individual or group work) or tasks that required text comprehension mostly in the mainstream class, as it was quite difficult to express himself by following the grammar rules and he usually failed to provide the correct answer (‘MCOb’ and ‘ICOb’).
As far as his literacy weaknesses, his difficulty in following grammar and syntactic rules was evident when writing assignments, as he struggled to form simple sentences (e.g. his assignments were rarely enhanced by coordinating and subordinating conjunctions, adverbs or adjectives); instead he needed his teachers’ guidance in order to organise the assignments’ structure properly (‘MTI’, ‘ICTI’, ‘MCOb’, ‘ICOb’ and ‘PLTA’). His spelling mistakes also raised concerns, either when writing abstract words or forming sentences (e.g. verbs’ endings, nouns in singular/plural forms, appropriate accent) and his handwriting was illegible, as he tended not to keep the proper distance between words when forming sentences (‘MCOb’, ‘ICOb’ and ‘PLTA’). Further, when reading texts, his difficulty in distinguishing and pronouncing certain speech sounds (e.g. substituted ‘θ’/’th’ with ‘δ’/’d’), clusters of consonants or diphthongs, as well as his weakness in reading words with the wrong accent usually made him stammer (‘MTI’, ‘ICTI’, ‘MCOb’ and ‘ICOb’).

Overall, despite Nick’s teachers’ arguments regarding his slight progress at certain aspects of speech/language and literacy development, he experienced considerable difficulties in his expressive and receptive language skills, and significant problems in spelling, writing, reading and text comprehension which affected highly his attainments in these essential aspects of the curriculum.

**Helen**

Her mainstream and SEN teacher applied curriculum-based assessment of her speech and language progress through everyday teaching and participation in related tasks (‘MTI’, ‘ICTI’, ‘MCOb’ and ‘ICOb’). Similarly to Nick, her literacy progress in the inclusion class was examined through the school language/literacy textbook tasks of the year she attended or related handouts (that involved spelling, grammatical and syntactical tasks) in every session (‘ICTI’, ‘ICOb’ and ‘PLTA’). In the mainstream classroom, her literacy skills were assessed through everyday assignments from the literacy textbook or handouts, as well as informal tests and individual assessment tasks provided regularly to her class (‘MTI’, ‘MCOb’ and ‘PLTA’). Helen, similarly to Nick, attended year B and therefore did not have an official record of her progress. However, apart
from her IEP which included her oral language and literacy attainments, the annual confidential evaluation that her SEN teacher prepared and provided at the end of the school year to the KEDDY service, actually constituted an official record of her progress in the above domains ('MTI' and 'ICTI').

Helen’s mainstream and SEN teacher argued that during the short period of time that they taught her (approximately 6 months) there were some slight improvements in her speech and language skills. In particular, they reported that although she made speech sound errors when trying to express herself, her language appeared to make small progress and, despite stammering, her reading skills appeared also slightly improved. In addition, they highlighted that compared to the beginning of the school year her handwriting skills also got better and her texts were more legible.

The data revealed that similarly to Nick, her speech sound errors were evident in her oral language as she substituted certain sounds/letters (e.g. ‘κ’/‘k’ with ‘χ’/‘x’) and struggled to pronounce clusters of consonants (e.g. ‘ντρ’/‘ntr’) ('MTI', 'ICTI', 'MCOb' and 'ICOb'). Her difficulty to form appropriate language by choosing, and combining the correct words and providing a coherent meaning, indicated her limitations with the grammatical and syntactical aspects of language ('MCOb' and 'ICOb'). Moreover, her weakness to understand the chronological series of events made it quite difficult for her to respond well to tasks that required building up or narrating a story ('ICTI', 'MCOb' and 'ICOb').

Her literacy difficulties were related to the domains of spelling, writing, reading and comprehension. Specifically, she made spelling mistakes (struggled to write correctly words with diphthongs e.g. ‘αυ’/‘au’ or ‘ου’/‘ou’ and clusters of consonants e.g. ‘νν’/‘nn’ or ‘κτ’/‘kt’) to already known/taught or unknown words, when writing tasks or assignments it was difficult for her to form simple sentences by following the rules of grammar and syntax (e.g. not proper connection between subject, verb ending and object), while she did not use or comprehend punctuation marks (e.g. apostrophe or accent) ('MTI', 'ICTI', 'MCOb', 'ICOb' and 'PLTA'). In addition, she lacked reading fluency as she stammered when reading words with consonant’ clusters and words with
diphthongs, and she did not accent the words correctly (‘MTI’, ‘ICTI’, ‘MCOb’ and ‘ICOb’). Further, when reading a text she could not answer related questions, she struggled to understand the metaphorical sense of phrases, as well as the relationship between cause and effect either when reading the texts herself or when listening to her teachers’ and classmates’ narrations (‘ICTI’ and ‘ICOb’).

Despite her slight improvements in the development of her expressive language, reading and handwriting skills, speech/language and literacy constituted highly problematic areas for Helen. Her lack of expressive and receptive language proficiency, articulation, spelling and writing competence, text comprehension as well as reading fluency, made it difficult for her to progress adequately as the curriculum demands increased.

**Jim**

Jim had an official progress record of his speech/language and literacy skills, as he attended year C, while his text scores were provided after mainstream and SEN teachers’ agreement of his progress in the school terms. According to his record, in the first school term his text score was ‘C’, indicating that his progress in the domains of speech/language and literacy was ‘Good’ (‘MTI’ and ICTI’).

In the mainstream class, his progress in the above areas was assessed through everyday assignments from the literacy textbook and handouts, as well as through informal tests and individual assessment tasks or tasks and tests on the computer applied on a regular basis (‘MTI’, ‘MCOb’ and ‘PLTA’). Inclusion class assessment of his speech/language and literacy attainments was mostly based on the previous year’s language and literacy curriculum goals and involved assignments in every session (e.g. verbs’ tenses or verbs and nouns inflections).

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129 Although the term ‘text score’ may be considered inconsistent, given the text/alphabetical form of the grades (e.g. Grade ‘B’ indicated ‘Very Good’ performance) that indicated pupils progress in year C and year D, this term described adequately pupils’ performance which was provided in the official school progress records.
and repetitive tasks (same grammatical/syntactical tasks after a short period of time) (‘ICTI’, ‘ICO’ and ‘PLTA’).

The fact that the same mainstream and SEN teacher taught Jim last year (when he attended year B) gave them a clear understanding of his weaknesses and the progress that he made during this period of time. According to the teacher, his oral language was slightly more fluent, as not only his expressions appeared more coherent, but also his articulation was improved to some extent. He slightly improved his skills in text comprehension, although the teacher reported that usually they had to prompt him first before he would answer related questions (‘MTI’, ‘ICTI’, ‘MCO’ and ‘ICO’). However, they highlighted the fact that his difficulties with speech/language development, as well as his limitations in writing, reading and text comprehension, influenced highly his knowledge regarding the taught curriculum, which they described as quite poor (‘MTI’, ‘ICTI’, ‘MCO’ and ‘ICO’).

The evidence also revealed his difficulties with articulation, as he sometimes mixed consonants (e.g. substituted ‘β’/’b’ with ‘δ’/’d’) or diphthongs (especially ‘μπ’/’mp’ and ‘ντ’/’nt’) and struggled when pronouncing longer and unknown words (‘ICTI’, ‘MCO’ and ‘ICO’). Although he could form simple sentences, he often failed to link them properly (not using the appropriate grammar structure) and grasped for the right words (‘MTI’, ‘ICTI’, ‘MCO’ and ‘ICO’).

As far as his literacy progress, he lacked writing and reading competence, and when writing longer words he tended to miss letters or make spelling mistakes with words that required the same consonant in a row (e.g. ‘μέλισσα’/i.e. ‘bee’, ‘πολλά’/i.e. ‘many’) (‘MTI’, ‘ICTI’, ‘MCO’, ‘ICO’ and ‘PLTA’). He could not form sentences by following the rules of grammar and syntax (e.g. he struggled to use the right verb tense and was confused with inflections rules, especially in verbs and adjectives) and his inspiration when writing assignments was quite limited (‘MTI’, ‘ICTI’, ‘MCO’, ‘ICO’ and ‘PLTA’). He had difficulties with reading fluency, as he was a quite slow reader even when reading texts with already taught words or words and expressions used in everyday life (‘MTI’, ‘ICTI’, ‘MCO’ and ‘ICO’). Providing correct answers to text comprehension tasks, in
oral or written form of language, was another weak area for him, while his uncertainty and nervousness usually led him to hesitations, repetitions and more mistakes in his sentence structure (‘MTI’, ‘ICTI’, ‘MCOb’, ‘ICOb’ and ‘PLTA’).

Overall, Jim, despite his slight progress in the domains of articulation, expressive language and text comprehension, experienced serious weaknesses in his expressive and receptive language, writing and reading skills as well as slight problems with his spelling proficiency. His limitations in the areas of speech/language and literacy made him unable to respond adequately to the curriculum demands of the year he attended.

5.3.2 Pupils Not Officially Diagnosed with SLD

Simon

Similarly to Nick and Helen, Simon was in year B, so he did not have an official record of his progress in the domains of speech/language and literacy. The fact that he did not have an IEP indicated that there was no official documentation of his attainments in the above areas. Nevertheless, in the mainstream class curriculum-based assessment of his language and literacy progress were administered by means of everyday assignments from the literacy textbook and handouts (‘MTI’, ‘MCOb’ and ‘PLTA). In addition, informal tests and individual assessment tasks were provided to the pupils after the completion of a chapter or a set of units from the literacy textbook (‘MTI’, ‘MCOb’ and ‘PLTA). According to his teacher, although homework was another way of examining pupils’ literacy progress, this was not possible for Simon, as his homework had no mistakes due to his mother’s involvement\textsuperscript{130} (‘MTI’).

The fact that the same mainstream class teacher also taught him the previous year indicated that she had a well-rounded viewpoint of Simon’s weaknesses

\textsuperscript{130} Simon’s mainstream class teacher replied that ‘Simon’s mother helps him when doing his homework, as when doing the same kind of tasks here he has difficulties, but when checking his homework there are no mistakes...’.
and improvements in the domains of language and literacy during this period of
time. So, she argued that although Simon’s speech and language skills were
not improved, he made slight progress in reading. She highlighted that he was
not yet a fluent reader, but usually he did not stammer (‘MTI’ and ‘MCOb’).
Moreover, his spelling skills were competent enough as he made mistakes only
in unknown words (‘MTI’, ‘MCOb’ and ‘PLTA’). Further, he was well aware of
issues that were not directly related to the school curriculum of the year he
attended, such as historical facts and he preferred to discuss mostly about them
(‘MTI’).

Nevertheless, Simon’s speech and language skills were below the expected
level for his age. Although he did not make grammatical errors (e.g. used the
appropriate tense in verbs and correct verb and nouns inflections), it was
difficult for him to express his thoughts in tasks that required his oral language
skills. Specifically, he used noticeably less words and relied strongly on short
and simple sentence structure compared to children of a similar age (i.e. only
subject, verb and object, no adjectives, adverbs, coordinating or subordinating
conjunctions) (‘MTI’ and ‘MCOb’). In addition, although sometimes it was
difficult for him to answer questions related to the taught material, when he
appeared unable to understand and follow his teacher’s verbal instructions he
might asked her to repeat what she said (‘MTI’ and ‘MCOb’). Due to his slight
difficulty in maintaining self-directed work, his workflow was a little slower
compared to his classmates and as a result he usually needed more time when
doing tasks (either the tasks required oral or written language) (‘MTI’ and
‘MCOb’).

Although his spelling skills progressed adequately, he struggled with writing
(‘MTI’, ‘MCOb’ and ‘PLTA’). Specifically, in tasks or assignments he could not
link his phrases in a cohesive way and, despite that he had many ideas, when
trying to include them in an assignment he used poor or incomplete syntactical
structure, confusing thereby the meaning of his sentences (‘MTI’, ‘MCOb’ and
‘PLTA’). Moreover, his assignments did not involve words that he should know
(i.e. vocabulary taught in the classroom), but relied mostly on everyday
language or standard phrases (‘MTI’, ‘MCOb’ and ‘PLTA’). His handwriting was
considered slightly illegible due to the irregular size of his letters, while he usually did not keep the appropriate distance between words (‘MTI’, MCOb’ and ‘PLTA’).

In conclusion, although Simon improved his reading fluency, his considerable difficulties with his speech/language, comprehension, writing and handwriting skills affected his language and literacy attainments.

**Steven**

Steven, similarly to Jim, had an official record of his speech/language and literacy skills progress which was based on a mainstream teacher’s evaluation of his performance in these areas. According to his official record, his text score in the first school term was ‘C’, indicating that his performance in these domains was ‘Good’ (‘MTI’). In the mainstream class his speech/language and literacy progress was examined through everyday assignments based on previous and up-to-date knowledge, handouts, spelling tasks, homework, and informal tests or individual assessment tasks which were applied approximately every three weeks (‘MTI’, MCOb’ and ‘PLTA’).

Steven’s mainstream class teacher who also taught him the previous year (i.e. year B) revealed that there were some slight improvements in Steven’s expressive language skills compared to last year. Specifically, she argued that his language was more fluent, while he did not appear to be particularly reluctant when trying to express himself (‘MTI’). In addition, despite his stammering in rather complex or unknown words his reading skills were also improved (‘MTI’ and ‘MCOb’).

Despite Steven’s slight improvement in the domain of speech and language, the evidence highlighted his noticeable weaknesses in the development of expressive language. His difficulties were evident when trying to express himself, as he often had difficulty finding the appropriate words, and it was also difficult for him to combine them and link his sentences in a grammatically and syntactically correct way (‘MTI’ and ‘MCOb’). Similarly to Simon, his difficulty in forming meaningful sentences led him to rely on sentences that had short and
simple structures (‘MCOb’). Hesitations and repetitions were also weaknesses, especially when he was feeling anxious or uncertain about his answer (‘MTI’ and ‘MCOb’). His difficulty to understand and consequently follow the teacher’s verbal instructions or answer task-related questions was evident when he was required to work individually or in a group (‘MTI’ and ‘MCOb’). Additionally, it appears that his weakness to express himself properly, keeping to the topic and maintaining a conversation with his peers, often discouraged him from participating in group discussions or group work (‘MCOb’).

In literacy he had serious problems in the domains of spelling, writing and reading. Specifically, in spelling he usually mixed certain letters (usually failed to write the correct ‘e’ e.g. ‘πρόσκληση’ instead of ‘πρόσκληση’), mixed the endings in verbs’ tenses (e.g. in imperfect, past tense or continuous future tense) or in present/past participles, while he often could not correctly accent the words in different cases (e.g. nominative/possessive case ‘το ελαφι’/του ελαφιού’ / i.e. ‘the deer’) (‘MTI’, ‘MCOb’ and ‘PLTA’). The syntactic structure of his sentences was rather simple, he usually did not use pronouns and he struggled to link his phrases correctly (e.g. he did not use commas or the ampersand ‘and’) (‘MTI’, ‘MCOb’ and ‘PLTA’), while when writing more complex texts/assignments he could not organise them appropriately to achieve a coherent meaning (‘MCOb’ and ‘PLTA’). When the classroom’s tasks required individual work he usually did not complete them on his own and preferred to look at his classmates’ textbooks or handouts in order to copy their answers (‘MCOb’). Although he did not lack reading fluency, usually he stammered in words with many syllables, words that he did not meet often in texts or did not use in everyday language (‘MTI’ and ‘MCOb’).

Overall, despite his reading skills competence, his considerable difficulties in the areas of expressive and receptive language, spelling, writing and comprehension influenced highly his active engagement in classroom’s tasks,

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131 The word ‘prosklisi’ means ‘invitation’.
and his ability to follow the curriculum demands and progress well in these domains.

5.3.3 Pupil Officially Diagnosed with General Learning Difficulties

John

John, similarly to Nick, Helen and Simon, was in year B and therefore he did not have an official record of his speech/language and literacy progress. Nevertheless, the annual confidential evaluation report, which was written by his SEN teacher and provided to the health service and KEDDY at the end of the school year, constituted an official record of his attainments in different areas of the curriculum including language and literacy (‘ICTI’). His teachers, who also taught him the previous year, argued that John made some progress in the domains of reading and writing. Despite his slight stammering, his reading skills progressed adequately while, when writing assignments, he usually could form short sentences with simple grammatical and syntactical structure (‘MTI’, ‘ICTI’, ‘MCOB’, ‘ICOB’ and ‘PLTA’).

In the mainstream class curriculum-based assessment of his speech/language and literacy progress were administered by means of everyday assignments from the language/literacy textbook, handouts, and tasks that he has done before, spelling tasks, as well as through informal tests or individual assessment tasks which were provided occasionally (in contrast to his classmates though he was not required to do all the tasks involved in the tests) (‘MTI’, ‘MCOB’ and ‘PLTA’). In the inclusion class, his progress in these areas was examined through curriculum-based tasks provided in every session, informal assessment tasks (that assessed both his oral and written language skills) and computer assignments, applied approximately every three weeks (‘ICTI’, ‘ICOB’ and ‘PLTA’).

The evidence indicated that although he did not have any problems with articulation, his difficulty to put his thoughts in the right order created difficulties for his expressive language skills and as a result often he could not form his language in an organised and cohesive way (‘MTI’, ‘ICTI’, ‘MCOB’ and ‘ICOB’).
Frequently, when trying to answer text-related questions or when asked by his teachers about a task’s rationale, he appeared confused, unable to come to the point, providing a rather poor and syntactically incomplete sentence structure that lacked coherent meaning (‘MTI’, ‘ICTI’, ‘MCOb’ and ‘ICOb’).

As far as his literacy progress, spelling and writing constituted highly problematic areas for John. He made spelling mistakes in verb endings (usually failed to use the correct ‘o’ when forming verbs\textsuperscript{132}), skipped letters when writing longer or more complex words and mixed diphthongs or clusters of consonants (‘MTI’, ‘ICTI’, ‘MCOb’, ‘ICOb’ and ‘PLTA’). Although he could structure short sentences in a syntactically appropriate way, when writing assignments or trying to form longer sentences, apart from his grammatical and syntactical errors (e.g. difficulties with personal pronouns or proper ending in adjectives) he usually attached words, did not use punctuation marks (especially full stop), while his sentences structure appeared incomplete and fragmentary (‘MCOb’, ‘ICTI’, ‘ICOb’ and ‘PLTA’). His weaknesses in the areas of expressive language, spelling, writing, reading comprehension and his difficulty to keep to a joint topic of conversation often discouraged him from being actively involved in group tasks (‘MCOB’ and ‘ICOB’). His weakness to respond efficiently to the curriculum demands usually caused his disappointment or involvement in something irrelevant to the teaching (e.g. drawing in his notebook or chatting with his peers) (‘MCOB’ and ‘ICOB’).

In conclusion, John’s expressive language difficulties, problems maintaining a conversation and considerable difficulties with reading comprehension, spelling and writing, not only hindered his academic progress significantly but also had a strong effect on his active engagement in individual tasks and group work.

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\textsuperscript{132} The Greek language has two letters as ‘o’: ‘ω’ and ‘ο’. The first one, i.e. ‘ω’ is used as a verb ending in the first person of singular form in active voice.
5.3.4 Pupil Not Officially Diagnosed with Specific Writing difficulties

George

George attended year D and, similarly to Jim and Steven, had an official record of his speech/language and literacy progress. His text score in the first term was ‘C’ revealing that his performance in these areas was ‘Good’ (‘MTI’ and ‘ICTI’). In the mainstream class curriculum-based assessment of his language and literacy progress were administered by means of everyday assignments from the literacy textbook, homework and handouts (twice or three times a week). Further assessment was also applied through informal tests and individual assessment tasks that were provided at the end of every chapter from the language/literacy school textbook (approximately once or twice a month) (‘MTI’, ‘MCOb’ and ‘PLTA’). In the inclusion class, his progress in these domains was examined in every session through tasks from the literacy textbook, handouts and assignments from older literacy textbooks or SEN textbooks provided by the Ministry of Education and Religious Affairs (‘ICTI’, ‘ICOb’ and ‘PLTA’).

The fact that the same mainstream and SEN teacher taught George when he was in year C indicated that they were well aware of his strengths, weaknesses and the progress that he made during this period. Specifically, they argued that George progressed well in reading and despite the fact that his handwriting skills were not age appropriate he made some progress in this domain (‘MTI’ and ‘ICTI’).

Despite his expressive language fluency, he tended to make grammatical errors when narrating, as he usually did not use the correct verb tense (he had difficulty especially with the continuous tenses) (‘MTI’, ‘MCOb’ and ‘ICOb’). Additionally, his slight problems with articulation were evident when pronouncing words that involved clusters of consonants (e.g. ‘στρ’/’str’, ‘ντρ’/’ntr’, ‘μπρ’/’mpr’) (‘MTI’ and ‘ICOb’). Apart from his reading skills which progressed adequately, as he was able to read fluently small texts and stammered only occasionally when reading rather complex or unknown words, his comprehension skills also progressed well as he was able to reply correctly to text-related questions in oral language (‘MTI’, ‘ICTI’, ‘MCOb’, ‘ICOb’ and
‘PLTA’). On the contrary, his handwriting was slightly illegible (‘ICTI’ and ‘PLTA’), while his spelling and writing limitations usually held him back from responding adequately to related classroom tasks (‘MCOb’).

Specifically, he tended to make spelling mistakes in verb endings or participles (usually he could not write the correct ‘o’), while it was difficult for him to structure sentences that were grammatically and syntactically correct (‘MCTI’, ‘ICTI’ and ‘PLTA’). Characteristically, he struggled with punctuation marks (e.g. when to use the apostrophe), the structure of comparative/superlative forms of adjectives, nouns (in singular or plural form) and verb endings in different tenses or voice (‘MCOb’, ‘ICOb’ and ‘PLTA’). He had difficulties with the comprehension and use of the subjunctive and imperative structure/mood, while his sentences were not linked and organised properly (e.g. no relative pronouns were used) (‘MCOb’, ‘ICOb’ and ‘PLTA’). Despite his slower writing and learning pace he appeared able to understand the taught curriculum and respond to some extent to the literacy demands (‘ICTI’, ‘MCOb’ and ‘ICOb’). He usually followed the flow of the tasks and asked questions when he could not understand the meaning of a word in a task or when he was not sure about something related to the material provided (‘MCOb’ and ‘ICOb’). However, when he appeared to be confused or unwilling to be involved in mainstream class assignments he preferred to remain silent and ‘invisible’ (‘MCOb’).

To conclude, George improved his reading and handwriting skills (although the latter appeared not to be age appropriate), and despite his slight limitations in articulation he had competent expressive and receptive language skills. Although he appeared able to understand the literacy demands of the taught curriculum, his substantial spelling and writing problems influenced highly his attainments in this particular field.

5.3.5 Overall description and comparisons of the academic attainments of pupils with SLD, General Learning Difficulties and Specific Writing difficulties

The mainstream class and SEN teachers’ interviews regarding the pupils’ academic attainments, strengths and weaknesses, the observation of the pupils’
performance and active engagement during the teaching process in the mainstream and inclusion class, as well as the schools’ literacy tasks/pupils’ assignments, provided a useful description of the pupils’ attainments and weaknesses in the domains of speech/language and literacy.

For Nick, Helen, John and George the assessment of their speech/language and literacy skills in the mainstream and inclusion classes was based on the curriculum of the year they attended. Specifically, the teachers examined their progress in the above areas through their engagement in everyday teaching, assignments from the language/literacy textbook, tasks that required their oral language skills and handouts. In the mainstream classroom, the teachers also applied individual assessment tasks or informal tests, while for Nick’s, Steven’s and George’s mainstream class teachers, homework was another way for assessing literacy attainments. These methods of speech/language and literacy assessment were also applied to Jim, however in the inclusion class the examination of his progress in these areas was based mainly on the previous year’s curriculum. Although the assessment of Simon’s and Steven’s progress in the essential areas of speech/language and literacy was made through the same methods with the above pupils and in line with the curriculum demands of the year they attended, it was based entirely on their mainstream class attainments.

Simon’s and John’s teachers, who had also taught them the previous year, were well aware of the pupils’ attainments in the areas of language and literacy and the progress they had made during this period of time. Specifically, Simon’s mainstream teacher argued that although his speech and language skills were not improved, he had made some progress in spelling and reading. Additionally, John’s mainstream and SEN teacher revealed that despite the slight stammering his reading appeared to be slightly improved, while he usually managed to form and write short sentences correctly with simple grammatical and syntactical structure. Nick’s and Helen’s mainstream and SEN teachers who taught them for a shorter period of time (approximately 6 months) argued that the speech and language skills of both pupils were slightly improved. In particular, both pupils despite their speech sound errors made small progress in
articulation, while Nick’s speech was more coherent. In addition, his comprehension and spelling skills were improved to some extent and Helen’s handwriting appeared to be more legible, while both pupils’ reading skills also made some progress.

The pupils who were in year B, Nick, Helen, Simon and John, according to the official policy did not have an official record of their speech/language and literacy progress. Nevertheless, Helen’s and John’s confidential progress evaluation which was written by the SEN teachers for the health service and KEDDY, constituted an official record of their attainments and weaknesses in the above areas.

In contrast to the above pupils, Jim and Steven who attended year C, as well as George who attended year D, had an official record that indicated the level of their progress in the above domains in an alphabetical/text form. Additionally, the fact that the same teachers taught these pupils the previous year, made them well aware of their attainments and progress in the areas of speech/language and literacy. Specifically, Jim’s mainstream and SEN teacher argued that his expressive language was slightly more coherent, while he made small progress in his articulation and text comprehension skills. Further, according to his progress record, his text score in the first school term was ‘C’, indicating that his speech/language and literacy performance was good. Similarly to Jim, Steven’s expressive language was more fluent and despite stammering with complex or unknown words he was also more fluent when reading texts. His speech/language and literacy text score in the first school term was ‘C’ revealing that his progress in these areas was good. Similarly to Jim and Steven, George’s text score in the first school term was ‘C’ indicating that his performance was good. Despite his lack of handwriting competence, he appeared to make some progress in this field, while his reading fluency was also improved.

However, the range of evidence revealed that despite the pupils’ slight improvements in different aspects of language and literacy, their significant
weaknesses in these domains influenced highly their academic progress and created strong barriers in the pupils’ responses to the curriculum demands.

Overall, the expressive and/or receptive language skills of pupils officially and not officially diagnosed with SLD were highly problematic. Specifically, despite Nick’s and Helen’s (officially diagnosed with SLD) slight improvement in expressive language skills, the limited articulation and incoherent structure of their oral language were quite challenging areas for both of them. In spite of the teachers’ arguments regarding Jim’s (officially diagnosed with SLD) and Steven’s (not officially diagnosed with SLD) slight progress with their expressive language skills, both of them experienced serious weaknesses in this field. Their problems in this area reflected their lack of semantic knowledge and limited vocabulary, and the formulation of short sentences with inappropriate grammatical and syntactical structure, and coherent meaning. Similarly, Simon, who was not officially diagnosed with SLD, continued to rely strongly on short sentences that had correct but quite simple grammatical and syntactical structure.

Additionally, the evidence revealed that despite Nick’s and Helen’s slight progress in reading, they stammered when reading words with certain speech sounds, clusters of consonants or diphthongs, and they usually could not accent the words correctly. Similarly to them Jim lacked reading fluency, while Steven, who was considered a competent reader, occasionally stammered with unknown or more complex words, as well as with words that involved many syllables. In contrast to the above pupils, John (officially diagnosed with General Learning Difficulties), George (not officially diagnosed with Specific Writing difficulties) and Simon (not officially diagnosed with SLD), made improvements in this domain and was quite fluent when reading tasks, indicating that the lack of reading competence was an aspect that, with the exception of Simon, concerned mainly the pupils who had SLD. In addition, according to the evidence, there was no significant progress in the writing skills of George and pupils who were diagnosed officially or not with SLD, as they struggled to provide appropriate grammatical, syntactical structure and coherent meaning when formulating sentences and small texts. On the other hand, John achieved
writing competence only in tasks that required short sentences with simple grammatical and syntactical structure.

Spelling tasks was another domain that, regardless of the pupils' identification, was challenging for the majority of them and specifically for Helen, Steven, John and George, whether the tasks involved abstract words or formulation of sentences. In addition, despite Nick's slight improvement of spelling skills, it was evident that he did not progress well in this domain. On the contrary, spelling tasks were not a weak area for Simon and Jim who had SLD, as they made mistakes only occasionally in their assignments or related tasks. Furthermore, apart from John who could respond correctly to text-related questions when not reading the texts himself (i.e. listening comprehension) and George whose comprehension skills progressed efficiently, the pupils with SLD could not respond adequately to tasks that required both listening and reading comprehension, an aspect that is highly related to pupils' deficient/poor non-phonological language skills. Specifically, Simon often struggled to answer questions related to the taught material, while Helen's, and Steven's lack of comprehension competence was evident in texts and assignments that required their oral or written involvement. Despite Nick's and Jim's teachers' arguments regarding their slight progress in this area, providing correct answers to text-related questions was a struggle for both pupils (see Appendix Y for a summary of RQ3 findings).

5.4 RQ4. To what extent do case study pupils’ social participation and peer acceptance relate to the difficulties they have?

This particular research question aimed to explore the pupils’ social participation and relationships with their peers, and the extent to which these elements were influenced by their difficulties (i.e. SLD, General Learning Difficulties and Specific Writing difficulties) they had. The variety of methods

133 Given the wide range of assessment methods that were applied in Phase 2, next to the evidence are provided the related sources (i.e. the methods from which the evidence derived
that were applied explored not only mainstream and SEN teachers’ views of pupils’ social development, but also the pupils’ own perspectives regarding their cognitive competence and peer acceptance, and enabled useful ‘within case’ and ‘cross case’ comparisons of the collected data.

Specifically, mainstream class teachers’ and SEN teachers’ interviews provided evidence of pupils’ willingness for collaboration with their peers in the mainstream classroom, their preference for certain peers in the mainstream class, inclusion class (when attended) and playground, and level of confidence in both classrooms. The Social Participation Questionnaire for Teachers (SPQ) (Koster et al., 2009) which was also provided to the mainstream class teachers revealed a useful description of pupils’ social self-perception, acceptance by classmates, contacts/interactions with peers, and friendships. Additionally, the PATEM I and PATEM II (Makri-Mpotsari, 2001a, 2001b) revealed the children’s own perceptions regarding their scholastic/cognitive competence and social acceptance, while mainstream and inclusion class observations provided supplementary evidence of the pupils’ social involvement, initiatives and responses to interactions with their peers.

5.4.1 Pupils Officially Diagnosed with SLD

Nick

‘...he is emotionally fulfilled, dynamic, he has mental strength...’ (SEN teacher)

Nick was a friendly and quite ‘extrovert’ boy (‘MTI’, ‘ICTI’, ‘MCOb’ and ‘ICOb’), with a high level of social self-perception and self-cognitive competence134 (‘PATEM I’). Despite his SEN teacher’s argument that he was more confident in

from) in the form of abbreviations (and in brackets). So, for each method are used the following abbreviations: Mainstream teacher Interview: ‘MTI’, Inclusion class teacher interview: ‘ICTI’, Mainstream class observation: ‘MCOb’, Inclusion class observation: ‘ICOb’, Social Participation Questionnaire (SPQ) for Teachers: ‘SPQ’, while the evidence from PATEM I and PATEM II for children preserved the same abbreviations.

134 PATEM I data revealed Nick’s high self-perceptions of academic competence and classmates’ acceptance. Specifically, in both subscales ‘Cognitive competence’ and ‘Peer acceptance’, he scored above average (i.e. 3.6).
the mainstream classroom, he appeared to be self-confident in both classrooms (i.e. mainstream and inclusion class), he was sociable, often took the initiative for discussions (not related to tasks) and teased his classmates, who were usually friendly and supportive to him (‘MCOb’, ‘ICOb’ and ‘SPQ’). Nevertheless, in the mainstream class he was not always willing to collaborate and discuss with his peers, especially when the tasks were challenging for him he appeared to be rather bored or disinterested, while he had no preference for collaboration with specific classmates (‘MTI’ and ‘MCOb’). Alternatively, he preferred to complete the tasks on his own (usually with his teacher’s guidance), at home or talk with the classmates about issues that were irrelevant to the teaching (‘MTI’ and ‘MCOb’).

In the inclusion class, he was always friendly and talkative with his classmate, Helen, usually willing to work on assignments and collaborate with her when pair work was required (‘ICTI’ and ‘ICOb’). He was also keen to help her in tasks even when he was not requested by his SEN teacher to do so (‘ICOb’). In the playground, he usually played with his older brother who attended the same school, occasionally though he preferred to play with some of his classmates, while he had no contact with Helen outside the inclusion class (‘MTI’ and ‘ICTI’). Although Nick considered himself to be liked by his peers and surrounded by many friends (‘PATEM I’), his interactions and relationships with his classmates were mostly related to his engagement with them in group/pair work in the mainstream and inclusion class environment (‘SPQ’, ‘MCOb’ and ‘ICOb’).

Overall, although Nick appeared to be a sociable and self-assured boy, who considered himself academically competent and highly accepted by his peers, his substantial difficulties in the domain of speech and language discouraged his social interactions in the school context.

**Helen**

‘In general, she is socially accepted by her peers, but she is quite introvert, she doesn’t show her emotions easily...’ (Mainstream class teacher)
‘...she is very timid and has phobias, she doesn’t believe in herself...’ (SEN teacher)

Helen was a very shy and introverted girl, whose lack of confidence was evident during the teaching process and her interactions with her peers (‘MTI’, ‘ICTI’, ‘MCOb’, ICOb’ and ‘SPQ’). Despite her considerable difficulties in the domains of speech/language and literacy, Helen believed that her scholastic performance was efficient, whilst considering herself to be quite sociable and with many friendships\(^{135}\) (‘PATEM I’). In contrast to her beliefs, the KEDDY staff who examined and officially diagnosed Helen with SLD, highlighted her restrained, withdrawn and phobic character. In addition, they urged her teachers to emphasise not only academic support but also to boost her confidence and improve her social skills (‘ICTI’).

Considering her low profile, both teachers highlighted that she tended to feel more comfortable when attending the inclusion class, not only due to the ‘looser teaching framework’, but also because of her active engagement with Nick during the teaching and learning process (‘MTI’ and ‘ICTI’). When attending the inclusion class, she enjoyed collaborating with Nick and was eager to express herself (often though the SEN teacher had to prompt her first), while both of them were quite friendly and not critical of each other (‘ICTI’ and ‘ICOb’). The positive way Helen perceived herself regarding her relationships with peers was partly supported by her mainstream class teacher who highlighted Helen’s acceptance by classmates and their willingness to collaborate with her (‘MTI’, ‘SPQ’ and ‘PATEM I’), although this usually happened after her teacher’s prompts to them (‘MCOb’).

Although in the mainstream class she did not take the initiative with her classmates and appeared to be quite reticent with them (‘MCOb’), she was usually keen to take part in group work. However, she preferred to collaborate with a few girls who were next to her (‘MTI’ and ‘MCOb’). Despite her

\(^{135}\) PATEM I data revealed Helen’s high self-perceptions of academic competence and peer acceptance. Specifically, in both subscales ‘Cognitive competence’ and ‘Peer acceptance’, she scored above average (i.e. 3.6).
collaboration with some of her classmates and her involvement in group work assignments, her difficulty in expressing herself correctly and her inadequate performance in tasks that required her spelling, writing or reading skills prevented her interactions and active engagement with her peers in the mainstream class (‘MCOb’). In the playground, she preferred to play with a boy who she knew since nursery school, while sometimes she played with a few girls from her mainstream class (the same girls she used to collaborate with in group work) (‘MTI’ and ‘ICTI’).

In conclusion, although Helen considered herself as highly competent academically and socially, the methods that were applied for the identification of her social participation and relationships with peers revealed that her difficulties with expressive, receptive language and literacy influenced her social competence. Specifically, the evidence revealed that her substantial weaknesses in the broad domains of language and literacy affected her self-confidence and positive interactions with peers.

**Jim**

‘...he is tight, quite shy, but only when he wants to. He can be quite naughty too, especially when he believes that I'm not watching him, he likes to chat and chuckle with his classmates...' (Mainstream class teacher)

Although Jim appeared to be a quite shy and reluctant boy, he could be mischievous either during the teaching process or when he spent his time in the playground (‘MTI’, ‘ICTI’, ‘MCOb’ and ‘ICOb’). Although his difficulties in the domains of speech/language and literacy usually discouraged him from being actively involved in language and literacy tasks that required group work in the mainstream class (‘MTI’ and ‘MCOb’), he tried hard when working on tasks with his classmates (‘MTI’), despite his limited interactions with the majority of them (‘SPQ’ and ‘MCOb’). Additionally, he liked to collaborate with the classmates next to him, as he had the opportunity to discuss with them about issues irrelevant to the teaching process and to act mischievously (‘MTI’ and ‘MCOb’).
Although in the inclusion class he was willing to take part in group or pair work and appeared to be confident when expressing himself in language and literacy tasks (‘ICTI’ and ‘ICOb’), his SEN teacher reported that at the beginning of the school year Jim’s behaviour was different. Specifically, the fact that some of his classmates avoided working with him or teased him when he provided wrong answers to literacy tasks, made him quite introverted and reluctant to attend the inclusion class sessions (‘ICTI’). During the period of the study though, Jim appeared to become more confident in the inclusion class, he was more talkative there than in the mainstream class, he collaborated harmoniously with his peers and they also were keen to work with him (‘ICTI’ and ‘ICOb’). In the playground he usually played with some of his mainstream class peers and some other children (one or two of them had literacy difficulties, but they were not inclusion class classmates) (‘MTI’ and ‘ICTI’).

Despite Jim perceiving himself quite positively in scholastic competence and social acceptance by his peers\(^{136}\) (‘PATEM I’), his significant difficulties in the domains of expressive, receptive language and literacy usually made him avoid expressing himself in front of his mainstream class peers during the teaching process and to hesitate participating in tasks that required collaboration with them (‘MTI’ and ‘MCoB’). Additionally, his weaknesses in the above areas had also an impact on his interactions with his inclusion class peers and the lack of acceptance by them earlier that school year (‘ICTI’).

Overall, the way that Jim perceived himself in the domains of cognitive and social competence was only partly supported by his teachers’ responses in the interviews, the observations in both classrooms and the SPQ findings. On the contrary, it appears that his serious difficulties in the areas of speech/language had an effect on his interactions and relationships with peers in the mainstream and inclusion class, especially in the latter one, where at the beginning of the

\(^{136}\) PATEM I data indicated Jim’s high self-perception of academic competence and peer acceptance, as in both subscales he scored above average. Particularly in the ‘Cognitive competence’ his score was 3.8 and in ‘Peer acceptance’ his score was 3.6.
school year he experienced his classmates’ rejection and a highly negative stance towards him.

5.4.2 Not Officially Diagnosed with SLD

**Simon**

‘...generally he is a shy boy and he doesn’t take the initiative’ (Mainstream class teacher)

He was a shy and introvert boy who, although he appeared to be excited and quite friendly with his classmates, lacked confidence and did not take the initiative with them in the mainstream class or the playground (‘MTI’, ‘SPQ’ and ‘MCOb’). Despite him seeming willing to participate in tasks and express his thoughts in front of his classmates, his lack of expressive and receptive language competence and uncertainty regarding his answers, often discouraged him from being actively involved in the teaching process and group work, and limited his contacts with classmates (‘MCOb’ and ‘SPQ’).

Simon perceived himself making good progress in his learning, and being highly accepted by his peers\(^\text{137}\) (‘PATEM I’). His classmates were friendly to him and keen to collaborate in group tasks or play with him in the playground (‘MTI’, ‘SPQ’ and ‘MCOb’). Although Simon did not take the initiative with them in group work, he was willing to work or play with them, and when collaboration was required he preferred to work with a boy next to him who was his close friend since nursery school (‘MTI’ and ‘MCOb’). In the playground, he preferred to play with some of his peers, not necessarily classmates, and he also liked to play with the same boys outside the school (‘MTI’). Nevertheless, due to his speech/language and literacy weaknesses and his slight difficulty in maintaining self-directed work, Simon’s workflow in group work was much slower than his classmates, a point that limited his active collaboration with them, while his

\(^{137}\) PATEM I data revealed Simon’s high self-perception of academic competence and peer acceptance, as in both subscales he scored above average. In the ‘Cognitive competence’ his score was 3.8 and in ‘Peer acceptance’ his score was 3.6.
involvement in conversations or playing with them usually happened after his peers’ or teacher’s prompting (‘MTI’ and ‘MCOb’).

To conclude, despite Simon’s high self-perception of his academic attainments and relationships with his peers, it appears that his speech/language and literacy problems limited his active participation in tasks that required collaboration with peers. In addition, despite his positive self-perception in the social domain and acceptance by classmates, his limited conversational interactions with them and lack of confidence in his social contacts indicated the impact of his speech and language weaknesses on his relationships and interactions with peers.

**Steven**

‘...he is a quite calm and introverted boy, of course he can be mischievous, when influenced and provoked by his peers, but in general I believe that the classroom helps him to gain more confidence...’ (Mainstream class teacher)

Steven was a self-conscious boy who kept a low profile, he liked being part of the class when all the classmates worked on tasks together. However, he usually worked on his own instead of collaborating with them (‘MTI’ and ‘MCOb’). This may be attributed to his considerable difficulties in the domains of speech/language and literacy, as often some of his classmates were critical of him and his lack of knowledge in literacy tasks, while they commented scornfully on Steven’s incorrect answers in tasks (‘MCOb’).

When doing group work he did not have any preference for collaboration with specific classmates and did not take the initiative with them (‘MTI’ and ‘MCOb’). However, after his teacher’s encouragement he usually collaborated with the boy next to him (‘MTI’). Despite his limited interactions with peers, Steven liked to be considered part of the class network, laughed with his peers when being naughty and sometimes he imitated his classmates mischief and was naughty himself, but he was not the one who would cause trouble during the teaching process (‘MTI’, ‘SPQ’ and ‘MCOb’). In the playground, he usually spent his time with a few of his classmates (‘MTI’).
Nevertheless, some of his peers had a rather negative attitude towards him as they usually did not talk to him in the mainstream class or playground (‘MTI’ and ‘SPQ’), they appeared to be uninterested in Steven’s responses in tasks or preferred to criticise his weaknesses in spelling or reading tasks (‘MCOb’). In contrast to them, the majority of Steven’s classmates had a friendly attitude towards him, despite their limited interactions with him (‘MTI’, ‘SPQ’ and ‘MCOb’).

Steven’s self-concept of his cognitive and social competence was within the average level, as indicated by PATEM I scores. Specifically, his slightly above average performance in the scholastic competence part revealed that he was aware of his academic attainments and limitations in the domains of language and literacy. Although Steven was also aware of some of his peers’ critical attitude/vicious criticism towards him and the limited interactions with them in the school context (‘SPQ’ and ‘MCOb’), he perceived himself as quite competent in the social domain. Nevertheless, the various assessment methods that were applied highlighted his poor social contacts with classmates, as well as the negative and critical behaviour of some of them towards him in the mainstream class context or outside the school environment (‘MTI’, ‘SPQ’ and ‘MCOb’).

In conclusion, Steven was a calm and not very confident boy who was aware of his strengths and weaknesses both in the academic and social domains. The data revealed that his speech/language and literacy difficulties impacted on his poor social functioning, limited friendships, and contacts with classmates and promoted a rather negative attitude in some of them.

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Steven’s score in the ‘Cognitive competence’ subscale was 2.6 and in ‘Peer acceptance’ subscale was 3.0.
5.4.3 Officially Diagnosed with General Learning Difficulties

**John**

‘...he is very social, friendly, but he can be contentious when he wants to’
(Mainstream class teacher)

Although John appeared to be a quite social child, who was friendly with his peers, the evidence revealed his lack of confidence in his friendships and his close contacts with only a few of his peers (‘MTI’, ‘ICTI’, ‘SPQ’, ‘MCOb’ and ‘ICOb’). John was well aware of the fact that he had only one or two close friends, and that the majority of his peers preferred not to collaborate with him in group tasks or to join him when playing in the playground\(^{139}\). His lack of confidence was further supported through his low performance in PATEM I\(^{140}\), as his well below-average scores revealed his negative self-perception of cognitive competence and social acceptance by his peers.

Nevertheless, in the mainstream classroom he was friendly, occasionally quite talkative and sometimes silent, almost invisible (‘MTI’ and ‘MCOb’). He was not always willing to collaborate with his peers, especially when the tasks were challenging for him (‘MTI’ and ‘MCOb’). When he was required to do spelling tasks or write short stories he preferred to talk and laugh with the boys next to him (‘MCOb’). However, when he needed to collaborate with peers who progressed well in literacy, he either looked disappointed and avoided doing the tasks or became stubborn or competitive. At this point, he could also become contentious to his classmates (‘MTI’ and ‘MCOb’). Nevertheless, despite the limited contacts, his classmates were friendly to him. A few boys who used to collaborate with John in group work were quite close friends with him and were

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\(^{139}\) During the PATEM I administration John stated that he had only a few close friends, while the majority of his peers had poor contact with him, and did not like to work or play with him during the breaks.

\(^{140}\) John’s score in the ‘Cognitive competence’ subscale was 2.2, while in ‘Peer acceptance’ subscale his score was 1.4, well below average.
often naughty or were chuckling with him during the teaching process (‘MTI’, ‘SPQ’ and ‘MCOb’).

In the inclusion class, John enjoyed spending his time and collaborating with the two children who co-attended the class with him, and especially one of them who also attended the same mainstream class with him (‘ICTI’ and ‘ICOb’). In contrast to the mainstream classroom, in the inclusion class he was willing to work with his classmates, often though he was competitive with them and when not feeling confident in doing literacy tasks he acted as if he was tired or bored (‘ICTI’ and ‘ICOb’). In the playground, he preferred to spend his time with some of his classmates, the same boys who usually collaborated with him when doing group tasks in the mainstream classroom, while one of these boys co-attended the inclusion class with John (‘MTI’ and ICTI’).

In contrast to the views of John’s mainstream class teacher, who argued that he was confident in both classrooms (‘MTI’), John appeared to be more self-assured when he was in the inclusion class (‘ICTI’ and ICOb’). As also highlighted by his SEN teacher\(^\text{141}\), in the inclusion class he expressed himself without being worried about the rightness of his answers and the comments of his classmates (‘ICTI’). He also liked to discuss with his peers about issues irrelevant to the teaching material, he usually waited patiently for his turn when doing tasks, was not critical to them and was thrilled when he had responded correctly (‘ICOb’).

Overall, the evidence indicated that John’s slight difficulties in the area of expressive language, as well as his considerable literacy weaknesses influenced negatively his self-confidence and particularly the way he perceived himself in the cognitive and social domains. Additionally, his lack of friendships and interactions with peers was further supported by his mainstream class

\(^{141}\) His SEN teacher replied that ‘in the inclusion class he feels happy, he gets away from the highly demanding mainstream classroom and comes to a rather pleasant environment (she smiles) where someone works with him, looks after him, encourages him, he is around peers that understand him and feel the same, and he can express his thoughts and feelings with confidence…at least most of the time.’

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teacher’s responses to the SPQ questionnaire, his teachers’ responses in the interviews, as well as the mainstream and inclusion classroom observation notes.

5.4.4 Not Officially Diagnosed with Specific Writing difficulties

George

‘After school he doesn’t have any friends...his classmates told me so, as well as himself...he never told me, for example, that he played after school with his friends or that he went to a birthday party.’ (Mainstream class teacher)

George was a shy boy who kept a low profile. He was friendly with his mainstream class peers, and although he appeared to be willing to collaborate with them in group work, he sometimes preferred to do the tasks on his own or avoided doing them when they were quite challenging for him (‘MTI’, ‘ICTI’, ‘MCOb’ and ‘ICOb’). When he was not interested or keen to participate in class discussions or literacy tasks, he was rather invisible (‘MTI’ and ‘MCOb’). Although the majority of his classmates were friendly and had a positive attitude towards him, he was not often socially engaged with them in the class or the playground (‘MTI’, ‘SPQ’ and ‘MCOb’). He usually took the initiative with a few boys who were next to him in the mainstream class and sometimes collaborated with them in tasks (‘MTI’ and ‘MCOb’).

In the inclusion class his SEN teacher highlighted that George used to be more restrained but his classmate, who had a completely different behaviour from George, helped him to open up, not to be afraid to say his opinion or to make mistakes in front of other people (‘ICTI’ and ‘ICOb’). He was friendly with his classmate, talkative, and willing to work on tasks with him: they exchanged views about possible answers in tasks and George often helped him when he seemed confused (‘ICOb’). Nevertheless, they did not have any further interactions outside the inclusion class, as George preferred to spend his time in the playground with a few of his mainstream class peers (‘ICTI’).
George perceived himself quite positively in the domains of cognitive and social competence and had a high self-esteem142 (‘PATEM II’). Additional evidence though, supported partly the way he perceived himself in these domains. Specifically, although he considered himself as making good progress, he was quite reluctant in responding to literacy tasks that were quite challenging for him or collaborating with his classmates in related tasks, and despite his high self-reported acceptance by peers, he had limited interactions with them in the school context and outside of it (‘MTI’, ‘SPQ’ and ‘MCOb’). Although the mainstream class and SEN teacher argued that George felt confident in both classes (‘MTI’ and ‘ICTI’), it appears that in the inclusion class George enjoyed the individualised attention and support he received, educationally and socially, as not only was he willing to collaborate with his classmate (in contrast to his limited collaboration with peers in the mainstream class), but he also expressed his thoughts without being reluctant (‘ICOb’).

In conclusion, although George’s self-perception evidence described a confident boy, the various data did not entirely support his cognitive and social self-reported skills. Despite his peers’ positive stance towards him, it appears that his weaknesses in the literacy domain encouraged George’s reluctance to participate in group work and his poor interactions in the school context and outside of it.

5.4.5 Overall description of the influence of pupils’ difficulties (i.e. SLD, General Learning Difficulties and Specific Writing difficulties) on their social participation and acceptance by their peers

Taking into consideration the growing body of literature (Avramidis, 2010; Boer et al., 2013; Durkin and Conti-Ramsden, 2007; Wadman et al., 2008) that emphasises the strong interrelation between SEN, and specifically SLD, and children’s self-esteem and acceptance by peers, the variety of assessment methods applied to this research question, aimed to explore the possible

142 PATEM II data revealed George’s high self-perception of cognitive competence, peer acceptance and high self-esteem, as in the provided subscales he scored well above average. Specifically, in the ‘Scholastic competence’ and ‘Social acceptance’ subscales his scores were 3.2, and in the ‘Self-esteem’ subscale his score was 3.6.
implications of the pupils’ difficulties in their social competence and relationships with their peers.

Although the majority of pupils appeared to be willing to collaborate with their mainstream class peers in group work, their weakness to respond efficiently to tasks that required their oral language and/or literacy skills, discouraged them from being actively involved and engage positively with their classmates in the mainstream class context. Specifically, Helen and Jim, who were officially diagnosed with SLD, and Simon and Steven who were not officially diagnosed with SLD, were quite keen to collaborate with their peers, their difficulties though in the domains of speech/language and literacy usually discouraged their active participation and effective collaboration with them. In contrast to them, Nick (officially diagnosed with SLD) and George (not officially diagnosed with Specific Writing difficulties) were not always willing to work with their peers as part of a group, especially in tasks that were quite challenging for them. Their weakness in responding effectively to group-work tasks that required their speech/language and/or literacy skills discouraged their collaboration with classmates and usually led to them doing the tasks on their own or to avoiding doing them at all. Similarly, John’s (who was officially diagnosed with General Learning Difficulties) serious limitations in the area of literacy usually lessened his willingness for collaboration with his classmates. However, when working with them and especially with classmates who made good progress in literacy tasks, he tried hard to follow their workflow, became highly competitive and often quite contentious towards them.

Exploring the pupils’ level of confidence in the mainstream and inclusion class, the data revealed that the majority of them were more confident, when they attended the inclusion class. Specifically, John, George and Helen, were more relaxed when in the inclusion class, as they took the initiative with their classmates, supported each other in tasks and were not reluctant to express themselves either when answering tasks or discussing about issues irrelevant to the teaching process. Similarly, Jim was more confident and talkative when in the inclusion class, despite his reluctance to join the class at the beginning of the school year due to his peers’ critical attitude towards him and their negative
comments on his considerable speech/language and literacy limitations. In contrast, Nick appeared to be confident in both classrooms. Although usually he did not like to be involved in group work with his mainstream class peers, he liked to take part in discussions about issues not related to the lessons, and quite often chuckled with them or teased them. In addition, in the inclusion class he was quite talkative, sometimes reluctant when responding to tasks, he usually liked to work with Helen and support her in group tasks. Simon and Steven, who did not go to an inclusion class, although they liked to be considered part of their class social network, especially Steven who often imitated his classmates mischievous behaviour, lacked confidence and had lower levels of social interaction with their peers.

The data from PATEM I and II revealed that the majority of the pupils, regardless of their identification, had highly positive academic and social self-concepts. Particularly, Nick, Helen, Jim, Simon and George scored well above average describing themselves as highly competent in the scholastic and social domain. Additionally, George’s well above average score in the ‘self-esteem’ subscale indicated that he had a positive general perception of himself and was happy with the way he was. Although Steven, similarly to the above pupils, perceived himself positively in the academic and social area his slightly above average scores (especially in the scholastic competence subscale) revealed his awareness of the speech/language and literacy limitations that he had. In contrast to the above pupils, John was the only child who had quite low academic and social self-concept, indicating thereby that he had a clear and reasoned perception of his poor academic attainments, reduced acceptance by peers and low social position in his class network.

Nevertheless, the range of methods that were employed in the previous and current phase offered a clear framework of the pupils’ difficulties in the domains of speech/language and/or literacy, and a less positive viewpoint of their academic competence than the one provided by the children through PATEM I and PATEM II. In addition, the various assessment methods that were applied in this phase provided a less favourable perspective of the pupils’ social interactions and peer relationships. In particular, the observations examined the
pupils’ social participation, initiatives and responses to peers interactions in the mainstream and inclusion classroom context, and the interviews elicited mainstream and SEN teachers’ perspectives on the pupils’ social participation and their acceptance by their classmates. Moreover, the SPQ for the mainstream class teachers offered a further insight on pupils’ social competence in the school context and outside of it. The evidence revealed that despite Nick’s, Helen’s, Jim’s, Simon’s, Steven’s and George’s highly positive self-reported social skills, their actual peer relations and social interactions could not justify their ‘inflated’ (Bear et al., 1993, p. 134) social self-perceptions.

Overall, although all pupils had formed some friendships, they were less socially competent and less successful in peer relations. Associated indications of their low levels of social participation and social position were their shyness, withdrawal, lack of initiative with classmates and reluctance for collaboration when group/interactive work was required. In addition, although in the inclusion class pupils felt more confident and willing to be involved in group work, their close friendships involved peers from their mainstream class network. With the exception of John, whose one close friend attended the inclusion class with him, the rest of the pupils preferred not to have any further contact with their inclusion class peers outside the class context. Nevertheless, despite their preference for mainstream class peers, their unwillingness and avoidance for interactive work in the mainstream classroom most of the time, their lack of desire to be equal members of a group when collaborating with their peers, as well as their limited interactions in peers’ network, reflected the effect of their difficulties in social competence.

The evidence supported the fact that poor speech and language skills discouraged pupils’ engagement in verbally demanding situations and either led pupils to take a less dominant role or to withdraw from such situations. Specifically, it appears that the weak conversational skills of pupils with SLD, officially or not diagnosed, and their expressive and/or receptive language limitations created considerable barriers to their social participation and active engagement with peers. Similarly, George’s language problems impacted on his social interactions in tasks that were considered highly challenging for him and
promoted his self-consciousness when engaging with peers in the school context and outside of it. In contrast to the above pupils (who had SLD and General Learning Difficulties), John’s poor pragmatic skills and further academic weaknesses influenced negatively not only his social contacts and level of social participation, but also his cognitive and social self-concept (see Appendix Z for a summary of RQ4 findings).
6.1 Introduction

I summarise and discuss in this chapter the aims, research questions and findings of Phase 1 and Phase 2 of the current research study. Although each phase is examined separately, taking into consideration how Phase 1 aims and Phase 2 research questions were addressed, the connections between the phases are also discussed. The findings of each phase are then related to the literature and the existing knowledge in the broader field of SLD. I discuss next the main contribution of this particular research study to knowledge and where this study goes beyond previous research in the SLD domain. In addition, the study’s methodology framework is evaluated, while aspects related to the reliability and validity of the methods are further discussed. Future research that may arise from the study’s findings is considered next, while the implications of findings for theory, policy, provision and practice related to the domain of SLD are further explored and discussed in the Conclusion chapter.
6.2 Phase 1

6.2.1 Research aims and findings - How these relate to the literature and the existing knowledge in the broader field of SLD

The purpose of Phase 1 was the identification of pupils with SLD in Greek mainstream primary schools. Specifically, considering the heterogeneous population of children with SLD, the systematic survey that was employed in this phase aimed to identify the pupils whose progress in the domain of speech and language was not as anticipated and had raised concerns with their teachers. Further examination of a sub-sample of these pupils was essential to supplement and provide task performance-based analysis of their current language functioning in a range of areas and their non-verbal reasoning skills.

6.2.2 Identification of SLD pupils - overlapping speech and language skills of SEN subgroups

Various studies have underlined the role of screening assessment for the identification of pupils who have difficulties in the domain of speech and language and have emphasised the importance of detection at an early age (Law et al., 1998; Stott et al., 2002). It is considered that early assessment and identification of SLD, as well as appropriate intervention for the child may lead to a reduction in their language weaknesses and educational problems at a later stage (Bercow, 2008; Lewis et al., 2010). However, the evidence regarding the optimal screening assessment measures of speech and language difficulties, in terms of the appropriate psychometric qualities, and the consistency of clinicians’ assessment in primary care practice seem quite controversial (Nelson et al., 2006). Encouraging findings, though, were provided by Snowling et al. (2011), who in line with Government proposals for the revision of the Early Years Foundation Stage framework (EYFS)\(^{143}\) highlighted the role of children’s screening assessment at the age of 5 years old as a valid measure for the

\(^{143}\) Tickell Review (2011).
monitoring, identification of children’s difficulties in the domains of language and communication, and a robust predictor of their future academic attainments.

There has been a lack of official screening assessment with standardised measures in the Greek context for the identification of children’s speech and language limitations in the years of primary education. The screening assessment tool used in this study made it possible to detect children with considerable difficulties in these areas and provided a notable overview of their current speech and language skills. In addition, the pupils’ screening assessment was not applied as a whole-school examination but relied heavily on mainstream teachers’ judgements. This highlighted their essential role in the assessment of pupils’ language development. The teachers’ role was also underlined by the BCRP findings (Snowling et al., 2011), which suggested that teachers can provide reliable information and make accurate judgements regarding pupils’ language and literacy functioning through valid monitoring and assessment measures.

Mainstream teachers’ ratings of pupils’ speech and language skills through the LAMP screening assessment, revealed an important overview of pupils’ language development, in aspects such as expressive language, receptive language, behaviour related to speech, language and communication needs, and social skills language. It also provided evidence to compare SEN groups. The evidence indicated that teachers’ concerns about the language skills of pupils who progressed as expected, were significantly lower than pupils with SLD, General Learning Difficulties (GLD) or other SEN. This confirmed the fact that they followed the typical pattern of language development. According to the findings, the majority of pupils from the SLD, GLD and other SEN subgroups were in the range of the top 10% of concern scores, raising thereby greater concerns regarding the level of their speech and language development. By contrast, the performance of the majority of pupils from the No Difficulty subgroup was outside the top 10% concern scores cut-off, so confirming their efficient language skills. The analysis revealed that, despite pupils’ classification into different SEN subgroups which was based either on official diagnosis (by the KEDDY or health services) or teachers’ professional experience/personal
judgement, their mean speech and language performance did not differ significantly.

In the literature review chapter (see sections 2.1, 2.1.1, 2.1.2, 2.1.3) I examined the nature of the SLD field and the discreteness of this SEN category was assumed. Although the range of evidence from the international literature and research examined the SLD category as a distinct area of difficulty (Damico et al., 2010; Griffiths, 2002; Kersner and Wright, 2013; Law et al., 2003), the findings from pupils’ LAMP screening assessment revealed many similarities in the speech and language profile of pupils with SLD, GLD and other SEN, highlighting the complexity of the SLD field and raising the following key distinctive points. Given that pupils’ nomination in the LAMP screening assessment was based on their official diagnosis (by the KEDDY or a health service) with SLD, GLD or other SEN, and teachers’ professional experience/personal judgements of pupils’ speech/language progress, the findings raise questions about how SEN categories were used in practice in the Greek sample schools and how these categories were used in empirical studies. More specifically, the above findings revealed a discrepancy between the understanding and use of the SLD label by the Greek teachers sample and its use in the international research context. In a similar way, Dockrell et al. (2014), within the BCRP framework also emphasised the lack of awareness about SLD in UK educational contexts, the various manifestations of these difficulties and the systemic factors that influence the identification of these children.

Furthermore, studies in the broad field of SLD have highlighted that they may constitute a secondary difficulty or be associated with the problematic speech and language functioning when co-occurring with underlying disorders, such as ASD, ADHD or EBD (Cohen et al., 2000; Conti-Ramsden et al., 2006; Kjelgaard and Tager-Flusberg, 2001; Manolitsi and Botting, 2011; Williams et al., 2008). Additionally, the similarities in the speech and language skills of the SLD subgroup and the pupils who were identified, officially or not with GLD indicated the difficulties that the latter group of children (i.e. with GLD) had in identifying expressive cues and decoding nonverbal cues (i.e. their weakness to
understand nonverbal aspects of communication), and revealed their difficulty with the social and cognitive processes underlying social interactions (Bauminger et al., 2005; Vaughn et al., 2001).

Nevertheless, further research within this SEN field in Greece and the establishment of an officially and mutually accepted SLD definition in the Greek context could lessen the misconceptions that surround the SLD category and assist in the identification of children who experience this type of difficulties by the Greek system.

6.2.3 Findings from additional background factors

Although the main focus of this phase was to identify the pupils with SLD, drawing at the same time comparisons with pupils with GLD, other SEN or pupils who had No Difficulty, additional analysis was conducted in order to identify significant differences and interaction effects between pupils’ speech and language skills and additional background factors. The findings revealed additional significant or non-significant differences between pupils’ performance in the speech and language screening assessment measure and factors such as gender, Greek as Additional Language (GAL), year of attendance, inclusion class attendance and literacy difficulty, without differentiating pupils to SEN subgroups.

In particular, given that inclusion class provision has become the most widely available form of educational placement for children who need specialist language and literacy support in the Greek mainstream school environment, without focusing solely on those with SLD, the findings showed greater language weaknesses for the pupils who attended an inclusion class. Similar findings were reported by Conti-Ramsden and Botting (2004, 2000), who reported that a growing number of children with difficulties in the domain of speech and language are educated in specialized language units. In the current study the children who attended an inclusion class had greater

144 Or Language Resource Base (LRB) as it is also called.

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difficulties in the domains of expressive language, receptive language, behaviour related to speech, language and communication, and social skills language than the pupils who did not attend an inclusion class.

A large number of studies in the broad field of speech and language have reported that children and young people with difficulties in this area also have literacy problems (Dodd, 2013; Nathan et al., 2004b; Sices et al., 2007; Stojanovik and Riddell, 2008). In line with these findings, this study revealed that the pupils who had literacy difficulties (i.e. difficulty with their written language), regardless of their SEN identification, had greater speech and language difficulty ratings than pupils who did not have a literacy difficulty. The findings of Hesketh (2004) and Holm et al. (2008) raised questions about the connection between speech/language and literacy difficulties, suggesting that the nature of this connection may differ depending on the specific skills that are being assessed. In contrast, the outcomes of this study add to the growing body of literature (Curran, 2004; Dickinson and McCabe, 2001; Dickinson et al., 2003), highlighting the strong interrelationship between speech/language and literacy skills. In particular, the evidence supported the highly important role of poor phonological awareness, expressive and receptive vocabulary, syntactical, morphological and discourse abilities in children’s speech/language and literacy development.

The range of contradictory evidence from the international research database that examines the relationship between SLD and bilingualism, reveal that bilingual children (such as, Spanish-English, French-English, Greek-French) who have SLD appear not to be in an advantageous or disadvantageous position from the monolingual peers who experience the same type of disorders (De Lamo White and Jin, 2011; Kampanaros and Grohmann, 2013; Peña and Bedore, 2009). Specifically, although a number of studies indicated that bilingual children who have speech/language difficulties performed lower than their monolingual in language aspects such as vocabulary, morphology, lexicon and grammar (Verhoeven et al., 2011), other empirical studies within this field, similar to the results from this current study, revealed no differentiation in the speech and language skills of bilingual children who experienced
speech/language difficulties and monolingual children who had similar problems (Paradis, 2005; Windsor et al., 2010).

As Hambly et al. (2013) highlighted in their systematic review of studies regarding the influence of bilingualism on speech production/acquisition and the identification of speech problems in bilingual children, the inconsistencies in the above findings appear to be highly related to aspects such as, the methodological differences of the studies conducted within this field, differences in the children’s socio-cultural and linguistic background or the degree of children’s language exposure. These factors must be taken into consideration when examining the divergence in the evidence of this current study with similar research in this domain in the international context. Nevertheless, another aspect that should not be overlooked when examining bilingualism and SLD in the Greek context is the lack of valid and standardised language assessment measures that enable the detailed examination of speech/language skills of bilingual children in Greece. This point adds to the complexity that surrounds the identification of SLD in Greece and creates challenges regarding the interventions that need to be provided to the bilingual children with SLD by teachers and practitioners/professionals.

In addition, the evidence revealed no significant differences in the speech and language performance of pupils who were in year B, year C, year D or year E. Stothard et al. (1998), in a follow-up study that examined the language skills of children who had difficulties in this area at the age of 5, reported that a substantial proportion of them (48%) continued having considerable problems at the age of 15 years old. Conti-Ramsden et al. (2001) suggested that difficulties in the broad domain of language at an early age are likely to persist to late primary school years. This pattern of evidence revealed in the current study has some similarities with the study of Leitão and Fletcher (2004), as their follow-up data revealed continuous expressive language difficulties from children’s first year at school (5-6 years) until the age of 12-13 years. Despite the methodological differences (e.g. longitudinal design of studies) between this study and international studies within the broad domain of speech and language difficulties, the evidence supported the long-term nature of difficulties in core
aspects of the language system, including expressive and receptive language, across the primary school years.

Unlike the studies of Lindsay et al. (2010b) and Dockrell et al. (2012a)\(^{145}\) which revealed a strong predominance of boys in the domain of SLD, and further findings which indicated higher prevalence rates for boys in the domains of expressive, receptive language and articulation difficulties (McKinnon et al., 2007; Okalidou and Kampanaros, 2001), boys and girls in this study had no significantly different speech and language skills. Similarly, Fox et al. (2002) in an earlier study that sought to identify whether factors, such as gender, may be associated with speech disorders, revealed no significant relationship for this particular factor. However, it should be made clear that although the language levels were similar in boys and girls, the number of boys identified with SLD (officially or not) was larger than the number of girls, indicating that boys were still more likely to be identified with SLD. Nevertheless, the difference in this finding may be related to the differences in methodological procedures followed in the current study and similar studies in the SLD field. For example, in this study the analysis regarding the identification of SLD relied on data from SLD official (based on the KEEDY or health centres) and not official (based on teachers professional experience /own judgement) identification, while the data on the studies within the BCRP of Lindsay et al. (2010b) and Dockrell et al. (2012a) came from the National Pupil Database (NPD) and the Pupil Level School Census (PLASC).

### 6.2.4 SLD incidence in the sample schools

The screening assessment measure was not applied as a whole school screen but only to pupils who were officially diagnosed with SLD or those pupils whose speech and language skills raised concerns for their mainstream class teachers. Nevertheless, it was possible to estimate the SLD incidence\(^{146}\) in the

\(^{145}\) Specifically, Dockrell et al. (2012) within the BCRP framework reported that boys were overrepresented in relation to girls 2.5:1 for Speech, Language and Communication Needs.

\(^{146}\) Considering that the statistical values that concern the number of children with SLD may be reported either as ‘prevalence’ or ‘incidence’, it is essential to draw the line between these two
sample schools. Specifically, for the pupils that were officially diagnosed with SLD and those pupils whose teachers had concerns about their speech and language skills without being officially diagnosed with SLD, the teachers also provided the total number of classmates that attended the sample classes, enabling thereby to identify the SLD incidence in these classrooms (i.e. year B, year C, year D and year E). The analysis revealed that the incidence of pupils who were officially diagnosed with SLD (n = 26) in the sample classes was 4.96%, while the incidence of pupils who were not officially diagnosed with SLD (n = 23) was 5.09%.

Aiming to identify the incidence of SLD in primary and secondary state schools in England, Meschi et al. (2010) reported that at the age of 7 nearly 3% of the pupils have been identified as having some speech, language and communication needs. Specifically, according to the analysis of their data, which came for two different sources, the National Pupil Database (NPD) and the Pupil Level School Census (PLASC), 0.39% of the pupils have a statement for Speech, Language and Communication Needs (as their main area of SEN) and 2.15% with these SEN without a statement. Their findings indicated a marked overall decrease with age, confirming the benefit of early identification in many cases. In contrast to the above evidence, which relied on administrative data collected by the Department for Children, Schools and Families (DCSF) on all pupils in state schools (primary and secondary), due to lack of official evidence it is not possible to have a clear view of SLD incidence in a nationally representative Greek sample.

Despite the lack of official evidence of SLD incidence in a nationally representative Greek mainstream schools sample, the comparison of the incidence rates of this current study with the prevalence rates of Lindsay et al. (2011) who revealed that 3% of the school population, between 7 and 12 years, are identified with SLCN (at School Action Plus/SAP or with a statement), measures. So, the term 'incidence', which is used in this particular study, indicates 'the number of new cases of speech and language disorder occurring in a given population during a specified time' (Enderby and Phillip, 1986, p. 152), while 'prevalence' shows 'the total number of people with speech and language disorder at any one time in a population' (ibid., p. 153).
showed similarities in the rates of pupils who have SLD in both context. This point strengthened the validity of the incidence rates in the sample Greek schools and demanded further research in this field in Greece.

Although, Okalidou and Kampanaros (2001) provided informative evidence regarding the prevalence of communication impairments in Greece, their study focused on preschool children and included only the urban region of Patras. Specifically, their original and follow-up study aimed to screen preschool children for speech and language impairments, through the Greek adaptation of Communication Checklist for Preschool Teachers (Whitworth et al., 1993), examining aspects such as, articulation/phonology, expressive language and pragmatics, receptive language, dysfluency and voice. Drawing evidence from a sample of 1,113 children (57 kindergartens) the analysis revealed that the overall prevalence rate for Greek preschool children with communication impairments in Patras ranged from 14.4 % to 18.7%. Although their study relied solely on teachers’ reports and their sample was not nationally representative, the overall prevalence values of their study lay close to the internationally reported prevalence rates derived from direct speech-language assessments (Rapin, 1996; Shriberg et al., 1999).

Despite the methodological differences between the current study and the study conducted by Okalidou and Kampanaros (2001), comparisons of the rates add to the evidence that the incidence of SLD decreases with age (Lindsay et al., 2010b), while the findings of this current study constitute a useful description of the SLD incidence in Greek mainstream primary classrooms. Nevertheless, the analysis of the SLD incidence data in the current study needs to take into account that it relied on teachers’ concerns on the LAMP screening assessment and pupils’ official diagnosis from the diagnostic and health centres. In addition, it focused only on pupils in certain years (i.e. year B, year C, year D and year E) of the sample schools located in two out of seven districts of Athens and therefore the population of the schools that finally took part cannot be considered an entirely representative sample of children with SLD.
6.2.5 Correspondence between LAMP cut-off scores and SEN official/not official identification

The analysis also revealed that, regardless of the SEN subgroup, the incidence for the pupils within the top 10% cut-off was 5.8% and for the top 20% was 10.8%. Moreover, the 77% and 95% correspondence between LAMP 10% - 20% respectively and pupils’ SEN official/not official identification indicated good levels of consistency between SEN formal/informal identification and LAMP cut-off groups.

Although the sample parameters and the aims of Nash’s study (2013) differed, her findings revealed that 81% (17/21) of pupils identified or not identified by LAMP (using the top 20% on the LAMP as the cut-off point for a low score) were also identified by GCC (General Communicative Competence level) of the Children’s Communication Checklist (Bishop, 2003b). Moreover, in her study (ibid.) 75% (3/4) of the pupils identified by LAMP were also identified by GCC, and 82% (14/17) of those with no concern by LAMP had no concerns by GCC, indicating that teachers and parents appeared to observe the same difficulties presented in both contexts (school and home). These findings increased the validity of teachers’ and parents’ observations, and supported the LAMP screening assessment results.

In this current study the fact that the majority of pupils with SLD (73% and 93%), General Learning Difficulties and other SEN (72% and 97%) were in the top 10% and 20% of concern scores respectively, validated their identification in the Greek system. In addition, no pupils from the No Difficulty (without SEN) subgroup were in top 10% and only 5% of them were in top 20%. Overall, these findings indicated that the LAMP did not differentiate between the SLD, General Learning Difficulties and other SEN subgroups and did not detect SLD pupils’ specific speech and language difficulties. It revealed the similar speech/language profiles of the pupils identified formally or not with SLD, General Learning Difficulties and other SEN. Although Nash (2013) attempted to compare at case study level the LAMP top 10% and 20% cut-off concern scores of children identified with SLD, recorded on their school’s SEN Register,
this was not possible due to lack of comparability between the children's LAMP scores and their language concern level in the SEN Register.

6.2.6 Broader language profile and non-verbal reasoning ability of SLD and SEN subgroups

Similar to other studies in the domain of SLD (Goodson, 2011; Nathan et al., 2004b), further assessment of a sub-sample of the pupils not only validated their initial identification through teachers' ratings in the screening assessment tool, but also provided supplementary and detailed information regarding their language profile in various domains, including non-verbal reasoning skills. Despite the lack of standardised quantitative assessment measures with known validity and reliability which focus entirely on the examination of speech and language in the Greek context, the Athena Test language assessment measure was selected and administered in the current study as the best available measure. Although it is a measure widely used in the Greek context for the diagnosis of Learning Difficulties, it does not provide a detailed examination of pupils' speech and language skills, compared to international assessment tools, such as the CELF-4UK. Nevertheless, its administration to the pupils of the current study offered an overall description of their language profile in essential developmental areas. Specifically, it examined the level and rate of pupils' development in terms of intellectual ability\textsuperscript{147}, phonological, semantic and morpho-syntactic skills, sequencing ability, auditory verbal short-term memory and neuropsychological maturity. Additionally, the assessment of pupils' non-verbal reasoning skills, through a supplementary task, the Matrices (BAS II), provided significant evidence of their cognitive development which is considered a key criterion for the definition of SLD (Leonard, 1998).

The analysis of the pupils' performance in the areas of intellectual ability, phonological, semantic and morpho syntactic skills, sequencing ability, auditory verbal short-term memory and neuropsychological maturity revealed significant

\textsuperscript{147} It assessed the children’s ability to analyse and link words logically, as well as their understanding of abstract words' meaning.
differences between those pupils who followed the typical pattern of development (i.e. No Difficulty) and the pupils with SLD, General Learning Difficulties and other SEN. This pattern of findings has some similarities with the work of Conti-Ramsden et al. (2001), and Hesketh and Conti-Ramsden (2013) that highlighted the importance of phonological processing skills, verbal short-term memory, grammatical knowledge and word repetition in differentiating children who had difficulties with their speech and language skills from their typically developed peers.

The findings indicated no differentiation in the expressive language, semantic knowledge, writing-phonological skills, grapheme-phoneme knowledge, decoding and comprehension abilities of the pupils identified with SLD, General Learning Difficulties or other SEN, raising questions about the sharp distinction between SLD and the involved SEN subgroups. In this sample there were also low levels of sequencing ability, retrieval of information from long-term memory and limited processing speed, which appeared to be related to problematic language learning, comprehension and production of the pupils with SLD, General Learning Difficulties and other SEN. The above pattern of results has some similarities to those reported by Snowling (2001) regarding limited phonological processing skills of pupils with developmental dyslexia, indicating their weakness to represent, manipulate, store in short-term memory and retrieve speech sounds. Lahey et al. (2001) also highlighted the relationship between language difficulties and limited speed of processing, but their findings suggested no linear connection between speed of processing and severity of language difficulties.

Additionally, the evidence from the SLD subgroup, in line with the study conducted by Conti-Ramsden and Windfuhr (2002), revealed that the pupils who were identified, officially or not with SLD, struggled to acquire aspects of language such as grammatical morphology, phonology, syntax, vocabulary and semantics, while they also had problems with processing speed, sequencing ability and retrieval of information from long-term memory. Similar to studies in the broader field of language difficulties (Botting and Conti-Ramsden, 2001; Griffiths and Snowling, 2002) the findings also indicated that these pupils' verbal
short-term memory weaknesses had implications for their literacy skills, such as learning of vocabulary, syntax, and reading development as well as their mathematical computation skills (Bull and Johnston, 1997; Hecht et al., 2001).

Overall, the similarities in the speech/language profile of the pupils identified officially or not with SLD, General Learning Difficulties and other SEN, raised questions about who are the children that the Greek system identifies with SLD and how Greek teachers and professionals operationalize SLD. This key issue, which demands future research, appears to be highly related to the lack of a robust definition of SLD in the Greek context and (the lack of) its operational assessment through standard and informal tests similar to those used in the UK (e.g. TROG-2, CELF-3UK or CELF-4UK).

6.2.7 SLD and association with non-verbal reasoning skills

Considering that the traditional practice of the examination of non-verbal ability in the diagnosis of SLD aims to show that the language difficulties are not caused by cognitive or perceptual deficits (Andrés-Roqueta et al., 2013; Leonard, 2014), this current study also examined the non-verbal reasoning ability of the sample pupils.

The picture emerged from the evidence which revealed that the SLD pupils’ non-verbal reasoning skills levels were below their age level, is not one that would be expected of the SLD field as it constitutes a specific difficulty and is not part of wider language learning and conceptual/intellectual difficulties (associated with the domain of General Learning Difficulty) (González and Espínel, 1999; Sternberg and Grigorenko, 2002). Botting has underlined the ‘fluidity of diagnosis’ (2005, p. 317) as it tends to ‘capture an individual’s needs at a given point (or sometimes phase) in their development’ (ibid.) and emphasised the connection and dynamic process reflected between language and cognitive development. Although linguistic theories and studies within the same field suggested that specific processing limitations may partly explain this complex pattern of SLD (Ellis-Weismer et al., 1999; Montgomery, 2003), it is not quite clear yet whether these children show progressively more impaired non-verbal reasoning skills. In addition, it should be highlighted that the Matrices
task, which examined pupils’ non-verbal reasoning skills in this current study, was not standardised in Greek and therefore no local norms were developed. So, the interpretation of pupils’ scoring (age equivalent, T-score and percentile) was based on the norms of the English standardised version.

Nevertheless, the challenging findings of this study raised further concerns regarding the validity of children’s SLD identification by the Greek teachers and professionals and what definition of SLD was used in this sample. This point is related to the issues raised previously in this chapter regarding the lack of discreteness of the SLD domain in the sample schools and the non existence of an official SLD definition in the Greek context. The evidence regarding the non-verbal reasoning ability of the sample pupils adds to the complexity of the SLD identification in Greece and highlights the need for the development of official, valid and standardised Greek assessment measures that enable the thorough examination of the speech/language skills and non-verbal cognitive development of primary school aged children, offering a reliable SLD diagnosis.

6.2.8 SLD and associations with gender, year of attendance, GAL and SES

Despite the small size of the sub-sample of pupils who were further examined by performance tests in this phase and were diagnosed officially (n=11) or not (n=6) with SLD, further analysis was possible for additional background factors such as, gender, year group, GAL, and SES. Unlike the evidence provided by Meschi et al. (2010), Snowling et al. (2011) and Dockrell et al. (2012a) within the framework of BCRP regarding the role of gender in the SLD domain, no significant differences were reported in the language profiles of boys and girls identified with SLD in this study. Nevertheless, as highlighted previously in this chapter, despite the similarities in the speech/language skills between boys and girls, the number of boys diagnosed officially or not with SLD (LAMP sample: 33 boys and 16 girls, Athena Test and Matrices task sub-sample: 11 boys and 6 girls) was larger than the number of girls, indicating that boys were more likely to be identified with SLD. Additionally, in contrast to Dockrell et al. (2012a) who revealed that older pupils with language difficulties had greater weaknesses in different aspects of structural language, such as vocabulary or grammar, no
differences were revealed in the language profile of the SLD pupils across the different year groups (i.e. year B, year C, year D and year E).

The divergence in this study’s findings (regarding the connection between SLD - gender, and SLD - year group) and other international studies can be explained by differences in the methodological profiles followed in this study and other related studies (e.g. other studies used follow-up data when comparing SLD in different year groups), as well as the small size of this current study’s sample and the use of SEN categories. It follows that the findings call for further research in this field in a larger sample and with a different methodological framework could provide useful evidence regarding the relationship of SLD, gender and year group in the Greek context.

In line with studies in the field of bilingualism and SLD (De Lamo White and Jin, 2011; Paradis, 2010) no differences were indicated in the language profile of pupils who had GAL and pupils with no GAL. In contrast to these findings, Sheng et al. (2012) reported that Spanish-English bilingual children who had Language difficulties experienced considerable limitations in the domain of semantic knowledge, while within the BCRP framework Snowling et al. (2011) revealed that pupils with EAL were at higher risk for SLD. Nevertheless, as Ingram (2012) highlighted, variations within languages (for example in terms of phonetic complexity) may differentiate the outcomes provided by comparisons of language pairs. In addition, given the lack of standardised assessment measures and the limited understanding of clinical indicators in languages other than English (O’Toole and Hickey, 2013) this current study adds to the evidence that the identification of SLD in bilingual children becomes a more complex and challenging task than in monolingual and highlights the need for the development of Greek standardised measures that will assess the speech and language skills of bilingual children.

In contrast to studies which reported that the incidence of SLD was higher in children with lower SES (Law et al., 2011; Snowling et al., 2011), the findings revealed no differences in the language profile of the SLD pupils with low SES, medium/average SES or high SES, which was assessed by the level of parental
education and occupation. Similar evidence though was reported from studies focusing on pre-school aged and school-aged children, which indicated no association between SES and language development (Black et al., 2008; Nash, 2013; Reilly et al., 2009), while McKinnon et al. (2007), in a study conducted in Australia, also reported no significant differences in the prevalence of speech disorders and school-aged children SES. Similarities in the above findings suggest that the influence of SES may not be as great for the SLD population as reported by some studies in this field. Nevertheless, the sample’s characteristics (e.g. sample size), as well as the assessment measures applied for children’s language and SES may explain these outcomes, while they should be also considered carefully when interpreting similar studies.

6.2.9 SEN subgroups and additional background characteristics

Supplementary analysis was also conducted in order to identify the impact of the additional background factors in language profile and non-verbal reasoning ability, without differentiating pupils by SEN subgroups (i.e. SLD, General Learning Difficulties and other SEN). According to the findings, the pupils who attended an inclusion class, regardless of their SEN identification, performed lower than the pupils who did not attend an inclusion class only in the domain of grapheme/phoneme knowledge. In addition, girls performed better than boys in the domains of intellectual functioning ability, expressive language, semantic knowledge, decoding and comprehension abilities. Although the evidence related to the domains of expressive language and articulation/phonology have some similarities with studies in the field of speech and language difficulties (McKinnon et al., 2007; Okalidou and Kampanaros, 2001), which also indicated that boys tend to present higher prevalence rates than girls in the above areas, no further differentiations were revealed between boys and girls in this study.

Additionally, the pupils who were in year B (approximately 7½ or 8 years old), regardless of their SEN identification performed lower than pupils in year C (approximately 9 years old), year D (approximately 10 years old) and year E (approximately 11 years old), in areas such as expressive language, phoneme-grapheme knowledge or processing skills. Similar findings were reported in
McKinnon et al. (2007), who examined the prevalence of speech disorders and gender, and grade level (from kindergarten to Grade 6) and SES, suggesting that as pupils’ grade level increased the prevalence of speech disorders decreased. Vandewalle et al. (2012) reported that children with difficulties in the domain of speech/language and literacy had extensive and persistent problems with their phonological awareness at least until Grade 3. In contrast to these findings, McGregor et al. (2013) revealed no differences in the breadth and depth of vocabulary knowledge throughout the school years, indicating the persistence of vocabulary deficits over the school years. Dockrell et al. (2007) in an earlier study reported that children identified with SLD, at the age of 8 years (age range of year B in the Greek context) had significant weaknesses with their receptive vocabulary, understanding of grammar and narrative production, while examination of the same children at the end of compulsory education (i.e. 16 years) revealed that their pattern of difficulties remained the same. The above contradictory evidence, as highlighted by Lindsay & Dockrell (2008a) provided an indication that the patterns of children’s speech and language functioning vary over time, educational phases and with respect to curriculum demands.

The essential role of phonological, semantic and broader language skills in the development of literacy (Caravolas et al., 2005; Conti-Ramsden and Fraser, 2008; Nation and Snowling, 2004) was also found in this study. Specifically, the evidence indicated that the pupils who also had a literacy difficulty, regardless of their SEN identification, performed lower than the pupils with no literacy difficulty in the domains of intellectual ability, phonological awareness, expressive language, semantic and morpho-syntactic skills, decoding and comprehension abilities, writing-phonological skills, sequencing ability, processing speed skills and non-verbal reasoning ability. Additional findings also revealed differences in the performance of these pupils in short-term memory, processing speed and sequencing ability.
6.3 Phase 2

6.3.1 Research Questions (RQs) and findings - How these relate to the literature and the existing knowledge in the broader field of SLD

The case study methodology used in this phase further examined the evidence that emerged in Phase 1 which indicated no considerable differentiations in the language profile and non-verbal reasoning skills of pupils with SLD compared to those with General Learning Difficulties or other SEN. The cases were selected purposefully to enable within-case and cross-case comparisons of the pupils diagnosed officially with SLD (i.e. Nick, Helen and Jim), pupils not officially diagnosed with SLD (i.e. Simon and Steven), one pupil (i.e. John) who was officially diagnosed with General Learning Difficulties (GLD) and one pupil (i.e. George) who was not officially diagnosed with Specific Writing difficulties (SpWd).

6.3.2 RQ1. How did the case study pupils come to be identified as having SLD, General Learning Difficulties and Specific Writing difficulties?

Speech/Language, and literacy profile of pupils with SLD, General learning Difficulties and Specific Writing difficulties

The evidence from the pupils’ screening assessment in Phase 1 revealed that the performance of pupils who were officially diagnosed with SLD (Nick, Helen and Jim) and pupils who were not officially diagnosed with SLD (Simon and Steven) was within the top 10% of concern scores, indicating difficulties in their speech and language development. John’s (officially diagnosed with General learning Difficulties) was also within the top 10% of concern scores. George’s (not officially diagnosed with Specific Writing difficulties) performance within the top 20% of concern scores also revealed difficulties in speech and language progress.

Overall, the pupils who were identified officially or not with SLD can be said to have mixed expressive and receptive language disorders. The range of evidence from both phases of the study revealed the considerable difficulties that these pupils had with their expressive language (e.g. weakness to form and
provide age appropriate sentences with legible meaning), receptive language (e.g. struggled to align with verbal instructions), phonological awareness and text comprehension. The children’s problems with both production and comprehension of language influenced aspects of the language system such as grammar, semantics, lexical acquisition, phonology and pragmatics. Dockrell and Messer (1999) and Chiat (2000), also revealed the dynamic relationship of these elements and their impact on children’s expressive and receptive language skills. Similar to the evidence of this current study, Dockrell et al. (2007a) in a follow-up study that examined the achievements of children with SLD, reported that the children identified with SLD had substantial problems with their receptive vocabulary, understanding of grammar and narrative skills, while they also had considerable literacy difficulties. Further findings from studies that examined the grammatical weaknesses showed by preschool and school aged children with difficulties in the domain of speech and language (Hamann et al., 2003; Van der Lely, 2005, 1998) supported the above pattern of results regarding children’s grammar problems. In line with the findings of Rice et al. (2004) and Leonard et al. (2007) the grammatical morphology limitations of the SLD children in this study were highly related to morphemes that express tense and agreement. There are various explanations regarding the types of grammatical limitations that children with language problems may have. All of them though suggest that the grammatical difficulty is not limited to expressive language but extends to children’s deficient grasp of particular linguistic principles or their weakness to process linguistic input data (Leonard, 2009).

Nick, Helen and Jim, who were officially identified with SLD, also had articulation difficulties, which mainly concerned distortions and constitutions of specific speech sounds, while George, who was not officially identified with Specific Writing difficulties, also had slight problems in this domain. Studies that examined the articulation rate of children with difficulties in the domain of speech and language reported that subtle articulation problems might be identified in these children. Specifically, Scheltinga et al. (2003) who explored the articulation skills of children with SLD, dyslexia and typically developed peers, suggested that children with SLD had more problems in this area compared to the other two groups of children; while Watkins et al. (2002) and
Goffman (2004) aimed to explain the link between articulation deficits and SLD by suggesting an association between articulation and acquisition of morpho-syntax\textsuperscript{148}. In addition, the evidence revealed that, similar to the pupils with SLD, George had weak phonological skills, lacked grapheme/phoneme, and semantic knowledge and struggled with the grammatical structure of his phrases. Similar to the findings for George, studies from the broad field of speech and language difficulties (Messer and Dockrell, 2006; Van der Lely and Ullman, 2001) reported that children’s language weaknesses at the word and sentence level were related to limited writing skills. Specifically, they were associated with the production of shorter sentences and poor content texts, as well as the lack of prepositions and inflectional morphology weaknesses. Additionally, in line with the findings of Bishop and Clarkson (2003) who highlighted the role of writing as a sensitive index of language difficulties, revealing a large number of phonologically inaccurate spelling errors in children with problems in this field, George’s poor phonological skills influenced his writing through increased spelling errors.

Despite the dispute regarding the classification of children who have difficulties with the pragmatic/social use of language (Bishop, 2000) studies from the SLD domain highlight the strong relationship between this particular area and the difficulty in using language appropriately in social situations. Similar to the study of Norbury et al. (2004), who reported problems in the social use of language for a number of children who had difficulties with their speech and language skills, this current study revealed that Simon (not officially identified with SLD) also had difficulties in the social/pragmatic use of language. Nevertheless, similar evidence was also found for John with GLD as he usually could not initiate, engage in and maintain a joint topic of conversation. This finding underlines the limitations that John had in the domain of communication as,

\textsuperscript{148} One suggestion regarding the association between articulation and morho-syntactic skills is that articulation may have an effect on grammar through phonological processing and therefore poor articulation skills can cause limited phonological processing skills or poor phonological working memory and consequently a morpho-syntactic deficit (Mortimer, 2007). Another suggestion, as proposed by Goffman (2004) is the direct association between articulation and grammar.
despite his relatively fluent expressive language skills\textsuperscript{149}, he struggled to understand/decode and convey intentions, adhere/hold to the demands of a conversational partner and cope with discourse management.

Given the association between phonological awareness and both short-term memory and learning abilities (Archibald and Gathercole, 2006) it was not surprising that the evidence revealed weak short-term memory skills and limited processing speed skills for George, Helen, Simon, Nick and Jim. In addition, such processing weaknesses had an impact on Nick’s, Simon’s and Jim’s sequencing skills and their ability to retrieve information from long-term memory. Moreover, in line with the evidence that highlighted the strong relationship between limited short-term memory and GLD (Henry, 2001), the findings for John revealed that he had slower processing speed and limited short-term memory, which had an effect on the amount and quality of his linguistic information and the phonological and semantic aspects of these linguistic representations. Similar to the above findings, Miller \textit{et al.} (2001) and Leonard \textit{et al.} (2007) highlighted the processing capacity limitations and representational weaknesses for children with SLD. Gathercole \textit{et al.} (2005) and Van Daal \textit{et al.} (2009) also reported the strong connection between short-term memory and language problems.

\textbf{Literacy and numeracy problems}

Particularly in the field of SLD, various studies have reported that the patterns of children’s literacy performance may vary according to the aspects that are assessed and the individual children’s skills (Hesketh, 2004; Holm \textit{et al.}, 2008). The range of findings in this study revealed similarities, to a lesser or greater extent, in the literacy profiles of all the above pupils and particularly in spelling, writing, reading and listening/reading comprehension, regardless of their official or non-official SLD identification. Similar evidence from the broad area of SLD revealed that children and young people identified with such difficulties have

\textsuperscript{149} Occasionally, though, he could not provide the appropriate syntactic structure when expressing himself.
associated literacy problems (Bishop and Clarkson, 2003; Catts et al., 2008; Larkin and Snowling, 2008; Lewis et al., 2006; Silliman et al., 2006). Considering the role of phonological skills in the literacy development, poor phonological awareness was related to the progress in the domains of reading, spelling and writing for Nick, Helen and Steven, in writing and reading skills for Jim and in writing for Simon. Studies within the same domain highlighted the strong connection between difficulties in phonological awareness, phonological memory, processing speed and vocabulary on oral language, spelling, comprehension and written skills at school age (Catts and Weismer, 2006; Conti-Ramsden and Fraser, 2008; Lewis et al., 2011; Smith et al., 2005). John’s (GLD) and George’s (SpWd) difficulties were mostly associated with spelling and writing. Their difficulties in the writing-phonological domain justified their tendency to form short sentences that did not follow the rules of grammar, and syntax and lacked meaning. Further, this current study revealed that John’s\textsuperscript{150} and the SLD pupils’ limitations in the domains of phonemic awareness impacted on their reading skills and reading comprehension. In line with this study’s evidence, Nation (2005) reported that weaknesses in oral language are related to poor reading comprehension, while lack of semantic knowledge and grammar limitations (knowledge of morphology and syntax) are reported to be highly linked to reading comprehension difficulties (Snowling and Hulme, 2011). Moreover, SLD pupils’ difficulties in vocabulary knowledge, which according to Nash and Donaldson (2005) possibly derive from semantic and phonological weaknesses in word learning, impacted on their written output and comprehension. Jim’s, Nick’s and Simon’s, John’s and George’s weak verbal short-term memory skills had also an influence on the quality of their writing.

In addition, Nick’s, Simon’s (SLD) and George’s (SpWd) illegible and below average handwriting skills, indicated their transcription constraints. Similarly, the study of Dockrell & Connelly (2009) revealed that children with difficulties in the domain of speech and/or language also had considerable problems with

\textsuperscript{150} John appeared to have efficient reading skills, despite his slight stammering over complex or unknown words, whereas he had limited reading comprehension skills.
handwriting, while in a later study Connelly et al. (2012) indicated the strong links between spelling proficiency and handwriting fluency, underlining the latter as a strong predictor of overall writing competence.

Additionally, further evidence from the study revealed limitations in the domain of mathematics for Helen (SLD), Jim (SLD), John (GLD) and George (SpWd). Studies in this field have reported variations in children with SLD regarding their problems in some number skills, including calculations, but not in others, such as number comparison (Arvedson, 2002; Donlan and Gourlay, 1999; Fazio, 1999). As Koponen et al. (2006) highlighted, despite differences between the studies they have revealed that language difficulties are highly related to problems in number processing. When ‘the explicit verbal processing and expression of numerals are demanded’ (ibid. p. 59), such as in oral counting or when arithmetic fact retrieval is required, these aspects are challenging, as shown by pupils in this current study. Nevertheless, considering that difficulties with numeracy/calculation ability are thought to derive from weaknesses in cognitive processing related to some type of biological dysfunction (Koumoula et al., 2004), Helen’s and Jim’s well below their age non-verbal reasoning skills might underpin some of the language learning difficulties that they had, raising concerns regarding their SLD identification.

6.3.3 RQ2. Are there any differences between pupils having SLD, General Learning Difficulties and Specific Writing difficulties in terms of the support, and the teaching and learning practices provided to them at different years?

**Mainstream classroom context**

Given that the Greek mainstream schools are required to follow a common school policy, same guidelines and almost identical timetable, to implement an academically oriented national curriculum and use the same textbooks (Vlachou, 2006), individualised teaching and learning for pupils who experience difficulties may be applied within a narrow mainstream class framework. With the exception of Simon and George who had SLD and SpWd respectively, the findings revealed that the pupils did not respond well to the teaching pace of the
mainstream class context, regardless of their official or not official identification or year of attendance. The progress of teaching and schoolwork was dictated by the classroom’s demands, which appeared not to respond sensitively to the speech/language and literacy skills of pupils with SLD, GLD and SpWd. Although the majority of mainstream class teachers aimed to support pupils to keep up with the curriculum demands and encourage their involvement in the learning process, teaching was not differentiated according to the pupils’ identification or year of attendance. In addition, individualised practices were also applied for Simon and George who appeared to follow the workflow of their classroom. In contrast to the above pupils though, the range of learning activities used by Steven’s mainstream class teacher were not specialised, but were implemented for the whole class and only occasionally Steven received individualised support during the teaching process (e.g. the repetition of the task instructions). Nonetheless, parallel support in the mainstream class was provided to one pupil, Nick (officially diagnosed with SLD), after his mainstream and SEN teachers’ agreement to support him in tasks that were quite demanding for him.

Studies in the broad field of SEN have highlighted the importance of differentiated teaching practices and approaches for pupils’ learning support (Gersten et al., 2001). In the field of SLD, apart from the concerns raised regarding the ability of teachers to provide effective programmes (Dockrell and Lindsay, 2001; Dockrell et al., 2007b), a large amount of literature has focused on the intervention reports and practices applied to children and young people who experience this type of difficulties (Lindsay and Dockrell, 2008b; McCartney et al., 2011; Roulstone et al., 2012; Snowling and Hulme, 2011). In the current study, typical examples of the individualised practices aimed to promote children’s learning include the implementation of fewer or less demanding language/literacy tasks in the mainstream class context, less homework, one-to-one guidance, simplification of tasks’ verbal instructions and visual support in highly demanding tasks. Similar practices for promoting pupils ‘active learning’, positive participation and collaboration with peers were also underlined by Davis et al. (2004) in their scoping study. Some of the above strategies, such as visual approaches for the support of language skills, were also reported by Dockrell et
al. (2012b), who examined the additional support and the practices provided by teachers for the curriculum differentiation of pupils with language impairments and ASD.

**Inclusion class context**

The educational needs of pupils with SLD are met in various types of provision, which may range from individual inclusion in the mainstream school context to special school context (Lindsay *et al.*, 2005). However, a well-known approach for the support of learning needs of pupils who experience SEN and specifically SLD has been the provision of language units (Band *et al.*, 2002; Botting *et al.*, 1998; Conti-Ramsden and Botting, 2000) or inclusion classes (as called in Greece) within the mainstream school environment (Greek Public Law 3699/2008). Within the framework of additional support the pupils who were officially identified with SLD, John (who was officially diagnosed with GLD) and George (who was not officially identified with SpWd) received further language support in the inclusion class context and direct specialist support by the SEN teacher. Although the above pupils were in different years (i.e. Nick, Helen, and John attended year B, Jim year C and George year D), they were all in the second year of attending the inclusion class. They all received the same amount of teaching hours per week (i.e. three hours a week). Further, apart from Nick and Helen the same SEN teachers taught Jim, John and George for both years of them being in the inclusion class.

In contrast, Steven and Simon (who were not officially diagnosed with SLD, despite their teachers’ recommendations to their parents), did not receive any additional support within the mainstream school environment or any other professional service outside the school context. The teachers’ difficulty in convincing the parents of the benefits of the additional support that should be provided to the above children reflected the limited collaboration between the teachers and parents, and the parents’ key role on the decisions regarding the referral process, appropriate educational placement and additional support offered to children in the Greek educational context. In contrast to the U.S. model for SEN pupils (IDEA, 2004) and the UK policy (Department for
Education, 2013a) where the referral can come from parents, teachers, social service agencies, doctors or other professionals, Greece has a referral system which authorises only parents and not teachers or other professionals/practitioners to begin the referral process and request further psychoeducational assessment by a Greek public diagnostic or health service/centre (Greek Government Gazette, 2008). The fact that the role of teachers is weaker in this process, which was also supported by the evidence of this study, constitutes one of the most important drawbacks of the Greek SEN identification system, as they are not entitled to refer directly children for evaluation, but rely solely on parents' approval about children’s provision and placement.

Lindsay and Dockrell (2002) and Barron et al. (2007) highlighted that the lack of shared understanding between teachers, parents and professionals had a negative influence on supporting the educational needs of these children. Similarly, the above pattern of findings within this study raised questions regarding the effectiveness and efficiency of the current educational support that was provided to these children (i.e. Steven and Simon), solely in the mainstream class environment.

The above evidence highlighted the need for the empowerment/upgrading of teachers’ role in children’s referral process, educational placement and support, in order to be able to contribute to children’s assessment and intervention planning. This point will not only assist on the identification of pupils’ difficulties, but it will also offer the potential to these children to receive additional support and interventions within the mainstream school environment without relying exclusively on parents’ responsiveness.

In addition, the evidence revealed that the teaching of pupils attending the inclusion class was organised according to their difficulties in the domains of speech/language, literacy and/or maths, following either the curriculum of the year attended or the previous year. With the exception of pupils officially diagnosed with SLD whose additional support was focused on the improvement of their oral language and literacy skills, the teaching provided to John and
George was mainly focused on their literacy weaknesses, overlooking their limitations in the domains of pragmatic/social use of language and articulation respectively.

The findings revealed that the pupils received support in small groups, as they co-attended the inclusion class with other pupils who were identified, officially or not, with similar difficulties. According to Dockrell et al. (2006b) support in small groups has a positive impact on pupil’s language skills, especially during the early years. Additionally, although the SEN teachers applied a range of practices in order to support pupils’ speech/language, literacy and/or numeracy learning, such as tasks on the computer, group/pair/individual work in tasks, or efforts praise, no differentiated practices were applied based on the pupils identification with SLD, GLD and SpWd, or their year group. Nevertheless, as emphasised by Lindsay & Dockrell (2008b), distinctive group categories do not necessarily indicate that different teaching strategies are required or are effective. In an earlier study that examined the LEAs approaches to provision for children with Specific Speech and Language Difficulties in England and Wales, Lindsay et al. (2005) reported the lack of valid evidence regarding the efficacy of differential provision for these pupils. In general though, the pedagogic strategies that aim to facilitate pupils’ learning should be related to individual child’s needs and to the demands of the setting in which child’s teaching and learning occurs (Lewis and Norwich, 2005).

**IEP**

Following the policy applied in the USA and the UK where the IEPs are mandatory for children with SEN, the latest Greek Public Law of SEN (2008) stated that the pupils with SEN typically follow an IEP which is designed through a collaborative process involving the multidisciplinary team of KEDDY, SEN teacher, mainstream class teacher, school counsellor/advisor and by request the pupil’s parents/carers. Nevertheless, the findings revealed differences in the documentation of pupils’ teaching plan, curriculum aims, and speech/language and literacy progress between those children who had an official diagnosis and those who did not. Specifically, Simon, Steven and George, who were not
officially identified with SLD and SpWd respectively, did not have an IEP or a similar teaching/progress plan. Their teachers rejected the formulation and implementation of such a plan, arguing that it applied mostly to pupils who were officially diagnosed with SEN or that it would not be useful to these pupils and would not make any difference in their teaching.

On the contrary, the mainstream and SEN teachers of pupils who had an official SLD diagnosis formed an IEP for each of them without KEDDY’s involvement in this process. The above pupils’ IEPs constituted a record of their progress and a teaching plan that included oral language, literacy and maths curriculum-based goals adjusted to their weaknesses. Helen was the only pupil whose IEP was designed by the KEDDY staff, and then organised by the SEN teacher, developed, reviewed regularly by both mainstream and SEN teacher, and provided at the end of the school year to the KEDDY by request as an annual confidential evaluation of her progress. Although John did not have an IEP, similarly to Helen, his SEN teacher provided a confidential evaluation of his progress to the diagnostic services at the end of the school year as a confidential evaluation of his attainments.

In line with the study conducted by Vlachou (2006) who examined the role of SEN teachers in Greek primary schools, the above pattern of findings revealed a collaborative relationship between mainstream and SEN teachers in terms of co-planning the learning goals for pupils identified with SLD and co-evaluating their progress in the domains of speech/language, literacy and numeracy. Collaboration between the diagnostic, health services, and education has been highlighted by the international and Greek Government legislation and policy (Department for Education and Skills, 2004b; Greek Government Gazette, 2008; Lamb et al., 2012) to meet SEN children’s educational needs effectively. Yet this study, like similar studies from the wider field of SEN (Lampropoulou and Padeliadu, 1997; Law et al., 2002; Lindsay et al., 2005), show limited collaboration between the diagnostic and health and educational systems and inadequate coordination of service delivery.
SEN teachers’ reliance on SEN official identification

Nevertheless, an issue that was raised at this point was SEN teachers’ strong reliance on pupils’ official identification by the diagnostic and health services. Specifically, all the SEN teachers who were involved in this phase of the study, agreed on the importance of pupils’ assessment and diagnosis in order for appropriate support to be offered to them in the mainstream school settings. Despite their regular contact and teaching of these children for a considerable period of time, the SEN teachers believed with certainty that the multidisciplinary teams of the diagnostic centres were the experts in assessing and identifying pupils’ strengths and weaknesses, relying heavily on their assessments, recommendations and intervention goals which they saw as important when structuring the pupils’ teaching. Their lack of confidence regarding their role and expertise in the field of SEN and strong reliance on the diagnostic centres’ assessments and diagnoses reflected their preference towards a diagnosis-based approach, which as reported by Lindsay et al. (2005) is usually followed by SLTs (Speech and Language Therapists), although in practice they implemented a needs-based approach, which is preferred by educationists.

This dominance was actually highlighted by the latest Greek Public Law of SEN (Greek Government Gazette, 2008). It modified the process of identification, reflecting a shift from the traditional psycho-educational diagnostic model to the medical one (Anastasiou and Polychronopoulou, 2009). Nevertheless, given the limited collaboration between the diagnostic centres and SEN teachers it appears that despite these positions, the findings from classroom’ observation revealed an inconsistency between their teaching and their beliefs. Specifically, their frequent contacts with the pupils made them well aware of the nature of their difficulties and academic attainments, compared to the professionals who scarcely had any contact with the children after the process of assessment and identification. Given that the SEN teachers were fully aware of the pupils’ areas of difficulty and the progress they had made during the period of the school year, they were highly knowledgeable in organising and implementing their teaching framework based on the pupils’ learning needs, instead of following
passively the professionals’ recommendations and guidelines. The evidence (observational) though revealed that despite the various practices they used in their support of pupils’ needs, these were not differentiated by pupils’ identification as having SLD, GLD or SpWd, or by their year group. This point highlights the need for the establishment of closer collaboration and co-working between the SEN teachers and professionals from the KEDDY or the health services, and shared knowledge and understanding of the learning needs of SLD children in order to facilitate their teaching and learning in the inclusion class context.

6.3.4 RQ3. Are there any differences in the academic (i.e. speech/language and literacy) attainments of the case study pupils identified with SLD, General Learning Difficulties and Specific Writing difficulties?

Assessment of speech/language and literacy progress in the mainstream and inclusion class context

Following the Greek educational policy (Presidential Decree, 1995), which states that there is no official progress record for pupils attending year A and year B of mainstream primary education, regardless of whether they have SEN or follow the typical pattern of development, Nick, Helen, Simon and John who attended year B, did not have an official record of their speech/language and literacy progress. In addition, as further indicated by the related policy (ibid.), parents were informed only orally by the mainstream and SEN teachers about the pupils’ progress at the end of each school term or after agreement with them. Nevertheless, Helen’s and John’s confidential progress evaluation which was prepared and provided by their SEN teacher (in Helen’s case with the cooperation of mainstream’s class teacher) for the diagnostic centres, constituted an official record of their difficulties and attainments in the domains of speech/language, literacy, maths and social development. However, the pupils, who attended year C, Jim and Steven, and George who attended year D, had an official record of their speech/language and literacy progress based on a text scale.
A range of evidence indicated that regardless of the pupils’ difficulties, official/non-official identification or year of attendance, the mainstream class teachers applied the same methods for the assessment of their progress in the areas of speech/language and literacy. Following the policy implemented for pupils’ assessment in primary education (Greek Government Gazette, 2008), the most commonly used methods for the examination of pupils’ speech/language and literacy skills were their participation in everyday teaching, individual assessment tasks or informal tests, handouts, tasks from the language/literacy textbook or tasks that required their oral language skills. In addition, for Nick, Steven and George, homework constituted an additional practice for the assessment of their literacy skills. Similarly, Ware et al. (2011), in a study that examined SEN pupils’ access to the curriculum in the Irish mainstream primary context, reported the variety of methods which may be applied for the SEN pupils assessment of all areas of the curriculum. These may range from formal assessment tools, for instance standardised tests, to informal methods which were also reported in this current study, such as teacher’ observation, class work or homework.

With the exception of Simon and Steven, who did not attend an inclusion class and hence their speech/language and literacy attainments were based solely on mainstream class assessment, similar methods (e.g. tasks based on the mainstream class literacy textbook or related handouts) were applied by the SEN teachers for Nick, Helen, Jim, John and George in the inclusion class context. Nevertheless, John’s SEN teacher examined further his oral language and literacy performance through informal assessment tasks and computer assignments, while George’s SEN teacher also used handouts and assignments from older school literacy textbooks or SEN textbooks, provided by the Greek Ministry of Education and Religious Affairs. With the exception of George, whose assessment was mainly focused on his literacy (i.e. spelling and writing) progress, the range of methods applied by the SEN teachers for the pupils identified with SLD and the pupil diagnosed with General Learning
Difficulties\textsuperscript{151} examined both their oral and written language skills. In addition, Jim was the only pupil whose speech/language and literacy skills assessment was mainly based on the previous year curriculum goals.

\textit{Pupils’ weaknesses and attainments/improvements}

Similarly with the findings provided by Lindsay \textit{et al.} (2010b), within the BCRP for children with SLD, it was evident that the pupils with SLD in this current study, had significant weaknesses with their expressive and receptive language skills, articulation (not Simon or Steven) and sub elements of language such as morpho-syntax, semantics, vocabulary or grammar. The above pattern of results has similarities with two cross-sectional studies from the Netherlands (Van Daal \textit{et al.}, 2004; Van Weerdenburg \textit{et al.}, 2006) which highlighted that phonological limitations, lexical-semantic weaknesses and semantic problems were consistent for children with difficulties in speech and language between the ages of 4 and 10 years old. In addition, the evidence revealed that the pupils with SLD shared literacy difficulties with John (GLD) and George (SpWd), as they had serious limitations in the domains of spelling, writing, reading and text comprehension.

In line with this study’s findings, Windsor \textit{et al.} (2000) and Mackie & Dockrell (2004) highlighted the role of poor phonological awareness and semantic skills in the weaknesses experienced at the word and sentences level by children with difficulties in the domain of speech and language. Similar to the study of Dockrell \textit{et al.} (2007a) who aimed to identify the relationship between oral language, writing and reading skills of primary school aged children with language difficulties through the examination of their writing skills, the evidence of this current study revealed no progress in children’s writing competence. Specifically, for the SLD children their writing performance was characterised by texts of limited length, inadequate sentence grammatical/syntactical structure, whereas they also showed poor ideas and limited organisational skills.

\textsuperscript{151} Although John’s teaching in the inclusion class mainly focused on the improvement of his literacy skills (i.e. spelling, writing, reading and text comprehension).
Additionally, the evidence revealed that although John could formulate correctly his written language when it involved short sentences with simple structure, similarly to George and the pupils with SLD, he could not provide the appropriate grammatical and syntactical structure to more complex sentences and texts, and respond efficiently to spelling tasks.

Pupils with SLD in this study had considerable difficulties with reading tasks, which, according to McArthur et al. (2000) and Dockrell et al. (2007a) may be considered another possible barrier in the production of legible written texts. The range of evidence revealed that despite Nick’s, Helen’s and Jim’s slight improvement of their reading skills, they lacked reading competence in the sense that they used to stammer or not accent the words correctly. In contrast to Simon, whose reading skills were considered quite competent, Steven, despite his reading fluency, tended to stammer over complex or unknown words. The above pattern of evidence has some similarities with the study of Peterson et al. (2009) who reported that when children’s Speech Sound Disorders (SSD) were accompanied by Language Impairments (LI) they had higher rates of reading difficulties, underlining thereby the role of morphological awareness skills in the development of literacy. Similar findings from studies (Lewis et al., 2000b; Peterson et al., 2009; Tomblin et al., 2000) that examined the reading competency of pupils with language difficulties or combined SSD and LI revealed that they also had reading problems. Similar to the evidence of Nathan et al. (2004a), and Catts and Kamhi (2005) who reported that a lack of phonological and phonemic awareness is highly associated with reading problems in various ages and educational phases, the evidence in this current study indicated that SLD pupils’ limited phonological knowledge had an impact on their reading accuracy and fluency.

In contrast to the majority of pupils with SLD, the findings revealed that John (GLD) and George (SpWd) made progress in the domain of reading despite their slight stammering with complex or unknown words. Although John’s weaknesses concerned mostly his reading comprehension skills, the pupils with SLD had reading and listening comprehension problems in related tasks. In contrast, George appeared to make good progress in the above areas. Text
comprehension is considered a highly complex aspect that is related to many cognitive processes and abilities. Catts et al. (1999), who explored this area, highlighted the role of spoken syntax and semantics as strong aspects that may predict young children’s text comprehension competence; while, according to Oakhill et al. (2003), children’s verbal and numerical working memories are also considered highly related to reading comprehension. Similar to the findings of Norbury and Bishop (2002), and Botting and Adams (2005) for children with difficulties in the domain of speech and language, the evidence of this current study indicated that the SLD pupils struggled with answering questions that sought information clearly described in texts and that could be deducted from the texts. Unlike the pattern of the findings revealed by Nation et al. (2004) where children with poor reading comprehension skills had satisfactory reading accuracy skills, in this study the pupils with SLD could not respond efficiently to tasks that required text comprehension and they also had reading problems. Nevertheless, similar to this current study, Nation et al. (ibid.) also reported that children who were identified as poor comprehenders experienced further limitations in the domain of receptive language, as they had weak listening comprehension skills and limited vocabulary, while some of them also had expressive language problems.

Taking into consideration that the pupils of this current study had problems at various levels of oral language such as phonology, syntax, semantics, pragmatics (especially Steven and John) or vocabulary, it was not surprising that some of them (i.e. Nick, Helen, Steven, John and George), regardless of their identification, also had difficulties with writing language, such as spelling and handwriting, which involved transcription and composition skills. Similar findings from Dockrell et al. (2009) reported slow handwriting skills for pupils with difficulties in the domain of speech and language, while in a more recent study within this field Connelly et al. (2012) revealed that these children at age of 11 years old struggled to bring together translation and transcription compared to their typically developed peers.

Overall, the findings revealed that regardless of pupils’ SLD, General Learning Difficulties or Specific Writing difficulties identification, their weaknesses in the
areas of speech/language and literacy impacted, to a lesser or greater extent, on their abilities to follow the mainstream class workflow, participation in literacy tasks and collaboration with peers. In spite of their slight progress in different linguistic areas, their difficulties in the above domains interfered with their academic progress and their ability to follow the curriculum learning demands.

6.3.5 RQ4. To what extent do case study pupils’ social participation and peer acceptance relate to the difficulties they have?

**Impact of pupils’ difficulties on their level of confidence in the mainstream and inclusion class context**

The evidence regarding the pupils’ level of confidence revealed that the majority of them, regardless of their identification, felt more confident and self-assured when attending the inclusion class. In particular, Helen’s, Jim’s, John’s and George’s attitude was differentiated when working with their inclusion class peers, as they were more willing to collaborate and confident when expressing themselves in tasks. Although at the beginning of the school year, Jim hesitated attending the inclusion class due to his classmates’ critical attitude and negative comments regarding his speech/language and literacy weaknesses, at the time of the study he appeared to be quite confident and working harmoniously with the majority of them.

In the mainstream class environment, the majority of pupils’ level of confidence varied. Although Helen, Jim, John and George usually appeared willing to work with their classmates, their difficulties in the domains of speech/language and/or literacy prevented them from being actively involved in collaborative learning tasks. In contrast, Nick was confident when attending both classrooms, despite that he was not always being keen to collaborate with his mainstream class peers. In addition, he liked to work with Helen in the inclusion class and support her in pair-tasks. Comparisons between the mainstream and inclusion class context could not be drawn for Simon and Steven, as they did not attend an inclusion class. Nevertheless, the evidence from the mainstream class environment revealed that Steven usually lacked confidence, whereas his involvement in discussion or play with his classmates usually happened after
his teacher’s prompting. Simon, despite the limited interactions with his classmates, liked to be considered part of his class social network.

In contrast to the pupils’ highly positive self-concepts of scholastic and social competence, the range of the study’s evidence revealed a discrepancy between children’s own perceptions, and the other data sources that were applied (teachers’ interviews, observations, and the SPQ). In line with the research literature that examined parents’, teachers’ and other professionals’ views regarding the social acceptance and peers relationships of children and adolescents with speech and language difficulties (Lindsay et al., 2002a; Wadman et al., 2008), the findings of this study revealed that regardless of the children’s positive self-perceptions of social acceptance, they lacked confidence and had limited interactions with peers. It was evident that their speech/language and literacy difficulties inhibited their participation in collaborative learning tasks within the mainstream class context. Similarly, Durkin and Conti-Ramsden (2010) emphasised that the children with SLD participated less frequently in positive social contacts with peers, had weak discourse skills, limited friendships and avoided taking the initiative with peers.

**Pupils’ academic and social self-concepts**

The findings that concerned the pupils’ academic and social competence revealed noteworthy divergences between the sources of data. Although George (SpWd) and the pupils with SLD had highly positive academic and social self-perceptions, the range of other evidence provided a less positive profile of their scholastic competence and attainments in the domains of speech/language and literacy, and a less positive overview of their social participation and acceptance by their peers. Similarly, Lindsay and Dockrell (2000) and Jerome et al. (2002) reported that the perceived scholastic and social competence of primary school-aged pupils who had difficulties in the domain of speech and language was within the same level as their age-matched peers. In line with the above evidence, earlier studies (Bear and Minke, 1996; Meltzer et al., 1998) revealed the average or above average academic self-concepts of children with learning difficulties: despite their
considerable language problems, they considered themselves to be no less competent than their typically developed peers in their schoolwork and progressing well in the domains of reading, writing and spelling.

In contrast to previous research (Lindsay et al., 2002a; Marton et al., 2005), which revealed that the scholastic and social self-concepts of children with speech and language difficulties were at a lower level compared to their typically developed classmates, the discrepancy of this current study findings highlighted SLD pupils lack of/limited reasoned concept of their academic weaknesses and low social position in their class network. Given that similar studies within this field attempted to explain the discrepancy between children’s positive self-perceptions of academic attainments and social skills and their actual less favourable competence in these areas, it is noteworthy to provide possible justifications regarding this divergence of findings. Specifically, Rothman and Cosden (1995) and Hagborg (1996) revealed that factors such as, perceived favourable feedback from teachers, classmates, parents or perceived competence in areas other than academic performance (for instance athletic competence), appeared to inflate the children’s self-concept. However, the fact that the social self-concepts of the majority of pupils in this current study were more favourable than their actual relationships with peers, does not presume children’s ‘social obliviousness’ or ‘insensitivity’ (Bear et al., 1993, p. 134). As highlighted by similar studies (Gans et al., 2003; Nowicki, 2003), highly positive self-perceptions in the social domain which do not reflect children’s existing friendships or acceptance by peers might be justified through children’s tendency to emphasise the positive elements of their social interactions. Additionally, positive self-concepts might reflect the fulfilment that emerges from having a few friends or even one intimate friend, that may offset the negative stance or ignorance by the majority of peers (Avramidis, 2013).

Further evidence indicated that the pupils identified officially or not with SLD had lower ratings in their ‘contacts/interactions with peers’ and in ‘acceptance by classmates’ subscales. Similar findings were revealed by Laws et al. (2012) in a study that examined peer acceptance of primary school-aged children with language and communication impairments. Specifically, their findings revealed
that peer acceptance was significantly associated with pupils’ social communication skills, while modification of children’s main placement from the language resource base to the mainstream class context minimised peer rejection for these children. The above evidence is partly in agreement with this current study, as despite the majority of pupils having higher levels of confidence when they attended the inclusion class, not only in terms of their academic engagement but also when collaborating with peers, they had developed friendships mainly with peers from the mainstream class context. Additionally, with the exception of John (GLD) who liked to spend his time in the playground with one of his inclusion class peers, the pupils with SLD and George did not have any further interactions with their inclusion class classmates outside the class context. On the contrary, Koster et al. (2010) reported no significant differences in contacts/interactions, acceptance by classmates, friendships/relationships and social self-perception of children with different SEN (including SLD) in mainstream primary schools in the Netherlands.

Further research in the SLD domain, internationally and within the Greek context, examining jointly teachers’, parents’ or other professionals’ judgments/ratings and children’s self-concepts of their academic and social skills, could provide additional evidence. It could also assist on the development of social interventions (e.g. peer group activities) that could reduce these children’s marginalisation and enhance their sociability.

**Impact of pupils’ difficulties on their social participation and peer acceptance**

In line with the findings of Brinton et al. (2000) who examined the social-behavioural profiles of children with language difficulties and the ways in which these problems impacted on their collaborative work with peers, the evidence of this current study revealed that pupils’ considerable weaknesses in the domains of speech/language and literacy influenced their social competence and relationships with peers. In addition, their limitations encouraged internalising or social isolation problems, such as shyness, withdrawal, or lack of confidence.
when interacting with peers. Part of the findings is in agreement with the withdrawn interaction profiles, which were underlined by Conti-Ramsden and Botting (2004) for pupils with SLD, such as lack of initiating conversation or playing alone in the playground. Regardless of their diagnosis the pupils of this current study experienced such internalising difficulties, whereas Helen who was officially identified with SLD appeared also to experience social phobias (characteristically her SEN teacher used the term ‘timid’ when describing Helen’s behaviour and personality). Empirical evidence from the field of language impairments has suggested that these children are at high risk for experiencing social phobia which may be associated with an unreasonable fear of public speaking or involve further social fears that are related to higher levels of functional weaknesses (Stein and Kean, 2000). Further, as highlighted by Snowling et al. (2006) and was also revealed from the evidence of this study for Helen, the risk of psychiatric morbidity is higher in children and young people who have considerable and persistent language difficulties especially when these, are related to quite low non-verbal skills.

Nevertheless, part of the evidence for Jim and Steven, who had SLD, revealed that both pupils were teased and partly excluded by their classmates. Although this appeared not to be the case anymore for Jim, Steven experienced some mainstream class peer negativity and scornful criticism related to his language and literacy limitations. Although Savage et al. (2005) and Lindsay et al. (2008b) found no significant levels of physical or verbal bullying in the mainstream primary school context for pupils identified with SLD, it constituted a matter of concern, especially in the first study, for a number of children with SLD. Similar to this current study’s pattern of results though, Roulstone & Lindsay (2012), revealed that children and young people with SLD had experienced teasing, bullying or exclusion/isolation by their peers. However, the authors (ibid.) highlighted that these aspects should not be considered causative or inevitable for pupils who have such difficulties, but should be seen as associations and risk factors.
6.4 Reflections on the study - Strengths and limitations of the mixed-method framework

The use of multiple methodologies and the mixed-methods research design constituted the most appropriate approach for the aims and research questions of the two phase framework of the study. This particular framework was considered mixed-method not only from the perspective of the methods applied in each phase of the study, but also methodologically as Phase 1 constituted a survey and Phase 2 was a follow-up case studies design.

Specifically, the systematic survey of the 1st part of the study enabled the identification of pupils whose speech and language skills did not progress as expected and raised concerns for their mainstream class teachers. Additionally, given the lack of official evidence regarding the incidence of SLD in the Greek mainstream primary schools, the screening assessment measure (i.e. LAMP) enabled the identification of the SLD estimated incidence in the sample classrooms for pupils officially and not officially diagnosed with SLD. Detailed assessment of a number of pupils through the Athena Test and the Matrices task, not only validated the initial identification through the LAMP but also offered a thorough description of pupils language functioning and non-verbal reasoning ability. Considering the non-significant differentiations in the speech and language profiles of the pupils identified with SLD, General Learning Difficulties or other SEN, the study’s framework led to the Phase 2 in order to examine how these pupils came to be identified as experiencing these difficulties and explore the provision offered to them in the mainstream primary school context.

The multiple case study design of Phase 2 not only allowed the use of various sources of data but also the triangulation of findings offering useful, and detailed within-case and cross-case comparisons between the pupils identified with SLD, GLD and SpWd. This added robustness and credibility to the study. In particular, the quantitative data from Phase 1 of the study, which acted as supplementary evidence in Phase 2 and the range of findings from teachers’ interviews, schools’ literacy tasks/pupils’ assignments and the task for informal
speech and language assessment that were used in the case studies, made it possible to examine how the pupils came to be identified with SLD, GLD and SpWd. Additionally, the evidence from teachers’ interviews and classrooms’ observations showed the range of teaching and learning practices applied to these pupils at different years in the mainstream and inclusion class context. The findings from teachers’ interviews, classrooms observations and school literacy tasks/pupils’ assignments revealed the pupils’ academic (i.e. speech/language and literacy) attainments and limitations. Finally, the various and divergent evidence from the teachers’ interviews, SPQ, classrooms’ observations, and pupils’ self-perceptions of scholastic and social competence through PATEM I and PATEM II made it possible to identify the impact of pupils’ difficulties on their social participation and peer acceptance.

As concerns the limitations of this particular framework, in order to ensure that the aims and research questions of both phases were addressed as fully as possible, the ‘fundamental principle of mixed methods research’ was applied (Johnson and Turner, 2003), providing more ‘informative, complete, balanced and useful research results’ (Johnson et al., 2007, p. 129). This type of research made it possible to integrate quantitative and qualitative methodologies while both methodologies complemented each other as the qualitative compensated for the weaknesses of quantitative research and vice versa (Neuman, 2011). It increased the accuracy and enhanced the interpretation of the findings in both phases. Nevertheless, there were certain compromises in the design of the study.

Specifically, participants were recruited to this study on a voluntary basis and therefore the population of the schools cannot be considered an entirely representative sample of children with SLD. The LAMP screening assessment was not applied as a whole-school screening measure, but was completed only by the teachers of year B, year C, year D and year E who agreed to participate and only for the pupils who met specific criteria (see section 3.2.1 for the criteria). Considering that the mainstream school participation was voluntarily, although all teachers from year B, year C, year D and Year E of these schools were asked to participate a number of them were not willing to be involved in
the study. So, the LAMP was not used as a whole school screen assessment, and it was completed only by the mainstream class teachers of the above years who agreed to take part and only for the pupils who met the criteria, described in Chapter 3. It should be also made clear that Year A pupils were excluded from the sample as these children need time to settle into their schools, while year F pupils were also not involved as they exceeded the age range of some of the applying measuring instruments. The above points may be considered another limitation of the study as they limited the children’s sample size and narrowed the generalisability of the findings. In addition, it is important to highlight that the four SEN groups in Phase 1 was based on: (i) pupils’ official diagnosis by the KEDDY service or a Greek health service (a and c criteria), (ii) for the pupils who had no official diagnosis, but their mainstream class teachers had concerns about their slow progress. These teachers described the difficulties these children had (b and d criteria) based on their own professional experience and personal judgement about the progress the pupils made during the period they were teaching them. This latter point (b and d criteria) might be considered a limitation of the study, as despite teachers prior knowledge of these pupils progress (they taught them for over a period of time), the fact that they might have had limited/questionable awareness of the nature of SLD (considering the non existence of a consistent definition of SLD in the Greek context) and limited experience in identifying and teaching pupils with such difficulties, could have led them to the misidentification of the children’s difficulties. However, the fact that the teachers were also asked to nominate at least one pupil in their classroom whose speech/language profile followed the typical pattern of development constitutes a strength of this study as it enabled to compare the scores between this subgroup (i.e. No Difficulty) and those with difficulties (i.e. criteria a, b, c and d) and confirmed pupils SEN initial identification.

The evidence from the LAMP provided a useful description of the SLD estimated incidence in the sample classrooms. Although the analysis of the incidence data relied on validate sources (i.e. teachers evaluations on the LAMP and pupils official diagnosis from the Greek diagnostic and health centres), the lack of standardised assessment tools applied by the Greek
authorised services for the identification of SLD pupils, as well as teachers’ questionable awareness of SLD might have reduced the validity of SLD incidence in the sample classrooms.

Moreover, though the Athena Test is a widely applied Greek measure for the assessment of Learning Difficulties, given the lack of validated and reliable assessment tools that examine the speech and language functioning of primary school-aged children in the Greek context, it was selected and applied as the best available assessment tool. Although there is a great variety of reliable international measures, developed in English, for the examination of specific speech and language aspects (e.g. CELF-3UK), the translation of such measures into Greek would cause problems given the language differences. Nevertheless, the Athena Test provided an overall description of pupils’ language functioning in key developmental domains.

Additionally, although criticisms regarding the case study methodology have highlighted its time consuming nature, the collection of a huge amount of data (Yin, 2009), lack of rigorousness and of generalisability, as well as its tendency to bias (Jensen and Rodgers, 2001), the use of already accepted, and validated methods for data collection and their triangulation established the methodological rigour and validity of this framework (Luck et al., 2006). In addition, the multiple (or comparative) case study design addressed the issues of rigour and bias, and strengthened to some extent the generalisability of the findings not only to the Greek context but also internationally.

Regarding the reliability and validity of the methods applied, the LAMP screening assessment and Matrices task/BAS II, which were standardised in the UK, as well as the SPQ for teachers created and standardised in the Netherlands, had satisfactory indications of validity and reliability, so it was assumed that this was transferred to the Greek context. The model of the LAMP was based on research about the core aspects of language (Bloom and Lahey, 1978), while the ELKLAN model (Elks and Mclachlan, 2003) which informed its structure, is widely used by Early Years practitioners, teachers, SLTs and others (see Methodology chapter, section 3.2.2). The BAS II (Matrices task)
(Elliot et al., 1997) is a well known and widely applied measure especially by psychologists (see Methodology chapter, section 3.2.4), while the SPQ for teachers (Koster et al., 2009) is an easily understood and used tool for teachers (see Methodology chapter, section 3.3.2). Nevertheless, the Greek adjusted versions of the above measures were only translated and not standardised in Greek. The scoring system, and cut-off points of the original versions and therefore the interpretation of pupils' scores were based on the values of the original standardised versions.

The structure of the Athena Test (Paraskevopoulos and Paraskevopoulou, 2011) which is a well known measure standardised in Greece, applied by the diagnostic services, teachers, SLTs and other professionals (see Methodology chapter, section 3.2.4), was based on the Illinois Test of Psycholinguistic Abilities (ITPA) (Kirk et al., 1968) and Aston Index (Newton and Thomson, 1982, 1976). The PATEM I and PATEM II (Makri-Mpotsari, 2001a, 2001b) which are the Greek standardised versions of the ‘Pictorial Scale of Perceived Competence and Social Acceptance for Young Children’ (Harter and Pike, 1983) and the ‘Self-Perception Profile for Children’ (Harter, 1985) respectively, had also acceptable indications of reliability (see Methodology chapter, section 3.3.2), while they are easily applied by teachers, psychologists and other professionals.

The fact that the various Greek measures applied in Phase 2 of the study were based on research in the SEN field, and were approved by the Greek Ministry of Education and Religious Affairs, and the Greek Pedagogical Institute, strengthened the content validity of the findings. Specifically, the framework of observation field notes for the identification of the teaching practices and the pupils' engagement in the learning process was based on the templates provided by two experts in the Greek SEN context, Panteliadu and Patsiodimou (2007) (see Methodology chapter, section 3.3.2). The task for the pupils' informal speech and language assessment (Karakitsios et al., 2011) which was applied in order to identify how the pupils came to be identified with SLD, GLD and SpWd (see Methodology chapter, section 3.3.2), constituted part of the supportive teaching material provided by the Greek Ministry of Education and
Religious Affairs, and the Greek Pedagogical Institute for pupils identified with SEN in the mainstream primary context. In addition, the set of two questionnaires, which were developed by Panteliadu and Patsiodimou (2007) and the Greek Framework of SEN Analytic Programme (Presidential Decree, 1996) respectively, supplemented two teachers’ interview questions in order to identify the implementation of ‘specialised’ practices and pupils’ academic strengths and weaknesses (see Methodology chapter, section 3.3.2).

Another point though, that may constitute a limitation of this study, was the lack of parental voice, particularly in relation to Phase 2. Given the central role of parents in the referral process, educational placement and provision of their children, which was highlighted in the latest Greek law of SEN (2008) and was also revealed by the findings of Phase 2, including them in this phase would have enabled the collection of further and detailed information about case study pupils’ difficulties, academic progress, social participation and peer acceptance. Nevertheless, although parents’ participation was requested either by phone or personal contact, explaining to them explicitly their complementary role and the importance of their participation in Phase 2, they were reluctant and unwilling to be actively involved in this phase. This reluctance is perhaps why the majority of Greek SEN studies have not included the parental voice. This reflects parents not being experienced in participating in such studies. So, the difficulty in gaining supplementary information from the parents of the case study pupils did not allow any comparison of their beliefs and judgements with those of teachers and the researcher’s observations. This affected the generalisability of the findings.

The lack of the child’s voice might also be considered another limitation of this study. Considering the discrepancy data (relevant to RQ4 of Phase 2), between the SLD case studies pupils highly positive academic and social self-perceptions and the mainstream class teachers’ less favourable perceptions for these children, this is where the children’s additional and more active involvement (e.g. through interviews) would have added to the related evidence. Although PATEM I and II, revealed case studies pupils self-perceptions of academic and social competence, these were restricted to the specific ratings of
this particular measuring instrument which prevented them from providing more
detailed personal views about their attainments and relationships with peers.
Nevertheless, providing to the children the opportunity to raise their own voice
and express their views regarding their academic and social profile, as have
similar studies in this field (Boer et al., 2013; Conti-Ramsden and Botting,
2004), was not possible in this study. Despite reassuring the schools and
parents that children’s assessment would take place in any quiet room in the
school setting, in a friendly environment and at a time where the children’s class
teaching would not be disrupted, their concerns that the children’s teaching
programme could be disrupted by their further involvement in the study and the
possibility that the children could be distressed if they continued being part of it
made it difficult to include children’s own voice in the study.

Another limitation of the study may be that, although the findings from Phase 1
revealed no differentiation in the speech/language profile of the boys and girls
who took part in that part of the study, only one girl was included in the case
studies of Phase 2. Despite including more females in the case studies
(identified either with SLD, GLD or SpWd), similar to the research in the SLD
field which has examined the relationship between gender and SLD (Dockrell et
al., 2014; Harrison and McLeod, 2010), would have enabled further within-case
and cross-case comparisons, revealing additional findings regarding children’s
speech/language functioning, academic progress and relationship with peers.
Due to the tight time framework of the study this was not possible.

Considering the growing number of studies that have examined the role of
socio-economic background on children’s speech and language development
(Hartas, 2015; Letts et al., 2013; Thomas et al., 2013), in Phase 1 of the study
the relationship between pupils’ socio-economic status and their
speech/language skills was also examined. Nevertheless, the findings did not
reveal any association between children’s SES and their language profile. This
must be must be interpreted with careful consideration because although the
related SES data were gathered from schools that involved children from
various socio-economic backgrounds and ethnicities, the sample that was not
fully representative. Specifically, although my intention was to include in the
study schools from all seven districts of Athens, the fact that the schools were recruited on a voluntary basis and those that agreed to participate in the study were located in two out of seven districts of Athens (Central and South Athens) limited the sample size. Additionally, due to the schools’ refusal to be further involved in the study, the SES data were not gathered for the 23 schools and 111 pupils who were initially screened through the LAMP, but only for the 12 schools and 45 children who were further examined through the Athena Test and Matrices task. This point also limited the sample size and narrowed the generalisability of the findings, adding another limitation in this current study.

6.5 Original contribution to knowledge

Considering the limited amount of empirical studies in the Greek context that has examined the field of SLD in mainstream primary education, this particular study went beyond previous research in the SLD domain and added original knowledge not only to the Greek context but internationally, in the following areas:

6.5.1 Phase 1

a. Despite the lack of official evidence regarding the SLD incidence in a nationally representative Greek sample, the evidence from the pupils’ screening assessment suggested an estimated incidence of pupils who were officially diagnosed with SLD in the sample classes (i.e. 4.96%) and the incidence of pupils who were not officially diagnosed with SLD (i.e. 5.09%).

Although the above rates did not derive from a whole school screen assessment sample, they constitute a useful description of the SLD incidence in the sample Greek mainstream primary schools. The values indicated a rather small difference between the rates of pupils officially diagnosed with SLD (by the KEDDY or a Greek health service) and those who were not officially diagnosed with SLD (based on teachers’ professional experience/personal judgement).
b. The speech and language assessment of the pupils revealed considerable similarities in their speech and language profile, regardless of whether they were officially or not identified with SLD, General Learning Difficulties (GLD) or other SEN. A discrepancy between the pupils’ non-verbal reasoning ability and SLD diagnosis was also found.

The overlap of speech and language skills of the pupils from the SLD, GLD and other SEN subgroups, which was revealed from this current study, indicated the lack of discreteness of the SLD category in the sample schools. This key point might be related to the lack of officially and clearly stated criteria of the SLD in the Greek context, an issue that raises questions about how teachers and professionals operationalise SLD and who the children are that the Greek system identifies with SLD. In addition, the evidence which revealed that the SLD pupils’ non-verbal reasoning skills levels were as low as those children identified with GLD or other SEN, could also indicate some doubts regarding the validity of children’s identification by the Greek teachers and professionals. This point is consistent with the questions about discreteness of SLD domain in this sample of schools and there being no officially and clearly stated criteria of the SLD definition in Greece.

c. The findings from the pupils’ screening assessment revealed no significant differences in the speech and language skills of SEN subgroups (i.e. SLD, General Learning Difficulties and other SEN) with GAL (Greek as Additional Language) and SEN subgroups with no GAL. The evidence from pupils detailed language assessment revealed no significant differences in the language profiles of boys and girls and across the different year groups (i.e. year B, year C, year D and year E) identified officially or not with SLD.

This indicated that the language profile of monolingual children with SEN did not differ from the profile of their bilingual peers who were also identified with SEN. Although the findings from pupils’ detailed language examination revealed similar language profiles for boys and girls identified formally or informally with SLD, the number of boys identified (officially or not) with SLD in this study was
larger than the number of girls indicating that boys were still more likely to be identified with SLD. The evidence also indicated no differences in the speech/language skills of pupils identified officially or not with SLD across the year groups examined in the study.

6.5.2 Phase 2

d. The findings revealed the key role of parents in the decisions regarding the referral process, appropriate educational placement and additional support offered to children in the Greek educational context.

The findings from this current study were consistent with the Greek practice (Greek Government Gazette, 2008) as regards the role of parents in child’s referral, educational placement and provision offered in the mainstream school environment. In particular, the two case study pupils who were not officially identified with SLD (based on teachers professional experience/personal judgement) despite their mainstream class teachers repeated recommendations to their parents for additional language support, did not receive any support in the mainstream school setting or from a professional service or SLT outside the school. As a result, one of the pupils (Simon) continued attending a mainstream school that did not have an inclusion class and the other pupil (Steven), due to his parents’ refusal, did not attend his school’s inclusion class, and therefore both children’s educational support was limited to the mainstream class context.

e. The evidence indicated the significance of labelling for the educational support provided to the children in the inclusion classes.

Although the strong reliance of these teachers on children’s label reflected their limited professional confidence about their SEN expertise, the range of findings revealed a discrepancy between their expressed confidence and the teaching they provided in the inclusion classes. Specifically, their teaching to these children over a period of time made them well aware of children’s strengths and limitations in contrast to the KEDDY staff or the health centres professionals whose contact with these pupils after their diagnosis was infrequent. So, these teachers, despite their strong reliance on professionals’ diagnoses and
recommendations, were aware of the pupils’ needs. Although, on the one hand children’s SLD official identification might constitute a starting point for teachers when planning their teaching, on the other hand their SEN expertise and frequent contacts with these children made them highly knowledgeable of their (i.e. children's) strengths and limitations and able to structure their teaching based on pupils’ difficulties.

f. The range of findings revealed a discrepancy between SLD pupils’ highly positive self-perceptions of scholastic competence and social participation and their actual academic attainments and relationships with peers.

When examining the case studies pupils’ social participation and peer acceptance, the divergence between pupils’ highly positive academic and social self-perceptions, and their lower actual academic and social competence became evident. Specifically, although the pupils with SLD and George (SpWd) had highly positive academic and social self-concepts, the findings from teachers’ interviews, classrooms’ observation and the SPQ, revealed a less positive profile of children’s scholastic competence in the areas of speech/language and literacy, while also having low confidence and limited interactions with peers.

6.6 Contribution to Future Research

Replication of the study’s survey on a larger scale and a representative sample, could involve the participation of mainstream primary schools from all seven districts of Athens and LAMP screening assessments for whole schools. This would not only provide additional evidence regarding the speech and language profile of pupils with SLD, General Learning Difficulties or other SEN but would also strengthen the generalisability of the survey’s findings. In addition, given the low non-verbal reasoning skills of the pupils identified officially or not with SLD, further investigation of this ability on a larger scale could lead the investigation one step further on SLD pupils’ identification and whether the speech and language difficulties of this subgroup constituted part of wider
learning or cognitive problems. Although the Athena Test validated the pupils’ initial identification and offered a supplementary and detailed description of their language profile in a range of areas, it did not provide a thorough examination of the pupils’ speech and language skills. Replication of the pupils’ performance through an assessment tool that focuses on speech and language could provide a more detailed language profile of the SLD and the different SEN subgroups (i.e. GLD and other SEN).

Similar to the findings from the pupils’ LAMP screening assessment, the non significant differences in the language profile of pupils from the SLD, GLD and other SEN subgroups, as revealed by the Athena Test, highlighted the complexity of the SLD domain and the lack of discreteness of this SEN category in the sample mainstream schools. The enquiry of how professionals and mainstream class teachers used and operationalised the terminology of SLD in this study, might be related to the lack of officially stated criteria of the SLD definition in Greece and the fact that in contrast to the US (e.g. Hodson Assessment of Phonological Patterns/HAPP-3) and UK (e.g. British Picture Vocabulary Scale: Second Edition/BPVS II or the Clinical Evaluation of Language Fundamentals III and IV / CELF-3UK and CELF-4UK), there are no official standardised assessment measures that examine thoroughly the speech and language development of primary school aged children. Given the essential role of children’s performance in speech/language tests and cognitive development measures for the identification of SLD (Dodd, 2013; Schwartz, 2009), the lack of such measures in the Greek context creates barriers to the identification of SLD and the intervention planning. Thus, the development and implementation of a thorough, reliable and valid Greek assessment measure which examines various speech/language aspects (e.g. morpho-syntax or semantics) not only will assist on SLD identification, but will also improve teachers’ and practitioners'/professionals’ SLD understanding, as well as their ability to collaborate in order to provide effective interventions and adequate resources to support teaching and learning for pupils with SLD.

Moreover, replication of the study involving case studies from pupils without SLD but with other SEN subgroups (not GLD or SpWd), would provide further
within-case and cross-case comparisons between the new subgroups and would also enable further comparisons with the SEN subgroups involved in this current study. Additional comparisons could also be made by involving, in the cases studies, more female pupils; enabling thereby the identification of any gender differences in the language profile, academic progress and social competence of the case studies children. Extending the time framework of the study for a longer period of time (i.e. longitudinal study) could possibly add to the evidence regarding the teaching and learning practices applied in both contexts (i.e. the mainstream and inclusion class), pupils’ academic (i.e. speech/language and literacy) attainments and progress, as well as the impact of their difficulties in their social participation and peer acceptance. Specifically, extending the case study time framework in order to provide additional evidence regarding the pupils’ academic attainments and weaknesses could add to the findings of Dockrell et al. (2009) and Connelly et al. (2011) who aimed to identify the schooling progress of pupils with difficulties in the domain of speech and language.

Although the evidence regarding peer acceptance and friendships formed in the mainstream and inclusion class for the case studies/comparisons groups provided an useful description of their social participation in both contexts, they did not allow any statistical comparisons (as for LAMP, Athena Test or the Matrices/BAS II). A modified design that would involve a large number of pupils could provide additional evidence to the study of Laws et al. (2012) which revealed that children with language and communication difficulties felt happier in the mainstream class environment than in the language resource base and had formed friendships with their classmates from the mainstream class. The use of a social participation assessment, such as PATEM I and II or a similar measure, with a large group of children with SLD would further enhance understanding of the impact of this condition on children’s social competence and relationships with their classmates.

Another point that could also be taken into consideration for future research is that the pupils’ nomination in the LAMP and the formulation of SEN subgroups were based not only on pupils’ official diagnosis from the KEDDY and health
services (criteria a and c) but also on teachers’ professional experience and personal judgement (criteria b and d). So, taking into account teachers’ questionable awareness of SLD in this current study, further research in this field within the Greek context relying solely on pupils official diagnosis (from the KEDDY and health services/centres) may increase the generalisability and reliability of the related evidence.

Although part of the evidence from Phase 2 revealed the central role of parents in the referral process, educational placement and provision of their children, they were not actively involved in the study. Replication of the study with active parental participation, similar to the studies of Band et al. (2002), Lindsay and Dockrell (2004) and Roulstone and Lindsay (2012), would offer to the parents the opportunity to raise their own voice, add to the existing evidence regarding children’s difficulties, academic and social competence, and would build on parents-teachers collaboration for the improvement of children’s learning and SEN identification.

Despite the fact that the children in Phase 2 provided their self-concepts of academic progress and relationships with peers (through PATEM I and II), the discrepancy between their self-perceptions and the range of data sources highlighted the need for further research in this domain in order to shed more light on these findings. So, replication of the study with more active participation of children in the case studies would enable them to provide their own views (e.g. through interviews), offering more detailed data regarding their academic skills and weaknesses, friendships and interactions with peers.

Finally, given the lack of Greek studies that examine the role of socio-economic status on children’s speech and language development, future research in this domain in a larger sample would provide more robust evidence regarding the possible influence of SES on children’s language profile, enabling also their generalisability.

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CHAPTER 7

Conclusion

Considering the scarcity of empirical studies that have explored issues related to the identification of pupils with SLD and the educational provision offered to them in the Greek mainstream primary school settings, this study offered important evidence regarding this particular SEN field. In addition, including different SEN subgroups in the sample enabled useful comparisons of the broader language profile and non-verbal reasoning skills of these pupils. The study explored in depth the SLD domain and specifically the nature of these pupils' difficulties and the implications that this had for their literacy skills. Subsequently I examined the existing provision for these pupils in terms of the teaching and learning practices offered to them in the mainstream and inclusion class context, their academic (i.e. speech/language and literacy) attainments and finally the impact of their difficulties in their social participation and peer acceptance.

This chapter examines the implications of the study’s findings for policy and practice. Specifically, the following parts provide an indication of what needs to be done in the Greek context in order the evidence revealed from this study to contribute to the modification of the existing Greek SEN policies, and the introduction of new practices for SLD children’s identification, teaching and learning and who would be responsible for making these changes.
7.1 Implications for assessment/identification of SLD children

The relationship between speech/language and literacy has been examined thoroughly in the field of SLD internationally, while further theoretical and empirical work has emphasised the association between speech and language weaknesses, and literacy problems that may subsequently occur (Bishop and Snowling, 2004; Carroll and Snowling, 2004; McDowell et al., 2007). The range of evidence from this current study reaffirmed the complex nature of the SLD area, and the wider impact of pupils’ speech and language limitations in the domain of literacy and particularly in spelling, writing, reading and text comprehension. In addition, comparisons of the SLD subgroup with the pupils identified with GLD and other SEN revealed significant similarities in the speech/language profile of these pupils and in various aspects related to the domain of language (e.g. in writing-phonological awareness). This raised concerns that, although these SEN subgroups are regarded as separable disorders/difficulties, they shared language limitations and deficits indicating thereby a connection or a continuum between them. In addition, although the non-verbal reasoning ability within the average age range is considered an essential criterion for the description of SLD (Leonard, 1998), the findings revealed that the non-verbal reasoning skills of the SLD subgroup were at the same low level as the GLD subgroup. This not only indicated the highly complex nature of SLD, but also highlighted the possibility of the misidentification of pupils’ needs.

A point which adds to this possibility is provided by the findings from Meschi et al. (2012) as part of the BCRP, who examined the transitions made by pupils into and out of various SEN subgroups, reported that the proportion of pupils who were diagnosed at some point with SLD or ASD changed noticeably with age. Specifically, the pupils who were initially identified with primary SLD, when they moved to secondary education (from Key Stage 2 to 3) were usually identified as experiencing moderate or specific Learning Difficulties. As highlighted by Meschi et al. the transition of pupils with SLD into and out of this area, revealed the vagueness and ‘blurring’ (ibid. p. 48) in the identification of these pupils’ primary needs, an issue which may also apply in this current
study, raising concerns that the reasons that cause this blurring may lie with the pupils’ developmental changes, or the misidentification of needs or the vague criteria of the SLD category system in the Greek context. Consequently this poses further questions: who are the children that the Greek system identifies with SLD and how do professionals and teachers operationalize SLD in Greece? The difficulties regarding the identification of children with SLD in the Greek system and by Greek teachers appear to be highly related to the lack of officially and clearly stated criteria regarding the definition of SLD in Greece.

It is noteworthy that according to the latest Greek Public Law of SEN (2008), although the teachers working with children with SEN serve as sources of information in the identification process, they do not take an active part in it. Additionally, the points that add to the complexity of SLD identification is the scarcity of standardised Greek assessment tools that focus on speech and language skills and the limitation of the existing Greek assessment measures to make these fine grained distinctions.

The study highlighted the fundamental role of parents not only in the educational placement and provision offered to the children, but also in the referral process in the Greek context. Specifically, the findings revealed that the pupil case studies who were not officially diagnosed with SLD, despite teachers’ recommendations for further support, due to their parents’ decision, did not receive any additional provision in the mainstream school setting or outside of it. This added to the evidence of Anastasiou and Polychronopoulou (2009) that Greece lacks an officially instituted referral system for the children who experience SEN, whereas schools, head teachers and mainstream teachers roles are significantly undermined in this process, as there is no legal provision for them to directly refer a child with difficulties for psychoeducational assessment by the multidisciplinary staff of the KEDDY or health services. Moreover, the fact that the educational support offered to the pupils in this study not officially identified with SLD was solely based in the mainstream class context (as they did not receive any further support in an inclusion class or outside the school context), raised further questions regarding the efficiency and the effectiveness of the teaching delivered to them.
The study’s conclusions, as described in this section, highlight the need for changes in the Greek SEN policy by the Government (i.e. policy makers). Specifically:

- The existing Greek Public Law of SEN (Greek Government Gazette, 2008) needs to be reviewed, in order to establish a more consistent definition of SLD in the Greek system. This key point will improve the identification process by the professionals and facilitate the development of speech and language assessment protocols/materials and intervention programmes for these children by the KEDDY and health centres’ professionals and teachers. It will also enable the latter (i.e. teachers) to have a much clearer idea of the SLD nature and support them in detecting and identifying more confidently such difficulties.

- The establishment of an officially instituted referral system that will empower school’s (i.e. head teacher and teacher) role/authority in the referral process, children’s educational placement and provision. Teachers’ active participation in children’s psycho-educational assessment will add to the evidence regarding their skills, while their collaboration with the professionals (i.e. by the KEDDY or health centres) and parents will also assist on children’s appropriate educational placement and the structure of efficient teaching and learning programmes in the school context.

- The development and standardisation of a Greek language assessment scheme that will be officially examined, approved and licensed by the Greek Ministry of Education and Religious Affairs providing detailed evidence regarding the speech and language profile of children with SLD. This would lessen the misconceptions that surround the SLD category in the Greek context and would assist the valid identification of such difficulties.
7.2 Implications for practical teaching of SLD children

Although inclusive provision is highlighted in the latest Greek Public Law of SEN (2008), limited guidance is offered to mainstream class teachers for the daily practices related to the teaching and learning support of children with SLD. Although the majority of mainstream class teachers in this particular study provided individualised practices, these were not differentiated based on the pupil’s SEN identification or their year group. Despite references to inclusion in written documentation and SEN legislation, this is not actually seen in practice in the Greek context, as inclusive practices mainly concerned children’s social and physical integration. In terms of educational support, mainstream teachers applied the same curriculum and learning materials for all pupils regardless of their SEN diagnosis or typical development.

A Greek study in the field of SEN that examined teachers’ perspectives regarding the feasibility of inclusive education (Koutrouba et al., 2008) highlighted that teachers’ limited specialised knowledge, as well as factors such as the highly demanding curriculum, the lack of specialised resources or limited cooperation with parents, created barriers to SEN pupils’ differentiated teaching in the mainstream class environment. Further learning support was provided to the pupils in this current study only in the inclusion class context by the SEN teacher, as the role of teaching assistant, SENCO or SLT has not been officially established and applied in the Greek educational system. This highlighted the highly demanding role for SEN teachers in order to support effectively the diverse needs of pupils with SLD.

The findings described above underlined the need for new practices to be introduced regarding the teaching of SLD children (and SEN children in general) in the mainstream school environment. The introduction of these practices could be made by the Greek Government and the related educational authorities, such as the Institute of Educational Policy. In particular:

- Appropriate resources (e.g. specialised teaching material or IT equipment) offered to mainstream class teachers will assist on the teaching and learning of SLD pupils.
• Careful and well-planned training courses for mainstream class teachers will support their SEN professional development in order efficient teaching support to be offered to the children with SLD.

• The establishment of the use of support staff (e.g. teaching assistants or SENCOs) will facilitate the teaching and learning of these children in mainstream school settings.

The findings of this study also revealed SEN teachers’ strong reliance on the diagnostic and health services assessments, and children's official diagnosis. The fact that the SEN label offered security to the SEN teachers in terms of the educational support they would provide to these children within the school context, showed the strong inclination of the Greek system towards the medical model and the diagnosis-based approach. Nevertheless, the range of evidence indicated that the teachers’ awareness of the children’s strengths and limitations (due to their regular contact with them) was treated as more important than the recommendations and learning goals set by the multidisciplinary teams of the diagnostic and health services, providing teaching tailored to the pupils’ speech/language and literacy difficulties.

These findings highlighted the need for new practices that could be set by the Greek Government (i.e. policy makers), such as:

• The establishment of collaboration between schools and the multidisciplinary teams of the KEDDY and health services. Closer working and reciprocal support between the latter and SEN teachers, in terms of the structure of curriculum-based teaching and the administration of flexible interventions will address more efficiently children’s speech/language and literacy needs.

Although the majority of pupils reported highly positive self-concepts of scholastic and social competence, the evidence from various sources revealed discrepancies between pupils’ self-reports and their actual academic performance and social competence. Similarly, Makri-Mpotsari, in her findings from the study conducted for PATEM I standardisation (2001a), revealed a
discrepancy between pupils self-reports and teachers’ ratings, suggesting that younger children tend not to perceive themselves realistically. The findings from my study indicated that the pupils’ difficulties in the domains of speech/language and/or literacy not only discouraged their participation in cooperative learning tasks, but also increased their lack of confidence when interacting with peers, shyness and withdrawal.

Given that the main concern of mainstream and SEN teachers in the mainstream and inclusion class environment respectively was the pupils’ educational support, this raised further questions about how they could promote children’s social participation and improve their relationships with peers in the wider mainstream school context.

Although no straightforward answers can be provided, some suggestions could probably improve the pupils’ active involvement and improve their collaboration with peers:

- Further SEN training courses/seminars for mainstream class teachers, organised by the Greek Educational authorities, such as the Institute of Educational Policy or the Directorates of first grade education. This will enhance the teachers’ professional skills on how to support effectively SLD (and SEN in general) children’s relationship with classmates and improve their learning and social engagement in the mainstream classroom context.

A few examples of the ways that the mainstream class teachers can improve children’s engagement and understanding of the subject matter is pre-teaching of the key vocabulary and concepts, as well as making each pupil equal and accountable in terms of learning and contribution are considered highly important (Robinson, 2012). Additionally, as underlined by Brinton et al. (2000), it is also essential for teachers to consider carefully the social profiles of pupils with SLD and those with typical development when including them in joint work, as the typically developed peers need to have the skills in order to include and embrace these pupils in group work rather than simply co-exist in the same group. Brinton et al. (ibid.) also reported that seeking the views of pupils with
SLD is also a highly successful practice for improving and encouraging their active engagement in collaborative learning tasks.

Overall, this study provided an in-depth description of the SLD domain in the Greek context and shed more light on issues related to the assessment and identification of this condition, the educational provision offered to children who experience this type of difficulties and the working relationship between teachers and professionals. Based on the evidence, the implications for the assessment/identification and teaching of SLD children were highlighted and the changes that need to be made in the Greek context by the Government, policy makers, educational authorities, professionals/practitioners (KEDDY or health services/centres) or schools (i.e. head teachers and teachers) were also described.
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Appendix A.
LAMP measure (English version)

Guidelines for completing LAMP

Please think of the child’s typical performance during the last period. Read carefully the screen and if you find an area where the child has a difficulty decide whether it is observed to happen sometimes, or frequently or is seen on every attempt the child makes, i.e. constantly.

If the child has no difficulty in the examined areas please enter ‘0’ in the spaces provided for scores.

Please consider all questions with regard to the developmental stage and age of the child.

Thank you
LAMP Screen Teacher Assessment

SCORING; Never 0; Sometimes 1; Frequently 2; Constantly 3

School............. Year Group/class.............. Name/Coded:........................................ Date.............

First 4 questions please circle: Is English the first language? (yes no) Is there a hearing difficulty? (yes no unknown) Are there difficulties with written literacy? (yes no) SEN status? (Universal / school action / school action + / statement)

Taking account of age appropriateness does the child have difficulty in:

1) Expressive language skills (outgoing) (SCORE 1 - )
   a) Having ideas and deciding what to say
   b) Choosing vocabulary words
   c) Remembering words you feel they should know
   d) Choosing appropriate sentence structure – grammar
   e) Selecting the sounds – phonological awareness
   f) Sequencing the sounds
   g) Speaking fluently e.g. hesitation repetitions
   h) Speaking appropriately keeping to topic – pragmatics
   i) Talking without use of gesture/non verbal demonstration
   j) Using language for different functions e.g. ask, explain, reason, describe
   k) Using language for thinking/planning
   l) Self-monitoring/being aware of mistakes

2) Receptive language (incoming) (SCORE 2 - )
   a) Looking at speaker/s
   b) Listening and attending to talk in class
   c) Retaining auditory information
   d) Understanding individual words – semantics
   e) Understanding literal meaning of sentence – comprehension
   f) Understanding implied meaning/humour of sentence
   g) Understanding age appropriate concepts explained verbally
   h) processing and responding to verbal communication quickly
   i) Following instructions without visual support e.g. gesture, modelling the activity
   j) Responding to part of a spoken instruction e.g. loses the beginning or end of it
   k) Responding appropriately to question words e.g. what, where, who, when (why and how for older children)

3) Behaviour related to scln (SCORE 3 - )
   a) Attending to instructions
   b) Maintaining self-directed work or play
   c) Initiating verbal communication with others
   d) Engaging in symbolic play or activity e.g. role play, drama, puppets, creative writing
   e) Taking part in situations where talking is involved e.g. limited use of language in co operative play and group /activities / passing on circle time
   f) Concentrating in talk based sessions e.g. fidgets, talks inappropriately, hinders others
   g) Using language and uses physical communication instead when language would be more appropriate e.g. tapping adult’s arm, pointing to direct the adult’s gaze
   h) Developing relationships with adults
   i) Developing relationships with peers
   j) Speaking out and is shy and over spoken

4) Social Skills (SCORE 4 - )
   a) Maintaining appropriate eye contact - too much too little
   b) Initiating non verbal communication with others
   c) Maintaining a conversation with others
   d) Keeping to a joint topic of conversation
   e) Understanding / remembering rules
   f) Following rules
   g) Showing care and concern (empathy)

TOTAL of the 4 SCORES ............. © M Nash
Appendix B.
LAMP measure (Greek version)

Οδηγίες για την συμπλήρωση του LAMP – Έλεγχος από Δασκάλους

Παρακαλώ σκεφτείτε την πρόοδο του παιδιού κατά τους τελευταίους δύο μήνες. Διαβάστε προσεκτικά το υλικό που σας δόθηκε και αν εντοπίσετε κάποιο τομέα στον οποίο έχει δυσκολία αποφασίστε για το εάν συμβαίνει μερικές φορές ή συχνά ή σε κάθε προσπάθεια του παιδιού δηλ. συνέχεια/επανειλημμένως.

Εάν το παιδί δεν έχει καμία δυσκολία σε αυτούς τους τομείς, παρακαλώ συμπληρώστε ‘0’ στα κενά που ενδείκνυνται για τους βαθμούς.

Παρακαλώ σκεφτείτε και απαντήστε όλες τις ερωτήσεις λαμβάνοντας υπ’όψιν το αναπτυξιακό στάδιο και την ηλικία του παιδιού.

Σας ευχαριστώ
3.1 ΛΑΜΠ: Έλεγχος από Δασκάλους

Βαθμολόγηση: Ποτέ 0, Μερικές φορές 1, Συχνά 2, Συνεχεία/Επανειλημμένως 3

Σχολείο: Τάξη: 
Όνομα Μαθητή/τριάς: Κωδικοποιημένο
Ημερομηνία:
Παρακαλώ κυκλώστε τις προτιμές 5 ερωτήσεις και συμπλήρωστε την τελευταία:
Είναι η ελληνική η πρώτη γλώσσα; (Ναι / Όχι). Υπάρχει κύριος; (Ναι / Όχι / Αγνωστο)
Υπάρχουν διασκέδαση στο γραφτό λόγο; (Ναι / Όχι). Διαγωνισμός μαθησιακών διασκεδασμών; (Επίσημη διάγνωση / Δεν υπάρχει επίσημη διάγνωση)
Φοίτησα σε ιμέρια ένταξης - ΕΜΕΑΕ; (Ναι / Όχι)
Τύπος μαθησιακών διασκέδασμων: 
Λαμβάνοντας υπόψη το κατάλληλο της ηλικίας, το παιδί έχει διασκέδαση στο:
1) Ικανότητες έκφρασης του λόγου (εξερήσιμος) (ΒΑΘΜΟΣ 1 - )
   a) Ναι έχει ιδέες και να αποφασίζει πώς θα πει
   b) Ναι διαλέγει λέξεις και λεξιλογικά
   γ) Ναι θυμάται λέξεις που νομίζει πως θα χρησιμοποιήσει
   δ) Ναι διαλέγει την κατάλληλη διάρκεια προτάσεων - γραμματική
   ε) Ναι διαλέγει τους ήχους - φωνολογική επίλυση
   στ) Ναι βάζει σε σειρά τους ήχους
   ζ) Ναι μιλά με αναστολές π.χ. επαναλήψεις διαστάσεων
   η) Ναι μιλά κατάλληλα μένοντας στο θέμα - πραγματολογικά
   θ) Ναι μιλά χωρίς τη χρήση χρονομετρημένης λεπτικής επίλυση

2) Προσανατολισμός λόγου (εισαγόμενος) (ΒΑΘΜΟΣ 2 - )
   a) Ναι καταδίκαζε την αμυντική συμπεριφορά
   β) Ακολουθούντας και παρακολουθώντας να μιλά στην ταξίδι
   γ) Ναι συγκεκριμένες πληροφορίες
   δ) Ναι καταλαβαίνει μειονεκτήματα λέξεων - σημασιολογία
   ε) Ναι καταλαβαίνει την κυριολεκτική σημασία της πρότασης - κατανόηση
   στ) Ναι καταλαβαίνει την υποκειμένη σημασία της πρότασης
   ζ) Ναι καταλαβαίνει κατάλληλες για την ηλικία του ενός που εξαγόνησαν λεπτικά
   η) Ναι επεξεργάζεται και να αναπτύκειται σε προφορική επικοινωνία γραμματικά
   θ) Ναι αναλαμβάνει οδηγίες χωρίς στροφής ρητορικής σημασίας - πραγματολογικά
   ι) Ναι αναπτύσσει αν πρέπει σε μια λεπτική ανάλυση π.χ. ή άλλον, αναπτύσσεται την διασταύρωση
   κ) Ναι αναπτύσσεται σε μια μικρή ανάλυση λέξεων π.χ. ή το, ποιο, ποιος, τέτοιο (γαλάτικα) και πώς για παράδειγμα μεγαλύτερος/μικρότερος
   ι) Ναι στοιχεία σε ερωτήσεις τύπο: Πώς η εκμνήθηκε από προφορικός εμπεριέχει π.χ. το εδώ και για μεγαλύτερο/μικρότερος παράδειγμα: ένταξα, μου το επάνω

3) Συμπεριφορά σχετιζόμενη με τις ανάγκες του λόγου, της γλώσσας και της επικοινωνίας (ΒΑΘΜΟΣ 3 - )

1 Ημερολόγια χρήσης του αρχοντικού του νομοσχεδίου του παιδιού καθώς και το εσωτερικό για ανθρώπινη ή κοινωνική.
<table>
<thead>
<tr>
<th>Α) Να παρασκευάσει τις οδηγίες</th>
</tr>
</thead>
<tbody>
<tr>
<td>Β) Να διατηρεί αυτόνομη καταλληλότητα ή αυτόνομο παράδειγμα</td>
</tr>
<tr>
<td>Γ) Να επιχειρεί λειτουργικά επικοινωνίες με άλλους</td>
</tr>
<tr>
<td>Δ) Να εμπλέκεται σε συμβολικό παράδειγμα ή δραστηριότητα π.χ. παράδειγμα ρόλων, δράσεων, μαρτύρια, δημιουργικό γράμμα</td>
</tr>
<tr>
<td>Ε) Να παρέχει μέρος σε κατασκευής όπου απαιτείται λόγος ή π.χ. περικοποιημένη χρήση της γλώσσας σε συνεργασία παράδειγμα και ομαδικές δραστηριότητες</td>
</tr>
<tr>
<td>Σ) Να συγκεντρώνεται σε διδακτικές που βασίζονται στη γλώσσα ή νεαρές εικόνες, μελέτει νεαρές εικόνες, με τοις άλλους</td>
</tr>
<tr>
<td>Ζ) Να χρησιμοποιεί τον λόγο και να ασκεί οικετική επικοινωνία όπου μόνο η χρήση του λόγου θα θεωρείται σε κατάλληλη, π.χ. ταξιδιωτικοί ελεγχοί, η ανάλυση του ενηλίκων, διαχείριση και κατανόηση των επιστήμων του ενηλίκων</td>
</tr>
<tr>
<td>Η) Να αναπτύσσει σχέσεις με ενηλίκες</td>
</tr>
<tr>
<td>Θ) Να αναπτύσσει σχέσεις με συμμαθήτες</td>
</tr>
<tr>
<td>Ι) Να μάθει με θάρρος και χωρίς να νιρρίπτεται</td>
</tr>
</tbody>
</table>

4) Κοινωνικές Δεξιότητες  (ΒΑΘΜΟΣ 4 - )

| Α) Να διατηρεί καταλληλή οπτική επαφή – ουσίας παλιώτισσα ότι ένοχος |
| Β) Να διατηρεί μη λειτουργική επικοινωνία με τους άλλους |
| Γ) Να διατηρεί με συνωμολογία με τους άλλους |
| Δ) Να διατηρεί ένα κανονικό θέμα συζήτησης |
| Ε) Να καταπληθεί διηγημάτων κανόνες |
| Σ) Να ακολουθεί κανόνες |
| Ζ) Να δείγει φροντίδα και ενδιαφέρον |

ΣΥΝΟΛΟ των 4 ΒΑΘΜΩΝ ..........................................

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Appendix C.
Athena Test (administered subscales and number of items)

1. *Linguistic/Language proportions* subscale: 32 items

2. *Vocabulary* subscale: 20 items

3. *Memory of numbers*: 16 items

4. *Common sequences* subscale involves:
   - *Days/Months*: 8 items
   - *Counting*: 10 items

5. *Sentence completion* subscale: 32 items

6. *Word completion* subscale: 32 items

7. *Discrimination of graphemes* subscale: 21 items

8. *Discrimination of sounds / or Phonetics discrimination* subscale: 32 items

9. *Composition of sounds / or Phonetics composition* subscale: 32 items

10. *Perception of right-left* subscale: 12 items
Appendix D.  
Matrices (BAS II) Sample item

The following item is one of the practice items provided to the pupils at the beginning of the task’s administration aiming to ensure that they understood the instructions given orally to them.
Appendix E1.
Interviews’ schedule for mainstream and SEN teachers

Interview questions for the mainstream class teachers

Indicative introductory information about the child:

1. What are the difficulties that this child experiences? Does he/she have an official diagnosis? If yes, when was assessed and diagnosed and what his/her diagnosis involve? If not, why?

2. How long are you teaching (name of the child)?

3. Is it the first time for you to teach a child with this type of difficulties within the mainstream classroom? How do you deal with this child?

a. Teaching and learning practices for the SLD pupil(s) in the mainstream classroom

4. Do you believe that (name of the child) can follow the pace of teaching in the mainstream classroom or you try to modify your teaching (i.e. pattern of teaching) in order to make it easier for him to follow classroom’s pace as much as possible? Can you give me examples?

5. Does this pupil have an IEP? If so, what exactly does this include? How is it developed, used and reviewed? Is it useful?

6. Are there any ‘specialised’ teaching practices that you use in order to support his learning, and would you call them ‘specialised’? If so, is it in liaison with the SEN teacher, another teacher or professional? Questionnaire A accompanies this question

7. Do you seek for his/her advice or ask for help? If so, can you give me more details and an example?

8. Are there ways for improvement when teaching this child?

b. Pupil’s educational attainments

9. What areas of attainment are assessed by you and how do you assess them?

10. How do you assess (name of the child) academic progress? (e.g. curriculum based assessment, formal assessment/tests, informal assessment-tasks) - And how often do you assess the child’s progress?

11. Are there any certain tasks or courses that this child finds easier or harder to cope with? Questionnaire B accompanies this question
12. Are there certain tasks that this child has made improvements?

13. Do you believe that this child benefits academically from his/her attendance in the inclusion class? And how do you know this?

14. Any disadvantages from the inclusion class attendance for the child and you?

15. What improvements would you like to see for this child?

c. Social Participation

16. To what extent is [name of the child] required to collaborate with his/her peers (i.e. group work) in the classroom? If so, does he/she prefer to collaborate with certain peers and not others (e.g. peers that experience SEN too)?

17. Is this child willing to participate in tasks that demand collaboration with his/her peers? How do you know?

18. How about in the playground? Does he/she tend to play with certain peers (e.g. other children who experience SEN)?

19. Do you believe that this child has benefitted socially from his/her attendance in the mainstream classroom? Why do you say this?

20. Do you believe [name of the child] feels more comfortable when being in the ‘inclusion class’, the mainstream classroom or both? Why do you say this?
Interview questions for the SEN teachers (Inclusion class)

Indicative introductory information about the child:

1. What are the difficulties that this child experiences? Does he/she have an official diagnosis? If yes, when he was assessed and diagnosed and what his/her diagnosis involve? If not, why?

2. How long are you teaching (name of the child)?

3. Is it the first time for you to teach a child with this type of difficulties within the mainstream classroom? How do you deal with this child?

a. Teaching and learning practices applied in the inclusion class

4. How long has this school an inclusion class?

5. How long are you teaching (name of the child)?

6. Do you work with this child individually or in groups and why? (a) How are you teaching them? (b) Is this different from what this child gets in the mainstream classroom? (c) What areas of the curriculum do you focus on?

7. Does this child have an IEP? If so, how long he/she has it, how it is developed, used and reviewed? What exactly does it include? How do you use it? Is it useful to you?

8. What are the teaching practices and resources that you apply in order to support their learning? Questionnaire A accompanies this question

9. What contact do you have with the mainstream class teacher, the KEDDY staff or the health service that made their official diagnosis?

10. Do you believe that the particular school is well developed with this inclusion – withdrawal practice?

11. Taking into consideration the fact that a child who isn’t formally diagnosed with SLD (or General Learning Difficulties, or Specific Writing difficulties) may attend an inclusion class, what is the value of official identification in terms of further support/additional support?

b. Pupil(s) educational attainments

12. Do you believe that this child has benefited academically from his/her attendance in the inclusion class? And why do you say this?

13. How do you assess (name of the child) academic gains/progress? And how often do you assess his/her progress?
14. Are there any certain tasks that (name of the child) find easier or harder to cope with?
   Questionnaire B accompanies this question

15. Are there certain tasks that this child has made improvements?

16. What improvements would you like to see for this child?

17. To what extent is this child required to collaborate (group work)?

18. Is he/she willing to participate in tasks that demand cooperation with his/her peers in the inclusion class? How do you know?

19. Do you believe that children with SLD (or General Learning Difficulties, or Specific Writing difficulties) are benefited socially from their attendance in the inclusion class? And how do you know?

20. Is this child more close to his/her peers from the ‘inclusion class’, the mainstream classroom or both or even none of this? What makes you say this?

21. Are there any disadvantages from this child’s attendance in the inclusion class?

22. Do you believe that the pupils with SLD (or General Learning Difficulties, or Specific Writing difficulties) tend to feel more comfortable when being in the ‘inclusion class’, the mainstream classroom or both?
Appendix E2.

Example of coding frame from a fully coded interview

Mainstream class teacher interview for Jim

**Starting theme 1 – How the pupil came to be identified with SLD**

Highlighter colour explanations of interview's coding:

**Codes**

Health service diagnosis of SLD

Mainstream teacher’s role in referral process

Health service SLD diagnosis content

**Sub-theme - Parents’ essential role in referral process**

Parents’ essential role in referral process

**Starting theme 2 – Support - the teaching and learning practices applied to the case study pupil**

Highlighter colour explanations of interview's coding:

**Codes**

**Sub-theme - Prior to primary school attendance**

Repeated codes - No additional support offered outside the school

Repeated codes - Additional support outside the school is required

Repeated codes - Mainstream and SEN teachers’ collaboration

Repeated codes - Specialised practices

Repeated codes - Health service intervention' recommendations

Period of teaching this child

Experience of teaching children with SLD

Prior to primary school attendance

Nursery school inclusion class attendance (code from the additional/potential theme)

Nursery school classmates' behaviour (code from the additional/potential theme)

Parents’ role in inclusion class placement (code from the additional/potential theme)

Additional support in the mainstream school / Inclusion class attendance

Child unable to follow peers' learning pace
Difficulty at the beginning of the school year
Difficulty in following the pace of teaching
Specialised practice – the class waits for him

**Specialised practice – motivation/encouragement for being active**

Not official IEP
IEP as a teaching plan
IEP as an informal progress record
IEP's content – areas of focus
IEP’s reviewing

**Mainstream and SEN teachers’ collaboration**

Specialised practice – seat was placed on the front row
Specialised practice – writing tasks checking
Specialised practice – more/additional time provided for tasks
Specialised practice – individual guidance

**Specialised practice – motivation/encouragement for being active**

Engagement in teaching

**Mainstream and SEN teachers’ collaboration**

Collaboration with parents/mother

**Mainstream and SEN teachers’ collaboration**

Health service intervention’ recommendations

**Additional support outside the school is required**

Intervention recommendations not followed by the family

**No additional support offered outside the school**

Health service intervention’ recommendations

**Additional support outside the school is required**

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**Starting theme 3 – Pupil’s progress / educational attainments**

Highlighter colour explanations of interview's coding:

**Codes**

Repeated codes - Areas of improvement

Repeated codes- Mainstream and SEN teachers’ collaboration
Repeated codes: No additional support offered outside the school

Repeated code – Child’s attitude towards the inclusion class

Repeated codes – Desirable academic improvements for this child

Courses assessed by the teacher

Official progress record

Type of official scoring/grading

Curriculum based assessment

Ways for assessing attainments/progress

Sources of tests/assessment tasks

Frequency of testing/assessment

Limited knowledge of taught curriculum

Courses/tasks easier for the child to cope with

Courses/tasks difficult for the child to cope with

Areas of improvement

Academic benefits from inclusion class attendance

Mainstream and SEN teachers’ collaboration

No additional support offered outside the school

Areas of improvement

No disadvantages from inclusion class attendance

Child’s attitude towards the inclusion class

SEN teacher’s additional support

Desirable academic improvements for this child

Starting theme 4 – (Impact of pupil’s difficulties on) Social participation and peer acceptance

Highlighter colour explanations of interview’s coding:

Codes

Repeated codes – Frequency of collaborative tasks

Repeated codes – Willingness for collaboration with mainstream class peers

Repeated code – Child’s attitude towards the inclusion class
Repeated code - Inclusion class peers’ behaviour
Repeated code - Level of confidence in the inclusion class
Repeated code - Social benefits from mainstream class attendance
Repeated codes – Desirable academic improvements for this child

Collaboration with peers
Frequency of collaborative tasks
Willingness for collaboration with mainstream class peers
Performance in collaborative tasks
No preference for collaboration with certain peers
Willingness for collaboration with mainstream class peers
Frequency of collaborative tasks
Willingness for collaboration with mainstream class peers
Behaviour in collaborative tasks
Playground – Friendships
Friends with no SEN and friends with SEN
Child’s attitude towards the inclusion class
Inclusion class peers’ behaviour
Inclusion class positive relationship with peers
Willingness for collaboration with inclusion class peers
Level of confidence in the inclusion class
Child’s attitude towards the inclusion class
Social benefits from mainstream class attendance
Level of confidence in the inclusion class
Inclusion class peers’ behaviour
Child’s attitude towards the inclusion class
Social benefits from mainstream class attendance
Academic and social benefits equally important for this child
Desirable academic improvements for this child
Social skills desirable improvements
Appendix E3.

Working example of how codes were applied to the interview text

Mainstream class teacher interview for Jim

1. How the pupil came to be identified with SLD? Does he have an official diagnosis? (background information)

Jim (pseudonym) was officially diagnosed as with SLD since year B by a health service. However, Jim was only assessed after his mainstream teacher continuous recommendations to his parents (especially his mother) who refused to be involved in this process (i.e. SEN assessment by an authorised diagnostic service). The diagnosis highlighted the difficulties that Jim had with his expressive (e.g. articulation or vocabulary) and receptive language skills (e.g. understanding, remembering and following oral instructions), and the problems that he also had with his reading, writing (i.e. appropriate grammatical/syntactic structure), text comprehension, maths and memorising.

2. How long are you teaching Jim?

I had him last year too (year B). So, it’s the second year.

3. Is it the first time for you to teach a child with this type of difficulties within the mainstream classroom? How do you deal with this child?

No, I often had pupils with the same difficulties as Jim, some of them were diagnosed (officially) some others not...Jim’s parents were well aware of his difficulties before nursery school and therefore when he attended the nursery school he also attended the inclusion class there. But he had some issues there, as his mother told me. His peers made fun of him, you know...because of his difficulty to express himself and so his mother decided not to give her permission in order Jim to attend the inclusion class when he was in year A. But now he attends the inclusion class. Anyway, here I try to help him as much as I can, but he struggles to follow the other pupils. At the beginning of this year (i.e. September) it was so difficult for him to catch up with the others. It must have been the summer holidays that disrupted him completely and all the progress that he had done during the year it was like...has been erased. I mean he couldn’t even express himself or read properly.

   a. Teaching and learning practices for the SLD pupil(s) in the mainstream classroom

4. Do you believe that Jim can follow the pace of teaching in the mainstream classroom or you try to modify your teaching (i.e. pattern of teaching) in order to make it easier for him to follow classroom’s pace as much as possible? Can you give me examples?

Well, in general it is difficult for him to follow the teaching pace. he needs his time, he has a slower pace and many times we wait for him. For example, when I ask him something related to
the course I teach he might not be able to repeat what I said or answer to my question, or follow his classmates’ answers on a literacy task. And this also happens when he reads a story, I ask him something related to it and he is confused … not only when trying to remember what the story was about but also when trying to find the proper words, the right tense in the verbs…And he also avoids taking part in the discussions that we have when doing a task e.g. in history… Therefore I try to encourage him being more active when doing tasks, in discussions...

5. Does this pupil have an IEP? If so, what exactly does this include? How is it developed, used and reviewed? Is it useful?

He has but it isn’t something official, you know in terms that we have to do it because we were asked to. It’s a plan that we form, I mean the SEN teacher and myself, based on his difficulties and what he has to be taught in the mainstream classroom, the curriculum, but at the same time it also works as a progress record, an informal one. It concerns only literacy and maths, areas that we need to work on with him…such as making proper sentences in oral and written language. I mean the right structure of sentences, but of course in order to achieve this we start from simpler things such as distinguishing diphthongs, two consonants together, choosing the right tense for the verbs and writing all these correctly. [How is it reviewed?] Often, by both of us…by checking through everyday teaching with him, tests, tasks. I’m aware of his progress and the points that we need to pay further attention and work on them.

6. Are there any ‘specialised’ teaching practices that you use in order to support his learning, and would you call them ‘specialised’? If so, is it in liaison with the SEN teacher, another teacher or professional?

Well, first of all, I decided to bring him in the first row of the desks, Jim and a few more pupils actually, as I want to watch him better all the time. Then, in terms of ‘specialised’ practices what else (she’s thinking), well … I check his writing all the time, either in tasks, assignments or the spelling task. I help him, I give him more time when working on tasks, I explain to him individually what the task is about, hmmm…nothing else really that I can think of…oh and I try to motivate him, to encourage him to take active part when doing tasks and provide answers to task related questions. But I have to say that he pays attention when I teach him something and he watches me, he corrects his mistakes. [It is only in liaison with the SEN teacher, as you said before?] Yes only with her, and of course his mother, she is aware of his problems and is worried about him, she visits me occasionally, we discuss about Jim’s problems...

7. Do you seek for the SEN teacher’s advice or ask for help? If so, can you give me more details and an example?

Oh yes, as I said again, we set his teaching plan together, discuss about it, review it. And of course when I’m not sure about something I’ll ask for help and advice, for example on how to teach him e.g. he struggles with the multiplication table, fractions, he is confused with inflections, so I’ll seek for the SEN teacher’s advice about such issues.

8. (a) Are there ways for improvement when teaching this child?
Well, I believe that the **SEN teacher and myself** are doing our best for Jim... (she’s thinking)...Although the health service made essential recommendations for Jim’s further educational support, providing for example a certain number of hours for speech and language therapy, which cannot be provided within the school setting due to limited time, and therefore his family must make the necessary arrangements for this, unfortunately his parents didn’t follow the service’s recommendations and Jim does not get any support when he is not in school.

(b) Would you suggest any changes? If so, what changes?

I don’t think so. He **doesn’t get any help from another professional**, such as an SLT when he’s not at school, and the **SEN teacher and myself** try to do the best for him and he isn’t abandoned to his difficulties. Well, as I said before, based on the health service recommendations additional support outside the school would be helpful.

b. **Pupil’s educational attainments**

9. What areas of attainment are assessed by you?

The courses that I teach him are **literacy**, **maths**, **history**, **environmental study**, and the **course of religion**.

10. How do you assess his academic progress? (e.g. curriculum based assessment, formal assessment/tests, informal assessment-tasks) - And how often do you assess him?

*First of all in this year (i.e. year C) they have a progress record, it is text scoring actually, you know ‘A’, ‘B’, ‘C’. And of course it is curriculum based assessment, all the tasks that they do...the assignments, the informal tests, the individual assessment tasks. All these are either taken by the school books or by handouts which come also from books that the Ministry recommends. And, how often? Well, through all these tasks that we do it is actual everyday assessment, while they also have tests from time to time, the individual assessment tasks at the end of each chapter...and occasionally we do tasks and tests on the computer.*

11. Are there any certain tasks or courses that Jim finds easier or harder to cope with?

Well broadly speaking, when comparing with the majority of the class, there are parts of the curriculum that he should know but he doesn’t. He is not bad in the spelling task, as he prepares it at home, so he knows it well, his speech gets more fluent, e.g. when answering a question in the ‘course of religion’, but when he’s not sure about something and hesitates he makes mistakes. Reading and writing are a struggle for him and **maths** of course.

12. Are there certain tasks that he has made improvements?

As I said, his speech gets better, definitely more fluent, comparing to how it was at the beginning of this year (i.e. September). And his writing is hmmm...(shaking her head) slightly better...he tries hard when writing a task, however he still makes so many mistakes.
13. Do you believe that this child benefits academically from his attendance in the inclusion class? And how do you know this?

Yes he does, very much I could say. You see...he doesn’t get any help when he’s not at school, you know from a professional, so we need to help him as much as we can here. And I can tell this from the progress that he has made is certain tasks and points that we focus on for example his understanding in tasks that he reads got better, still problematic but better, and also his expressive language is better, still problematic, but he made some progress..

14. Any disadvantages from the inclusion class attendance for him and you?

No, not really. I believe that Jim feels fine about it, he gets so much help from the SEN teacher, so on the contrary his attendance there is really helpful.

15. What improvements would you like to see for this child?

I would like him to improve his oral language, to link properly his phrases when expressing himself, to learn reading and writing properly too...also to improve his maths, I mean calculation and such aspects ... What else...I would like him to have inspiration when writing an assignment, to make his imagination work, because even when doing a drawing task, I often see him checking what the child who seats next to him draws and then he draws something similar, it is like he hesitates to express himself for so simple things, even when drawing.

c. Social Participation

16. To what extent is he required to collaborate with his peers (i.e. group work) in the classroom? If so, does he prefer to collaborate with certain peers and not others (e.g. peers that experience SEN too)?

He likes to collaborate with his peers and almost every day I give them tasks that demand cooperation. He tries to do better when working with others, but he usually works with the children that sit next to him, because you know this is easier when they work in groups, but...he doesn’t have certain peers that he likes to work with.

17. Is he willing to participate in tasks that demand collaboration with his peers? How do you know?

Yes he is, whenever he has to work with his classmates, which is almost every day as I told you, he doesn’t mind at all. On the contrary he enjoys it, as he can be naughty, chat with them, so he likes it. Especially when he believes that I don’t watch him he likes to chat and chuckle with his classmates, for example when I write something on the board and have my back turned to him..

18. How about in the playground? Does he tend to play with certain peers (e.g other children who experience SEN)?
He has a few friends from this class and a couple of others from another class. As far as I know, one or two of these children...from the other class, have some literacy difficulties too, and he likes playing with them in the playground and running around...

19. Do you believe that this child has benefitted socially from his attendance in the mainstream classroom? Why do you say this?

Yes, of course he likes being here. Yes...he likes being in the inclusion class too. At the beginning, though some of his peers there didn't like him that much and tried to avoid him when needed to cooperate or tease him when saying something wrong, but over time the things got better and now they don't have a problem when they work together. So, then he slightly hesitated going there, but now when he has to go to the inclusion class he prepares the things that he needs to take with him on his own, you know books, notebooks, pencils, and goes willingly...but the mainstream classroom gives him the chance to work with his peers and friends, to talk with them whenever he wants to, be naughty when they are...I believe that he feels happy here.

20. (a) Do you believe he feels more comfortable when being in the ‘inclusion class’, the mainstream classroom or both? Why do you say this?

Both I believe, although...in the inclusion class he might feel slightly more confident, although as I said before he might hesitated going to the inclusion class at the beginning...because of the problems that he had with some of his classmates, but now he likes it. Now he feels fine going there, it's part of his school programme...and of course he likes being here as he can be around his classmates and friends, and he spends most of his time here.

(b) Do you prioritise/rate the academic benefits, the social benefits or both as the most important for this child? Can you briefly explain to me why do you say this?

I'll say both, because this is what the school must actually offer education, academic benefits on the one hand and promote socialisation on the other and Jim needs both, to improve his oral and written skills and to have good relationships with his peers, to respect them and to be confident about himself.

[End of Interview]
Appendix F.
Questionnaire A (accompanied interview question Number 6 for mainstream teachers and Number 8 for SEN teachers)

Please tick ‘✓’ the following boxes based on how frequently you apply each of the following practices and resources in your classroom:

**Teacher’s self-assessment for teaching**

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Use educational equipment?</td>
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<tr>
<td>2.</td>
<td>Inform the pupils about the learning goal/aim at the beginning of the teaching?</td>
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<td>3.</td>
<td>Use diagrams for organising the information of the course that will be taught?</td>
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<td>4.</td>
<td>Use concept maps during the teaching process?</td>
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<td>5.</td>
<td>Summarize the main points at the end of the teaching?</td>
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<td>6.</td>
<td>Teach learning strategies?</td>
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<td>7.</td>
<td>Analyse the process of doing a task in steps and teach one by one the parts of this hierarchy (task analysis)?</td>
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<tr>
<td>8.</td>
<td>Introduce loudly my thought development in order to reach to an answer, acting as a model for imitation?</td>
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<td>9.</td>
<td>Set examples?</td>
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<tr>
<td>10.</td>
<td>Set the opposite of an example?</td>
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<tr>
<td>11.</td>
<td>Provide opportunities to the pupils for active involvement to the class (not just listening and watching the activities)?</td>
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<tr>
<td>12.</td>
<td>Assess pupils’ past/previous knowledge relative to the new learning material?</td>
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<tr>
<td>13.</td>
<td>Utilise pupils’ past/previous knowledge relative to the new learning material?</td>
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<td>14.</td>
<td>Ask many questions during the teaching process in order to promote dialogue?</td>
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<td>15.</td>
<td>Integrate pupils’ answers and comments in teaching?</td>
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<td>16.</td>
<td>Emphasise on pupils’ practical training (devote essential teaching time)?</td>
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<td>17.</td>
<td>Provide assignments which lead to a ‘product’ that may be displayed in the classroom’s wall?</td>
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<td>18.</td>
<td>Re-fuel pupils promptly for their answers?</td>
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<td>19.</td>
<td>Praise or reward after good performance?</td>
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<td>20.</td>
<td>Assess in a systematic way pupils’ performance?</td>
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<td>21.</td>
<td>Adjust my teaching based on pupils’ assessment results?</td>
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</table>
Appendix G.
Questionnaire B (accompanied interview question Number 11 for mainstream teachers and Number 14 for SEN teachers)

Please tick ‘✓’ the following boxes based on how often the pupil achieved the provided educational goals:

<table>
<thead>
<tr>
<th>Areas of child's learning</th>
<th>Aims/Goals This child can:</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Always</th>
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<tbody>
<tr>
<td>Speech &amp; Language Development</td>
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<tr>
<td>a. Hearing skills</td>
<td>• Listen to the speaker</td>
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<td></td>
<td>• Watch and understand discussions</td>
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<td></td>
<td>• Carry out oral orders &amp; follow instructions</td>
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<tr>
<td>b. Dialogue participation</td>
<td>• Ask questions</td>
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<td></td>
<td>• Answer to questions</td>
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<td></td>
<td>• Take part in group conversation</td>
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<tr>
<td>c. Speech construction</td>
<td>• Make simple sentences (e.g. put words in the right order in order to form a sentence that makes sense)</td>
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<td></td>
<td>• Make more complicated sentences</td>
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<td></td>
<td>• Understand and produce oral language</td>
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<td>d. Speech 'promotion'</td>
<td>• Enhance speech with new words</td>
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<td></td>
<td>• Use everyday life expressions</td>
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<td></td>
<td>• Observe &amp; describe</td>
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<td></td>
<td>• Express his/her opinion in a proper way</td>
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<td></td>
<td>• Narrate stories or facts</td>
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<td></td>
<td>• Articulate properly</td>
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<td>e. Basic vocabulary</td>
<td>• Use vocabulary related to family, school and social environment</td>
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<td></td>
<td>• Use vocabulary proper for his/her social/peers relationships</td>
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<td>Areas of child's learning</td>
<td>Aims/Goals</td>
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<td><strong>e. Basic vocabulary</strong></td>
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<td></td>
<td>• Name objects and equipment from his/her school environment</td>
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<td></td>
<td>• Use vocabulary related to his/her leisure time</td>
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<td><strong>Reading &amp; Writing Skills</strong></td>
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<tr>
<td>a. Reading &amp; Writing structures</td>
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<tr>
<td></td>
<td>• Recognize, pronounce, and write vowels</td>
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<td></td>
<td>• Recognize, pronounce, and write consonants</td>
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<tr>
<td></td>
<td>• Spell, read and compose syllables</td>
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<td></td>
<td>• Spell, read and compose diphthongs</td>
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<td></td>
<td>• Read and write words</td>
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<td></td>
<td>• Read and write simple sentences (2 sentences)</td>
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<td>b. Written language for communication purposes</td>
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<td></td>
<td>• Read and write complex sentences (more than 2 sentences)</td>
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<td></td>
<td>• Read a small text without stammering</td>
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<td>• Understand and express a text's meaning</td>
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<td>• Write his/her thoughts following the syntactic and grammatical rules</td>
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</table>
Appendix H.
Social Participation Questionnaire (SPQ) for teachers (English version)

Social Participation Questionnaire
(Marloes Koster, University of Groningen, Netherlands)

General information

Date : 
Your name : 
Name student : 
Date of birth student : 
Sex student : boy / girl (please circle the correct answer)
Grade student : 2 3 4 5 (please circle the correct answer)

Social participation

This questionnaire comprises 24 statements on the social participation of students in primary education. These statements are related to ‘aspects of social participation’.

Broadly speaking, social participation of students in regular primary education may be described as:

| the presence of positive social contact/interaction between these students and their classmates; |
| acceptance of them by their classmates; social relationships/friendships between them and their classmates; and the students’ perception that they are accepted by their classmates |

What we ask of you

Please tell us to what degree the 24 following statements apply to a particular student in your class by ticking one appropriate box for each statement. The answering scale ranges from “this does not apply at all” to “this strongly applies”. When answering the questions, you are asked to compare the student with other students.

The questionnaire contains aspects which are both positive and negative indicators (contra-indications) of social participation. The positive aspects indicate a student’s social participation, while the negative ones indicate a lack of social participation.

To what degree do the following aspects apply to your student?

1. This student clearly has fun with his/her classmates (laughing together)

| This does not apply at all | This strongly applies |

2. Classmates systematically exclude this student from activities

| This does not apply at all | This strongly applies |
3. You expect that, where necessary, classmates are willing to adapt the rules of a game in order for this student to join in

This does not apply at all

4. Classmates provoke this student (wind him/her up)

This does not apply at all

5. Classmates ask this student themselves to play with them

This does not apply at all

6. This student is a member of a group of friends

This does not apply at all

7. This student is teased by classmates (for instance, being called names)

This does not apply at all

8. This student has one or more good friends in the classroom (mixing with them several times a week, much contact on a regular basis)

This does not apply at all

9. This student has the feeling s/he belongs to the group, which means s/he does not feel an outsider and regards him/herself as part of the group

This does not apply at all

10. This student joins in games with classmates, without any guidance on your part

This does not apply at all

11. Classmates laugh at this student

This does not apply at all

12. When collaborating on school tasks, you expect classmates to take into consideration, when needed, this student’s abilities with regard to learning

This does not apply at all
13. When choosing a game, you expect classmates to take into consideration, when needed, what this student can and cannot do

This does not apply at all  This strongly applies

14. After school hours this student makes arrangements to play with one or more classmates (where this student does not live near school, you may skip this question)

This does not apply at all  This strongly applies

15. Classmates stand up for this student when s/he is treated in an unpleasant manner by students from another class or school (or would if the occasion arose)

This does not apply at all  This strongly applies

16. When sitting in a class circle or an assembly, classmates sit next to this student on their own preference

This does not apply at all  This strongly applies

17. One or more classmates take the initiative to invite this student to play with them during the school holidays (where this student does not live near school, you may skip this question)

This does not apply at all  This strongly applies

18. This student feels lonely in the classroom and at school

This does not apply at all  This strongly applies

19. This student works spontaneously on school tasks with classmates without any steering on your part

This does not apply at all  This strongly applies

20. This student is invited to birthday parties

This does not apply at all  This strongly applies

21. This student feels able to be himself/herself at school, without the need to pretend to be someone else

This does not apply at all  This strongly applies

22. This student has the feeling s/he is teased more often than other students
<table>
<thead>
<tr>
<th></th>
<th>This does not apply at all</th>
<th></th>
<th></th>
<th></th>
<th>This strongly applies</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.</td>
<td>Classmates are willing to assist this student (for instance with tying his/her shoelaces, picking up something that has fallen or by putting books away) in a positive way, without being patronizing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This does not apply at all</td>
<td></td>
<td></td>
<td></td>
<td>This strongly applies</td>
</tr>
<tr>
<td>24.</td>
<td>This student takes pleasure in going to school (which is noticeable, for instance, because s/he asks at home when s/he is going to school again)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you for filling in this questionnaire.
Appendix I.
Social Participation Questionnaire (SPQ) for teachers (Greek version)

‘Ερωτηματολόγιο για τις Σχέσεις με τους Συνομηλίκους’

Γενικές Πληροφορίες
Ημερομηνία:
Ονοματεπώνυμο - Κωδικό/μένο:
Τάξη Μαθητή / Μαθήτριας:
Φύλο:

‘Σχέσεις με τους συνομηλίκους’
Το ερωτηματολόγιο αποτελείται από 24 δηλώσεις που αφορούν τις σχέσεις με τους συνομηλίκους των μαθητών της δημοτικής εκπαίδευσης.

Σε ποιό βαθμό τα παρακάτω χαρακτηριστικά αφορούν τον μαθητή/την μαθήτρια?

1. Αυτός ο μαθητής/ αυτή η μαθήτρια διασκέδαζε με τους συμμαθητές του/της (γελάνε μαζί)

2. Οι συμμαθητές συστηματικά αποκλείουν αυτόν τον μαθητή/αυτή την μαθήτρια από δραστηριότητες
3. Περιμένετε ότι, όταν είναι απαραίτητο, οι συμμαθητές είναι πρόθυμοι να υιοθετήσουν τους κανόνες ενός παιχνιδιού προκειμένου αυτός ο μαθητής/αυτή η μαθήτρια να συμμετέχει.

4. Οι συμμαθητές προκαλούν τον συγκεκριμένο μαθητή/μαθήτρια (τον/την ενοχλούν).

5. Οι συμμαθητές ζητούν οι ίδιοι από τον μαθητή/την μαθήτρια να παίξει μαζί τους.

6. Αυτός ο μαθητής/αυτή η μαθήτρια είναι μέλος μιας ομάδας φίλων.

7. Αυτόν τον μαθητή/αυτή την μαθήτρια πειράζουν οι συμμαθητές του/της (π.χ. του/της δίνουν ονόματα).

8. Αυτός ο μαθητής/αυτή η μαθήτρια έχει έναν ή περισσότερους καλούς φίλους στην τάξη (συναναστρέφεται μαζί τους αρκετές φορές την εβδομάδα, συχνή επαφή σε τακτική βάση).
9. Αυτός ο μαθητής/αυτή η μαθήτρια έχει την αίσθηση ότι ανήκει στην ομάδα, που σημαίνει ότι δεν αισθάνεται παρείσακτος/η και βλέπει τον εαυτό του/της ως μέλος της ομάδας

Αυτό δεν ισχύει καθόλου

Αυτό ισχύει πολύ

10. Αυτός ο μαθητής/αυτή η μαθήτρια συμμετέχει σε παιχνίδια με τους συμμαθητές του/της, χωρίς καμία καθοδήγηση από εσάς

Αυτό δεν ισχύει καθόλου

Αυτό ισχύει πολύ

11. Οι συμμαθητές γελάνε με αυτόν τον μαθητή/αυτή την μαθήτρια

Αυτό δεν ισχύει καθόλου

Αυτό ισχύει πολύ

12. Όταν συνεργάζονται σε σχολικές εργασίες, περιμένετε ότι οι συμμαθητές θα λάβουν υπ’όψη τους, όταν χρειάζεται, τις μαθησιακές ανάγκες αυτού του μαθητή/αυτής της μαθήτριας

Αυτό δεν ισχύει καθόλου

Αυτό ισχύει πολύ

13. Όταν διαλέγουν ένα παιχνίδι, περιμένετε ότι οι συμμαθητές θα λάβουν υπ’όψη τους, όταν χρειάζεται, το τι μπορεί ή δεν μπορεί να κάνει αυτός ο μαθητής/αυτή η μαθήτρια

Αυτό δεν ισχύει καθόλου

Αυτό ισχύει πολύ

14. Μετά το σχολείο αυτός ο μαθητής/αυτή η μαθήτρια προγραμματίζει να παίξει με έναν ή περισσότερους συμμαθητές (όταν αυτός ο μαθητής/αυτή η μαθήτρια δεν μένει κοντά στο σχολείο, παραλέγετε την ερώτηση)

Αυτό δεν ισχύει καθόλου

Αυτό ισχύει πολύ
15. Οι συμμαθητές υπερασπίζονται αυτόν τον μαθητή/αυτή την μαθήτρια όταν του/της συμπεριφέρονται με
dυσάρεστο τρόπο μαθητές από άλλη τάξη ή σχολείο (ή θα το έκαναν αν συνέβαινε κάτι τέτοιο).

16. Όταν συγκεντρώνονται σε κύκλο στην τάξη ή σε μια σχολική συγκέντρωση, οι συμμαθητές κάθονται
οικειοθελώς δίπλα σ'αυτόν τον μαθητή/σ'αυτή την μαθήτρια

17. Ένας ή περισσότεροι μαθητές παίρνουν την πρωτοβουλία να προσκαλέσουν αυτόν τον μαθητή/αυτή την
μαθήτρια να παίξει μαζί τους κατά τη διάρκεια των σχολικών διακοπών (όταν αυτός ο μαθητής /αυτή η
μαθήτρια δεν μένει κοντά στο σχολείο, παραλείψτε την ερώτηση)

18. Αυτός ο μαθητής/αυτή η μαθήτρια αισθάνεται μόνος/μόνη στην τάξη και στο σχολείο

19. Αυτός ο μαθητής/αυτή η μαθήτρια συνεργάζεται αυθόρμητα στις σχολικές ασκήσεις με τους συμμαθητές
του/της χωρίς την δική σας ανάμειξη/προτροπή

20. Αυτός ο μαθητής/αυτή η μαθήτρια προσκαλείται σε παιδικά πάρτι

21. Αυτός ο μαθητής/αυτή η μαθήτρια αισθάνεται εισαρμένος στο σχολείο χωρίς την ανάγκη να υποδύεται
κάποιον άλλοκάτοιχο άλλη.
22. Αυτός ο μαθητής/αυτή η μαθήτρια έχει την αίσθηση ότι τον/την πειράζουν πιο συχνά απ’ ότι άλλους μαθητές.

23. Οι συμμαθητές είναι πρόθυμοι να βοηθήσουν αυτόν τον μαθητή/αυτή την μαθήτρια (π.χ. δένοντας τα κορδόνια του/της, σηκώνοντας κάτι που του/της έχει πέσει ή τακτοποιώντας τα βιβλία του/της) με θετικό τρόπο, χωρίς να τον/την πατρονάρουν (δηλ. κηδεμονεύουν’).

24. Αυτός ο μαθητής/αυτή η μαθήτρια χαίρεται να πηγαίνει στο σχολείο (αυτό παρατηρείται, π.χ. όταν είναι στο σπίτι ρώταει πότε θα πάει ξανά στο σχολείο)

Σας ευχαρίστω θερμά για την συμμετοχή σας.
Appendix J.
PATEM I Administered subscales ‘cognitive competence’ and ‘peer acceptance’ and items (10 items)

<table>
<thead>
<tr>
<th>ΣΧΟΛΙΚΗ ΙΚΑΝΟΤΗΤΑ</th>
<th>ΣΧΕΣΕΙΣ ΜΕ ΤΟΥΣ ΣΥΝΟΜΗΛΙΚΟΥΣ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (-)</td>
<td>1. Αυτό το παιδί δεν είναι και τόσο καλό στην αριθμητική.</td>
</tr>
<tr>
<td></td>
<td>Αυτό το παιδί είναι πολύ καλό στην αριθμητική.</td>
</tr>
<tr>
<td>5 (+)</td>
<td>2. Αυτό το παιδί έχει μάθει πολλά πράγματα στο σχολείο.</td>
</tr>
<tr>
<td></td>
<td>Αυτό το παιδί δεν έχει μάθει πολλά πράγματα στο σχολείο.</td>
</tr>
<tr>
<td>9 (-)</td>
<td>3. Αυτό το παιδί δυσκολεύεται να διαβάσει μόνο το μαθήματά του.</td>
</tr>
<tr>
<td></td>
<td>Αυτό το παιδί μπορεί να διαβάσει μόνο τα μαθήματά του.</td>
</tr>
<tr>
<td>13 (+)</td>
<td>4. Αυτό το παιδί είναι πολύ καλό στην ορθογραφία.</td>
</tr>
<tr>
<td></td>
<td>Αυτό το παιδί δεν είναι και τόσο καλό στην ορθογραφία.</td>
</tr>
<tr>
<td>17 (+)</td>
<td>5. Αυτό το παιδί είναι πολύ καλό στις πράξεις με αριθμούς.</td>
</tr>
<tr>
<td></td>
<td>Αυτό το παιδί δυσκολεύεται στις πράξεις με αριθμούς.</td>
</tr>
</tbody>
</table>

| 2 (+)            | Αυτό το παιδί έχει πολλούς φίλους για να κάνει παρέα μαζί τους. |
|                  | Αυτό το παιδί δεν έχει πολλούς φίλους για να κάνει παρέα μαζί τους. |
| 6 (-)            | Πολλά λέγει παιδιά θέλουν να καθίσουν δίπλα σ’ αυτό το παιδί. |
|                  | Πολλά παιδιά θέλουν να καθίσουν δίπλα σ’ αυτό το παιδί. |
| 10 (+)           | Αυτό το παιδί έχει πολλούς φίλους για να παίξει διάφορα παιχνίδια μαζί τους. |
|                  | Αυτό το παιδί δεν έχει πολλούς φίλους για να παίξει διάφορα παιχνίδια μαζί τους. |
| 14 (-)           | Αυτό το παιδί δεν έχει πολλούς φίλους για να παίξει μαζί τους στην ακλή του σχολείου. |
|                  | Αυτό το παιδί έχει πολλούς φίλους για να παίξει μαζί τους στην ακλή του σχολείου. |
| 18 (+)           | Αυτό το παιδί τις περισσότερες φορές το φωνάζουν τα άλλα παιδιά να παίξει μαζί τους. |
|                  | Αυτό το παιδί μενεί μόνο του πολλές φορές γιατί τα άλλα παιδιά δεν το φωνάζουν να παίξει μαζί τους. |
Appendix K.
PATEM II Sample of administered subscales Scholastic competence’, ‘Social acceptance’ and ‘Self-esteem’ and sample of items (10 items)

<table>
<thead>
<tr>
<th>ΣΧΟΛΙΚΗ ΙΚΑΝΟΤΗΤΑ</th>
<th>ΟΜΟΣ</th>
<th>ΟΜΟΣΣ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Μερικά παιδιά πιστεύουν ότι είναι πολύ καλά στη σχολική τους εργασία.</td>
<td>άλλα παιδιά πιστεύουν ότι δεν είναι κανός και τόσο καλά στη σχολική τους εργασία.</td>
<td></td>
</tr>
<tr>
<td>(+)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Μερικά παιδιά πιστεύουν ότι είναι τόσο καλά στα μαθήματα του σχολείου όσο και τα άλλα παιδιά της ημέρας τους.</td>
<td>άλλα παιδιά δεν είναι τόσο ολόγνως και συναισθησίανται ως είναι τόσο καλά στα μαθήματα του σχολείου όπως οι συνομόλογοι τους.</td>
<td></td>
</tr>
<tr>
<td>(+)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Μερικά παιδιά αρχίζουν πολύ να τελειώνουν τη σχολική τους εργασία.</td>
<td>άλλα παιδιά τελειώνουν γρήγορα τη σχολική τους εργασία.</td>
<td></td>
</tr>
<tr>
<td>(-)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 Μερικά παιδιά τα καταφέρνουν πολύ καλά στα μαθήματα τους.</td>
<td>άλλα παιδιά δεν τα καταφέρνουν και τόσο καλά στα μαθήματα τους.</td>
<td></td>
</tr>
<tr>
<td>(+)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 Μερικά παιδιά διστάζουν να βρουν τις σωστές απαντήσεις στο σχολείο.</td>
<td>άλλα παιδιά σχεδόν πάντα βρίσκουν τις σωστές απαντήσεις.</td>
<td></td>
</tr>
<tr>
<td>(-)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ΣΧΕΣΕΙΣ ΜΕ ΤΟΥΣ ΣΥΝΟΜΗΛΙΚΟΥΣ</th>
<th>ΟΜΟΣ</th>
<th>ΟΜΟΣΣ</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Μερικά παιδιά δυσκολεύονται να κάνουν φίλους.</td>
<td>άλλα παιδιά κάνουν πολύ εύκολα φίλους.</td>
<td></td>
</tr>
<tr>
<td>(-)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Μερικά παιδιά έχουν πολλούς φίλους.</td>
<td>άλλα παιδιά δεν έχουν πολλούς φίλους.</td>
<td></td>
</tr>
<tr>
<td>(+)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Μερικά παιδιά θα ήθελαν να έχουν περισσότερους φίλους.</td>
<td>άλλα παιδιά έχουν τόσους φίλους όσους θα ήθελαν.</td>
<td></td>
</tr>
<tr>
<td>(-)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 Μερικά παιδιά θα ήθελαν να τα συμπεριλάβουν στην περιορισμένη συνομήλική τους.</td>
<td>άλλα παιδιά πιστεύουν ότι τα συμπεριλάβουν στην περιορισμένη συνομήλική τους.</td>
<td></td>
</tr>
<tr>
<td>(-)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 Μερικά παιδιά είναι δημοφιλής ανάμεσα στους συνομήλικους τους.</td>
<td>άλλα παιδιά δεν είναι κανός και τόσο δημοφιλής.</td>
<td></td>
</tr>
<tr>
<td>(+)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix L.
Task for informal speech and language assessment

At the beginning of the task the child is asked to observe and describe the pictures. Then the teacher (here the researcher) guides the pupil through simple questions to identify the main aspects of each narrative story, such as the main idea and target related to the problem that each of the stories characters had, and consequently to set the pictures in the right order.

Story A

Story B
## Appendix M.
### Observation record sheet example

**Observation Day 1 /Mainstream classroom**  
**Pupil:** John (General Learning Difficulties-officially diagnosed)

<table>
<thead>
<tr>
<th>Time</th>
<th>Teaching</th>
<th>Pupil’s performance &amp; attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Literacy hour’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year B</td>
<td>1. The teacher reads the spelling task</td>
<td>1. John writes his spelling task slower than the others</td>
</tr>
<tr>
<td>Time: 8:20-9:40</td>
<td>2. The teacher corrects the spelling task</td>
<td>2. He checks quickly the corrected task, he missed a few words, but isn’t disappointed at all, he chats with his friend</td>
</tr>
<tr>
<td></td>
<td>3. The teacher asks for the pupils’ homework and starts checking it</td>
<td>3. He doesn’t pull his hand up in order to read his homework-he hasn’t done most of it</td>
</tr>
<tr>
<td></td>
<td>4. Homework checking</td>
<td>4. He doesn’t participate, he rather prefers to talk to his friend or draw and sometimes to fill in the task that the classroom checks</td>
</tr>
<tr>
<td></td>
<td>5. The teacher asks from John to answer a question from the literacy task</td>
<td>5. He answers, not correctly the first time but after asking him again and urging him to be more careful, he answers it correctly</td>
</tr>
<tr>
<td></td>
<td>6. The teacher continues to the next part of the chapter and starts reading a small text</td>
<td>6. He seems concentrated at the moment</td>
</tr>
<tr>
<td></td>
<td>7. The teacher writes on the board</td>
<td>7. He watches her for a while and then draws on his book</td>
</tr>
<tr>
<td></td>
<td>8. She reads, writes on the board and then asks the children</td>
<td>8. He watches her and sometimes he pulls up his hand in order to answer some of her questions-he does answer one of them correctly</td>
</tr>
<tr>
<td></td>
<td>9. The teacher asks them to do a task (i.e. fill in the gaps) on their own, based on what she just taught them</td>
<td>9. He starts writing the task, he completes only two or three sentences</td>
</tr>
<tr>
<td></td>
<td>10. They correct the task and she writes the answers on the board</td>
<td>10. He doesn’t pull his hand up in order to answer the task’ questions, but he completes them after watching the teacher writing them on the board</td>
</tr>
<tr>
<td></td>
<td>11. She continues reading a small text and then teaches them grammar</td>
<td>11. He watches her and occasionally he chats with his friend</td>
</tr>
<tr>
<td></td>
<td>12. They do a task –all the class</td>
<td>12. He pulls his hand up, he answers it but not entirely correctly, however the teacher praises him</td>
</tr>
<tr>
<td></td>
<td>13. The teacher writes on the board pupils’ answers</td>
<td>13. He watches her and chats with his friend, occasionally he writes down some of the answers</td>
</tr>
<tr>
<td></td>
<td>14. The teacher asks them to do a grammar task-cooperate with their peers</td>
<td>14. He doesn’t seem willing to do it, he prefers to chat with his friend or draw on his book</td>
</tr>
<tr>
<td></td>
<td>15. They don’t have time to complete it though as the bell rings, so the teacher asks them to continue doing the task at home, while she also tells them their homework</td>
<td>15. He stands up when listening the bell, while he writes down some of his homework (not all his homework as I checked later)</td>
</tr>
</tbody>
</table>
Appendix N.
Samples of school tasks/documents

Grammar task 1 (Helen)
Grammar task 2 (Jim)

Τα πράγματα που κάνετε

Χίλια τό

(Τα πράγματα που κάνουν δυνάμει)

Η γάτα. Κινήσεις προσοχής στο στόμα της γάτας.

Η απάντηση του μηνυτηρίου

Τις μέθοδους του στόματος του μηνυτηρίου

(Τα αντικείμενα στοματικής ιατρικής)

Η πράξη κακού και

Πίσω το δέρμα (κρύφτες πτερύγια από το δέρμα)

ηλικίας μικρή

ηλικίας μικρή

οίκος μικροί

οίκος μικροί
Γραμμώνα αξιολόγησης 5ης ενότητας

Σύμφωνα με το στοιχείο του υποψηφίου Δημόσιας Τάξης, το διάστημα 1990-1995 περιελάμβανε από 3.000 παιδιά και νεαρά άτομα έχοντας τη ζωή τους σε τροχαία ατυχήματα. Ωστόσο, να σημειωθεί ότι κάθε χρόνο μεταφέρονται στα νοσοκομεία περίπου 500 παιδιά, τα οποία έχουν τραυματιστεί σε τροχαία, για να προσβληθούν.

Κύρια αιτία του προβλήματος, οπότε αναφέρθηκε σε συνέδριο με θέμα "Το ταχύτατο τροχαίο ατύχημα και η πρόληψή του", που διοργάνωσε το σωματείο "Φίλοι Κοινωνικής Παιδιατρικής", είναι η άνοια των βασικών κοινοτήτων, εκτός από τους ναυτικούς. Οπως τόνισαν οι ομιλητές του συνεδρίου, έξι από δέκα παιδιά πέφτουν θύματα τροχαίου ατυχήματος ακριβώς τη σημείωση που προηγήθηκαν να διαχειριστούν το δρόμο, τον οποίο δεν έχουν ελέγξει, ενώ τρία από δέκα παιδιά καταστρώνταν σε διαστάσεις.

1) Το κείμενο είναι μια είδηση που δημοσιεύτηκε σε εφημερίδα:
   - Το θέμα: Παιδία κρούσματα Ατύχημα και η πρόληψη, η ανάπτυξη της κοινωνίας
   - Ποια εταιρεία: Παιδία κρούσματα Ατύχημα και η πρόληψη, η ανάπτυξη της κοινωνίας
   - Ποια είναι η βασική αιτία του προβλήματος: Η. Εργασία. Η. Εργασία. Η. Εργασία. Η. Εργασία. Η. Εργασία. Η. Εργασία. Η. Εργασία.

2) Να συμπληρώσεις τις προτάσεις με τα ρήματα Παιδία κρούσματα Ατύχημα και η πρόληψη:
   - Να προβλέψεις την αντιβίωση την ώρα που τρέφεις.
   - Πολλά είναι τα τακτικά και βλέπους τους πιθανούς τους.
   - Μπορείς να στα σκέφτης τα λόγια τους.
   - Σαν είναι πολλά καιρούς από την.
   - Πρέπει να καλά στην κανονική γειτονιά.
   - Στο όροι του παραπάνω πάντα τη διαμορφώσεις.

3) Να σχηματίσεις φράσεις βάζοντας το δεύτερο υστερικό στη γενική
   του ενικού και του πληθυντικού αριθμού:
   - Η διάρκεια — το διάστημα
   - Η διάρκεια του διαλέγματος — διάρκεια των διαλέγματων
   - Η αποστολή — το διπλωμα
   - Η αναρρήτηση — το διπλωμα
   - Το οργανισμό — το διπλωμα
   - Η άνοιξη — το πρόβλημα
   - Η λύση — το πρόβλημα

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Appendix O.
Ethical Approval form (University of Exeter)

STUDENT HIGHER-LEVEL RESEARCH
DISSERTATION/THESIS

UNIVERSITY OF
EXETER
Graduate School of Education

Certificate of ethical research approval
DISSERTATION/THESIS

To activate this certificate you need to first sign it yourself, and then have it signed by your supervisor and finally by the Chair of the School’s Ethics Committee.

For further information on ethical educational research access the guidelines on the BERA web site: http://www.bera.ac.uk/publications/guidelines/ and view the School’s statement on the GSE student access on-line documents.

READ THIS FORM CAREFULLY AND THEN COMPLETE IT ON YOUR
COMPUTER (the form will expand to contain the text you enter). DO NOT
COMPLETE BY HAND

Your name: Efstathia Karakosta

Your student no: [Redacted]

Return address for this certificate: [Redacted]

Degree/Programme of Study: PhD in Education, Special Educational Needs

Project Supervisor(s): Brahm Norwich and Hannah Anglin-Jaffe

Your email address: [Redacted]

Tel: [Redacted]

I hereby certify that I will abide by the details given overleaf and that I undertake in my
dissertation/thesis (delete whichever is inappropriate) to respect the dignity and privacy of those
participating in this research.

I confirm that if my research should change radically, I will complete a further form.

Signed: [Signature] .................................................. date: 21/6/2014

NB For Masters dissertations, which are marked blind, this first page must not be included in your
work. It can be kept for your records.

Chair of the School’s Ethics Committee
updated: April 2011
Certificate of ethical research approval

Your student no: [Redacted]

Title of your project: ‘Managing inclusive provision for pupils with Speech and Language Disorders (SLD) in mainstream Greek primary schools’

Brief description of your research project:

This particular research study intends to explore the field of Speech and Language Disorders (SLD) and in view of the limited research related to the field of SLD in the Greek educational context, the intention of this research is twofold:

- In the first phase (survey), it seeks to identify and assess speech, language and communication skills of pupils with noticeably slow progress in these specific domains (primary difficulty).
- While in the second phase (follow-up case studies) it aims to examine the provision made for pupils who experience this type of difficulties in inclusion classes and mainstream classrooms.

The study will take place in the broad area of Athens and focus on (a) mainstream primary schools without inclusion classes and (b) on mainstream primary schools with inclusion classes that involve SLD pupils.

Give details of the participants in this research (giving ages of any children and/or young people involved):

The study will focus on 15 mainstream primary schools without inclusion classes and on 10 mainstream primary schools with inclusion classes that involve SLD pupils in the area of Athens. The pupils who will participate in the study will attend Year 2, 3, 4 and 5 (ages 8, 9, 10 and 11 years old), both genders, their first language will be Greek, while they are expected to come from different socioeconomic backgrounds.

Phase 1 participants

- The teachers’ screening assessment, LAMP, will be applied to pupils of Year 2, 3 and 5 whose progress in speech, language and communication skills is not as anticipated and raises concerns to their teachers. In particular, the pupils who will be screened are the following: (a) one pupil whose speech, language and communication skills are average for the class, (b) any pupil who is already diagnosed with primary SLD, (c) any pupil whose performance in the areas of speech and language raises concerns to his/her teacher but he/she isn’t officially diagnosed and (d) any pupil who is diagnosed with another difficulty/disorder (e.g. dyslexia) and SLD may be a primary difficulty.
- Further individual assessment of the pupils with the lower scoring in the LAMP as well as naturalistic language observation and analysis, will identify possible impact of difficulties in speech, language and communication in various areas of development and will decrease the possibility of ‘false positive’ cases of SLD for pupils whose teachers have indicated in the LAMP, as performing quite low in the areas of speech, language and communication development.
- Mainstream classroom teachers’ participation (one from each of the examined Years) is considered significant, as the fact that they work with the pupils many hours (in addition to the SEN teacher of the inclusion class or in class support) makes them fully aware of their performance and therefore more suitable to indicate those to whom they will apply the LAMP.

Chair of the School’s Ethics Committee

updated: April 2011
Phase 2 participants

- The pupils of the cases studies will be selected once the data of the survey (1st phase) are obtained and will be purposively sampled to reflect key aspects of SLD and their impact on other areas of learning and development. There will be between 8-10 cases.
- Apart from the pupils, the sample of this phase will also consist of mainstream teachers and SEN teachers (of the inclusion classes or in class support) who teach the examined pupils (case studies) and will provide useful information for them.

Give details (with special reference to any children or those with special needs) regarding the ethical issues of:

a) informed consent: Where children in schools are involved this includes both headteachers and parents. Copy(ies) of your consent form(s) you will be using must accompany this document. A blank consent form can be downloaded from the GSE student access online documents.

A consent form is required to be signed for all participants, mainstream class teachers, SEN teachers and pupil’s parents/careers (as the pupils are underage), in order to ensure that they are aware of the study’s aims and purposes as well as their right to withdraw from it. In addition to voluntary informed consent given by the teachers and the parents/careers, since pupils who will constitute the sample will have SLD, it is vital to ensure that they fully understand what is required of them throughout and that they are readily able to signal a wish for non-participation or withdrawal.

b) anonymity and confidentiality

It is ethical and scientific obligation as a researcher, to ensure schools’ and participants’ anonymity and confidentiality. Their identities will remain anonymous and pseudonyms will be used instead of their names throughout the study (e.g. pupil 1, pupil 2, mainstream class teacher 1 etc.).

Give details of the methods to be used for data collection and analysis and how you would ensure they do not cause any harm, detriment or unreasonable stress:

First Phase: November-December 2011 and January 2012

in the first phase there will be used the following data collection methods:

(a) The ‘Teachers’ screening assessment — LAMP (Linguistic Assessment and Mapped Provision) (Nash, 2011) will be applied by teachers to the pupils of Year 2, 3, 4 and 5 of mainstream primary schools (with and without inclusion classes) in order to identify those whose speech and language skills are not well developed. Teachers’ responses to the statements/items in the LAMP (based on a simple numerical scale), elicit their assessment of pupils’ performance/skills in expressive/receptive language, behaviour related to SLCN and social skills, based on close observation of the children and cooperation with them over a satisfactory period of time.

(b) Pupils with the lower scoring will be further assessed individually with the short form of Athina Test – Diagnosis of Learning Difficulties (Paraskevopoulos & Paraskevopoulos, 2011) in order to examine the possible impact of their difficulties/delays in other areas of development (i.e. literacy). The pupils will be examined in the following developmental psychometric scales: Language analogies, Vocabulary, Memory of numbers - common sequences, Memory of pictures, Sentence Completion, Discrimination of graphemes, Composition of sounds, Visual co-ordination, Perception of right-left.

(c) Along with the Athina Test there will be also applied the Matrices scale from the School Age BAS II (British Ability Scale) (Elliot et al, 1997) as a measure of pupils’ non-verbal reasoning skills.

Chair of the School’s Ethics Committee
updated: April 2011
Second Phase: February until June 2012
In the second phase there will be used the following data collection methods:
(a) Non participant, semi structured observation, will take place at certain days (after prior agreement with the schools) and will focus on SLD pupils’ (case studies) performance and active engagement during the teaching process in the mainstream, inclusion class or in parallel support, on how they initiate and respond to peer interactions in groups of pupils with and without SEN, as well as teachers’ applied methods and practices for the SLD pupils in the mainstream, inclusion class or in parallel support.
(b) Semi-structured, face to face, individual interviews will be applied to the teaching staff (mainstream class and SEN teachers) of the pupils (case studies), in order to identify the applied teaching and learning practices (in the mainstream class, the inclusion class or in parallel support) for SLD pupils, their educational attainments and social participation.
(c) The Social Participation Questionnaire (SPQ) for teachers (Koster et al, 2009) will be applied to the mainstream class teachers and its purpose is to assess their social participation. This questionnaire comprises 24 statements on ‘aspects of social participation’ in four subscales and what is asked from the mainstream class teachers is to state to what degree the 24 statements apply to particular pupils who experience difficulties with their speech and language skills, in their class by ticking one appropriate box for each statement. The answering scale ranges from “this does not apply at all” to “this strongly applies”.
(d) The Greek standardised version will be used of the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter and Pike, 1983), which is called PATEM I (Makri-Mpotsari, 2001). In particular only the ‘peer acceptance’ scale (5 items) will be applied to the pupils of Year 2 and 3 (ages 8 and 9 years old) (the age range in the Greek version differs from Harter’s and Pike version) in order to identify their social acceptance.
(e) The Greek standardised version will be used of the Self-Perception Profile for Children (Harter, 1985), which is called PATEM II (Makri-Mpotsari, 2001). In particular there will be applied only the ‘social acceptance’ scale (5 items) of this questionnaire to the pupils of Year 4 and 5 (10 and 11 years old) in order to examine their own views regarding their relationships with their peers.
(f) The use of schools’ documents that concern the pupils will be very helpful, in order to identify essential aspects that are related to the offered provision and their academic progress. These documents may provide information that is related to the teaching and learning practices for these pupils, while they may also be records of their progress during the previous and current Year, in order to identify their educational attainments.

Two of the data collection methods (LAMP, SPQ for teachers) that were mentioned previously were translated into Greek, the target language, by a bilingual expert in the field of SEN and back into English, while any phrase-conceptual differences were resolved by consensus: The adjusted versions were not standardised in Greek and therefore each one of them will use the scoring system of the original versions, and the interpretation of their findings/scoring will be also based on the values of those. The Matrices scale from the School Age BAS II, as it was not standardised in Greek either, it will use the rating system of the English version and the interpretation of its findings will be also based on the values of the original version.

All methods (in both phases) will be applied after prior agreement with the schools (and having already ensured headteachers’, teachers’-mainstream and inclusion class/or in class support- and parents’ consent), at a time convenient to the schools and with no intention to disrupt pupils teaching and learning.

Data Analysis Methods for Phase 1 & 2
The quantitative data demand statistical analysis and generation of the collected information in numerical form. As there is a great majority of statistical packages that enable the researchers to carry out their data analysis, the software package that will be used is SPSS 15. This method of analysis deals with the quantitative
data that will emerge from the LAMP, Athina Test, BAS II, The Matrices, SPQ for teachers, PATEM I and PATEM II.
The qualitative data (non-numerical form) will emerge from the written field notes of the observation, the interviews, as well as the schools' documents that are related to the pupils and for their analysis it will be used the NVIVO 8 qualitative data analysis software package. The above data will be transcribed and uploaded to NVIVO 8 for thematic coding and further analysis.

Give details of any other ethical issues which may arise from this project (e.g. secure storage of videos/recoded interviews/photos/completed questionnaires or special arrangements made for participants with special needs etc.):

During the data collection, data analysis and write up, all identifying information on schools and participants (screening assessment, tests, questionnaires, field notes from observation and interviews, school's documents) will be securely stored in a locked cabinet. Electronic information will be stored on a secure system and will only be accessed by the researcher, while a username and password will be required. No such information will be published or otherwise identifiable in the thesis itself.

Give details of any exceptional factors, which may raise ethical issues (e.g. potential political or ideological conflicts which may pose danger or harm to participants):

None

This form should now be printed out, signed by you on the first page and sent to your supervisor to sign. Your supervisor will forward this document to the School's Research Support Office for the Chair of the School's Ethics Committee to countersign. A unique approval reference will be added and this certificate will be returned to you to be included at the back of your dissertation/thesis.

N.B. You should not start the fieldwork part of the project until you have the signature of your supervisor.

This project has been approved for the period: 2/8/11 until: the project is completed

By (above mentioned supervisor's signature): ...

N.B. To Supervisor: Please ensure that ethical issues are addressed annually in your report and if any changes in the research occur a further form is completed.

GSE unique approval reference: ... 7.3

Signed: Chairman of the School's Ethics Committee

Date: 17/6/2011

Chair of the School's Ethics Committee

This form is available from http://education.exeter.ac.uk/students/
Appendix P.
Ethical Approval form (Greek Ministry of Education and Religious Affairs).

Θέμα: Έγκριση έρευνας

Απαντώντας σε σχετικό αίτημα σας και έχοντας υπόψη την αριθμ. 1/2012 τράπεζ του Τμήματος Ε.Τ.Ε.Τ. του Παιδαγωγικού Ινστιτούτου, σας κάνουμε γνωτό ότι εγκρίνουμε τη διεξαγωγή της έρευνάς σας με θέμα: «Διασχέσεις πρακτικών ένταξης για μαθητές με Διαταραχές Λόγου και Ομίλια σε ελληνικά δημοτικά σχολεία», η οποία θα πραγματοποιηθεί στα σχολεία του συνημμένου πίνακα με τις ακόλουθες επισημάνσεις:

1. Η άδεια χορηγείται για μια τριετία.

2. Πριν από τις επισκέψεις σας στα σχολεία να υπάρχει συνεννόηση με τους Διευθυντές τους, το Σχολικό Συμβούλιο και συνεργασία με το διδακτικό προσωπικό, ώστε να εξευρεθεί η ομαλή λειτουργία των σχολικών μονάδων.

3. Τα αποτελέσματα της έρευνάς σας να κοινοποιηθούν στο Ινστιτούτο Εκπαιδευτικής Πολιτικής και στη Δύνα Σπουδών Π.Ε.

4. Η συμμετοχή των εκπαιδευτικών στην έρευνα είναι πάντα προσωρινή, γίνεται με δική τους ευθύνη και εφόσον το επιθυμούν.

5. Για τη διεξαγωγή της έρευνάς σας στους μαθητές θα πρέπει να προηγηθεί ενημέρωση των γονέων και των εκπαιδευτικών, ώστε να υπάρχει ενουσία-προθεσμία δήλωση των γονέων έχοντας υπόψη ότι για όλες τις περιπτώσεις η συμμετοχή στην έρευνα δεν είναι υποχρεωτική.

6. Για την παρούσα της ερευνητής στην τάξη να υπάρχει η σύμφωνη γνώμη του Σχολικού Συμβουλίου, του Διευθυντή του σχολείου και του εκπαιδευτικού της τάξης. Η
ερευνήτρια δε θα διδάσκει και κατά την παρουσία της στην τάξη θα παρευρίσκεται πάντα και ο
εκπαιδευτικός της τάξης.
7. Οι μαθητές θα αποσχοληθούν δύο (2) ώρες και πάντα παρουσία του εκπαιδευτικού
της τάξης. Η συμπλήρωση των ερωτηματολόγιων από τους εκπαιδευτικούς θα γίνει εκτός του
διδακτικού τους ωραρίου.
8. Δεν επιτρέπεται σε καμία περίπτωση η βιντεοσκόπηση και η μαγνητοφώνηση των
μαθητών και των διδακτικών. Σε κάθε περίπτωση να τηρηθεί η ανωνυμία των μαθητών και
των εκπαιδευτικών.
Οι Διευθυντές Πρωτοβάθμιας Εκπαίδευσης στους οποίους κοινοποιείται το έγγραφο αυτό,
pαρακαλούνται να ενημερώσουν σχετικά τα σχολεία στα οποία θα διεξαχθεί η έρευνα.

Συν: 7 φύλλα

Εσωτ. Διανομή
Δήμης Σπουδών Π.Ε
Τμήμα Α'
Appendix Q.
Sample of covering letters to head teachers, mainstream class teachers, SEN teachers and parents

Covering letter to the head teachers of mainstream primary schools without inclusion class

Efstathia Karakosta  
Tel..... (Greece)  
Tel..... (UK, Exeter)  
E-mail: ...@exeter.ac.uk

Dear Head teacher,

My name is Efstathia Karakosta and I'm a PhD student in the Graduate School of Education of the University of Exeter. My thesis examines the field of Speech and Language Disorders. The aims of the study are: In the first phase, it seeks to identify and assess speech, language and communication skills of pupils with noticeably slow progress in these specific domains, while in the second phase it aims to examine the provision made for pupils who experience this type of difficulties in inclusion classes and mainstream classrooms.

I am doing this study in mainstream primary schools located in the area of Athens. I would be very grateful if you would like to participate in this research, which has already been approved by the University of Exeter, the Greek Ministry of Education and Religious Affairs and the Pedagogical Institute.

My request includes only pupils of year B, year C, year D and year E (ages 8, 9, 10 and 11 years old) whose performance in the areas of speech and language raises concerns to their teachers.

A teachers' screening inventory (it takes 5 minutes per child) will be used by mainstream class teachers of the above years to identify the pupils who will participate in the study. Teachers are asked to complete the inventory for about 4 or 5 pupils in their class and the pupils who will be involved in the screening process are the following: (a) one pupil whose speech, language and communication skills are average for the class, (b) any pupil who is already diagnosed with primary SLD, (c) any pupil whose performance in the areas of speech and language raise concerns to his/her teacher but he/she is not officially diagnosed and (d) any pupil who is diagnosed with another difficulty/disorder (e.g. dyslexia) and SLD may be a primary difficulty. The inventory will identify some pupils for further individual assessment done by me. This will identify the possible impact of difficulties in speech, language and communication in other areas of development (i.e. literacy).

Some of the pupils identified in the first phase will be asked to participate in the second phase of the study. In this phase there will be case studies using observation, some inventories and interviews to examine their participation social and academic in their class.

Mainstream teachers cooperation is crucial to this study. Their involvement will include screening assessment in Phase 1, a short questionnaire about pupils’ social participation and an interview in Phase 2. This will provide insight into the teaching and learning methods, pupils’ educational attainments and their peers’ acceptance.

Pupils' individual assessment and teachers’ interviews will be applied after prior agreement with the schools, in a quiet place within the school setting, at a time convenient to the schools’ programme and with no intention to disrupt pupils teaching and learning. Pupil(s)' observation in the mainstream classroom will also be arranged after prior agreement with the school, in order my presence there not to affect or disrupt the teaching and learning process.
It is estimated that the first phase of the research will start in November 2011, however, this can be arranged at your convenience.

In order to ensure schools’ and participants’ anonymity and confidentiality, all identities will remain anonymous and pseudonyms will be used instead of the names throughout the study. Moreover, after agreeing to participate in the study, a consent form is required to be signed for all participants, head teacher, mainstream class teachers and parents/carers (as the pupils are underage), in order to ensure that they are aware of the study’s aims and purposes as well as their right to withdraw from it. In addition to the voluntary consent form, since pupils who will participate are underage and constitute a vulnerable group, it is vital to ensure that they fully understand what is required of them throughout and that they are readily able to signal a wish for non-participation or withdrawal.

I will be delighted to provide any further information about my study or about this request.

Yours sincerely
Efstathia Karakosta
Appendix R.
Voluntary consent form

GRADUATE SCHOOL OF EDUCATION

CONSENT FORM

I have been fully informed about the aims and purposes of the project.

I understand that:

- there is no compulsion for me to participate in this research project and, if I do choose to participate, I may at any stage withdraw my participation.
- I have the right to refuse permission for the publication of any information about me.
- any information which I give will be used solely for the purposes of this research project, which may include publications.
- If applicable, the information, which I give, may be shared between any of the other researcher(s) participating in this project in an anonymised form.
- all information I give will be treated as confidential.
- the researcher(s) will make every effort to preserve my anonymity.

.......................................................... ..........................................................
(Signature of participant) (Date)

..........................................................
(Printed name of participant)

One copy of this form will be kept by the participant; a second copy will be kept by the researcher(s).

Contact phone number of researcher(s): …… (Greece) or ……. (UK, Exeter)

If you have any concerns about the project that you would like to discuss, please contact:

the phone numbers above

OR

email me at the following address: …@exeter.ac.uk

Data Protection Act: The University of Exeter is a data collector and is registered with the Office of the Data Protection Commissioner as required to do under the Data Protection Act 1998. The information you provide will be used for research purposes and will be processed in accordance with the University’s registration and current data protection legislation. Data will be confidential to the researcher(s) and will not be disclosed to any unauthorised third parties without further agreement by the participant. Reports based on the data will be in anonymised form.
Appendix S.
Tables from analysis of SEN subgroups, additional subgroups and LAMP scores

Table 22. SEN subgroups, Literacy Difficulty/No Literacy Difficulty and LAMP scores.

<table>
<thead>
<tr>
<th>N Total=111</th>
<th>SLD</th>
<th>General Learning Difficulties</th>
<th>Other SEN</th>
<th>No Difficulty</th>
<th>F</th>
<th>df</th>
<th>Sig (p)</th>
<th>Interaction effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Literacy difficulty</td>
<td>No Literacy difficulty</td>
<td>Literature difficulty</td>
<td>No Literacy difficulty</td>
<td>Literacy difficulty</td>
<td>No Literacy difficulty</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M = 57.85 SD = 21.35</td>
<td>M = 91.00 SD = 24.04</td>
<td>M = 79.00 SD = 18.19</td>
<td>M = 59.55 SD = 16.22</td>
<td>M = 62.80 SD = 37.64</td>
<td>M = 45.00 SD = 2.70</td>
<td>3.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M = 18.44 SD = 7.62</td>
<td>M = 29.50 SD = 7.77</td>
<td>M = 28.00 SD = 5.79</td>
<td>M = 17.40 SD = 4.77</td>
<td>M = 20.40 SD = 10.73</td>
<td>M = 12.00 SD = 1.09</td>
<td>2.72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M = 18.00 SD = 6.12</td>
<td>M = 29.00 SD = 8.48</td>
<td>M = 19.00 SD = 6.80</td>
<td>M = 18.60 SD = 5.35</td>
<td>M = 21.40 SD = 11.34</td>
<td>M = 14.00 SD = .87</td>
<td>3.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M = 11.80 SD = 5.98</td>
<td>M = 17.50 SD = 3.53</td>
<td>M = 14.41 SD = 4.87</td>
<td>M = 18.00 SD = 5.78</td>
<td>M = 13.00 SD = 8.10</td>
<td>M = 12.00 SD = .98</td>
<td>2.37</td>
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<tr>
<td></td>
<td></td>
<td>M = 9.55 SD = 5.09</td>
<td>M = 15.00 SD = 4.24</td>
<td>M = 14.00 SD = 3.39</td>
<td>M = 10.55 SD = 4.16</td>
<td>M = 10.80 SD = 7.82</td>
<td>M = 7.00 SD = .75</td>
<td>1.61</td>
</tr>
</tbody>
</table>

Total 47 42.3% 2 1.8% 17 15.3% 1 9.9% 20 18% 5 4.5% 1 9.9% 18 16.2%

Literacy Difficulty & Types of SEN MANOVA Wilks' Lambda = .643 df = 3, 103 p = .135
No statistically significant effect

374
Table 23. SEN subgroups, gender and LAMP scores.

<table>
<thead>
<tr>
<th>N Total= 111</th>
<th>SLD</th>
<th>General Learning Difficulties</th>
<th>Other SEN</th>
<th>No Difficulty</th>
<th>F</th>
<th>df</th>
<th>Sig p</th>
<th>Interaction effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys Girls</td>
<td>Boys Girls Boys Girls Boys Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Total</td>
<td>M=58.57 SD=20.88 M=60.50 SD=25.37 M=49.54 SD=13.47 M=75.42 SD=12.98</td>
<td>M=60.82 SD=15.42 M=58.87 SD=31.36 M=11.00 SD=13.22 M=7.20 SD=1.61</td>
<td></td>
<td></td>
<td>2.29</td>
<td>3,103</td>
<td>.082 p&gt;.05 NS</td>
<td>Univariate: Gender and Types of SEN No significant interaction effect (p=.082)</td>
</tr>
<tr>
<td>LAMP Expressive</td>
<td>M=18.69 SD=7.34 M=19.31 SD=9.08 M=13.90 SD=4.70 M=22.28 SD=4.85</td>
<td>M=17.35 SD=4.12 M=19.37 SD=9.53 M=2.88 SD=3.68 M=2.50 SD=.527</td>
<td></td>
<td></td>
<td>1.75</td>
<td>3,103</td>
<td>.161 p&gt;.05 NS</td>
<td>Univariate: Gender and Types of SEN No significant interaction effect (p=.161)</td>
</tr>
<tr>
<td>LAMP Receptive</td>
<td>M=18.60 SD=6.16 M=18.12 SD=7.35 M=14.81 SD=5.87 M=23.00 SD=4.28</td>
<td>M=19.17 SD=4.81 M=19.12 SD=10.14 M=3.44 SD=4.06 M=2.00 SD=.81</td>
<td></td>
<td></td>
<td>2.57</td>
<td>3,103</td>
<td>.058 p&gt;.05 NS</td>
<td>Univariate: Gender and Types of SEN No significant interaction effect (p=.058)</td>
</tr>
<tr>
<td>LAMP Behaviour</td>
<td>M=12.06 SD=6.051 M=12.00 SD=6.055 M=12.90 SD=4.43 M=17.28 SD=4.34</td>
<td>M=13.64 SD=5.92 M=9.87 SD=6.44 M=2.77 SD=3.70 M=1.40 SD=.51</td>
<td></td>
<td></td>
<td>1.89</td>
<td>3,103</td>
<td>.136 p&gt;.05 NS</td>
<td>Univariate: Gender and Types of SEN No significant interaction effect (p=.136)</td>
</tr>
<tr>
<td>LAMP Social skills</td>
<td>M=9.21 SD=4.55 M=10.93 SD=6.19 M=7.90 SD=2.46 M=12.85 SD=2.47</td>
<td>M=12.85 SD=4.40 M=10.50 SD=6.14 M=1.88 SD=2.08 M=1.30 SD=.67</td>
<td></td>
<td></td>
<td>1.52</td>
<td>3,103</td>
<td>.212 p&gt;.05 NS</td>
<td>Univariate: Gender and Types of SEN No significant interaction effect (p=.212)</td>
</tr>
<tr>
<td>Total</td>
<td>33 29.7%</td>
<td>16 14.4%</td>
<td>11 9.9%</td>
<td>7 6.3%</td>
<td>17 15.3%</td>
<td>8 7.2%</td>
<td>9 8.1%</td>
<td>10 9%</td>
</tr>
<tr>
<td>Gender and Types of SEN</td>
<td>MANOVA Wilks’ Lambda=.883 df= 3, 103 p=.395</td>
<td>No statistically significant effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 24. SEN subgroups, year of attendance and LAMP scores.

<table>
<thead>
<tr>
<th>N Total = 111</th>
<th>SLD</th>
<th>General Learning Difficulties</th>
<th>Other SEN</th>
<th>No Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year B</td>
<td>Year C</td>
<td>Year D</td>
<td>Year E</td>
</tr>
<tr>
<td>LAMP Total</td>
<td>M=63.14</td>
<td>SD=23.36</td>
<td>M=62.13</td>
<td>SD=21.88</td>
</tr>
<tr>
<td>LAMP Expressive</td>
<td>M=18.78</td>
<td>SD=9.20</td>
<td>M=21.00</td>
<td>SD=7.98</td>
</tr>
<tr>
<td>LAMP Receptive</td>
<td>M=18.42</td>
<td>SD=6.73</td>
<td>M=19.53</td>
<td>SD=6.78</td>
</tr>
<tr>
<td>LAMP Behaviour</td>
<td>M=15.14</td>
<td>SD=5.44</td>
<td>M=15.53</td>
<td>SD=5.22</td>
</tr>
<tr>
<td>LAMP Social skills</td>
<td>M=10.78</td>
<td>SD=4.26</td>
<td>M=10.06</td>
<td>SD=5.53</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>12.6%</td>
<td>15</td>
<td>13.5%</td>
</tr>
</tbody>
</table>
Table 25. SEN subgroups, inclusion class attendance/no inclusion class attendance and LAMP scores.

<table>
<thead>
<tr>
<th>N Total =111</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Interaction effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inclusion cl. attendance n=61  55%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No inclusion cl. attendance n=48  43.2%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SLD</td>
<td>General Learning Difficulties</td>
<td>Other SEN</td>
<td>No Difficulty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inclusion class attendance</td>
<td>No Inclusion class attendance</td>
<td>Inclusion class attendance</td>
<td>No Inclusion class attendance</td>
<td>Inclusion class attendance</td>
<td>No Inclusion class attendance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Total</td>
<td>M=56.62 SD=21.98</td>
<td>M=60.63 SD=19.93</td>
<td>M=58.66 SD=18.28</td>
<td>M= 55.61 SD=15.76</td>
<td>M= 62.90 SD=25.47</td>
<td>M= 9.00 SD=9.10</td>
<td>.95</td>
<td>3, 102</td>
</tr>
<tr>
<td>LAMP Expressive</td>
<td>M=18.13 SD=7.97</td>
<td>M=17.63 SD=6.12</td>
<td>M=17.16 SD=7.19</td>
<td>M= 16.53 SD=4.90</td>
<td>M=19.54 SD=7.63</td>
<td>M=2.68 SD=2.49</td>
<td>.51</td>
<td>3, 102</td>
</tr>
<tr>
<td>LAMP Receptive</td>
<td>M=17.54 SD=6.16</td>
<td>M=18.18 SD=7.52</td>
<td>M=18.16 SD=5.77</td>
<td>M= 17.46 SD=5.22</td>
<td>M=20.63 SD=8.17</td>
<td>M=2.68 SD=2.86</td>
<td>.74</td>
<td>3, 102</td>
</tr>
<tr>
<td>LAMP Behaviour</td>
<td>M= 11.45 SD=5.94</td>
<td>M=13.83 SD=6.02</td>
<td>M=15.27 SD=5.31</td>
<td>M= 12.66 SD=3.55</td>
<td>M=12.07 SD=5.66</td>
<td>M=11.63 SD=5.93</td>
<td>1.39</td>
<td>3, 102</td>
</tr>
<tr>
<td>LAMP Social skills</td>
<td>M= 9.43 SD=5.38</td>
<td>M=10.83 SD=4.34</td>
<td>M= 9.54 SD=3.38</td>
<td>M= 10.66 SD=3.98</td>
<td>M= 9.53 SD=3.97</td>
<td>M=11.09 SD=5.44</td>
<td>.97</td>
<td>3, 102</td>
</tr>
<tr>
<td>Total</td>
<td>37 33.3%</td>
<td>12 10.8%</td>
<td>11 9.9%</td>
<td>6 5.4%</td>
<td>13 11.7%</td>
<td>11 9.9%</td>
<td>19 17.1%</td>
<td></td>
</tr>
</tbody>
</table>

Inclusion class and Types of SEN MANOVA Wilks’ Lambda=.918 df= 3, 102 p=.731 No statistically significant effect
Table 26. SEN subgroups, GAL (Greek as Additional Language)/No GAL and LAMP scores.

<table>
<thead>
<tr>
<th></th>
<th>N Total= 111</th>
<th>SLD n=49 44.1%</th>
<th>General Learning Difficulties n=18 16.2%</th>
<th>Other SEN n=25 22.5%</th>
<th>No Difficulty n=19 17.1%</th>
<th>F</th>
<th>df</th>
<th>Sig</th>
<th>Interaction effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>GAL No GAL</td>
<td>GAL No GAL</td>
<td>GAL No GAL</td>
<td>GAL No GAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Total</td>
<td>GAL</td>
<td>M=47.60 SD=17.65</td>
<td>M=53.2 SD=15.35</td>
<td>M=62.07 SD=19.28</td>
<td>M=63.73 SD=22.98</td>
<td>.27</td>
<td>3,103</td>
<td>.841</td>
<td>GAL and Types of SEN No significant interaction effect (p=.841)</td>
</tr>
<tr>
<td></td>
<td>No GAL</td>
<td>M=62.17 SD=22.45</td>
<td>M=62.07 SD=19.28</td>
<td>M=63.73 SD=22.98</td>
<td>M=7.50 SD=2.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Expressive</td>
<td>GAL</td>
<td>M=15.90 SD=8.35</td>
<td>M=14.60 SD=5.02</td>
<td>M=15.00 SD=4.14</td>
<td>M=18.94 SD=6.55</td>
<td>.07</td>
<td>3,103</td>
<td>.972</td>
<td>Univariate: GAL and Types of SEN No significant interaction effect (p=.972)</td>
</tr>
<tr>
<td></td>
<td>No GAL</td>
<td>M=19.66 SD=7.65</td>
<td>M=18.15 SD=6.55</td>
<td>M=16.16 SD=1.16</td>
<td>M=20.10 SD=7.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Receptive</td>
<td>GAL</td>
<td>M=15.80 SD=6.44</td>
<td>M=17.60 SD=6.02</td>
<td>M=17.60 SD=7.04</td>
<td>M=20.10 SD=7.50</td>
<td>.29</td>
<td>3,103</td>
<td>.827</td>
<td>Univariate: GAL and Types of SEN No significant interaction effect (p=.827)</td>
</tr>
<tr>
<td></td>
<td>No GAL</td>
<td>M=19.12 SD=6.42</td>
<td>M=18.15 SD=7.04</td>
<td>M=16.16 SD=1.16</td>
<td>M=2.00 SD=0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Behaviour</td>
<td>GAL</td>
<td>M=7.40 SD=3.86</td>
<td>M=13.23 SD=5.88</td>
<td>M=15.61 SD=4.95</td>
<td>M=13.21 SD=6.60</td>
<td>.61</td>
<td>3,103</td>
<td>.490</td>
<td>Univariate: GAL and Types of SEN No significant interaction effect (p=.490)</td>
</tr>
<tr>
<td></td>
<td>No GAL</td>
<td>M=12.00 SD=3.53</td>
<td>M=10.00 SD=4.27</td>
<td>M=13.21 SD=6.60</td>
<td>M=2.50 SD=2.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Social skills</td>
<td>GAL</td>
<td>M=8.50 SD=4.24</td>
<td>M=10.10 SD=5.34</td>
<td>M=10.15 SD=3.55</td>
<td>M=11.47 SD=5.07</td>
<td>.38</td>
<td>3,103</td>
<td>.765</td>
<td>Univariate: GAL and Types of SEN No significant interaction effect (p=.765)</td>
</tr>
<tr>
<td></td>
<td>No GAL</td>
<td>M=9.00 SD=3.39</td>
<td>M=7.83 SD=3.18</td>
<td>M=11.47 SD=5.07</td>
<td>M=1.50 SD=1.58</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>10 9%</td>
<td>39 35.1%</td>
<td>13 11.7%</td>
<td>19 17.1%</td>
<td>6</td>
<td>5.4%</td>
<td>19 17.1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>39 35.1%</td>
<td>13 11.7%</td>
<td>6 5.4%</td>
<td>19 17.1%</td>
<td>2</td>
<td>1.8%</td>
<td>17 15.3</td>
<td></td>
</tr>
<tr>
<td>GAL and Types of SEN MANOVA Wilks' Lambda= .920</td>
<td>df= 3, 103</td>
<td>p=.745</td>
<td>No statistically significant effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix T.
Tables from analysis of additional subgroups and LAMP scores without pupils’ differentiation to SEN subgroups

Table 27. Inclusion class attendance/No inclusion class attendance and LAMP scores without SEN subgroups differentiation.

<table>
<thead>
<tr>
<th></th>
<th>Inclusion class attendance</th>
<th>No inclusion class attendance</th>
<th>F</th>
<th>df</th>
<th>Sig (p)</th>
<th>PEsq</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAMP Total</td>
<td>M = 57.13  SD = 20.22</td>
<td>M = 42.10  SD = 32.50</td>
<td>5.03</td>
<td>2,108</td>
<td>.008  p &lt; .01**</td>
<td>.085 or 8.5%</td>
</tr>
<tr>
<td>LAMP Expressive</td>
<td>M = 17.70  SD = 7.04</td>
<td>M = 13.00  SD = 10.26</td>
<td>4.03</td>
<td>2,108</td>
<td>.020  p &lt; .05*</td>
<td>.069 or 6.9%</td>
</tr>
<tr>
<td>LAMP Receptive</td>
<td>M = 17.63  SD = 6.14</td>
<td>M = 13.37  SD = 10.47</td>
<td>3.7</td>
<td>2,108</td>
<td>.026  p &lt; .05*</td>
<td>.066 or 6.6%</td>
</tr>
<tr>
<td>LAMP Behaviour</td>
<td>M = 12.27  SD = 5.86</td>
<td>M = 8.52   SD = 6.96</td>
<td>8.1</td>
<td>2,108</td>
<td>.001  p &lt; .01**</td>
<td>.131 or 13.1%</td>
</tr>
<tr>
<td>LAMP Social skills</td>
<td>M = 9.47   SD = 4.74</td>
<td>M = 7.20   SD = 5.87</td>
<td>3.3</td>
<td>2,108</td>
<td>.039  p &lt; .05*</td>
<td>.058 or 5.8%</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>55%</td>
<td>48</td>
<td>43.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inclusion class</td>
<td>MANOVA Wilks' Lambda=.805 df= 2, 108 p=.003</td>
<td></td>
<td></td>
<td></td>
<td>Statistically significant effect</td>
<td></td>
</tr>
</tbody>
</table>
Table 28. Literacy difficulty/No literacy difficulty and LAMP scores without SEN subgroups differentiation.

<table>
<thead>
<tr>
<th></th>
<th>N Total =111</th>
<th>Literacy difficulty</th>
<th>No Literacy difficulty</th>
<th>F</th>
<th>df</th>
<th>Sig (p)</th>
<th>PEsq</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAMP Total</td>
<td></td>
<td>M = 58.22</td>
<td>M = 26.96</td>
<td>34.0</td>
<td>1,109</td>
<td>.000 p &lt; .01**</td>
<td>.238 or 23.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD = 19.36</td>
<td>SD = 35.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Expressive</td>
<td></td>
<td>M = 17.74</td>
<td>M = 8.76</td>
<td>25.1</td>
<td>1,109</td>
<td>.000 p &lt; .01**</td>
<td>.187 or 18.7%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD = 6.66</td>
<td>SD = 11.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Receptive</td>
<td></td>
<td>M = 18.08</td>
<td>M = 8.50</td>
<td>32.3</td>
<td>1,109</td>
<td>.000 p &lt; .01**</td>
<td>.229 or 22.9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD = 6.01</td>
<td>SD = 11.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Behaviour</td>
<td></td>
<td>M = 12.61</td>
<td>M = 5.03</td>
<td>32.07</td>
<td>1,109</td>
<td>.000 p &lt; .01**</td>
<td>.227 or 22.7%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD = 5.72</td>
<td>SD = 6.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Social skills</td>
<td></td>
<td>M = 9.76</td>
<td>M = 4.65</td>
<td>21.0</td>
<td>1,109</td>
<td>.000 p &lt; .01**</td>
<td>.162 or 16.2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD = 4.53</td>
<td>SD = 6.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>85</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy Difficulty</td>
<td></td>
<td>76.6%</td>
<td>23.4%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MANOVA Wilks' Lambda= .745 df= 1, 109 p=.000

Table 29. Gender and LAMP scores without SEN subgroups differentiation

<table>
<thead>
<tr>
<th></th>
<th>N Total =111</th>
<th>Boys (n=70) 63.1%</th>
<th>Girls (n=41) 36.9%</th>
<th>F</th>
<th>df</th>
<th>Sig p</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAMP Total</td>
<td></td>
<td>M=51.61</td>
<td>M=49.73</td>
<td>.119</td>
<td>1,109</td>
<td>.731 p&gt;.05 NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD=23.69</td>
<td>SD=32.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Expressive</td>
<td></td>
<td>M=15.58</td>
<td>M=15.73</td>
<td>.007</td>
<td>1,109</td>
<td>.933 p&gt;.05 NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD=7.78</td>
<td>SD=10.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Receptive</td>
<td></td>
<td>M=16.20</td>
<td>M=15.21</td>
<td>.34</td>
<td>1,109</td>
<td>.561 p&gt;.05 NS</td>
</tr>
<tr>
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<td></td>
<td>SD=7.51</td>
<td>SD=10.09</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Behaviour</td>
<td></td>
<td>M=11.38</td>
<td>M=9.90</td>
<td>1.2</td>
<td>1,109</td>
<td>.266 p&gt;.05 NS</td>
</tr>
<tr>
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<td>SD=6.40</td>
<td>SD=7.30</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LAMP Social skills</td>
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<td>M=8.41</td>
<td>M=8.82</td>
<td>.15</td>
<td>1,109</td>
<td>.698 p&gt;.05 NS</td>
</tr>
<tr>
<td></td>
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<td>SD=4.75</td>
<td>SD=6.43</td>
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</table>

Gender MANOVA Wilks' Lambda=.926 df= 1, 109 p=.082

No statistically significant effect
Table 30. Year of attendance (i.e. year B, year C, year D and year E) and LAMP scores without SEN subgroups differentiation.

<table>
<thead>
<tr>
<th>N Total =111</th>
<th>Year B</th>
<th>Year C</th>
<th>Year D</th>
<th>Year E</th>
<th>F</th>
<th>df</th>
<th>Sig (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAMP Total</td>
<td>M=51.73 SD=27.04</td>
<td>M=50.53 SD=27.25</td>
<td>M=47.88 SD=29.38</td>
<td>M=53.52 SD=26.65</td>
<td>.18</td>
<td>3,107</td>
<td>.906 p &gt; .05 NS</td>
</tr>
<tr>
<td>LAMP Expressive</td>
<td>M=14.44 SD=8.70</td>
<td>M=16.96 SD=9.15</td>
<td>M=15.38 SD=9.16</td>
<td>M=16.08 SD=8.52</td>
<td>.44</td>
<td>3,107</td>
<td>.725 p &gt; .05 NS</td>
</tr>
<tr>
<td>LAMP Receptive</td>
<td>M=15.58 SD=8.14</td>
<td>M=15.67 SD=8.41</td>
<td>M=15.00 SD=9.16</td>
<td>M=17.34 SD=8.85</td>
<td>.33</td>
<td>3,107</td>
<td>.803 p &gt; .05 NS</td>
</tr>
<tr>
<td>LAMP Behaviour</td>
<td>M=12.97 SD=7.15</td>
<td>M=9.64 SD=6.27</td>
<td>M=9.30 SD=6.86</td>
<td>M=10.86 SD=6.16</td>
<td>1.9</td>
<td>3,107</td>
<td>.132 p &gt; .05 NS</td>
</tr>
<tr>
<td>LAMP Social skills</td>
<td>M=8.73 SD=4.87</td>
<td>M=8.25 SD=5.91</td>
<td>M=8.19 SD=5.74</td>
<td>M=9.13 SD=5.42</td>
<td>.16</td>
<td>3,107</td>
<td>.920 p &gt; .05 NS</td>
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<tr>
<td>Total</td>
<td>34</td>
<td>28</td>
<td>26</td>
<td>23</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Year of attendance</td>
<td>MANOVA Wilks’ Lambda= .765</td>
<td>df= 3, 107</td>
<td>p= .005</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>30.6%</td>
<td>25.2%</td>
<td>23.4%</td>
<td>20.7%</td>
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Table 31. GAL/No GAL and LAMP scores without SEN subgroups differentiation.

<table>
<thead>
<tr>
<th>N Total =111</th>
<th>GAL (n=23) 20.7%</th>
<th>No GAL (n=88) 79.3%</th>
<th>F</th>
<th>df</th>
<th>Sig p</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAMP Total</td>
<td>M=45.69 SD=18.17</td>
<td>M=52.26 SD=29.11</td>
<td>1.05</td>
<td>1,109</td>
<td>.306 p &gt; .05 NS</td>
</tr>
<tr>
<td>LAMP Expressive</td>
<td>M=14.13 SD=7.30</td>
<td>M=16.03 SD=9.17</td>
<td>.84</td>
<td>1,109</td>
<td>.359 p &gt; .05 NS</td>
</tr>
<tr>
<td>LAMP Receptive</td>
<td>M=15.08 SD=6.43</td>
<td>M=16.03 SD=9.012</td>
<td>.22</td>
<td>1,109</td>
<td>.637 p &gt; .05 NS</td>
</tr>
<tr>
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<td>M=8.65 SD=4.47</td>
<td>M=11.40 SD=7.14</td>
<td>3.09</td>
<td>1,109</td>
<td>.081 p &lt; .05 NS</td>
</tr>
<tr>
<td>LAMP Social skills</td>
<td>M=7.82 SD=3.99</td>
<td>M=8.76 SD=5.72</td>
<td>.54</td>
<td>1,109</td>
<td>.463 p &gt; .05 NS</td>
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<tr>
<td>GAL</td>
<td>MANOVA Wilks’ Lambda= .937</td>
<td>df= 1, 109</td>
<td>p=.138</td>
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<tr>
<td></td>
<td>No statistically significant effect</td>
<td></td>
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</tr>
</tbody>
</table>
Appendix U.
Tables from analysis of SEN subgroups, additional subgroups, and performance in LAMP, Athena Test and Matrices

Table 32. Gender and SEN subgroups’ performance in LAMP, Athena Test and Matrices.

<table>
<thead>
<tr>
<th>N Total</th>
<th>SLD</th>
<th>General Learning Difficulty</th>
<th>Other SENs</th>
<th>No Difficulty</th>
<th>F</th>
<th>df</th>
<th>Sig</th>
<th>Interaction effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>LAMP total</td>
<td>M=64.00</td>
<td>M-53.17</td>
<td>SD=23.37</td>
<td>M=44.86</td>
<td>SD=14.08</td>
<td>M=74.50</td>
<td>SD=10.85</td>
<td>M=59.60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>LAMP Expressive</td>
<td>M=20.36</td>
<td>M-16.67</td>
<td>SD=8.01</td>
<td>M=12.71</td>
<td>SD=4.53</td>
<td>M=20.00</td>
<td>SD=3.37</td>
<td>M=19.80</td>
</tr>
<tr>
<td></td>
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<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>LAMP Receptive</td>
<td>M=19.73</td>
<td>M-15.00</td>
<td>SD=6.90</td>
<td>M=13.43</td>
<td>SD=5.82</td>
<td>M=24.50</td>
<td>SD=3.61</td>
<td>M=19.60</td>
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<td>Girls</td>
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<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>LAMP Behaviour</td>
<td>M=14.09</td>
<td>M-10.67</td>
<td>SD=5.82</td>
<td>M=11.29</td>
<td>SD=4.46</td>
<td>M=18.00</td>
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<td>M=13.38</td>
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<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>LAMP Social skills</td>
<td>M=9.83</td>
<td>M-10.83</td>
<td>SD=4.53</td>
<td>M=7.43</td>
<td>SD=1.71</td>
<td>M=12.00</td>
<td>SD=2.82</td>
<td>M=11.00</td>
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<td>Girls</td>
<td>Boys</td>
</tr>
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<td>Language Proportions</td>
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<td>SD=14.44</td>
<td>M=80.29</td>
<td>SD=17.67</td>
<td>M=85.00</td>
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<td>M=102.00</td>
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<td>Boys</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>M=84.82</td>
<td>M-91.83</td>
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<td>M=83.00</td>
<td>SD=23.17</td>
<td>M=85.00</td>
<td>SD=16.60</td>
<td>M=91.60</td>
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<td>Boys</td>
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<tr>
<td>Memory of Numbers</td>
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<td>SD=22.55</td>
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<td>SD=14.71</td>
<td>M=61.00</td>
<td>SD=18.38</td>
<td>M=92.38</td>
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<td>Girls</td>
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<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>Sentence Completion</td>
<td>M=84.82</td>
<td>M-91.00</td>
<td>SD=16.98</td>
<td>M=88.57</td>
<td>SD=25.29</td>
<td>M=90.00</td>
<td>SD=14.56</td>
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<td>Boys</td>
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<tr>
<td>Words Completion</td>
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<td>SD=14.23</td>
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<td>SD=13.25</td>
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<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>Grapheme Discrimination</td>
<td>M=88.18</td>
<td>M-87.83</td>
<td>SD=20.36</td>
<td>M=94.57</td>
<td>SD=27.94</td>
<td>M=85.50</td>
<td>SD=20.30</td>
<td>M=101.00</td>
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<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
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<tr>
<td>Phonetics Discrimination</td>
<td>M=79.09</td>
<td>M-73.17</td>
<td>SD=21.10</td>
<td>M=86.29</td>
<td>SD=24.37</td>
<td>M=77.75</td>
<td>SD=26.09</td>
<td>M=74.20</td>
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<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
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<tr>
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<td>M-83.83</td>
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<td>M=81.14</td>
<td>SD=15.44</td>
<td>M=77.50</td>
<td>SD=10.60</td>
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<tr>
<td>Total</td>
<td>11</td>
<td>24.4%</td>
<td>6</td>
<td>13.3%</td>
<td>7</td>
<td>15.6%</td>
<td>2</td>
<td>4.4%</td>
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</table>
Table 33. GAL/No GAL and SEN subgroups’ performance in LAMP, Athena Test and Matrices.

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<tr>
<th>N Total</th>
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<th>General Learning Difficulty</th>
<th>Other SENs</th>
<th>No Difficulty</th>
<th>F</th>
<th>df</th>
<th>Sig</th>
<th>Interaction effect</th>
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<tbody>
<tr>
<td></td>
<td>GAL</td>
<td>No GAL</td>
<td>GAL</td>
<td>No GAL</td>
<td>GAL</td>
<td>No GAL</td>
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<td>No GAL</td>
</tr>
<tr>
<td>LAMP total</td>
<td>M=42.25</td>
<td>SD=10.96</td>
<td>M=65.69</td>
<td>SD=25.91</td>
<td>M=52.75</td>
<td>SD=11.02</td>
<td>M=50.40</td>
<td>SD=23.34</td>
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<tr>
<td>LAMP Expressive</td>
<td>M=12.50</td>
<td>SD=5.97</td>
<td>M=21.08</td>
<td>SD=9.26</td>
<td>M=15.75</td>
<td>SD=2.63</td>
<td>M=13.20</td>
<td>SD=6.53</td>
</tr>
<tr>
<td>LAMP Receptive</td>
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<td>SD=4.99</td>
<td>M=18.92</td>
<td>SD=7.59</td>
<td>M=17.00</td>
<td>SD=4.69</td>
<td>M=15.00</td>
<td>SD=8.94</td>
</tr>
<tr>
<td>LAMP Behaviour</td>
<td>M=6.75</td>
<td>SD=5.18</td>
<td>M=14.77</td>
<td>SD=5.74</td>
<td>M=12.00</td>
<td>SD=4.54</td>
<td>M=13.40</td>
<td>SD=5.72</td>
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<tr>
<td>LAMP Social skills</td>
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<td>SD=6.02</td>
<td>M=10.92</td>
<td>SD=5.34</td>
<td>M=8.00</td>
<td>SD=1.82</td>
<td>M=8.80</td>
<td>SD=3.42</td>
</tr>
<tr>
<td>Language Proportions</td>
<td>M=103.75</td>
<td>SD=17.87</td>
<td>M=87.38</td>
<td>SD=14.02</td>
<td>M=67.50</td>
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<td>M=87.80</td>
<td>SD=25.82</td>
</tr>
<tr>
<td>Vocabulary</td>
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<td>M=86.31</td>
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<td>M=74.50</td>
<td>SD=14.17</td>
<td>M=90.60</td>
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</tr>
<tr>
<td>Memory of Numbers</td>
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<td>SD=33.009</td>
<td>M=75.69</td>
<td>SD=21.92</td>
<td>M=86.50</td>
<td>SD=11.44</td>
<td>M=73.20</td>
<td>SD=20.58</td>
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<td>M=70.75</td>
<td>SD=2.67</td>
<td>M=83.60</td>
<td>SD=13.08</td>
</tr>
<tr>
<td>Grapheme Discrimination</td>
<td>M=108.00</td>
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<td>SD=20.99</td>
<td>M=85.75</td>
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<td>M=98.00</td>
<td>SD=30.48</td>
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<tr>
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<td>SD=22.81</td>
<td>M=88.25</td>
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</tr>
<tr>
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<td>M=76.92</td>
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<td>13</td>
<td>28.9%</td>
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<td>5</td>
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</tr>
</tbody>
</table>

GAL and Types of SEN MANOVA Wilks’ Lambda=.285 df= 2, 38 p=.043 Statistically significant effect
Table 34. Inclusion class attendance/No inclusion class attendance and SEN subgroups’ performance in LAMP, Athena Test and Matrices.

<table>
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<th>Other SENs</th>
<th>No Difficulty</th>
<th>F</th>
<th>df</th>
<th>Sig</th>
<th>Interaction effect</th>
</tr>
</thead>
<tbody>
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<td>Inclusion class</td>
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<td>No inclusion class</td>
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</tr>
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<td>M=51.20 SD=19.65</td>
<td>M=51.75 SD=18.37</td>
<td>M=61.33 SD=19.40</td>
<td>M=60.00 SD=12.83</td>
<td>M=6.17 SD=1.47</td>
<td>1.20</td>
</tr>
<tr>
<td>LAMP Expressive</td>
<td>M=17.75 SD=9.92</td>
<td>M=22.20 SD=7.19</td>
<td>M=14.60 SD=5.17</td>
<td>M=14.00 SD=5.71</td>
<td>M=19.00 SD=5.32</td>
<td>M=19.14 SD=5.39</td>
<td>M=2.33 SD=8.1</td>
<td>.48</td>
</tr>
<tr>
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<td>M=16.17 SD=6.53</td>
<td>M=22.60 SD=6.95</td>
<td>M=15.20 SD=7.98</td>
<td>M=16.75 SD=6.70</td>
<td>M=18.00 SD=6.35</td>
<td>M=19.43 SD=4.72</td>
<td>M=1.83 SD=7.53</td>
<td>.71</td>
</tr>
<tr>
<td>LAMP Behaviour</td>
<td>M=11.08 SD=6.64</td>
<td>M=17.20 SD=3.76</td>
<td>M=13.40 SD=6.46</td>
<td>M=12.00 SD=2.94</td>
<td>M=13.50 SD=6.74</td>
<td>M=10.57 SD=2.93</td>
<td>M=1.17 SD=4.08</td>
<td>2.90</td>
</tr>
<tr>
<td>LAMP Social skills</td>
<td>M=9.33 SD=6.15</td>
<td>M=12.20 SD=3.03</td>
<td>M=8.00 SD=1.58</td>
<td>M=9.00 SD=3.91</td>
<td>M=10.83 SD=3.86</td>
<td>M=10.86 SD=2.73</td>
<td>M=8.83 SD=7.5</td>
<td>.42</td>
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<tr>
<td>Language Proportions</td>
<td>M=94.75 SD=15.71</td>
<td>M=82.80 SD=15.13</td>
<td>M=86.80 SD=26.00</td>
<td>M=68.75 SD=11.87</td>
<td>M=100.33 SD=24.80</td>
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<tr>
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<td>M=92.42 SD=18.91</td>
<td>M=75.00 SD=19.90</td>
<td>M=92.60 SD=19.34</td>
<td>M=72.00 SD=16.20</td>
<td>M=89.33 SD=15.42</td>
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<td>M=114.50 SD=9.07</td>
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<td>M=70.00 SD=17.60</td>
<td>M=82.00 SD=21.43</td>
<td>M=75.50 SD=13.52</td>
<td>M=83.00 SD=15.42</td>
<td>M=95.00 SD=30.88</td>
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<td>M=78.60 SD=20.65</td>
<td>M=95.00 SD=19.14</td>
<td>M=81.25 SD=25.55</td>
<td>M=94.67 SD=17.51</td>
<td>M=99.00 SD=13.19</td>
<td>M=118.17 SD=5.15</td>
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<td>M=87.00 SD=8.68</td>
<td>M=93.60 SD=33.70</td>
<td>M=91.25 SD=19.63</td>
<td>M=102.17 SD=41.75</td>
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<td>M=120.83 SD=11.68</td>
<td>.004</td>
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<td>M=82.83 SD=16.59</td>
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<td>M=101.86 SD=9.78</td>
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<tr>
<td>Total</td>
<td>12 26.7%</td>
<td>5 11.1%</td>
<td>5 11.1%</td>
<td>4 8.9%</td>
<td>6 13.3%</td>
<td>7 15.6%</td>
<td>6 13.3%</td>
<td>MANOVA Wilks’ Lambda= .504 df= 2, 38 p=.708</td>
</tr>
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</table>
Table 35. Socio-economic Status and SEN subgroups’ performance in LAMP, Athena Test and Matrices.

<table>
<thead>
<tr>
<th>Type</th>
<th>N Total</th>
<th>SLD Low</th>
<th>SLD Medium/Average</th>
<th>General Learning Difficulty Low</th>
<th>General Learning Difficulty Medium/Average</th>
<th>Other SENs Low</th>
<th>Other SENs Medium/Average</th>
<th>No Difficulty Low</th>
<th>No Difficulty Medium/Average</th>
<th>F</th>
<th>df</th>
<th>Sig</th>
<th>Interaction effect</th>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td>36-200</td>
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<td></td>
<td>46</td>
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<td>1.5-1.0</td>
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<td>.37</td>
<td>35</td>
<td>.827</td>
<td>significant interaction effect (p=.827)</td>
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<tr>
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<td>1.5-1.0</td>
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<td>1.5-1.0</td>
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<td>6-15</td>
<td>3-15</td>
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</tr>
<tr>
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<td>45</td>
<td>45-100</td>
<td>36-200</td>
<td>18-100</td>
<td>9-50</td>
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<td>.86</td>
<td>35</td>
<td>.498</td>
<td>significant interaction effect (p=.498)</td>
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</tbody>
</table>

Types of SEN and SES / socio-economic status

MANOVA Wilks’ Lambda= .110 df= 4, 35 p = .106
No statistically significant effect
### Table 3: Year of attendance (i.e. year B, year C, year D and year E) and SEN subgroups' performance in LAMP, Athena Test and Matrices.

<table>
<thead>
<tr>
<th>N Total</th>
<th>45</th>
<th>SLD</th>
<th>General Learning Difficulty</th>
<th>Other SEN</th>
<th>No Difficulty</th>
<th>F</th>
<th>df</th>
<th>Sig</th>
<th>Interaction effect</th>
</tr>
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<tbody>
<tr>
<td>Year B</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Year D</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LAMP Total**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**LAMP Expressive**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**LAMP Receptive**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**LAMP Behaviour**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**LAMP Social Skills**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**Language Proportions**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**Vocabulary**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**Memory of Numbers**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**Sentence Completion**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**Words Completion**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**Grapheme Discrimination**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**Phonetics Discrimination**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**Matrices BASI**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**Total**

| Year B  |    |     |                               |           |               |   |     |      |                   |
| Year C  |    |     |                               |           |               |   |     |      |                   |
| Year D  |    |     |                               |           |               |   |     |      |                   |
| Year E  |    |     |                               |           |               |   |     |      |                   |

**Year of attendance and Types of SEN**

MANDAVA Wilke Lambert .03 df = 7, 31 p = .523

No statistically significant effect
Table 37. Common sequences and Perception of right/left subscales’ cross-tabs analysis for SEN subgroups and gender, GAL, year of attendance, inclusion class
attendance, literacy difficulty and SES.
Common sequences for Days/Months
N total = 45

n

Common sequences for Counting

Perception of right/left

Efficient
performance

Not efficient
performance

Efficient
performance

Not efficient
performance

Efficient
perception

Not efficient
perception

1

n=11

40.7%

7

63.6%

4

36.4%

3

27.3%

8

72.7%

5

45.5%

6

54.5%

1

n=6

33.3%

3

50%

3

50%

1

16.7%

5

83.3%

2

33.3%

4

66.7%

2

n=7

25.9%

3

42.9%

4

57.1%

4

57.1%

3

42.9%

5

71.4%

2

28.6%

SLD males
SLD females
GLD males
2

GLD females

n=2

11.1%

1

50%

1

50%

0

2

100%

2

100%

0

3

n=8

29.6%

4

50%

4

50%

3

37.5%

5

62.5%

4

50%

4

50%

3

Other SEN females

n=5

27.8%

3

60%

2

40%

1

20%

4

80%

3

60%

2

40%

No Difficulty males

n=1

3.7%

1

100%

0

1

100%

0

1

100%

0

No Difficulty females

n=5

27.8%

5

100%

0

5

100%

0

5

100%

0

n=4

40%

3

75%

1

25%

2

50%

2

50%

2

50%

2

50%

n=13

37.1%

7

53.8%

6

46.2%

2

15.4%

11

84.6%

5

38.5%

8

61.5%

GLD GAL

n=4

40%

2

50%

2

50%

3

75%

1

25%

3

75%

1

25%

2

n=5

14.3%

2

40%

3

60%

1

20%

4

80%

4

80%

1

20%

n=2

20%

0

2

100%

2

100%

0

1

50%

1

50%

n=11

31.4%

7

4

36.4%

2

18.2%

9

6

54.5%

5

45.5%

Other SEN males

1

4

SLD GAL
1

4

SLD No GAL
2

4

GLD no GAL
3

4

Other SEN GAL
3

4

Other SEN no GAL
4

No Difficulty GAL

n=0
4

No Difficulty no GAL
1

SLD year B
2

GLD year B

63.6%

0

0

n=6

17.1%

6

100%

0

n=7

53.8%

3

42.9%

4

57.1%

0

50%

1

n=4

30.8%

2

50%

2

Other SEN year B

n=2

15.4%

2

100%

0

No Difficulty year B

n=0

3

1

SLD year C

0
36.4%

3

n=2

18.2%

0

Other SEN year C

n=2

18.2%

1

50%

No Difficulty year C

n=3

27.3%

3

100%

1

n=4

30.8%

3

75%

1

2

n=3

23.1%

2

66.7%

1

Other SEN year D

n=4

30.8%

0

4

No Difficulty year D

n=2

15.4%

2

100%

0

1

n=2

25%

1

50%

1

2

n=0

GLD year C
3

SLD year D
GLD year D
3

SLD year E
GLD year E
3

75%

0

1

2

100%

0

1

50%

0

62.5%

4

80%

1

n=1

12.5%

1

100%

0

1

n=12

52.2%

6

50%

6

1

n=5

22.7%

4

80%

2

n=5

21.7%

3

60%

n=4

18.2%

1

n=6

26.1%

4

Other SEN no inclusion class
attendance

n=7

31.8%

3

No Difficulty inclusion class attendance

n=0

No Difficulty no inclusion class
attendance

n=6

27.3%

6

1

n=17

43.6%

10

1

n=0

2

n=9

SLD no inclusion class attendance
GLD inclusion class attendance
2

GLD no inclusion class attendance
3

Other SEN inclusion class attendance

25%

6

100%

0

100%

2

28.6%

5

71.4%

3

75%

3

75%

1

25%

2

100%

1

50%

1

50%

0
25%

0

0

3

75%

2

50%

2

50%

2

100%

1

50%

1

50%

2

100%

2

100%

0

3

100%

0

2

50%

2

3

100%

0

0

25%

3

75%

1

33.3%

3

100%

0

100%

1

25%

3

2

100%

0

20%

0

7

100%

50%

0

0

3

0

n=5

100%

0
25%

No Difficulty year E

0

0

1

Other SEN year E

SLD inclusion class attendance

6

0

n=4

2

0

81.8%

0

2

0

0

3

60%

2

1

100%

0

50%

3

25%

9

1

20%

1

20%

2

40%

3

60%

25%

3

75%

1

25%

66.7%

2

33.3%

0

42.9%

4

57.1%

4

25%

75%

100%

0

4

2

100%

0

1

50%

1

0
40%

50 %

100%

50%

0

4

80%

1

1

100%

0

20%

75%

5

41.7%

7

58.3%

4

80%

2

40%

3

60%

2

40%

4

80%

1

20%

3

75%

3

75%

1

25%

6

100%

4

66.7%

2

33.3%

3

42.9%

3

42.9%

4

57.1%

3

SLD literacy difficulty
SLD no literacy difficulty
GLD literacy difficulty
2

GLD no literacy difficulty

0

0

0

100%

0

6

58.8%

7

4

0
23.1%

n=0

4

0
44.4%

5

0

n=13

3

Other SEN no literacy difficulty

n=0

No Difficulty literacy difficulty

n=0

No Difficulty no literacy difficulty

n=6

100%

6

100%

n=3

27.3%

2

66.7%

1

n=14

45.2%

8

57.1%

6

1

SLD low SES

5

1

SLD medium SES
1

SLD high SES
2

GLD low SES

5

5

2
2

GLD high SES
3

5

5

Other SEN low SES

5

3

Other SEN medium SES
3

Other SEN high SES
No Difficulty low SES

5

5

5

No Difficulty medium SES
No Difficulty high SES
1

5

5

7

53.8%

6

0
0

n=0

5

GLD medium SES

33.3%

0

0

0

100%

0

6

100%

0

23.5 %

13

7

41.2%

10

0
55.6%

0

3

Other SEN literacy difficulty

41.2%

57.1%

4

0
44.4%

0
46.2%

4

5

0
55.6%

0
30.8%

9

0

0

0

0

0

6

100%

33.3%

1

33.3%

2

42.9%

3

21.4%

11

0

76.5%

0

0

0

7

77.8%

0
69.2%

2

53.8%

6

0

0

0

0

6

100%

66.7%

1

33.3%

2

66.7%

78.6%

6

42.9%

8

57.1%

0

0
0

0

0

27.3%

2

66.7%

1

33.3%

2

66.7%

1

33.3%

3

100%

0

16.1%

2

40%

3

60%

2

40%

3

60%

3

60%

2

n=1

33.3%

0

1

100%

0

1

100%

1

100%

0

n=2

18.2%

0

2

100%

1

50%

1

50%

0

n=9

29%

6

66.7%

3

33.3%

2

22.2%

7

77.8%

5

n=2

66.7%

1

100%

1

50%

1

50%

1

50%

2

n=3

27.3%

3

100%

0

3

100%

0

n=3

9.7%

3

100%

0

3

100%

0

0

0

0

0

0
3

4

46.2%

0

n=5

2

22.2%

0

7

n=3

n=0

58.8%

40%

2

100%

55.6%

4

44.4%

100%

0

3

100%

0

3

100%

0
0

5

NOTES: SLD = Speech and Language Disorders. GLD= General Learning Difficulties. Other SEN includes ADHD, EBD etc. GAL = Greek as Additional Language. SES = Socio-economic Status.

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### Appendix V.

**Tables from analysis of additional subgroups, and performance in LAMP, Athena Test and Matrices without pupils’ differentiation to SEN subgroups**

Table 38. Gender, Athena Test, Matrices and LAMP scores without SEN subgroups differentiation.

<table>
<thead>
<tr>
<th>1st Phase</th>
<th>Boys</th>
<th>Girls</th>
<th>F</th>
<th>df</th>
<th>Sig (p)</th>
<th>PEsq</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LAMP total</strong></td>
<td>M = 56.00 SD = 21.46</td>
<td>M = 44.39 SD = 31.43</td>
<td>2.1</td>
<td>1,43</td>
<td>.14 p &gt; .05 NS</td>
<td></td>
</tr>
<tr>
<td><strong>LAMP Expressive</strong></td>
<td>M = 17.15 SD = 7.27</td>
<td>M = 14.00 SD = 10.38</td>
<td>1.4</td>
<td>1,43</td>
<td>.23 p &gt; .05 NS</td>
<td></td>
</tr>
<tr>
<td><strong>LAMP Receptive</strong></td>
<td>M = 17.00 SD = 6.73</td>
<td>M = 13.67 SD = 9.76</td>
<td>1.8</td>
<td>1,43</td>
<td>.18 p &gt; .05 NS</td>
<td></td>
</tr>
<tr>
<td><strong>LAMP Behaviour</strong></td>
<td>M = 12.67 SD = 5.64</td>
<td>M = 8.56 SD = 7.06</td>
<td>4.6</td>
<td>1,43</td>
<td>.036 p &lt; .05*</td>
<td>.098 or 9.8%</td>
</tr>
<tr>
<td><strong>LAMP Social skills</strong></td>
<td>M = 9.19 SD = 4.01</td>
<td>M = 8.17 SD = 6.42</td>
<td>.43</td>
<td>1,43</td>
<td>.51 p &gt; .05 NS</td>
<td></td>
</tr>
<tr>
<td><strong>Language Proportions</strong></td>
<td>M = 87.26 SD = 18.58</td>
<td>M = 101.06 SD = 23.56</td>
<td>4.7</td>
<td>1,43</td>
<td>.034 p &lt; .05*</td>
<td>.100 or 10%</td>
</tr>
<tr>
<td><strong>Vocabulary</strong></td>
<td>M = 86.70 SD = 21.77</td>
<td>M = 97.22 SD = 15.44</td>
<td>3.1</td>
<td>1,43</td>
<td>.084 p &gt; .05 NS</td>
<td></td>
</tr>
<tr>
<td><strong>Memory of Numbers</strong></td>
<td>M = 85.78 SD = 23.11</td>
<td>M = 88.17 SD = 26.91</td>
<td>.101</td>
<td>1,43</td>
<td>.75 p &gt; .05 NS</td>
<td></td>
</tr>
<tr>
<td><strong>Sentence Completion</strong></td>
<td>M = 89.15 SD = 19.03</td>
<td>M = 102.33 SD = 18.26</td>
<td>5.3</td>
<td>1,43</td>
<td>.02 p &lt; .05*</td>
<td>.111 or 11.1%</td>
</tr>
<tr>
<td><strong>Words Completion</strong></td>
<td>M = 80.00 SD = 12.90</td>
<td>M = 96.00 SD = 24.37</td>
<td>8.24</td>
<td>1,43</td>
<td>.006 p &lt; .01**</td>
<td>.161 or 16.1%</td>
</tr>
<tr>
<td><strong>Grapheme Discrimination</strong></td>
<td>M = 94.56 SD = 25.55</td>
<td>M = 101.50 SD = 27.30</td>
<td>.75</td>
<td>1,43</td>
<td>.390 p &gt; .05 NS</td>
<td></td>
</tr>
<tr>
<td><strong>Phonetics Discrimination</strong></td>
<td>M = 82.07 SD = 23.69</td>
<td>M = 89.22 SD = 34.61</td>
<td>.67</td>
<td>1,43</td>
<td>.415 p &gt; .05 NS</td>
<td></td>
</tr>
<tr>
<td><strong>Phonetics Completion</strong></td>
<td>M = 83.37 SD = 20.27</td>
<td>M = 95.67 SD = 22.97</td>
<td>3.57</td>
<td>1,43</td>
<td>.066 p &gt; .05 NS</td>
<td></td>
</tr>
<tr>
<td><strong>Matrices BASII</strong></td>
<td>M = 99.37 SD = 15.99</td>
<td>M = 110.78 SD = 36.00</td>
<td>2.1</td>
<td>1,43</td>
<td>.154 p &gt; .05 NS</td>
<td></td>
</tr>
<tr>
<td><strong>N Total = 45</strong></td>
<td>27</td>
<td>18</td>
<td>60%</td>
<td>40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>MANOVA Wilks’ Lambda = .531 df = 1, 43 p = .044</td>
<td></td>
<td></td>
<td></td>
<td>Statistical significant effect</td>
<td></td>
</tr>
</tbody>
</table>
Table 39. GAL/No GAL, Athena Test, Matrices and LAMP scores without SEN subgroups differentiation.

<table>
<thead>
<tr>
<th></th>
<th>GAL</th>
<th>No GAL</th>
<th>F</th>
<th>df</th>
<th>Sig</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N Total =45</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LAMP total</strong></td>
<td>M= 50.60</td>
<td>M= 51.57</td>
<td>.01</td>
<td>1.43</td>
<td>.91</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>LAMP Expressive</strong></td>
<td>M= 15.10</td>
<td>M= 16.11</td>
<td>.10</td>
<td>1.43</td>
<td>.74</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>LAMP Receptive</strong></td>
<td>M= 16.80</td>
<td>M= 15.34</td>
<td>.24</td>
<td>1.43</td>
<td>.62</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>LAMP Behaviour</strong></td>
<td>M= 10.00</td>
<td>M= 11.31</td>
<td>.31</td>
<td>1.43</td>
<td>.57</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>LAMP Social skills</strong></td>
<td>M= 8.70</td>
<td>M= 8.80</td>
<td>.003</td>
<td>1.43</td>
<td>.95</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Language Proportions</strong></td>
<td>M= 87.70</td>
<td>M= 94.23</td>
<td>.70</td>
<td>1.43</td>
<td>.405</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Vocabulary</strong></td>
<td>M= 87.00</td>
<td>M= 92.03</td>
<td>.48</td>
<td>1.43</td>
<td>.48</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Memory of Numbers</strong></td>
<td>M= 94.00</td>
<td>M= 84.66</td>
<td>1.14</td>
<td>1.43</td>
<td>.29</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Sentence Completion</strong></td>
<td>M= 87.30</td>
<td>M= 96.46</td>
<td>1.71</td>
<td>1.43</td>
<td>.19</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Words Completion</strong></td>
<td>M= 78.20</td>
<td>M= 88.74</td>
<td>2.27</td>
<td>1.43</td>
<td>.13</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Grapheme Discrimination</strong></td>
<td>M= 97.70</td>
<td>M= 97.23</td>
<td>.002</td>
<td>1.43</td>
<td>.96</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Phonetics Discrimination</strong></td>
<td>M= 83.00</td>
<td>M= 85.49</td>
<td>.05</td>
<td>1.43</td>
<td>.81</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Phonetics Completion</strong></td>
<td>M= 89.40</td>
<td>M= 87.97</td>
<td>.03</td>
<td>1.43</td>
<td>.85</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Matrices BAS II</strong></td>
<td>M= 108.30</td>
<td>M= 102.69</td>
<td>.35</td>
<td>1.43</td>
<td>.55</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>10</td>
<td>35</td>
<td>22.2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MANOVA Wilks' Lambda= .534 df= 1, 43  p= .046
Statistically significant effect
Table 40. Inclusion class attendance/No inclusion class attendance, Athena Test, Matrices and LAMP scores without SEN subgroups differentiation.

<table>
<thead>
<tr>
<th></th>
<th>Inclusion class attendance</th>
<th>No Inclusion class attendance</th>
<th>F</th>
<th>df</th>
<th>Sig (p)</th>
<th>PEsq</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LAMP total</strong></td>
<td>M=55.48 SD=22.44</td>
<td>M=47.05 SD=29.56</td>
<td>1.1</td>
<td>1,43</td>
<td>.286</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>LAMP Expressive</strong></td>
<td>M=17.39 SD=7.94</td>
<td>M=14.32 SD=9.30</td>
<td>1.4</td>
<td>1,43</td>
<td>.239</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>LAMP Receptive</strong></td>
<td>M=16.43 SD=6.57</td>
<td>M=14.86 SD=9.61</td>
<td>.41</td>
<td>1,43</td>
<td>.524</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>LAMP Behaviour</strong></td>
<td>M=12.22 SD=6.43</td>
<td>M=9.77 SD=6.47</td>
<td>1.6</td>
<td>1,43</td>
<td>.211</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>LAMP Social skills</strong></td>
<td>M=9.43 SD=4.87</td>
<td>M=8.09 SD=5.29</td>
<td>.786</td>
<td>1,43</td>
<td>.380</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Language Proportions</strong></td>
<td>M=94.48 SD=20.22</td>
<td>M=91.00 SD=23.24</td>
<td>.28</td>
<td>1,43</td>
<td>.595</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Vocabulary</strong></td>
<td>M=91.65 SD=17.40</td>
<td>M=90.14 SD=22.77</td>
<td>.063</td>
<td>1,43</td>
<td>.803</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Memory of Numbers</strong></td>
<td>M=81.78 SD=21.10</td>
<td>M=91.91 SD=27.01</td>
<td>1.9</td>
<td>1,43</td>
<td>.167</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Sentence Completion</strong></td>
<td>M=92.57 SD=17.28</td>
<td>M=96.36 SD=22.07</td>
<td>.41</td>
<td>1,43</td>
<td>.523</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Words Completion</strong></td>
<td>M=82.87 SD=17.41</td>
<td>M=90.09 SD=21.75</td>
<td>1.51</td>
<td>1,43</td>
<td>.225</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Grapheme Discrimination</strong></td>
<td>M=93.17 SD=31.48</td>
<td>M=101.68 SD=18.95</td>
<td>1.19</td>
<td>1,43</td>
<td>.281</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Phonetics Discrimination</strong></td>
<td>M=78.39 SD=26.05</td>
<td>M=91.77 SD=29.73</td>
<td>2.5</td>
<td>1,43</td>
<td>.115</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Phonetics Completion</strong></td>
<td>M=80.35 SD=17.88</td>
<td>M=96.59 SD=23.18</td>
<td>6.9</td>
<td>1,43</td>
<td>.012</td>
<td>p&lt;.05*</td>
</tr>
<tr>
<td><strong>Matrices BASII</strong></td>
<td>M=103.48 SD=32.80</td>
<td>M=104.41 SD=17.45</td>
<td>0.04</td>
<td>1,43</td>
<td>.907</td>
<td>p&gt;.05 NS</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>23</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inclusion class</strong></td>
<td>51.1%</td>
<td>48.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MANOVA Wilks’ Lambda= .579 df= 1, 43  p=.103
No statistically significant effect
Table 41. Socio-economic Status, Athena Test, Matrices and LAMP scores without SEN subgroups differentiation.

<table>
<thead>
<tr>
<th></th>
<th>SES High</th>
<th>SES Medium/Average</th>
<th>SES Low</th>
<th>F</th>
<th>df</th>
<th>Sig p</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>n=8</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>17.8%</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Year E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=8</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>17.8%</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Literacy difficulty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=39</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>86.7%</td>
<td>53.8%</td>
<td>46.2%</td>
</tr>
<tr>
<td>n=6</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>13.3%</td>
<td>100%</td>
<td>0</td>
</tr>
<tr>
<td>Inclusion class attendance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=23</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>51.1%</td>
<td>56.5%</td>
<td>43.5%</td>
</tr>
<tr>
<td>n=22</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>48.9%</td>
<td>63.6%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Low SES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=11</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>24.4%</td>
<td>63.6%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Medium/Average SES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=31</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td>68.9%</td>
<td>61.3%</td>
<td>38.7%</td>
</tr>
<tr>
<td>High SES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6.7%</td>
<td>33.3%</td>
<td>66.7%</td>
</tr>
</tbody>
</table>

NOTES: 1 GAL = Greek as Additional Language. 2 SES = Socio-economic Status.
<table>
<thead>
<tr>
<th>Speech/language and literacy Aspects/areas of difficulty</th>
<th>SLD Diagnosed</th>
<th>SLD Not Diagnosed</th>
<th>General Learning Difficulties Diagnosed</th>
<th>Specific Writing difficulties Not Diagnosed</th>
</tr>
</thead>
<tbody>
<tr>
<td>-LAMP total score top 10% of concern scores</td>
<td>Nick, Helen, Jim</td>
<td>Simon , Steven</td>
<td>John</td>
<td>George</td>
</tr>
<tr>
<td>-LAMP total score top 20% of concern scores</td>
<td></td>
<td>Simon , Steven</td>
<td>John</td>
<td>George</td>
</tr>
<tr>
<td>-Difficulty with expressive and receptive language skills</td>
<td></td>
<td>Nick, Helen, Jim</td>
<td>Simon, John</td>
<td>George</td>
</tr>
<tr>
<td>-Expressive language delays</td>
<td></td>
<td>Nick, Helen, Jim</td>
<td>John</td>
<td>George</td>
</tr>
<tr>
<td>-Poor phonological awareness</td>
<td></td>
<td>Nick, Helen, Jim</td>
<td>Steven, Simon</td>
<td>George</td>
</tr>
<tr>
<td>-Lack of semantic knowledge</td>
<td></td>
<td>Nick, Helen, Jim</td>
<td>Steven, Simon</td>
<td>George</td>
</tr>
<tr>
<td>-Difficulties with short-term memory skills &amp; processing skills</td>
<td>Nick, Jim</td>
<td>Simon</td>
<td>John</td>
<td>George</td>
</tr>
<tr>
<td>-Processing information difficulty</td>
<td></td>
<td>Helen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Articulation problems</td>
<td></td>
<td>Nick, Helen, Jim</td>
<td>George</td>
<td></td>
</tr>
<tr>
<td>-Limited vocabulary</td>
<td></td>
<td>Nick, Helen, Jim</td>
<td>Steven, Simon</td>
<td></td>
</tr>
<tr>
<td>-Not age appropriate structure of sentences (grammatically and/or syntactically) in oral language</td>
<td>Nick, Helen, Jim</td>
<td>Steven, Simon</td>
<td>John</td>
<td>George</td>
</tr>
<tr>
<td>-Text comprehension difficulty (not answer to text/taught material related questions in oral and/or written language)</td>
<td>Nick, Helen, Jim</td>
<td>Steven, Simon</td>
<td>John</td>
<td>George</td>
</tr>
<tr>
<td>-Difficulty in understanding and following instructions</td>
<td></td>
<td>Jim</td>
<td>Steven, Simon</td>
<td></td>
</tr>
<tr>
<td>-Struggle to initiate a conversation or maintain to a joint topic of conversation*</td>
<td></td>
<td>Steven</td>
<td>John</td>
<td></td>
</tr>
<tr>
<td>-Below age non-verbal reasoning ability</td>
<td></td>
<td>Nick, Helen, Jim</td>
<td>Steven</td>
<td></td>
</tr>
<tr>
<td>-Difficulty with spelling, writing (not appropriate grammatical/syntactic structure and coherent meaning) and reading skills</td>
<td>Nick, Helen</td>
<td>Steven</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Difficulty with writing (not appropriate grammatical/syntactic structure) and reading skills</td>
<td>Jim</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Difficulty with spelling and writing (not appropriate grammatical/syntactic structure and coherent meaning) skills</td>
<td></td>
<td></td>
<td>John</td>
<td>George</td>
</tr>
<tr>
<td>-Difficulty mostly with writing skills (short sentences that lacked coherent meaning)</td>
<td></td>
<td>Simon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Slight difficulty with reading skills</td>
<td></td>
<td>Nick</td>
<td>Simon</td>
<td>George</td>
</tr>
<tr>
<td>-Illegible or not age appropriate handwriting</td>
<td>Helen, Jim</td>
<td>John</td>
<td>George</td>
<td></td>
</tr>
<tr>
<td>-Difficulty with maths</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix X.

#### RQ2 Summary of findings table

Table 44. Summary table of RQ2 findings.

<table>
<thead>
<tr>
<th>Support – Teaching and Learning practices</th>
<th>Officially Diagnosed with SLD</th>
<th>Not officially Diagnosed with SLD</th>
<th>Officially Diagnosed with General Learning Difficulties</th>
<th>Not officially Diagnosed with Specific Writing difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to follow the mainstream classroom’s teaching and learning pace</td>
<td>Nick</td>
<td>Helen</td>
<td>Jim</td>
<td>Simon</td>
</tr>
<tr>
<td>Did not respond efficiently to the classroom’s learning demands</td>
<td>Could not follow the pace of the teaching process.</td>
<td>It was difficult for him to follow the teaching pace and needed more time.</td>
<td>Followed the pace of teaching, either when doing tasks or listening and attending his teacher providing new teaching material.</td>
<td>Rather unable to follow the pace of teaching at all times or comprehend the provided teaching material.</td>
</tr>
<tr>
<td>Mainstream classroom’s ‘specialised’ practices</td>
<td>More time when doing assignments</td>
<td>Teacher’s one to one help/guidance when doing tasks</td>
<td>More time when doing assignments</td>
<td>More time when doing assignments</td>
</tr>
<tr>
<td>Inclusion class attendance</td>
<td>2nd year of attendance - 3 hours a week</td>
<td>2nd year of attendance - 3 hours a week</td>
<td>Did not attend an inclusion class or receive any further support outside the school.</td>
<td>2nd year of attendance - 3 hours a week</td>
</tr>
<tr>
<td>Inclusion class focus of support</td>
<td>Production and development of oral language, syntactic structure of texts and text understanding</td>
<td>Production and development of oral language (improvement of vocabulary or appropriate syntactic structure of sentences), as well as the improvement of his written language (segmentation of words into phonemes, composition of sentences with words from the curriculum or text understanding).</td>
<td>Areas of language, literacy and maths. Specifically they persisted on certain, problematic areas for him (e.g., distinguishing diphthongs, using proper conjugations in oral and written language or forming sentences with proper syntactic structure).</td>
<td>Certain aspects of literacy such as tasks related to spelling, appropriate grammatical and syntactic composition of sentences, texts reading and comprehension and maths.</td>
</tr>
<tr>
<td>Inclusion class’ SEN teachers’ teaching practices</td>
<td>- Individual tasks or pair work</td>
<td>- Provided examples</td>
<td>- Correct answers’ praise</td>
<td>- Individual tasks or pair work</td>
</tr>
<tr>
<td>IEP or similar teaching/progress plan</td>
<td>IEP set at the beginning of the school year and organised by both teachers, including literacy and maths curriculum based goals adjusted to his speech/language and literacy difficulties.</td>
<td>IEP organised by the SEN teacher, developed and reviewed regularly by both teachers. It included academic (i.e. literacy and maths) curriculum based goals tailored according to her difficulties and social goals following KEDDY recommendations. Additionally, a confidential evaluation of her progress was prepared by her SEN teacher for the KEDDY at the end of the school year.</td>
<td>IEP developed jointly by both teachers and reviewed regularly. It involved literacy and maths curriculum based goals and problematic areas that both teachers needed to work with him, while it had also the role of an informal progress record.</td>
<td>No IEP or similar teaching/progress plan.</td>
</tr>
</tbody>
</table>
## Appendix Y.

### RQ3 Summary of findings table

Table 45. Summary table of RQ3 findings.

<table>
<thead>
<tr>
<th>Academic attainments / improvements and drawbacks</th>
<th>Officially Diagnosed with SLD</th>
<th>Not officially Diagnosed with SLD</th>
<th>Officially Diagnosed with Specific Learning Difficulties</th>
<th>Not officially Diagnosed with Specific Learning Difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nick</td>
<td>Helen</td>
<td>Jim</td>
<td>Simon</td>
<td>Steven</td>
</tr>
<tr>
<td>Helen</td>
<td>Jim</td>
<td>Simon</td>
<td>Steven</td>
<td>John</td>
</tr>
<tr>
<td>Spelling, grammatical and syntactical tasks (literacy textbook) of the year she attended or related handouts.</td>
<td>Previous year curriculum learning goals, everyday grammar tasks and repetitive grammatical and syntactical tasks.</td>
<td>No inclusion class attendance.</td>
<td>No inclusion class attendance.</td>
<td>Curriculum based informal tasks (that assessed both his oral and written language skills) and computer assignments.</td>
</tr>
<tr>
<td>Jim</td>
<td>Simon</td>
<td>Steven</td>
<td>John</td>
<td>George</td>
</tr>
<tr>
<td>His IEP constituted an informal progress record.</td>
<td>Official record of his speech/language and literacy progress-First school term grade 'C' (i.e. Good).</td>
<td>No official documentation of his attainments and progress.</td>
<td>Official record of his speech/language and literacy progress-First school term grade 'C' (i.e. Good).</td>
<td>The annual confidential evaluation for the healthcare service and KEDDY constituted an official progress record.</td>
</tr>
<tr>
<td>Helen</td>
<td>Jim</td>
<td>Simon</td>
<td>Steven</td>
<td>John</td>
</tr>
<tr>
<td>Articulation problems, difficulty in finding the right words, grammatical errors in oral language, difficulties with text comprehension, spelling, writing, reading tasks (slight stammering) and handwriting.</td>
<td>Articulation problems with certain speech sounds, difficulty in finding the right words, grammatical errors in oral language, difficulty in understanding the chronological series of events, difficulties with text comprehension, spelling, writing, reading tasks (slight stammering), could not understand the metaphorical sense of sentences.</td>
<td>No grammatical errors in oral language but relied solely in short sentences with simple structure, slight difficulty in answering to questions related to the taught material, needed more time when doing tasks, poor and incomplete structure of sentences in writing tasks, lack of age appropriate vocabulary, slightly illegible handwriting.</td>
<td>Difficulty in finding the right words, grammatical and syntactical errors in oral language, strong reliance on short sentences with simple structure, difficulty to follow teacher’s verbal instructions or answer to tasks related questions, struggled to keep to a joint topic of conversation in group tasks, difficulties in spelling and writing tasks and slight stammering when reading.</td>
<td>Slight articulation problems with certain speech sounds, grammatical errors in oral language, slightly illegible handwriting skills, difficulties in spelling and writing.</td>
</tr>
<tr>
<td>Articulation problems, difficulty in finding the right words, grammatical errors in oral language, difficulties with text comprehension, spelling, writing, reading tasks (slight stammering) and handwriting.</td>
<td>Articulation problems with certain speech sounds, difficulty in finding the right words, grammatical errors in oral language, difficulty in understanding the chronological series of events, difficulties with text comprehension, spelling, writing, reading tasks (slight stammering), could not understand the metaphorical sense of sentences.</td>
<td>No grammatical errors in oral language but relied solely in short sentences with simple structure, slight difficulty in answering to questions related to the taught material, needed more time when doing tasks, poor and incomplete structure of sentences in writing tasks, lack of age appropriate vocabulary, slightly illegible handwriting.</td>
<td>Difficulty in finding the right words, grammatical and syntactical errors in oral language, strong reliance on short sentences with simple structure, difficulty to follow teacher’s verbal instructions or answer to tasks related questions, struggled to keep to a joint topic of conversation in group tasks, difficulties in spelling and writing tasks and slight stammering when reading.</td>
<td>Slight articulation problems with certain speech sounds, grammatical errors in oral language, slightly illegible handwriting skills, difficulties in spelling and writing.</td>
</tr>
<tr>
<td>John</td>
<td>Helen</td>
<td>Jim</td>
<td>Simon</td>
<td>Steven</td>
</tr>
<tr>
<td>Officially Diagnosed with Specific Learning Difficulties</td>
<td>Not officially Diagnosed with Specific Learning Difficulties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Official record of his speech/language and literacy progress-First school term grade 'C' (i.e. Good).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Official record of his speech/language and literacy progress-First school term grade 'C' (i.e. Good).</td>
<td>Official record of his speech/language and literacy progress-First school term grade 'C' (i.e. Good).</td>
<td>The annual confidential evaluation for the health service and KEDDY constituted an official progress record.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Official record of his speech/language and literacy progress-First school term grade 'C' (i.e. Good).</td>
<td>Official record of his speech/language and literacy progress-First school term grade 'C' (i.e. Good).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Official record of his speech/language and literacy progress-First school term grade 'C' (i.e. Good).</td>
<td>Official record of his speech/language and literacy progress-First school term grade 'C' (i.e. Good).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Official record of his speech/language and literacy progress-First school term grade 'C' (i.e. Good).</td>
<td>Official record of his speech/language and literacy progress-First school term grade 'C' (i.e. Good).</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Weaknesses

- **Articulation problems:** Difficulty in finding the right words, grammatical errors in oral language, difficulties with text comprehension, spelling, writing, reading tasks (slight stammering) and handwriting.
- **Articulation problems:** Difficulty in finding the right words, grammatical errors in oral language, difficulty in understanding the chronological series of events, difficulties with text comprehension, spelling, writing, reading tasks (slight stammering), could not understand the metaphorical sense of sentences.
- **Articulation problems:** Difficulty in finding the right words, grammatical errors in oral language, strong reliance on short sentences with simple structure, difficulty to follow teacher’s verbal instructions or answer to tasks related questions, struggled to keep to a joint topic of conversation in group tasks, difficulties in spelling and writing tasks and slight stammering when reading.

### Attainments and Improvements

- More coherent speech, his articulation and comprehension skills were slightly improved, and small progress in the domain of reading and spelling.
- Small progress of her expressive language skills despite her speech sound errors, reading skills slightly improved (despite stammering), more legible handwriting.
- Small progress of her expressive language skills slightly improved (despite stammering), more legible handwriting.
- Slight progress in reading, more competent spelling skills, well aware of issues not related to the curriculum of the year he attended (e.g. history).
- More fluent oral language and slight improvement in reading, despite stammering in complex or unknown words.
- Despite his slight stammering his reading skills progressed adequately, while he could form short sentences with simple grammatical and syntactical structure.
- Progressed well in reading (stammered occasionally in complex or unknown words), slight improvement of his handwriting skills.
Appendix Z. RQ4 Summary of findings table

Table 46. Summary table of RQ4 findings.

<table>
<thead>
<tr>
<th>Social participation and peers’ acceptance</th>
<th>Officially Diagnosed with SLD</th>
<th>Not officially Diagnosed with SLD</th>
<th>Officially Diagnosed with General Learning Difficulties</th>
<th>Not officially Diagnosed with General Learning Difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PATEM I</strong> or <strong>PATEM II</strong></td>
<td>Cognitive Competence: Above average (3.6) Peer Acceptance: Above average (3.6)</td>
<td>Cognitive Competence: Above average (3.6) Peer Acceptance: Above average (3.6)</td>
<td>Cognitive Competence: Above average (3.6) Peer Acceptance: Above average (3.6)</td>
<td>Cognitive Competence: Above average (3.6) Peer Acceptance: Above average (3.6)</td>
</tr>
<tr>
<td><strong>Pupils’ willingness for collaboration with peers in the mainstream class</strong></td>
<td>Often not willing to be involved in group work and collaborate with peers, especially in challenging language/skill tasks – he preferred not to do the tasks or do them on his own (or at home).</td>
<td>Occasionally he preferred to spend time with his classmates in the playground, as he was usually attached to his older brother.</td>
<td>Occasionally she preferred to work with the girl next to her – she had limited interactions with classmates in the mainstream classroom context and outside the school. After the beginning of the school year she did not want to join the class, due to his inclusion class classmates negative attitudes towards him, however, at the time of the study she was friendly to him and he was also willing to work with them.</td>
<td>Often not willing to be involved in group work and collaborate with peers, especially in challenging language/skill tasks – he preferred not to do the tasks or do them on his own.</td>
</tr>
<tr>
<td><strong>Level of confidence/ Rating of confidence in both classrooms</strong></td>
<td>Content in both classrooms. He usually did not like to be involved in group work with his mainstream class peers, but he liked to take part in discussions about issues not related to the school, and quite often chuckled with them or teased them. In the inclusion class he was quite talkative, not reluctant when required to task, he liked to work with Helen and support her in group work.</td>
<td>Content in both classrooms. He usually did not like to be involved in group work with his mainstream class peers, but he liked to take part in discussions about issues not related to the school, and quite often chuckled with them or teased them. In the inclusion class he was quite talkative, not reluctant when required to task, he liked to work with Helen and support her in group work.</td>
<td>Content in both classrooms. He usually did not like to be involved in group work with his mainstream class peers, but he liked to take part in discussions about issues not related to the school, and quite often chuckled with them or teased them. In the inclusion class he was quite talkative, not reluctant when required to task, he liked to work with Helen and support her in group work.</td>
<td>Content in both classrooms. He usually did not like to be involved in group work with his mainstream class peers, but he liked to take part in discussions about issues not related to the school, and quite often chuckled with them or teased them. In the inclusion class he was quite talkative, not reluctant when required to task, he liked to work with Helen and support her in group work.</td>
</tr>
<tr>
<td><strong>Classmates’ behaviour &amp; Contacts/Interactions with them</strong></td>
<td>Friendly with Helen, supportive to her and influenced positively her social skills.</td>
<td>Friendly with Helen, supportive to her and influenced positively her social skills.</td>
<td>Friendly with Helen, supportive to her and influenced positively her social skills.</td>
<td>Friendly with Helen, supportive to her and influenced positively her social skills.</td>
</tr>
<tr>
<td><strong>Impact of difficulties on pupils social participation &amp; collaboration with peers</strong></td>
<td>Above average. Nick’s, Helen’s, Jim’s and Simon’s positive social and social self-perceptions that difficulties affected their relations with peers, interactive work when collaborating with them and resulted in poor interactions and lack of confidence, shyness or withdrawal. Struggling similarly to the above pupils perceived himself positively in the academic and social area, however his slightly above average scores (especially in the scholastic competence subscale) revealed his awareness of the speech/language and literacy limitations that he possessed. In addition to his limited expressive and receptive skills and poor academic progress, created considerable barriers to his active involvement in group work and positive engagement with peers. He should be also taken into serious consideration the fact that some of his peers had a discouraging behaviour towards him, criticizing his speech/language problems and his weakness to respond efficiently to similar tasks.</td>
<td>Above average. Nick’s, Helen’s, Jim’s and Simon’s positive social and social self-perceptions that difficulties affected their relations with peers, interactive work when collaborating with them and resulted in poor interactions and lack of confidence, shyness or withdrawal. Struggling similarly to the above pupils perceived himself positively in the academic and social area, however his slightly above average scores (especially in the scholastic competence subscale) revealed his awareness of the speech/language and literacy limitations that he possessed. In addition to his limited expressive and receptive skills and poor academic progress, created considerable barriers to his active involvement in group work and positive engagement with peers. He should be also taken into serious consideration the fact that some of his peers had a discouraging behaviour towards him, criticizing his speech/language problems and his weakness to respond efficiently to similar tasks.</td>
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</tr>
</tbody>
</table>
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