Possibility Thinking and its pedagogy

in primary classrooms using learning resources

associated with museum visits in Cyprus

Submitted by

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<u>Abstract</u>

The concept of Possibility Thinking (PT) has been investigated both conceptually and empirically for over a decade in early year settings and primary classrooms. The basic aim of this study was to investigate Cypriot primary teachers and how they nurture the PT of 9-10 year-old children by drawing on learning resources associated with museum visits. This PhD thesis had as a sample eight primary teachers with their students' age 9-10 years and employed various data collection methods including semi-structured interviews, observations (field notes, video-recordings, still images), teachers' reflections and the researcher's reflective journals. This research builds on previous studies[1] that have documented PT and the pedagogical strategies which foster it. The findings were compared with the existing literature and contribute to the field in a number of ways. Firstly, the findings offer an in-depth investigation of the PT features and argue that the features have a different range and they shape differently according to the characteristics of the observed group. Thus, the data revealed the existing PT features from the literature. Secondly, risk taking was not identified among the features. This study offers an explanation about the absence of risk-taking by proposing a new feature, giving as a result a solution to the problem of the existence of PT without the feature of risk-taking. Thirdly, the findings contribute to understanding how the teachers nurture students' PT through alternative resources of learning like museum visits. This was achieved through the refinement of the existing pedagogies and the proposition of a new one, as well as the identification of three affordances that teachers perceive from the interactive programme in which the children participated. The study provides a starting point for further research on PT by drawing on learning resources associated with museum visits. This PhD thesis presents a

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[1] Burnard, P., Craft, A., Cremin, T., Duffy, B., Hanson, R., Keene, J., Haynes, L. and Burns, D. (2006); Chappell, A., Craft, A., Burnard, P. and Cremin, T. (2008); Craft, A., Cremin, T., Burnard, P., Dragovic, T. and Chappell, K. (2012); Craft, A. McConnon, L. and Matthews, A. (2012); Cremin, T., Burnard, P. & Craft, A., (2006); Cremin, T., Chappell, K., and Craft, A. (2013)

model of pedagogy of PT linked with museum affordances identified from the data and ends with suggestions for further research.

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Dedication

I would like to dedicate this dissertation to the loving memory of the most inspiring supervisor, Anna Craft. I am very appreciative of her support, inspiration and encouragement during my PhD study. She was a great supervisor and her support in writing my thesis was priceless. I am so very grateful for getting to know her and her work. She was able to inspire me with her knowledge, wisdom and kindness.

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Approaching my Ithaca after a long and challenging research journey, I would like to express my gratitude to and acknowledge those exceptional people who have helped to make the completion of this journey possible.

I could never have completed this journey without the love and support of my wonderful family. My parents, Giorgos and Marina Gregoriou, hold a special place in my heart and I wish to give them my love and thanks for always believing in me. Their continual and multifaceted support has been vital throughout my life. I would like also to express my gratitude to my sister Athina for her support and encouragement. I would like also to express my heartfelt gratitude to my fiancé Nikos for his love, support, encouragement, and patience, which enabled me to finish my PhD research.

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Chapter 1: Introduction

1.1. Rationale

Creativity has become a popular research topic in many parts of the world. Since the dawn of the 21st century, the social demand for creativity has been steadily increasing in almost every field of human activity (see for instance Baucus, Norton, Baucus & Human, 2008; Dewett, 2007; Lambropoulos & Kampylis, 2009; Lambropoulos, Kampylis & Bakharia, 2009). Today, creativity is considered to be 'an essential life skill, which needs to be fostered by the education system' (Craft, 1999, p.137) because it has the potential to solve a range of social, political and economic problems (Burnard & White, 2008). In this framework, Toynbee's (1964, p.4) words sound extremely vivid and valid today even after fifty years: '[…] creativity is a matter of life and death for any society'.

Considering the above, the question that naturally arises is 'How can teachers nurture children's creativity?' The fostering of creativity and creative thinking through schooling has been studied by researchers in diverse fields, who proposed various sets of recommendations (e.g. Banaji & Burn, 2006; Lambropoulos & Kampylis, 2009; Matheaon, 2006; O'Connor, 2007). Craft proposal the concept of Possibility Thinking (PT) as a possible mean of investigating creativity in the classroom. PT is described as 'being at the heart of creativity' (Craft 2001, p.49). It is in thinking of new possibilities that the individual is opening him or herself up to novel or original outcomes thus PT becomes the driving force behind creativity in the classroom. This study argues that a possible way to nurture PT and creativity in education is through the participation of the students in programmes outside their school. It is important to note that while there are different types of projects, this research study focuses solely on programmes between a museum and a teacher in primary education.

The nurturing of students' creativity and PT within the framework of primary education requires teachers to be active, as there are dynamic and reciprocal correlations between creativity and teachers' intentionality (TenHouten, 1999).

Therefore, teachers' beliefs and attitudes as well as their intentions need to be taken into account in any attempt at education reform as this correlates directly with their classroom practices (Park, Lee, Oliver & Cramond, 2006). Thus, this thesis aspires to highlight how the teachers nurture students' PT within a primary education framework in Cyprus by drawing on learning resources associated with museum visits.

Cyprus, which constitutes the cultural context of my research, has started to develop creativity and projects with museums only in the last few years. Creativity has become a popular topic very recently. Therefore if you ask a teacher 'What is creativity? it may not be a simple question to answer. Fortunately, as far as the projects with museums are concerned strategies and teaching pedagogies are a little more developed, because of the fact that museum education started to develop from 1990. Moreover, it is true that the available research from the national perspective is limited and that is another reason added to the above, to excuse the lack of the development of teaching strategies for nurturing creativity and museum education. Research in the UK and generally in Western societies is more plentiful, and according to most of the relevant papers, programmes with museums can have a significant contribution in developing the curriculum and teaching methods of creativity (Lambropoulos & Kampylis, 2009).

Personal meaning

It is true that the teacher's role has great importance in the classroom in order to lead children to creativity; not only for the arts lessons but for the whole curriculum. According to Jeffrey (2005), teachers must help children to explore the world in new ways, to open new contexts for learning and to present the challenge of the unfamiliar. All this can be achieved by encouraging and accepting original ideas, by nurturing flexibility and divergent thinking, by providing support and positive feedback for questioning and exploring behaviour, and problem finding and not just problem solving (Cropley, 2001).

Teachers should be creative themselves, take risks and create an environment where children will not be afraid to 'fail' and will take the opportunity to think, make decisions and choices (Jones and Wyse, 2004). I tried to follow this view by trying to be creative myself, as a trainee teacher. I made a lot of effort to achieve this goal, because I wanted to be totally different from the teachers that I had had in primary school. I wanted to create an environment where children could develop their creativity, take risks and try new ideas. As Jones and Wyse (2004) point out, this is not so easy to achieve because each child learns in a totally different way, and as a result, the teacher should be confident in his own capability. Thus, one of the main intentions of this study is to focus on and explore the pedagogical strategies that the teachers used in nurturing creativity and more specifically PT.

Aiming to broaden my teaching repertoire for creativity with theories and practices, I carried out my masters in Visual Arts and the Creative Arts in Education. Within the context of an assignment, I had the opportunity to study relevant literature that made me realise the great contribution that partnership projects can make in nurturing creativity in art education and pupils' learning in general (e.g. Anderson et al., 2006; Piscitelli et al., 2003). Thus, my MEd dissertation investigated one aspect of partnership projects which is partnership projects between a primary school and an artist. More specifically I investigated 'The implication of an artist's visit on children's skills, knowledge and creativity in visual art in primary education'. In my PhD study, I turn my focus onto another aspect of partnership projects (projects with museums) for nurturing children's creativity and more specifically PT.

The focus of this doctoral study is PT, which it has been argued is at the heart of creativity. According to Craft creativity is driven by PT (Craft, 2001) and that, if we are willing to study creativity in the classroom we must focus on studying PT because creativity cannot occur without it (Craft, 2002). One of the reasons for focusing on PT is that it is most closely aligned to my professional understandings of creativity. Further reasons for focusing on PT will be explained in detail in the next chapter.

It is true that the topic of fostering creativity through education may not appear novel. Research has been done and lots of approaches have been established in enhancing children's creativity. However, the fact that museum education is not a new practice in Cyprus and that creativity is the new target of the National Curriculum of Cyprus, provoked my curiosity to learn more about how primary teachers in Cyprus nurture the PT of 9-10 year-old children by drawing on learning resources associated with museum visits. Taking into consideration the limited research in this area, my own research into teachers' pedagogical practice can have a wider value and significance for nurturing students' PT by drawing on learning resources associated with museum visits in 9-10 year-old children.

1.2. Research purpose and research questions

In light of this situation in Cyprus, I have investigated how the pupils and teachers respond to a creative pedagogy. Informed by relevant theories of fostering creativity in educational settings, such as frameworks and pedagogical strategies for developing PT (Burnard et al., 2006; Craft et al. 2012, 2012b; Chappell et al., 2008; Cremin et al., 2006, Cremin et al., 2013), and discussions on creative teaching or teaching creativity (Jeffery & Craft, 2004), I was exploring how teachers can nurture students' PT through alternative resources of learning associated with museum visits. The ultimate aims of this research were to:

- Document the nurtured PT features.
- Document and analyse characteristic features of pedagogical strategies in nurturing PT.
- Explore the affordances that a teacher can perceive from the museum visits for nurturing children's PT.

The main research question and three subsidiaries are formed as follows:

Main question: How do primary teachers in Cyprus nurture the PT of 9-10 year-old children by drawing on learning resources associated with museum visits?

Sub-questions:

1. What features of children's PT are nurtured?
2. What pedagogical approaches do the teachers use to nurture children's PT?
3. What affordances for nurturing children's PT do teachers perceive to be offered by learning resources associated with museum visits?

It is important to note that by the term 'learning resources associated with museum visits' this study describes all the affordances that museum environment can offer to the teachers as tools for educational purposes inside their classrooms. With the term 'Learning resources' this study describes the museum interactivity and all the affordances that museum environments offer to teachers as tools for educational purposes. These are the hands-on exhibits, the playful programmes, and educational adventures through narrative spaces. Museums can be seen as active learning centers where children can discover new knowledge and challenge themselves through a scenario full of experiences and historical facts. As a result, museums are immersive environments and large-scale spectacle, both of which help tell stories by creating affective and sensory experiences using the museum exhibitions through the first hand experiences.

1.3. <u>Research problem significance</u>

During my PhD study, I mainly investigated the role of the teachers in fostering students' PT during a project which linked classroom lessons and an interactive museum programme, as similar studies have not been conducted in the framework of the Cypriot education system and there is a dearth of analogous studies worldwide.

Furthermore, this study responds directly to the new National Curriculum for Cypriot compulsory education. The National Curriculum reflects the international trend (e.g. QCA, 2005) by specifying the fostering of students' creativity and creative thinking as one of the main targets of the everyday classroom lessons. However, teachers need a clear idea about how this can be achieved. This thesis therefore offers a model of the pedagogy of PT linked with the museum visit affordances identified from the analysed episodes. Nevertheless, it must be acknowledged that the proposed model must be adjusted, by the teacher, according to the needs of the students.

Moreover, the present study offers a breakthrough in the study of PT as it was based and structured upon the earlier studies on PT. This thesis supplements earlier focus on PT characteristics and pedagogy (Burnard et al., 2006; Chappell et al., 2008; Craft et al. 2012a, 2012b; Cremin et al., 2006; Cremin et al., 2013) and substantially expands understanding of the enabling context outside of the school environment by involving the students into experiential and interactive museum programmes.

1.4. <u>Research context</u>

It would be a one-sided approach to the problem if we do not take into account the overall picture of the Cypriot educational context on creativity and PT as well as on museum education. It is important to look at these concepts in the context of educational policy and provision in Cypriot primary schools. However, these issues will be discussed further through the following chapters.

1.4.1. <u>Creativity in the Cypriot educational context</u>

Education in Cyprus is in the process of broad educational reform. The Cypriot policy arena has shown emerging interest in creativity since 2009, the European Year of Creativity and Innovation. One of the major aims for primary schools during the academic year of 2008-2010 was the promotion of

creativity and innovation (CMEC, 2008, 2010). These policy papers had suggested the implementation of projects and various other practical activities for the promotion of children's creativity. These suggested pedagogical strategies included problem-solving, brainstorming, developing divergent thinking, differentiation of teaching methods and use of ICT (CMEC, 2009, 2010). During the school year 2011-2012, teachers were expected to develop children's critical thinking, creativity and collaboration (CMEC, 2011a). The policy papers refer to creativity as the ability necessary for the 21st century. Also, they suggest that classrooms should become 'learning laboratories' in which children, collaborating with each other and with their teachers, would be able to find problems and search for solutions.

The recent educational reform in Cyprus, involving the implementation of a new National Curriculum, and including creativity, was inspired by Western education systems and what from citizens this society needs. More specifically, in the Cypriot National Curriculum, the recognition of the importance of facilitating creativity in educational settings is included both as a general educational goal as well as a specific objective in different subjects. However, after examining the National Curriculum more closely it is evident that the term 'creativity' is referred to in the National Curriculum but there is no actual link between this term and the analytic programmes for each lesson or with the museum visit programmes. It is up to the teachers how they will link creativity during their lessons and how best to achieve it. There seems to be dissonance between the policy, on the one hand, and the actual implemented practices in primary schools on the other hand. Thus, regardless of the availability of standardised measures and specific training programmes, the facilitation of creativity in the classroom is ultimately dependent on the teacher (Diakidou & Kanari, 1999) because the teacher is the one who will encourage creativity inside the classroom.

The role of the teacher is considered to be extremely significant in uncovering and advancing children's creativity in the classroom. Jeffrey and Craft (2004) have suggested that the constitution of creative pedagogic practices may be more transparent if the focus is on both teacher and learner and the interplay between them. This is what this study attempts to do. It seeks to shed light on

the relationship between teachers' pedagogy and children's PT through alternative resources of learning associated with museum visits in Cypriot primary classrooms.

1.4.2. Museum projects in Cyprus

In Cyprus there are numerous cultural sites and museums spread all over the island because of its rich cultural background. However, museological progress has happened very slowly and the provision of education in museums even today is rather poor (Hadjigavriel, 2000). Up until the time when Cyprus became an independent republic, very few museums were established and none were organised to arrange educational visits or other activities. Hadjigavriel (2000) cites that most of them exhibited archeological material for tourists.

During the 1980s the Cypriot government was preoccupied with solving basic social and economic problems caused by the Turkish invasion of 1974. However, in the late 1990s, these basic human political and social needs had been met, the state began to invest resources and money into education and the cultural industries, and with a particular focus on modernising museums (Papanicolaou, 2003). At that time the Ministry of Education and Culture was receiving criticism from organised local groups claiming that museum policy and practice in Cyprus was out of touch with developments in other western countries; museums failed to attract Cypriot nationals as visitors, and managers in museums were not aware of the potential contribution of their institutions to the general curriculum in schools (Koutselini, 1998).

In 1996 the government responded for the first time to this community regarding museum education. The Ministry of Education and Culture set up an experimental programme for schools in which four teachers were working part-time in order to develop educational projects with museums for primary students. This practice has been extended today and the Ministry of Education and Culture has, under its auspices, museum programmes in four towns: Nicosia, Limassol, Larnaca and Paphos (CMEC, 2011). Primary school

teachers work as museum educators in these cities' museums and are responsible for organising, developing and implementing programmes. Every programme is designed for a particular year group of students and all the local primary schools take part in these programmes once a year. One programme is being held in an art gallery focusing on art education, one in a Byzantine museum and others are being held in archaeological museums, the latter of which have a strong historical focus. The main objective of these educational programmes is to offer rich experiences to pupils and to develop positive attitudes towards the environment and the cultural heritage of Cyprus (CMEC, 2011).

Experienced teachers working on projects with museums, developing and delivering programmes in the museums have been successful because they can utilise their pedagogical expertise to great effect (Papanicolaou, 2000). Moreover, these programmes are considered successful by the Ministry of Education because the teachers have good knowledge of the content of the National Curriculum and are able to link museum and class learning which is considered to be an important factor influencing learning on field trips (Anderson et al., 2006; Piscitelli et al., 2003). In order for the programmes to be successful, the Ministry of Education began to offer in-service training to teachers concerning the activities they can do before and after the visit with their pupils (CMEC, 2011b). This is of particular significance as one of my research questions for my PhD study refers to the pedagogical features that the teachers use for nurturing children's PT and what PT features were nurtured.

A start has already been made in developing museum education and it is anticipated that educational practices in museum education will be more developed in the near future, improving and enriching the current position. The study attempts to explore specific pedagogical elements that relate to children's PT and presents a model of pedagogy of PT linked with the museum visit affordances identified from the analysed episodes.

1.5. <u>Outline of the chapters</u>

In Chapter 2, I review literature in order to provide a theoretical framework for understanding PT and how this can be nurtured by using the alternative resources of learning associated with museum visits as well as to build the foundations for my research study. The main intention of this chapter is to map out existing approaches in literature for understanding creativity and PT, pedagogies fostering PT and how museum education can contribute to nurturing children's PT. This chapter considers the specifics of the Cypriot context within which the research was carried out. A variety of significant texts and research journals have been reviewed from the fields of PT and museum education as well as from pedagogy.

In Chapter 3, I discuss the research approaches of this study and I explain and justify my epistemological and ontological position. Then, I present a summary of the initial pilot study and finally focus on the main study. Particularly, I explain and raise issues of trustworthiness for the study, the sampling procedures and the data collection methods. Some other ethical considerations are discussed and finally I describe in some detail the analytic process. Then Chapter 4 discusses the main stages of the analytic approach to the data that was applied during this study.

From Chapter 5 to Chapter 7, I present my findings related with my research questions. More specifically, Chapter 5 focuses on students' PT features that were nurtured when the teachers used alternative resources of learning associated with museum visits combined with their classroom teaching. Chapter 6, focuses on the pedagogical features that the teachers of this study used for nurturing students' PT. Chapter 7, focuses on the affordances that the teachers of this study perceive for nurturing students' PT by using alternative resources of learning associated with museum visits.

The discussion in Chapter 8 synthesises the discoveries made through the interpretations in answering the research questions. In the final part of the thesis, Chapter 9, the key issues and implications are drawn out for adopting values and practices as well as insights for future research into PT.

Chapter 2: Literature Review

2.1. Introduction

The purpose of the literature reported in this chapter is to provide a theoretical framework for understanding PT and how this can be nurtured by using the alternative resource of learning associated with museum visits as well as to build the foundations for my research study. The main intention of this chapter is to map out existing approaches in literature for understanding creativity and PT, pedagogies fostering PT and how museum education can contribute to nurturing children's PT. The literature reported on here underpins the empirical study which forms my doctoral study. This chapter considers specifics of the Cypriot context within which the research was carried out. A variety of significant texts and research articles have been reviewed from the fields of PT and museum education as well as from pedagogy. The range of literature includes also government documentation to show the thinking of the Cypriot government about PT and museum education.

The literature refers separately to PT (considered in this study as the core of creativity – the term will be explained in the next section) and museum education. Research papers, chapters and books refer to the refining of understanding of creativity and PT and to the pedagogical practices for fostering creativity and PT. While museum education has been a lot intentionally, this has not been in relation to PT but in relation to creativity.

In exploring the link between pedagogies for nurturing PT and museum visits, it was more suitable to search the educational research separately. For that reason in order to undertake a review, a search took place on the terms creativity, PT, pedagogies for nurturing creativity and PT, museum education, and projects with museums in the context of educational research. This was done through the search of electronic libraries and journals, including EBSCO and JSTOR. Also, the empirical research articles were focused on early years and primary school settings.

The literature review of this chapter is mainly focused on the research undertaken in the UK and Greece, because of their influences on the formulation of the Cypriot curriculum. These foreign influences may be seen as an outcome of the economic and political dependence on Europe and mainly the UK and Greece (Zembylas, 2010). In the case of the UK there is a historic legacy of prevalent norms and institutions (since UK was the colonial era of Cyprus) which have had a considerable impact on the curriculum practice in Cyprus and have created a greater continuing dependence than current institutional connections appear to justify. In the case of Greece, historic and ethnic ties along with the ideological and political influences remained important sources of determining the educational philosophy in Cyprus (Zembylas, 2010).

Focusing on the educational field in Cyprus, there are number of challenges in relation to PT and the children's participation to museum projects organized by the Ministry of Education and Culture. As promoted by educational policy in Cyprus, creativity is seen as ability necessary for the 21st century and schools are called to provide the conditions where children, collaborating with each other and with their teachers, will be able to find problems and search for solutions gaining agency over their learning (CMEC, 2011a). Creativity and museum projects are proposed to be connected with all the subjects of National Curriculum in primary education (CMEC, 2011a). The policy paper suggests teachers will need to nurture the 'abilities and skills needed for the 21st century' such as creativity, critical thinking and reflection, collaborative work, problem-solving and exploring alternative solutions, empathy and interpersonal communicational skills (ibid, p.6). The above are characteristics that may have links to both students' creativity and museum projects as an alternative resource of learning which are my areas of consideration in this study. Due to the fact that creativity had never before been a part of the Cypriot primary curriculum, there is a dearth of related research studies in the country. However, when considering policy research to be a part of my review only the most contemporary documents were included. As such for there were selected documents published from 2010, documents applicable for the relevant age group (ages 9-10), guidance literature like lesson planning

material, and documents published by government, by the Ministry of Education and Culture and curriculum authorities.

Overall, in this literature review, I followed the suggestions of Boote and Beile (2005) and tried to place my research problem in the historical contexts of the fields. I attempted to acquire the subject vocabulary and to clarify any terminology adopted by different researchers. I considered important issues relevant to creativity, PT and museum education and tried to gain a new perspective on the literature. In addition, I sought to critique the various theoretical and empirical studies, in order to reveal gaps and areas for potential enquiry that have relevance in my professional context.

2.2. <u>Conceptions of creativity</u>

The phenomenon of creativity is extremely complex and there are various conceptions of creativity in the literature revealing this complexity. Philosophers, theorists, artists and researchers have made efforts to depict and conceptualise what creativity is from their particular perspectives. Research on creativity has employed different operationalisations of the term and as a result the study of creativity has different perspectives and approaches.

During the twentieth century systematic studies of creativity began to be undertaken and these studies have been related to four general traditions. These are the psychoanalytic - creativity is associated with the unconscious modes of thought such as repressed emotions and unsatisfied wishes that emerge into consciousness through the subconscious, for example daydreams or fantasies (Freud, 1958, cited in European Communities, 2009); the cognitive - creativity is considered as thinking skills such as divergent thinking, a notion identified by Guilford in 1950 and measured by psychometric tools developed in America by Torrance during the 1960s and onwards (Torrance, 1966); the behaviouristic - creativity is connected to operant conditioning such as rewards; it is the individual's response to environmental stimuli (Skinner, 1960, 1974, cited in Craft, 2005); and the

humanistic - the creative person acts in harmony with an inner need for self-actualisation; creativity is an everyday phenomenon of the individual who takes control of his life and feels fulfilled (Maslow, 1970).

One of the more dominant theories of creativity that has emerged in the last decade has been the work of Margaret Boden (e.g. Boden, 1990). In her writing she has developed important notions of personal - versus historical - creativity, which have helped to define creativity in a much more formal context. More specifically, 'psychological' creativity involves coming up with a surprising, valuable idea that is new to the person who comes up with it. It does not matter how many people have had that idea before. But if a new idea is 'historical' creativity that means that no-one else has had it before: it has arisen for the first time in human history. Her work, which contrasts with that of Koestler (1975) and others, defines creativity as more than just novelty-producing thought, but rather of novel exploration of and creation of mental representations (Boden, 1990, 1994, 1995).

IMPLICIT		EXPLICIT
limited to arts	applies to every subject	
pure talent	skill to be learnt	
fun	hard work	
originality	both originality and value	
no prior knowledge	field knowledge is necessary	
major breakthrough	thinking skill	
free play and discovery	stimulation of play and discovery	

Figure 1: Implicit versus explicit theories of creativity

(Ferrari, Cachia and Punie, 2009, p.17)

Runco (1999) suggests that teachers usually hold a tacit knowledge about creativity, manifested in opinions and expectations which are in contrast with

what the research suggests. This can have negative effects on any attempts to foster creativity in schools. This tacit and shared knowledge builds up a series of "implicit theories", which account for how ordinary people think about creativity. These theories are different from the ones held and scientifically tested by researchers, which Runco calls "explicit theories". Figure 1 shows a series of implicit theories, as Sharp (2004) sees them, about creativity and the opposite findings of scientific research. According to Ferrari, Cachia and Punie (2009) the model presented in Figure 1 is an elaboration of Sharp (2004); Beghetto (2007a) and Runco (1999). Understanding creativity means addressing the above issues and being aware of the potential of everyone to become creative (Beghetto, 2007a).

2.2.1. <u>Creativity and Education</u>

The connection between creativity and education can be traced back to the argument over whether creativity can be developed, that is, whether it is amenable to education (Baer & Kaufman, 2006; Esquivel, 1995). As the research focus gradually shifted to ordinary people within education, and along with the movement towards child-centered and innovative pedagogy after the 1950s, more calls were given for reform of traditional school practice and the creative arts curriculum (of the US and UK) (Craft, 2001a; Esquivel, 1995).

The educational reforms informed by the theories and practices of creativity waned due to the critique of child-centered practices and the decline in academic performance (Craft, 2001a; Esquivel, 1995; Feldman & Benjamin, 2006); yet creativity was once more recognised as an important aim of education during the last decade of the twentieth century. Recent rapid social, economic, and technological changes have led to creativity celebrating a global-wide revival of interest in both the academic field of psychology and the applied domain of education (Craft, 2005, p.3). Faced with these intense changes, creativity is reckoned as a basic capacity for survival as well as for future success. Csikszentmihalyi (in Jackson et al, 2006: xix-1) put it this way

to show the altered status of creativity: "In the Renaissance creativity might have been a luxury for the few, but by now it is a necessity for all". At this point, the relationship between creativity and education is more than the previous goal, to encourage personal development and self-actualisation, but to equip youngsters with the basic capacity for future life as well as to increase the competitiveness of a country. The urge for developing creative skills through education is more obvious than before.

Craft (2005) suggests that the approach to creativity in education from the 1990s onward distinguishes it from the era of educational research and practice in the past. She describes this approach as revolutionary because of the challenges it brings to the teachers and schools, their values and their teaching practices. It has unique concerns, including the relationship between creativity and knowledge, curriculum, and appropriate pedagogical strategies to foster creativity in the classroom. Research in the UK by Craft (1997), for instance, explored how to nourish the creative teacher; Woods (1995) looked into teacher creativity through case studies; and Fryer (1996) investigated teachers' attitudes towards creativity through a large-scale survey. Furthermore, the perceptions of creativity this approach adopts are more relevant to educational values and settings. Thus, this approach seeks to develop a shared discourse and terms for understanding and promoting children's creativity.

There are two major premises underpinning the framework of creativity in education: first is the view that all individuals have the potential to be creative (Craft, 2001b; Esquivel, 1995; Feldman & Benjamin, 2006; NACCCE, 1999), and second is that creativity can be developed (Fryer, 1996; Parnes, 1963; Torrance, 1968; Torrance & Myers, 1970). As to the kind of creativity encouraged and guided through teaching and learning activities and the school environment, this is more relevant to democratic, process creativity rather than extraordinary creativity restricted to a few talented students (Feldman, 1999). Creative capacities concerning everyday problem-solving are nowadays necessary to everyone as keys to their future success or at least to their basic survival (Feldman & Benjamin, 2006).

Another assumption of creativity in education is the notion that creative abilities can be learned, developed, or nurtured. Compatible with the psychometric and pragmatic approaches, Fryer (1996: 5) stated that creative skills could be taught through certain strategies: "Training in creative problem-solving can enable people to be skilled in finding the best solution quickly…". Esquivel (1995) also made clear the role of educators in enhancing the creative potential of every student. In contemporary research, creativity is embraced as a multi-dimensional and developmental construct; it is believed that creativity is a developmental shift and a life-long process (Craft, 2001b; Esquivel, 1995; Feldman, 1999).

The perception of the source for creativity has shifted from the belief of the divine intervention, genius, and hereditary intelligence possessed by the highly talented individuals, to diverse human abilities owing to Guilford and Torrance's attempt to measure the thinking abilities, and to the later multidimensional theories of intelligence (Esquivel, 1995). Early childhood educators commonly hold the view that children are naturally creative, open to experience, and tend to be attracted by novel things (Feldman & Benjamin, 2006; Torrance & Myers, 1970), and this natural quality will diminish unless it is nurtured by favorable environments created by adults (Esquivel, 1995; Feldman & Benjamin, 2006). Rogers (1954) also sees creativity as the natural urge of individuals to develop, extend, express and activate their capacities.

The role of education in nurturing students' creativity and creative thinking is based on the assumption that creativity can be developed. There is considerable work that tried to document this (Craft, 2005, 2009; Cremin, 2009; Kaufman & Beghetto, 2009, Lin, 2011; Runco & Pagnani, 2011; Sawyer et al., 2003). Given the connection between education and creativity, relevant scholarly research, and the new approach proposed to make clear the reasons for studying creativity in education, in the following paragraphs the aspects of creativity will be examined.

2.2.2. <u>Distinguishing kinds of creativity</u>

Craft (2000, 2001, 2002, 2005, 2009, and 2011) studied creativity in education and theorised creativity as a developmental process, distinguishing 'Big-C' from 'Little-c' creativity. Social constructivist research theorised creativity as a developmental process on many different timescales such as the 'Big C Creativity' (Gardner, 1993) which requires a long time span and little-c creativity (Craft, 2001) which requires a shorter time span (Sawyer, 2003). 'Big-C Creativity' is considered as the extraordinary creativity of geniuses in particular fields such as science, mathematics, art, dance (Feldman et al., 1994). Craft (2001) argues, that 'Little-c' creativity is manifest in ordinary people; it involves trying out different possibilities, identifying and solving problems and moving on and coping with everyday challenges, e.g. inventing a meal, developing a new game or making up a rhyme. Craft has argued that 'Little-c' creativity is life-wide attitude and is driven by 'PT' – the transformation of what is to what might be (Craft, 2002).

The notion of creativity expanded further and a new model proposes a 'Four C' categorisation: the 'Mini-c', the 'Little-c', the 'Pro-c' and the 'Big-C' Creativity (Kaufman & Beghetto, 2009). According to the authors, this was developed in order to highlight important distinctions among the various levels of creativity. These authors stated that 'Mini-c' relates to the creative insight inherent in the learning process, which is intra-personally meaningful and which may be overlooked in the world of 'Little-c' approaches. Also, they argue that 'Mini-c' deserves its own terminology because the 'current conception of 'Little-c' is not enough to accommodate the personal creative processes involved in students' development of new understanding and personal knowledge construction' (Beghetto and Kaufman, 2007, p.75). Thus, there is a difference in the scope between 'Little-c' and 'Mini-c'. More specifically, 'Mini-c' they argue to be the intrapersonal creativity and a part of the learning process, contrarily with 'Little-c' which is the everyday creativity that possibly can make a strong contribution (Beghetto and Kaufman, 2007). In addition, Kaufman and Beghetto (2009) argue that 'Pro-c' represents the professional-level expertise in a creative area without reaching the eminence

of a 'Big-C' creator. It must be acknowledged that this 'Four-C' model provided a framework for a more detailed conceptualisation of creativity, however it has not been empirically tested. My study adopts a little-c conceptualisation of creativity and seeks to focus on children's creativity in the classroom and museum visit context illuminating further the connections between interpersonal and intrapersonal creativity.

Nevertheless, a strong critique has been developed for the existence of 'Little-c' creativity not only in the school environment but also in the everyday life. More specifically, Negus and Pickering (2004, p.44-45) argue that '... we cannot collapse creativity into everyday life, as if they are indistinguishable... Only certain of our everyday experiences involve creativity; only some of our everyday actions are creative...'. It is true that 'Little-c' creativity is more focused on everyday activities (which are my interest - creativity in everyday life in school), such as those creative actions in which the non-expert may participate each day (e.g., Richards, Kinney, Benet, & Merzel, 1988) but this statement does not argue that all everyday actions can be characterised as creative. Moreover, the category of 'Little-c' helps underscore the important role that creativity plays in everyday life (Richards, 2007) and points to the importance of identifying and nurturing creativity in everyday settings such as schools and classrooms (Beghetto & Kaufman, 2007).

The following section will focus on some empirical studies on the characteristics of creative teaching and then consider the recent framework of creative pedagogy and creative practice.

2.2.3. <u>Creative pedagogy</u>

Creative pedagogy describes the practices that enhance creative development through the three interrelated elements of creative teaching, teaching for creativity, and creative learning. More specifically, the word pedagogy comes from the Greek παιδαγωγέω (paidagōgeō); in which παῖς

(*país*, genitive παιδός, *paidos*) means 'child' and άγω (*ágō*) means 'lead'; so it literally means 'to lead the child'. However, over the years a number of people have contributed to the theories of pedagogy, among these are Piaget, 1926, 1936/1975; Bruner, 1960, 1966, 1971; Vygotsky, 1962; Paulo Freire, Benjamin Bloom and many others. Alexander defines pedagogy as 'the act of teaching and its attendant discourse' (Alexander 2004, p.7) which encompasses other views such as that of Watkins and Mortimore (1999, p.3) who judge the term to mean, 'any conscious activity of one person designed to enhance learning in another'.

The NACCCE[2] , 'All our Futures' report (1999) suggests that in order for children to achieve creativity a teacher must teach in a creative way. The focus of creative teaching is on the teacher's practice, whereas the focus of teaching for creativity is on the learner, with personal agency at the core (Craft, 2005). Through empirical research, Jeffrey and Craft (2003) have analysed the distinction between the two to highlight the importance of teaching for creativity. Craft (2005) points out that different pedagogical styles will result in different classroom practices and different learning; therefore precision in the use of terms will help effectively to foster student creativity.

The NACCCE report (1999) argues that, creative teaching can be defined in two ways: teaching creatively and teaching for creativity. By teaching creatively, teachers use imaginative approaches in order to make the learning process more exciting, interesting and effective. According to the wider literature, teachers can be highly creative in the development of teaching strategies that can promote children's learning. Teaching for creativity is about the forms of teaching that are intended to develop children's creative thinking or behaviour and engagement in exploring possibilities. It is often 'learner inclusive'. Thus, the child has a variety of choices and a great deal of

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[2] The National Advisory Committee on Creative and Cultural Education was established in February 1998 in UK by the Secretary of State for Education and Employment. This report makes recommendations for provision in formal and informal education for young people to the age of 16: that is, to the end of compulsory education. Their inquiry coincides with the Governments planned review of the National Curriculum. This report includes specific recommendations on the National Curriculum. It also includes recommendations for a wider national strategy for creative and cultural education.

control over what is explored and how (Jeffrey and Craft, 2004). The two practices are seen to be connected in nurturing the PTof the children. The characteristics of creative teaching, such as imaginative, dynamic, and innovative approaches (Jeffrey & Craft, 2004), often inspire the imagination and the development of new ideas of the children.

According to the literature, lots of researchers have studied creative teaching (e.g. Jeffrey, 2004; Sawyer, 2004; Woods, 2004). Woods (2004) documented among the key strategies employed by the creative teachers the imaginative approaches, spontaneous reaction, making emotional connections, creating atmosphere and role-play. Additionally, earlier studies had identified four core characteristics of creative teaching: making learning relevant to students; enabling them to take ownership of learning experiences; the passing back of control; and the encouragement of innovatory action (Woods, 1995). Jeffrey (2004), has documented numerous other characteristics of creative teaching strategies including: flexible structures, encouraging the taking of roles, considering emotions, using humour, creating critical events, problematising, stimulating the imagination through narratives, encouraging play, developing team identities, and establishing a dynamic caring school ethos.

The NACCCE report also suggests that teaching for creativity involves teaching creatively. Teaching for creativity is a very demanding process and there are three related tasks that need to be carried out in order to achieve that. These tasks are encouraging, identifying and fostering. The first task in teaching for creativity is 'to encourage young people to believe in their creative potential, to engage their sense of possibility and to give them the confidence to try' (NACCCE, 1999, p.90). Teachers must recognise children's strengths on creativity and also to foster their creative potential. This can be achieved by encouraging risk taking, independent judgment, resilience, motivation, and curiosity. The second task is to help children to discover and identify their creative abilities which include helping them to find their creative strengths. The last task is to foster children's creativity. As mentioned before, creativity is drawn from many regular abilities and skills. Thus according to NACCCE, the development of many common capacities and sensitivities such

as the stimulation of curiosity and enhancement of awareness can foster children's creativity.

Lin (2009), drawing upon the definitions afforded by the English NACCCE (1999) document, defines creative teaching as the teacher's use of innovative, imaginative strategies, while she considers teaching for creativity to be the identification and support of children's creative abilities. She defines creative learning as children's active engagement in learning through questioning, inquiring, experimenting, playing, imagining and collaborating. The above studies opened paths for the empirical investigation of teachers' pedagogy for fostering creativity, an area towards which this study has been addressed.
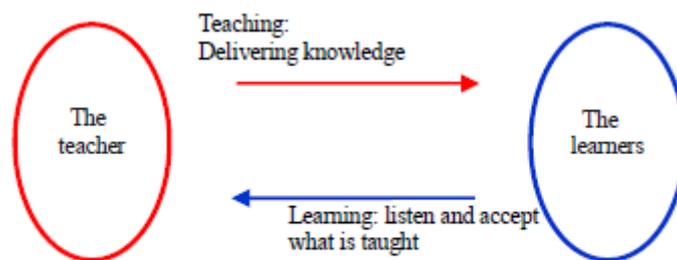
Figure 2: Conventional teaching and learning process (Lin, 2009)

Lin (2011, p.151) argues that 'Rather than a situation in which teaching and learning are two parallel processes that rarely meet (see Figure 2), the three interconnected elements complement and result in each other, rendering it a resonant process (see Figure 3)'. Thus, the developing creative abilities and qualities are created through the interaction between inventive and effective teaching by the creative facilitator and creative learning by the active learner.
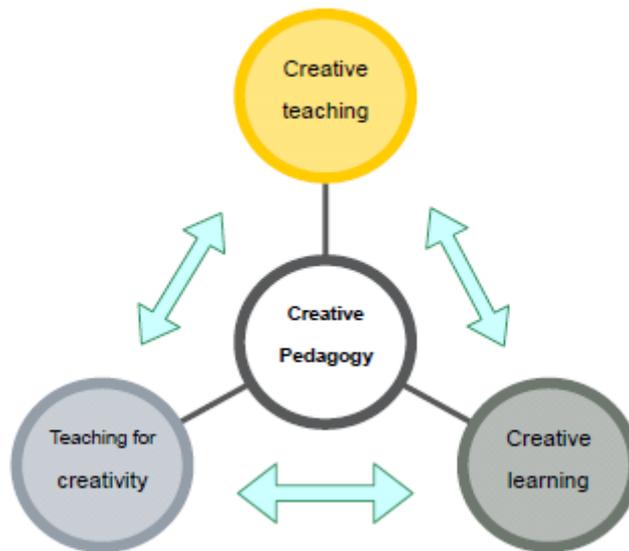
Figure 3: The three elements of creative pedagogy (Lin, 2009)

Through teaching creatively, teachers encourage learners' creativity by passing on their enthusiasm, imagination, and other talents (Lucas, 2001); whilst creating a learning context for problem solving and appreciating learners' creative contributions are essential principles of teaching for creativity (Fryer, 1996). The pedagogical principles of fostering children's PT identified by Cremin, Burnard, and Craft (2006), are useful to describe how teachers create a supportive environment through effective strategies that prioritise children's autonomy. They argue that, the three principles, involving standing back, profiling learner agency, and creating time and space (this principle will be explained in the next section), can encourage the children's questioning and active engagement in learning by passing the decision making and the responsibility for learning back to the child. The above studies opened paths for the empirical investigation of the teachers' pedagogy for fostering creativity, an area towards which this study has been addressed.

2.2.4. <u>Possibility Thinking as a key driver of creativity</u>

It has been argued (Craft, 2000; 2001; 2007) that at the heart of little-c creativity is PT, which drives creativity in different ways in different domains. The notion of PT (Craft, 2000; 2001) is considered as 'thinking in novel and

valuable ways about the world' (Craft, 2000, p.9). In its initial format, PT had three main principles: the use of imagination in order to find a solution for the problem, the asking of questions which children do normally, and combinatory play (Craft, 1999). These three principles formed the original conception of PT. However, the concept of PT has been developed and changed over the recent years. Craft offered a conceptual definition of PT (Craft, 2000) which has been developed through empirical studies (Burnard et al., 2006; Chappell et al., 2008; Craft et al., 2008; Craft, Cremin, Burnard, Dragovic and Chappell, 2012a; Craft, McConnon and Matthews, 2012; Cremin et al., 2006, 2013; Lin, 2010).

PT implied the learner's engagement with problems and also the shift from 'What is this and what does it do?' to 'What can I do with this?', whether this is through question-posing or behaving 'As if' (Craft, 2010). It is important to note that placing posing questions at the centre of PT provides the major case for the cross-curricular nature of PT. Thus, asking the question 'What if?' is non-domain specific and as such suggests that PT can occur in any area of the curriculum. It must be acknowledged that lots of research had been done taking into consideration that PT can be identified and fostered in different subjects of a curriculum like in maths (Clack, 2011), in drama (Lin, 2010, 2011), in science, maths and art (Craft et al., 2012). This is also one of the major points that this study aim to explore. More specifically, this study aim to investigate if students' PT can be nurtured through a museum project which has a cross-curricular nature.

In this study I chose to work on the notion of PT since it is most closely aligned to my professional understandings of creativity. This study argues that the features of PT can be nurtured through museum visits because of the nature of museum learning. This study adopts PT because of the characteristics that it has. Young children should indeed be shown real objects under a certain atmosphere in order to inspire them rather than simply to inform them. Such creativity involves seeing things in fresh ways and learning from past experiences. This can be achieved through PT and museum projects. It is argued that PT involves children engaging in curiosity-driven exploration generating and investigating questions generating novelty

(Burnard et al., 2006; Craft et al., 2012). All the characteristics of PT mentioned previously can be nurtured through the students' participation into museum projects because of the experiential interpretations with the 'real thing' which can raise the aspiration of asking 'what if' questions and thinking in an 'as if' context allowing ideas to be combined and problems to be solved.

2.2.5. <u>Empirical work on Possibility Thinking</u>

The empirical work on PT has been in many phases. During the first stage a naturalistic collaborative inquiry by Burnard, Craft and Cremin (2006) highlighted ways to identify the nature and characteristics of PT in early years' classroom settings. A twelve month study was carried out in a primary school with young children and their teachers which revealed seven features as core to PT from the classrooms of children aged three to seven. These features were:

- ***Posing Questions:*** PT 'is about posing lots of questions' (Craft, 2000, p.5). However, it must be acknowledged that not all the 'types' of questions posed are part of PT (Craft, Cremin & Burnard, 2008). Thus, it is appears to be most importantly the posing of question 'What if?' in a variety of ways because these may be described as generative questions, that may lead to more questions (Craft, 2000). As a result, the posed questions will then generate a number of possibilities for the learner.
- ***Play***: The notion of play is 'extremely wide' (Craft, 2002, p.115) and as a result it is necessary to provide an explicit example of the type of play that was part of PT. Craft conceptualised the notion of play as 'combinatory play' (Craft, 1999, p.146), with the suggestion of 'playing … with combination' (Craft, 2001, p.58). Also, Craft suggested that the 'type' of play is important to PT because 'play which has a strong imitative, intellectual, convergent or neutral 'flavour' seems to foster less creativity than the experimental play' (Craft, 1999, p.146).

- ***Immersion:*** The children were deeply immersed in a caring, positive, loving environment in each setting. In each case this was combined with overt cognitive challenge involved (Craft, 1999, p.15-32).

- ***Innovation:*** Children in these three settings made strong and playful connections between ideas in their own ways, and were encouraged to do this. Practitioners sought to further the children's growing understandings, offering provocations to stimulate connection-making (Craft, 1999, p.15-32)

- ***Risk-taking:*** Children were enabled in taking risks, working in safe, secure and supportive environments in which they were expected to exercise independence (agency) in making decisions and where their contributions were valued (Craft, 1999, p.15-32).

- ***Being imaginative:*** Craft (1999), outlined the feature of 'being imaginative' as 'seeing the unobvious, going beyond the expected' (Craft, 1999, pp.15-32) having an objective and intention.

- ***Self-determination:*** Children were working in secure and supportive environments in which they were expected to be independent in making decisions. Adults encouraged learning from experience as both empowering and generative (Craft, 1999, p.15-32).

This research study (Figure 4) suggests that the interaction between teacher and learner is important and placed these seven features within an 'enabling context' (Burnard et al., 2006, p.258).

In the same year Cremin, Burnard, and Craft (2006) focused on pedagogy and its relationship to fostering PT, emerging 'intentionality' as a separate and eighth feature. A playful classroom context was seen as an enabling factor for fostering PT. They tried to interrogate and build upon their earlier work by analysing and documenting characteristic features of pedagogy that foster PT in the early years. The pedagogical principles revealed how PT can encourage children's autonomy, questioning and engagement in learning. The pedagogical strategies that had been evidenced as crucial for fostering the development of PT (Figure 5) in classrooms are: 'standing back, profiling learner agency and creating time and space' (Cremin et al., 2006, p.108).

Standing back, it is argued, fosters learners' autonomy and provides students the opportunity to follow their own interests gaining agency in their learning. In this way the teacher is able to notice children's actions, understand their thinking in the process and build on this. Enriched space and stretchy time, it is argued, encourages children's motivation and involvement in the activity. These principles can help the engagement of children by allowing them to make decisions and take responsibility for learning (see Figure 5). Hence, the pedagogical strategies of teaching for creativity and creative teaching can be seen as two salient elements of nurturing PT (Cremin et al., 2006). Also, these strategies can build a context for children's creative and active learning (Cremin et al., 2006). Studies undertaken by the team (Burnard et al., 2006; Craft, 2001; Cremin et al., 2006) suggest that the concept of PT enables creative engagement across all contexts.

Figure 4: An evidence-based model of possibility thinking (Burnard et al., 2006)

Figure 5: A model of pedagogy and possibility thinking (Cremin et al., 2006, p.116)

A subsequent further second stage was undertaken by the PT team and provided a more in-depth analysis of the PT characteristics, focusing on students' discourse. It supported the view that question-posing and question-responding are driving features of young learners' PT (Chappell, Craft, Burnard and Cremin, 2008). Asking why, how, what if?; asking unusual questions and responding to ideas, questions, tasks or problems in an unusual way are some examples of PT questioning. This research, which analysed episodes where children were immersed in playful actions where their play was self-determined and their actions were seen through, identified three dimensions to posing questions: question framing, question degree and question modality. Question framing is concerned with the purpose within the questions, identified as leading, service and follow-through questions. The question degree relates to PT within the questions, possibility broad, moderate or narrow. The question modality relates to modality inherent in children's questions including verbal and non-verbal forms. Several categories of question responding were also identified like testing, predicting, accepting, rejecting, evaluating, compensating, completing and repeating (Chappell et al., 2008). Chappell et al. (2008) note interaction between risk-taking, being imaginative, posing questions and responding to questions. As a result this led to a further refinement of the diagrammatic representation of the concept of PT (Figure 6).

Figure 6, present with the shape of cone the inherent possibility in children's questions while the various question-responding categories are represented in the lower circle in no particular configuration. This paper does not fully illuminate the non-verbal question-posing and responding on the part of children and teachers. However, this study looked for the first time the non-verbal communication for the first time in PT research and proposed it for future research.

The researchers mentioned above with other collaborators, have undertaken empirical studies of PT in classrooms for almost a decade focusing on children aged 3-11. Some recent empirical work focused on 9 to 11 year olds (Craft, Cremin, Burnard, Dragovic, and Chappell, 2012a). More specifically, through their research they tried to answer a particular question which was 'What characterises PT as manifest in the learning engagement of children aged 9-11?'. The children engaged in a range of classroom activities, some individually and others as group work in which some features of PT were revealed but with different degrees of strength as shown in Table 1.

The findings of this study showed that, each group has a different dynamic, characteristics and needs. As a result, Table 1 shows that the PT features identified from earlier studies, have documented in a different range into these observed groups. This Phd study argues that this was one of the important findings on PT research as the range of the PT features depends from the observed group of students. There is also the case some of the existing features not to be identified or new features to be observed. Risk taking was absent and this raised the question of whether it is actually necessary to PT. A possible explanation, from the researchers' point of view is the teacher's control. Nevertheless, it can be argued that risk-taking was absent because the other features were strongly identified.
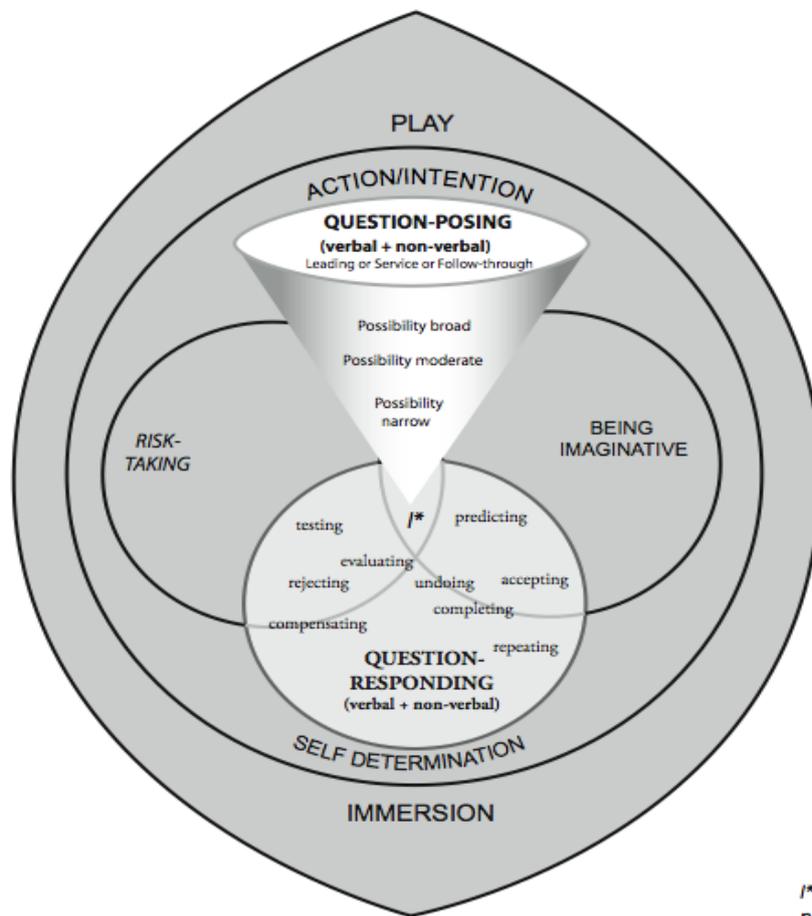
Figure 6: Taxonomy of question-posing and question-responding within possibility thinking (Chappell et al., 2008, p.19)

Features	Site: South West	Site: East Anglia
Q-P	Strong	Strong
Q-R	Strong	Strong
Self-determination	Strong	Strong
Intentional action	Strong	Strong
Development	Strong	Strong
Being imaginative	Strong	Medium
Play/playfulness	Strong	Medium
Immersion	Medium/strong	Medium/strong
Innovation	Medium	Medium
Risk-taking	Absent	Absent

Table 1: Range of evidence across the sites (Craft et al., 2012a, p.10)

The research in the paper of Craft et al. (2012a) revealed children working with ideas collaboratively and recognising one another's ideas as presented in Figure 7. As can be seen in this Figure, 'play' has been moved into 'process-outcome' close to 'imagination' reflecting the overlap between imaginative and playful behaviour in addition to the outcomes of younger children of the earlier PT work of Burnard et al. (2006). Also, this study documented differences on how Question Posing and Question Responding manifest compared with earlier studies with younger children. More specifically, in this study the teacher's leading question, the provision of time, and space for exploration was crucial for the children to generate their service and follow-through questions. Through the earlier studies the teachers' practice was seen to offer to the children considerable time and space in order to generate ideas and lead their own learning, responsive to their needs and interest.

Figure 7: Possibility thinking in 9-11 years old (Craft et al., 2012a, p.16)

A further recent study took place by Craft, McConnon and Matthews (2012) with fifteen four-year-old children in a nursery in the inner-city of London. This

study builds on previous studies that have documented PT and tried to answer two questions which are 'How is children's creativity manifest in child-initiated play?' and 'What is the role of the practitioner in supporting creativity in child-initiated play?'. In response to the first question, three sets of behaviours emerged in action, which were: stimulating and sustaining possibilities, communicating possibilities, and children's agency, roles and identities. As far as the second question is concerned the analysis revealed five ways in which practitioners supported children's creativity in child-initiated play. These were by provoking possibilities, allowing time and space, being in the moment, making interventions and mentoring in partnership. The new PT features in relation to pedagogy helped to develop a new representation of PT, as it is shown in Figure 8 and 9. Figure 8 shows that the children's play blended individual, collaborative and communal and was driven by a leading question or narrative, co-imagined, some of the time, with adults. It is important to mention that children's risk-taking was evident in this study, contrarily with earlier study in which it was absent.

Figure 8: Possibility thinking through provocation-stimulated play (Craft, McConnon & Matthews, 2012)

It must be acknowledge that the three aspects of creativity noted in Figure 8, draw on the work of Chappell (2006) and have been represented schematically by Greenwood et al. (2011, both cited in Craft et al., 2012b). The recent study of PT (Craft et al., 2012b) considered the individual,

collaborative and communal blend as a new PT feature. However, Chappell (2006) had conceptualised creativity as a mixture of individual ideas, shared ideas in collaborations and active group change. Additionally, it is argued that allowing time and space for children's responses, being in the moment with the children, making interventions and mentoring in partnership can provoke possibilities. This study supported the strategies of valuing learner agency and offering time and space and extended the strategies of standing back and enabling context. The teachers are seen as co-authors or 'meddlers-in-the-middle' (McWilliam, 2008, p.265) balancing standing back and stepping forward in their classroom. Also, it is argued that the teachers provided an emotionally enabling context encouraging children through provocations. However, what was not made clear was the relationship between imaginative narratives, different features of PT and the teachers' role in developing and fostering them. In my study, I seek to investigate this relationship and also the teachers' role in nurturing children's PT.

Figure 9: Pedagogy nurturing possibility thinking (Craft, McConnon & Matthews, 2012)

Figure 9 presents how the pedagogy relates to PT. This figure shows the pedagogy nurturing enabling opportunities driven by provocation, involving practitioners valuing highly children's agency, offering them time and space.

However, what is much clearer in this study is how practitioners blended standing back with stepping forward into children's play-space, co-imagining with the children, and how the children's play involved a blend of individual, collaborative and communal play, driven by a leading narrative and also encompassed risk-taking along with the other features of PT previously identified (question posing and responding, innovation, being imaginative, self determination and intentionality). It is clear that the above analysis offers further insight into the dynamic between children and between children and adults (Craft, McConnon and Matthews, 2012).

A recent study from Cremin, Chappell and Craft (2013) revisited key published work, and drawing on data previously analysed for PT features, explored how narrative might relate to the current theoretical framework. This study re-analysed fourteen published PT episodes in order to consider the role and construction of narrative in PT. This new analysis revealed that narrative plays a foundational role in PT and also argue that there are reciprocal relationships between questioning, imagination and narrative, layered between children and adults. In the seven reanalysed episodes where narrative was present, the main characteristics were: the nature of narrative was fantasy, everyday, or historical and it was child or teacher-initiated. Also, it was noted from the analysis that the narratives were individually, collaboratively or communally constructed and had a common set of narrative features. Additionally, core features were identified like character/s, plot, sequence of events, significance to the children and emotional or aesthetic investment. Figure 10 shows how new analysis extends the previous studies in terms of the role of narrative in PT. Narrative is seen to be working in complex combination with two core PT features of questioning and imagination. However, this thesis will try to investigate if narrative also plays a foundational role when the teachers use alternative resources of learning like museum projects and how narrative can be shaped in such a context.

My study draws on the theory of PT already built (Burnard et al., 2006; Chappell et al., 2008; Craft et al., 2012b; Craft et al., 2012a; Cremin et al., 2006; Cremin et al., 2013) and involves an attempt to explore and potentially expand the theory regarding characteristics and pedagogy of PT, through

museum visits as an alternative resource for learning. The following core features of PT were identified with children aged 3-7 and 9-11 in England (Burnard et al., 2006; Craft et al., 2008; Craft et al, 2012) while my study investigates children (aged 9-10) in Cyprus (Table 2). Regarding the PT features there are, as discussed earlier, gaps in the degree to which risk-taking has been documented as necessary to PT and concerning the nature and dynamic of peer collaboration in PT episodes. My study attempts to afford more evidence about these features. I also seek to explore the teacher's role and pedagogy for nurturing PT in more depth.
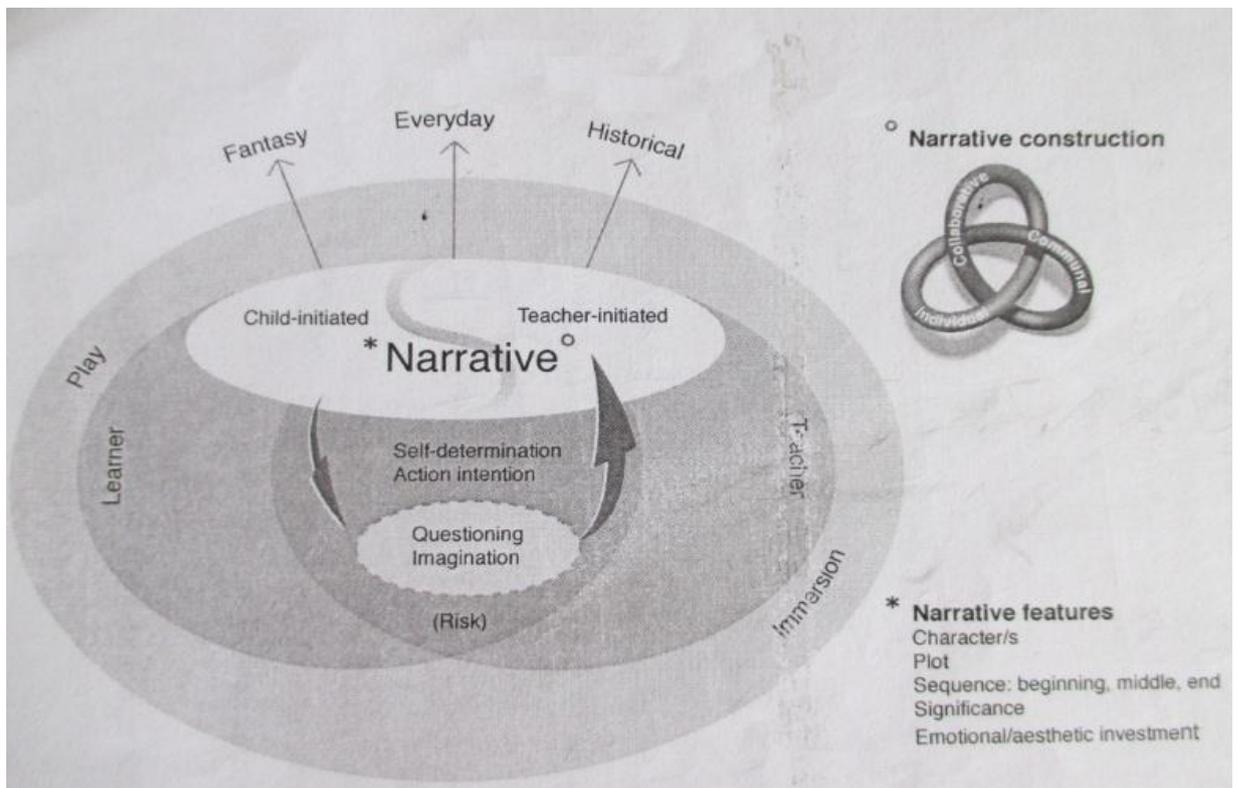
Figure 10: The role of narrative in possibility thinking (Cremin, Chappell and Craft, 2013)

Children's PT (individual, collaborative, communal)	Teacher's Pedagogy
• Narrative • Question-posing and responding • Being imaginative • Risk taking • Self determination • Intentionality • Innovation • Play • Immersion	• Standing back and stepping forward to 'meddle in the middle' • Creating time • Creating space • Profiling learner agency • Providing enabling context

Table 2: Core features of possibility thinking identified in earlier studies

Overall, it is clear that research into PT is both ongoing and useful for documenting creativity in early years and primary education, in relation to both teaching and learning. However, the studies undertaken so far leave a gap in the area of the teacher's role for nurturing students PT age 9-10. I have chosen to study PT in relation to museum projects because it is an area closely aligned to my professional interests. Additionally, this is a new curriculum area in Cypriot primary education and would appear to be a potentially rich context for investigating PT. In the next sections, the links between museum education and PT will be further explored. While this research proposal suggests there are links, it is necessary to examine what the literature says regarding museum visits and creativity, before finally presenting my perception of how PT and museum visits may link together.

2.3. <u>Creative pedagogy in museum visits: Museum projects in primary schools</u>

The International Council of Museums defines a museum as 'a non-profit making, permanent institution in the service of society and of its development, and open to public, which acquires, conserves, researches, communicates and exhibits, for purpose of study, education and enjoyment, material evidence of people and their environment' (ICOM, 2005). This expanded concept illustrates a clear shift in museum philosophy that is not merely restricted to the care and display of collections as was mainly the case in the past. Anderson, Kisiel and Storksdieck (2002) note that worldwide museums are focusing attention on their visitors by developing programmes and exhibitions which can promote repeated visits. Moreover, research over the last decade into school groups that visit museums reveal their unique educational value and their ability to create memorable, meaningful and highly contextualised experiences, if appropriate approaches and methods are used. This is because the nature of learning in museums is different from the classroom and thus it is necessary for teachers to possess special skills and knowledge (Talboys, 1996).

Museums are an integrated part of culture and society: as society changes, so do museums. In the last few decades, all museums have undergone fundamental changes in administration and organisation (Emery, 2001; Freedman, 2000; Matheson, 2006), from the types of collections (Freedman, 2000) to the characteristics of visitors (Hennes, 2002). Museums are now brokers of information and experience, not just collectors of objects (Cohen, 1999). With a growing emphasis on information, museum education has been a primary focus for transformation. Museums are changing their fundamental theories and structures based on social, cultural, and political pressures (Hein, 2005; Hooper-Greenhill, 2007).

2.3.1. <u>The nature of museum learning</u>

Much of today's focus on education is on formal resources like schools and classrooms. Informal settings such as museums offer untapped potential for communicating social, cultural and scientific information, correcting

misconceptions and improving attitudes and cognitive skills (Dalkos, 2000). Learning in museums, in its broadest sense, is a by-product of the free interaction of leisure oriented visitors with exhibitions and their surroundings (Anderson et al., 2002). Museums are ideal places to enrich what is learnt at school. The main reason for that is they have many kind of pieces related with cultures (Anderson et al., 2002). Museums have objects that can serve as representative examples of what is taught in social studies and science courses. Museum exhibit objects in a way that would provoke creative thinking and effective learning (Dalkos, 2000).

In museums, the hierarchy in classroom relationships changes just like the location does. Meeting new people in a new place helps students look at things from different viewpoints. Students who have difficulties learning at school could turn out to be quick learners in museums since intelligence and senses are used in all possible ways in museums. Children who have difficulties learning with traditional teaching methods can learn more easily with activities in museums, where the features of intelligence not used at school and abilities not noticed are all revealed (Hooper & Greenhill, 2000). As Hooper and Greenhill (2000) stated, one of the major benefits of regular museum visits by students is that museums give them the chance to learn in different ways, study things actively and use their abilities and skills that are hardly ever employed in formal education environments. All these attest to the power of museums in education.

Museums are one of the out-of-classroom environments. The importance of museums for education is basically related to the objects in the collection. Students are provided with rich experiences by the help of these objects. In museums: it is provided opportunity to work, and do research with first hand sources; participation in the active learning process is assured; the improvement of many skills such as observation, doing research, comparison, assessment, empathy, social participation, creativity, etc. are assured; and the feeling of liking together with features of being creative comes into prominence (Anderson et al., 2002).

Unlike in a classroom, learning in a museum is in three dimensions because of the real objects. Instead of giving information about a thing, a museum aims to raise interest, curiosity and imagination. As it is the way in daily life, enabling people to be exposed to three dimensional entities would produce much better results (Dalkos, 2000). Thanks to the findings of interdisciplinary studies and the changes and developments regarding the approach towards museums, it is now a widely known fact that learning should not be limited to the extent it can occur at school. Museums make use of interactive exhibitions in order to have the active participation of their visitors (Dalkos, 2000). Dalkos (2000) raised several guiding principles for constructing a creative learning environment. These principles are: the teacher must provide possible chances to choose and discover, to support any attempt to create and to implement sophisticated management strategies. The museum environment can give to the teacher this opportunity to offer to their pupils as it can be a place where the children have the chance to choose and discover.

2.3.2. <u>Experience and learning</u>

One of the first complexities in museum education is the relationship between learning and experience. In the museum, learning is not restricted to attaining factual knowledge. Museum learning encompasses a broader conception of learning, because of the flexibility in how learning takes place. Falk and Dierking (2002) are currently researching many aspects of free-choice learning in the Institute for Learning Innovation (ILI). Both are science educators who have worked extensively with each other and others on many aspects of free-choice learning and museum learning. According to ILI (2006), free-choice learning is learning that is guided by the individual's choices that originate from their personal preferences, knowledge, and experience. It is a fundamental part of life-long learning. Much of Falk and Dierking's (1992, 2000, 2002) research is based in the museum, because the museum is a place that encourages free-choice and life-long learning (Dierking, 2002, 2001; Direking, Falk, & Ellenboben, 2005; Dierking & Pollock, 1998; Dierking, Falk, Holland, Fisher & Wilke, 1997; Falk, 1993,1998a, 1998b, 2006; Falk &

Adelman, 2003; Falk & Dierking, 1992, 2000, 2002a, 2002b; Falk, Dierking & Rennie, 2005; Falk, et al., 1998; Falk, Scott & Dierking, 2004; Falk & Storksdiek, 2005).

2.3.3. <u>Museum Interactivity</u>

A museum is a place that materialises and visualises knowledge (Emery, 2001). A museum's function is to collect, preserve, and present information and knowledge for the public to appreciate and learn from. To compete with the entertainment industry, modern museums are attempting to move away from the perception that they are boring educational institutes by becoming active learning centres where people, especially young children, can discover new knowledge about the world and challenge themselves (Falk & Dierking, 2000). Therefore, interactivity becomes one of the most important design tools to attract visitors to come back to museums.

Hands-on exhibits, playful programmes, and educational adventures refresh visitors' minds with new experiences while they are visiting 'traditional' museums. A combination of ordinary displays of objects and images with creative interactions offers an effective method for designers and museum experts to make the visiting experience more attractive and meaningful. Those hands-on exhibits are usually presented through some technological media: for example, an exhibit with a device involving physical activity that the visitor can operate is added to the main display (Hinrichs, 2008). These interactive programmes successfully attract people to spend more time manually manipulating components of exhibits (Hinrichs, 2008). Interactive exhibits are especially attractive to children and families, who form the mainstay of museum audiences (Kidd et al., 2011).

However, interaction in the museum context is different because it not only provides a playful experience but also allows the visitor to become more engaged with the material. When designing interactive exhibits, designers and museum experts usually utilise discovery and constructivism as pedagogies to construct interactivity in the context of the museum. In modern museums,

these two pedagogies work together to promote the construction of meaning. Compared to the didactic expository model (when the visitor can only receive information passively) and stimulus-response model (when the visitor can only stimulate one correct answer to get a response), the discovery approach empowers the visitor to explore open-ended results. The focus is on exploration rather than on getting the right answer. Kidd, Ntalla and Lyons (2011) call these interactions "dialogic interactivity". She explains that dialogically interactive exhibitions tend to make an effort to connect with visitors by representing aspects of visitors' own cultural backgrounds and using open-ended narratives (Kidd et al., 2011).

Another approach towards museum interactivity is 'play', which integrates games, interactions and learning to create immersive visiting experiences (Falk & Dierking, 2000). Games enable discovery and also allow the museum to become a social space so that it can facilitate co-experience. In games, the player is more important than the objects in the context of the museum. 'Often games enable the audience to be in charge, gaining a closer relationship to the museum objects or stories' (Beale, 2011). The key to successful visitor learning is to 'help bridge the original contexts of museum objects with visitors' everyday lived context' (Falk & Dierking, 2000).

2.3.4. <u>Museum projects and creativity</u>

Projects linking schools and external organisations have been researched around the world including those formed with museums and galleries and creative professionals (like artists, writers, biologists). Such initiatives are frequently (particularly in England) referred to as a 'creative partnership'. According to Hall, Thomson and Russell (2007, p.605), a creative partnership gives to children and their teachers the opportunity to explore their creativity by working on sustained projects. Thus, the intention of a creative partnership initiative in school is to develop creative teaching and learning (Creative

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Partnerships[3], 2007). Research undertaken for the large-scale organisation which supported creative partnership activity over the course of nine years reports a difference in expectations, language and practices brought to the classroom by external creative and cultural partners, which can challenge and stretch both pupils and teachers (Creative Partnerships, 2007). Also, an evaluation from Ofsted (2010) for these kinds of projects identified a clear increase in teachers' skills and creativity in fostering creative learning.

One form of creative partnership as was mentioned earlier is cooperation between schools and museums. A reason for choosing as a focus of this research projects with museums is because of the nature of learning and the experiences that this kind of project offers to the students. This study argues that linking interactive and experiential museum projects as external experiences with the classroom lessons and involving students in the projects created and operated inside a museum can nurture students' PT. The above argument comes from the understanding that learning in museums is distinctive from classroom learning in being more active and experiential, because children learn through experiencing real objects using all their senses, as well as, for example, becoming involved in resource-based activities led by museum staff. Talboys (1996) notes the importance of using alternative environments for learning because otherwise not leaving the borders of a classroom will strictly limit the effectiveness and relevance of what pupils are taught. Added to this, Witmer et al. (2000) emphasise the importance of repeat museum visits which can have a profound and lasting impact on students, enhancing their abilities to respond and discuss whilst supporting education standards and classroom work. It is suggested that repeated visits to museums should be an important component of learning (Witmer et al., 2000).

This doctoral study argues that projects with museums have strong potential to develop creativity, especially PT, due to the characteristics of museum-

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[3] Creative Partnerships was a ten-year programme of creative partnerships in England. However, the government announced that the funding would be withdrawn from the end of the academic year 2010/2011. It is important to say that there are lots of others organisations that offer partnership projects to schools in UK like DAISI and SpacEx Gallery (Devon Arts in school partnership projects).

education partnership. Within the National Curriculum of Cyprus (CMEC, 2011) museum visits are obligatory for all primary schools. It can be argued that museum interactivity has strong connections with drama and improvisation. Playful museum projects can allow for creative ideas occurring unexpectedly during the improvisation process. This is perhaps more than a "serendipitous relationship". This is due to the nature of improvisation and its approaches employed in the learning process throughout a museum project that has an indivisible relationship with creativity. In the following section, the ways that improvisation and drama are related to creativity and museum interactivity are examined.

2.3.4.1. Creative teaching and Teaching for creativity in drama

Creative teaching and teaching for creativity are interrelated for the development of creativity even though they have different focuses, the former on teacher's practice and the latter on the learner and their personal agency (Craft, 2005). Drama, as Neelands (1984, p.24) states, "is both a way of learning and a method of teaching"; this means that drama concerns both of the focuses of the two practices. Didactic teaching without interacting with the learners can never trigger the dynamism and fun in drama.

The NACCCE report (1999: 89) defined creative teaching as: "using imaginative approaches to make learning more interesting and effective'". Drama is fashioned by imaginative, flexible, and innovative techniques and activities to make alive the learning content and static knowledge, and as a result increase pupils' interest and engagement (Heinig, 1993). Drama practices celebrate creative teaching, because drama's wide repertoire of techniques allows teachers to make flexible choices and inventive combinations that are appropriate to the objectives. In this way, teachers have control and autonomy over their own professional practice when they generate creative activities to entice pupils' interest and curiosity. Flexibility is also required when drama teachers interact with children and actually improvise in response to children's different needs.

Drama may not be seen as teaching for creativity as explicitly as the creativity training programme of the pragmatic approach. However, drama's approaches and context which provide opportunity for developing personal and social creativity denote drama as teaching aiming for creativity. Along with the approaches and activities, the common strategies teachers use also help to elicit learners' thinking and active involvement in problem-tackling, including posing questions, offering open-ended possibilities to respond, challenging but not overwhelmingly, and keeping open to other possibilities (Dickinson & Neelands, 2006; Neelands, 1990). In Cremin et al.'s (2006) study, standing back and profiling agency are found to be important features of teachers' creative pedagogies. In drama, though there are no explicit terms for these, Neelands' (1990, p.50) description of teacher-in-role shows that the way drama teachers work includes the two features:

"…it's also important to remember that the purpose of using teacher-role is to put the children into an immediate situation where they have to do the thinking, the talking, the responding, the decision-taking, the problem-solving. It's often hard for us to step back from our class when they are dealing with a problem; we want to wade in, help them sort it out, show them the right approach. In drama it's essential, whenever possible, to step back and push the group into using their own combined resources as a way of dealing with whatever arises. The teacher should deliberately withhold her expertise and knowledge even if that means long embarrassing pauses while the group figure out what to say or do for themselves; it must be the children's work".

As mentioned above, teachers' techniques and interactive relationships between learners help to prioritise children's ownership, engagement and autonomy. Children are encouraged to make their own decisions about their own stories in drama class; they are encouraged to engage in, to control and to contribute to their own learning, instead of "learning by authority". Also, creative learning is encouraged through the drama process which provides gaps/problems to investigate and chances to experiment, balanced with some "hands-on learning" (Zimmerman, 2004, p.3) rather than merely sitting and listening. Therefore creative learning methods are required in the learning process in drama (Mages, 2006). The learning is made important, fun, and

relevant to children's lives through dramatic activities (Dickinson & Neelands, 2006). In sum, the learning process in drama gives children autonomy over their learning, encourages children's active engagement, and at the same time involves children's creative capacities. All these links drama techniques with museum interactivity and their co-operation can nurture students' PT.

2.3.4.2. Drama, PT and museum interactivity

Drama and improvisation, according to Lemons (2005), provides an accepting and supportive social community, in which creators are able to face uncertainty and take risks, to be open to experience, trust others' potential to contribute and therefore build on their confidence. He emphasises that the process of improvisation is itself a challenge and a risk-taking action: it "requires a willingness to abandon routines" (ibid: 30), especially when receiving unexpected responses from other team creators that need to be built on. This kind of exploration as well as the risk-taking action link with the notion of PT and the everyday creativity which is the focus of this PhD study. Thus, it is argued from this study that when a museum has an interactive nature can nurture children's PT through drama activities.

The elements of everyday creativity nurtured through improvisation and the ethos of improvisation fit well with the LCC framework, on which my research is based. LCC and improvisation both stress everyday problem-solving, the abilities and attitudes everyone can learn, and are not limited to the talented few. Every child is encouraged to participate, to work out ideas, and to share in improvisations or little c creative activity. The purpose of participating and acting is not just for the ultimate product but for self-actualisation (Lemons, 2005).

As it was mentioned earlier, museum interactivity can adopt two essential approaches based on the collection that it holds. These are the story and the role-play which can enact various practices in drama (e.g. theatre games, improvisation) and contribute to achieving the objectives of drama. Dickinson & Neelands (2006) suggest that story, at the heart of everyday lessons, is the imaginative resource that gives delight and stretches the imagination; while role-

play offers the opportunity for imagining oneself differently when facing the same problem or situation as in the story.

The story, or the content of an interactive museum, can involve social issues (Bolton, 1992), or themes from other subjects such as an historical events (Clements, 1996; Somers, 1994), unfinished stories told by the teacher and needing to be developed by learners (Heinig, 1993), or the story invented by the whole class with the teacher's prompting and guidance (Wagner, 1999). No matter in which form, there is always a tension in the story (that is what makes story interesting), which enables teachers to set a context that not only involves experience related to children's everyday life, but also trigger children's curiosity "with problems to solve, with open-endedness that requires a filling in of gaps, with information and ideas to synthesise into new relationships…" (Torrance, in Heinig, 1993, p.8).

If story is the mean to arouse curiosity and invite children to jump into a learning context voluntarily, then role play is the vehicle through which children explore or develop the dramatic context. By being in role and acting out in drama, children are actually learning by doing, experiencing the tension or confronting the problem themselves, instead of merely reading or accepting knowledge from the teachers. The reason that drama is effective in helping children make sense of meaning is because: "children learn best by making and doing, and drama provides them with a physical and concrete resource for examining issues that might otherwise remain abstract and inaccessible" (Neelands, 1990, p.25).

Thus, through story, children's curiosity and their active engagement are aroused. As they experience delight in learning a new story, they are also offered the opportunity to experience the tension themselves, to solve the problem, or explore the gap by being in roles imaginatively. Children not only live through their knowledge by acting in a different role, but also learn to pose questions, find out more possibilities, take risks, and be playful in inventing new ideas. These features, reflect the notion of PT as well as links further PT, drama and museum interactivity. This PhD thesis argues that drama/improvisation is the vehicle through which children's PT can be foster inside and outside of an interactive museum. This statement will be discussed

in detail in the findings and discussion chapters. However, it will be interesting to look at the dynamic process of drama in order to understand better how drama can be the driving force for nurturing students' PT.

2.3.4.3. The dynamic process of drama

In contrast to the traditional ways of learning, involving sitting, listening, and copying for example, lessons that include drama usually require frequent body movement activities and acting, and therefore have a very different setting. With the teacher's guidance, children "explore, develop, express and communicate ideas, concepts and feelings through dramatic enactment" (Heinig, 1993, p.5). As argued above, in this way children are learning by doing, by taking action and by experiencing. With stories, movement in and out of roles, imagination and improvisation, drama forms a unique and dynamic learning process that nurtures creative abilities.

The dynamic process of drama is also embedded in the consciously active engagement through being in roles and improvisational acting. As discussed, unrepeated and unpredictable responses are produced during the improvisational process. Therefore when improvising with the partner or in a group, the teacher and children are actually taking risks and solving problems (Lemons, 2005). While in roles, students and the teacher move in and out between the real and the imagined world of drama, engaging in the situations in others' shoes or being out of the role to observe or reflect critically. This dynamic shift involves participants' imagination to "leap from their actual situation or roles into a supposed one" (McGregor, Tate, & Robinson, 1977, p.11), an "as-if" context, and vice versa. These are important factors for the PT to be nurtured and drama can be the driving force for the fostering of the PT features.

Additionally, drama itself is an interactive process, between different roles and between roles and observers. Due to the interactive nature, the social relationship in the classroom is again unconventional. In drama, children often need to collaborate with their peers, for drama activities include work levels ranging from individual (e.g. walking around the space, observing, reflecting) through group work, and even to the whole class working as a group (e.g.

teacher-in-role). Team work is important in the process of developing drama, involving discussion, generating, communicating and sharing ideas (Heining, 1994). Therefore social skills (social creativity, according to Dickison & Neelands, 2006) are nurtured. In addition, the teacher does not guide the dramatic exploration alone. He/she works together with the children when developing the drama. The interaction bouncing between teacher and the learners is crucial and occurs through questioning, discussing and open dialogue. Neelands (1990, p.49) describes this as "co-authorship": "In a sense, the teacher is using role to start 'writing' the drama. She is consciously selecting phrases and actions for the children to 'read', and then offering them the chance to use role in order to 'write' themselves into the action. Because the teacher is trying to work *indirectly* (i.e. at an affective rather than just at an intellectual level), the 'writing' is suggestive and resonant…".

The teacher-learner partnership (Neelands, 1990), the democratic relationship (Gatt, 2006), the membership and friendship (Bayliss & Dodwell, 2002), are formed and valued in drama. The dynamic interpersonal relationships in drama also help to build a context for creative learning and a psychologically safe environment as discussed below.

2.3.4.4. <u>A safe environment</u>

To act in front of others, or simply being imaginative, could be difficult and embarrassing to some students. Drama practitioner Zimmerman (2004, p.5) observes that: "We have all had students who were uncomfortable performing. They are called reluctant learners, and nothing feels better than helping them become self-believers, eager learners, and confident performers". To achieve this, he suggests theatre games to allow students to feel ready and some rules to create a safe climate: "Games are fun, a non-threatening way to prepare students for the stage. They teach skills in an enjoyable way that the actors will remember" (ibid: 5). Rules which must be made clear to students before drama lessons are: to trust others, including their potential; to respect your collaborators, the teacher, and the audience; to support each other and always

respond to collaborator's acting; know your limitations, and respect others' limitations.

The teacher's caring ethos is vital as well; he/she encourages learners' active engagement, and accepts and values their contributions. Support by the teacher is also shown through positive comments, such as "you had a very good facial expression", or "that was a very unique and creative idea" (Zimmerman, 2004, p.20-21). The teacher-learner relationship will become closer when they know their teacher believes in them (ibid). Therefore, with mutual trust and the teacher's caring ethos, drama provides an accepting and supportive social community for participants to be confident enough to act, be imaginative, face the uncertainty and take risks.

Another aspect of drama's safe context is its imaginative world. Somers (1994) suggests that imaginative acting in drama sets up a symbolic world where students can experiment with different reactions, to try out different possibilities and take up multiple perspectives which they may not do in real life. They are safe to try and to fail.

2.4. <u>School groups visiting museums</u>

Pupil visits to a museum happen in two basic ways: through an educational visit that the school or the teacher organises and through educational programmes that the museum offers (Xanthakou, 2007). The structure of the visits needs very careful thought and detailed, advanced planning. In the present context, this study focuses on the first type of visit where the teacher involves his/her students into an educational programme but also has an active role through the programme. The reason for this is that in Cypriot museums, the teachers have the main responsibility for pre-planning and the follow-up work.

The teacher's role in a museum visit can vary greatly from visit to visit. This depends on the structure of the museum, the teacher's interest, and the

curriculum. Tal and Morag (2009) studied the role of the teacher during guided school visits to a natural history museum in Israel. The teachers were not involved in the actual museum visit; however, the teachers' involvement is noted in the classroom. Teachers are responsible for planning and arranging the visits, as well as incorporating the subject into the curriculum and preparing the students for the visit. After the visit, teacher involvement continued as the teacher is responsible for reinforcing the ideas presented in the museum. This research demonstrated the outside influences of the museum visit with pre- and post-reinforcements.

Witmer, Luke, and Adams (2000) experimented with multiple-visit museum programmes. While the researchers found positive correlations between the projects' goals and the results, they admitted the shortcomings of multiple museum visits both as an educational tool and as a research tool. As a museum programme for the participants, it was a success. Students showed an increase in attitudes and understanding of art that met, and even exceeded, programme goals. As a research tool to demonstrate learning, it was not as efficient. Researchers spent five years evaluating the programme, interviewing the participants over that period to demonstrate the long-term effect of the programme.

2.5. <u>Structuring a meaningful class visit for nurturing creativity</u>

According to the wider literature, the museum that the teacher will select must best suit the needs and interests of the pupils and offer links to classroom learning in order to be able to build new understanding based on what they already know. Hein (1999, p.3) argues that 'one needs knowledge to learn: it is not possible to assimilate new knowledge without having some structure developed from previous knowledge to build on'. Theoretical and empirical studies assert that a direct connection between museum visits and classroom work strengthens the contribution of museums to teaching and learning (Xanthakou, 2007). However, Hooper-Greenhil (2011) argues that one possible

way to enhance the educational potential of the museum is to consider the visit as one of the elements of a 'three-part unit' which is consisted by the preliminary preparation, the visit and the follow-up work. The 'three-part unit' is one of the most common practices for partnership projects with museums and the Ministry of Education and Culture (CMEC, 2012) in Cyprus cites it as being best practice if teachers are to have meaningful class visits. However, it should be acknowledged that not all teachers use the 'three-part unit' approach and I may find this to be the case in the sample under investigation.

Preliminary preparation of students would be better carried out in the classroom and aims to prepare the pupils for their visit in order to gain the maximum value (Piscitelli & Anderson, 2000). This preparation would include cognitive, psychological and geographical factors which will allow a meaningful learning environment (Piscitelli & Anderson, 2000). Teachers can show pictures or/and similar objects they are likely to see at the museum to introduce children to new objects, to provoke their curiosity and engage them in discussion, to help them become familiar with appropriate vocabulary and develop skills working with objects (Falk & Dierking, 2000). It is also useful to discuss with children the rules of museum visiting, as well as what they will be doing and seeing there and how this will help with their work. Thus, children will frame appropriate expectations and arrive at the museum motivated and curious with questions they want to ask (Piscitelli & Anderson, 2000).

The next step that the teacher must take into consideration is the museum visit. Hooper-Greenhill (2011) suggests that the museum visit acts to motivate, stimulate, provide a physical experience, and consolidate learning. As such the visit would be most effectively used at the start or in the middle of a unit of work, so that there will be time left to use the information of ideas gained. The teacher can engage children in a variety of activities that will offer them multi-sensory experiences and opportunities for active participation, social interaction, choice and control. Moreover, playful experiences by employing strategies such as treasure hunts, role-play and other 'game-like' activities can help children learn in an enjoyable and active way. As Piscitelli, Weier and Everett (2003) note, children are intrinsically motivated during museum visits when the experience is made enjoyable and fun.

To achieve children's attention and communication, exhibitions need goal-directed and discovery activities (e.g., making predictions, completing a task, resolving a question) that reward appropriate attention (Anderson et al., 2002). The goal is that children use exhibition content as the framework for the learning activities. Children must operate a dial, compare two events, look for answers to a question, like 'What makes the ball come down?' 'What is missing in this picture?' 'What happens if X is kept constant?'. In other words, the positive results from attending and doing sustain this attention. Such natural (intrinsic) rewards can take many forms, but can include such simple things as completion of a task, achieving a prescribed score or performance level, or successfully predicting an event (Anderson et al., 2002).

After the visit it is advisable to provide follow-up activities otherwise much of the value will be probably lost (Hooper-Greenhill, 2011). Children can leave museums with a range of impressions, factual information, on-site drawings, photographs, new ideas and a richer understanding of life and culture which can be stimulated further in various ways (Piscitelli et al, 2003). Children can recall, discuss and evaluate their experiences and be engaged in a variety of activities inspired by their visit. In this way children's learning will be extended even further.

The above model proposed by Hooper-Greenhill (2011) is a fundamental contribution to the field of museum education. It illustrates that the visit must not be seen as a simple school trip, sporadic and casual, but as an educational tool for both teacher and pupils (Xanthakou, 2007). However, according to Xanthoudaki (2007) the success of the 'three part unit' depends on a variety of factors such as the correspondence between the topic of the visit and the classroom, curriculum requirements, the teacher's strategies and teaching context. Nevertheless, it must be acknowledge that the model described above may not be a reality in the observed classrooms of this study.

2.6. <u>My perception about how Possibility Thinking and museum project link</u>

Understanding of museum projects is changing over time. Exhibitions are now judged on the quality of their stories and presentation instead of the collections they display. Storytelling has become recognised as a very powerful way to communicate ideas (Hooper-Greenhill, 2011). Museum project designers have moved project design toward immersive environments and large-scale spectacle, both of which help tell stories by creating affective and sensory experiences by using the museum exhibitions. Therefore, interactive project designs make passive exhibitions dynamic and help to enhance visiting experiences (Hooper-Greenhill, 2011).

This study explores how children can be inspired by the stories behind the authentic works that museums hold and by participating in an interactive project hosted by a museum their PT can be nurtured. Duffy (2006) endorses the argument that the encounter with original artworks and artifacts instead of two-dimensional representations, such as reproductions, photographs or other secondary sources, is of great importance in children's learning. This can inspire children's imagination, experimentation and playfulness, something that will lead to innovative ideas and results on the tasks that will be set for them (Anderson et al., 2006). Museums present schools with many opportunities to help pupils take their learning further because pupils have the opportunity to experience the actual size, colour, texture, for example, of a sculpture or a ceramic artifact, and also can discover the story behind it (Anderson et al., 2006) by involving them into a scenario full of experiences and historical facts.

It is argued from this study, that looking closely at the elements existing in a piece of sculpture or researching a vessel made by someone else and inducting the students into an interactive scenario during their museum visit can promote ideas and inspire the imagination. Teachers, through firsthand experience, can stimulate children's curiosity to explore different problems with the use of imagination and also to create imaginative solutions. The children interact with the real objects moves in and out between the real and the imagined world of the museum, engaging in others' shoes or to reflect critically. This dynamic shift

involves the children's imagination to leap from their actual situation or roles into a supposed one, an 'as if' context, and vice versa. Thus, a museum project with an experiential atmosphere can stimulate children's curiosity and active engagement. A museum project also affords the children the opportunity to solve the problem, or to explore the gap by being imaginative and also to give them the opportunity of experiencing the tension themselves. Places outside the classroom afford direct contact between the student and the object of study. This is a central idea in outdoor education literature. Dahlgren and Szczepanski (1998, p.26) wrote that when using outdoor settings as places for learning, 'these places are connected to first-hand experiences in authentic environments with the purpose to create direct contact with the material and active participation, i.e., interaction and socialisation. Echoing, Dewey (1915/2011) argued that only a 'curriculum that blends children's lived experiences with surrounding objects and familiar spaces will create lasting meaning and understandings'.

Museum interactivity can improve the visiting experience (Kidd, Ntalla and Lyons, 2011). Rather, interactive exhibits will be a key tool in engaging visitors and creative immersive educational experiences for them. Children are also offered the opportunity to experience the tension themselves, or explore the gap that the teacher will set to them by being in roles imaginatively. Children not only live through their knowledge by acting in a different role, but also learn to pose questions, find out more possibilities, take risks and be playful in inventing new ideas (Kidd et al., 2011). These features are exactly the qualities of PT. Aristotle (cited in Ross, 1908, p.152) once said, 'For the things we have to learn before we can do them, we learn by doing them'. Experiential learning is the process of making meaning from direct experience. It is vital that the individual is encouraged to directly involve themselves in the experience, in order that they gain a better understanding of the new knowledge and then to nurture their PT.

Today it is possible in many museums, to learn by observing, touching and interacting with exhibits. For many learners, the notion of bodily engagement and tactile activity holds great appeal. This is also verified by literature on visitors' experiences: 'exhibits which are multi-sensory, hands-on, and interactive are key attributes for visitor enjoyment and memorabililty of museum-based experiences' (Piscitelli & Anderson, 2000, p.7). Jeffrey and Craft (2004, p.86) emphasise the

importance of the process of learning rather than the achievement of a creative output, artifact or interface. As such, creative learning is conceived as the middle ground that emphasises the pedagogical processes involved in working creatively (Jeffrey & Craft, 2004).   Thus, the children while visiting a museum may feel released from the 'boundaries' of the classroom. They may feel freer to experiment, to ask questions, to play, to cooperate, to discuss and exchange ideas. Teachers may also feel the same freedom as they can give their students greater time and space to experiment, to imagine, asking questions. They will probably stand back and let the children use this alternative learning resource and experience the ancient world and with the appropriate guidance may help them increase their PT.

This study argues that the characteristics of an interactive museum programme can nurture students' PT if the teacher uses it effectively and combines it with the classroom lessons. Thus, my curiosity was inspired to learn more about how the pedagogical practices of primary teachers in Cyprus may foster children's PT through museum visits. My doctoral study seeks to address the gap that currently exists between PT and the use of museums as an alternative resource of learning linked with classroom lessons. The results should prove interesting and valuable to both children and teachers and will offer helpful suggestions for improvements to existing provisions for PT and museum education. It should be pointed out that this study does not set out to provide finite answers, rather it seeks to explore the current utilisation of local museums by primary teachers and how they can nurture students' PT by using this kind of alternative resources of learning, and to signal the pedagogical strategies for nurturing PT through museum visits in Cyprus.

2.7. <u>The Cypriot educational context</u>

In Cyprus, the educational system is centralised. The Ministry of Education and Culture (CMEC) is responsible for educational policy making. All primary schools (apart from a limited number of private primary schools) are the responsibility of the government and are run according to the guidelines decided by the CMEC.

Teachers' transfers or promotions are decided by the Educational Service Commission, the members of which are appointed by the president of Cyprus. The evaluation of individual teachers, as well as of schools as units, is conducted by inspectors from the CMEC. Primary education is compulsory (6-12 years) and children are grouped with other children of the same age in mixed ability classes.

Primary education provides a six-year programme (grades 1 to 6) to children from the age of 5 years and 8 months. Primary education is compulsory in public schools. Larger schools in urban areas are divided into two cycles, namely Cycle A (grades 1 to 3) and Cycle B (grades 4 to 6). Generally, the same classroom teacher organises the teaching and learning process in all subjects (Table 3), although in large schools there are also subject teachers for physical education, art, music or other specialised subjects. There are no final examinations at the end of primary education. Upon successful completion of grade 6, pupils receive the primary school-leaving certificate.

The aims and goals that should be pursued in each primary school are also decided by the CMEC. Circulars are sent to each primary school at the beginning of each year in which these goals are specified and directions for their implementation are provided. If a certain school decides that it is necessary to pursue more goals than the goals prescribed by the Ministry, it has the freedom to do so, as long as the latter goals are not neglected. The curriculum for the primary school or any changes in this curriculum is prescribed by the CMEC. Guidelines about the teaching of this curriculum are also sent by the CMEC either through circulars or editions like the 'Curriculum Programmes for Primary Education' (CMEC, 2011).

Opportunities for professional development are provided by the CMEC and the Pedagogical Institute (tertiary level institute responsible for in-service training). These opportunities include circulars, teachers' books and short seminars by the CMEC and afternoon voluntary classes by the Pedagogical Institute. The above developmental opportunities are based on the giving of information. Inspectors are responsible for both primary school teachers' evaluation and professional development. Due to their load of work however, they visit teachers very few

times.   Other opportunities to meet Cypriot primary school teachers' developmental needs within the school context or outside do not exist in Cyprus.

Subject	Number of weekly periods in each grade					
	1	2	3	4	5	6
Modern Greek language	14	14	14	13	10	10
Mathematics	7	7	7	6	6	6
Religious education	2	2	2	2	2	2
History	–	–	2	2	2	2
Geography	–	–	2	2	2	2
Environmental studies	3	3	–	–	–	–
Science	1	1	2	2	2	2
Physical education	2	2	2	2	2	2
Art education	2	2	2	2	2	2
Music	2	2	2	2	2	2
Foreign language (English)	–	–	–	2	2	2
Home economics/Design and technology	2	2	–	–	2	2
Free activities	–	–	–	–	1	1
Total weekly periods	**35**	**35**	**35**	**35**	**35**	**35**

Table 3: Weekly lesson timetable (CMEC, 2011)

2.7.1.   Creativity in Cypriot primary education

The term of creativity and its cognates tend to be used in two ways within the Cypriot Ministry of Education and Culture (2011): to describe specific activities and to emphasise the value of creativity as a desirable 'thinking style'.   However, the term and its cognates are used in the National Curriculum in a vague way, and it is not clear how their teaching and development could be realised in the classroom settings (Kampylis, 2008; Kampylis & Argyriou, 2008). Thus, Cypriot teachers commonly interpret creativity and its teaching in personalised ways (Kampylis, Berki & Saariluoma, 2009). This is also true for teachers in arts subjects and generalist teachers in the education systems of other countries (Diakidou & Kanari, 1999; Dogani, 2004; Fryer & Collings, 1991; Odena & Welch, 2007). Regardless of their subject expertise, Cypriot primary teachers understand and appreciate the credentials for the creative students, the creative

process and the creative outcome (Kampylis & Argyriou, 2008; Kampylis, Berki & Saariluoma, 2009).

The development of Cypriot primary school students' creative potential lies at the heart of the educational goals as reflected in the present National Curriculum. However, despite the declarations for a creative education, the everyday practices in Cypriot primary schools are influenced by several factors (Kampylis, 2008). According to Kampylis (2008), the basic factors are the inflexible and extensive curriculum, and teachers' inadequate training on creativity. In addition, the term creativity is widely used in formal and informal settings but, as mentioned earlier, with vague definitions or without any specific explanations regarding implementations in the school context (Kampylis, 2008). For instance, in the reformed Cross Thematic Curriculum Framework (CTCF) for Compulsory Education (PI, 2003), the term and its cognates have been used approximately 300 times. Nevertheless, CTCF does not offer a substantiated working definition of the term and does not give explicit instructions on how creativity might be developed or how one would know when this ambitious target has been achieved. Moreover, the CTCF occasionally refers to the term creativity as a desirable thinking approach, as well as an attribute of specific activities.

2.7.2. <u>Museum education in Cyprus</u>

During the 1980s the Cypriot government was preoccupied with solving basic social and economic problems caused by the Turkish invasion of 1974. However, in the late 1990s these basic human political and social needs had been met; the state began to invest resources and money into education and the cultural industries, and with a particular focus on modernising museums (Papanicolaou, 2003). At that time the Ministry of Education and Culture was receiving criticism from organised local groups claiming that museum policy and practice in Cyprus was out of touch with developments in other western countries; museums failed to attract Cypriot nationals as visitors; and managers in museums were not aware of the potential contribution of their institutions to the general curriculum in schools (Koutselini, 1998).

In 1996, the government responded for the first time to the community pressure as far as the museum education is concerned. The Ministry of Education and Culture set up an experimental programme for schools in which four teachers were working part-time in order to develop educational projects for primary students. The CMEC's (2011) aspiration through museum education programmes is to provide all children, by the time they finish primary school, with the opportunity to visit at least one museum and to be exposed to cultural activities. Further to that, the CMEC (2011) aims to 'trigger children's interest and to show the teachers what can be accomplished in a context different to the classroom'. This practice has been extended today and the Ministry of Education and Culture has, under its auspices, museum programmes in four towns: Nicosia, Limassol, Larnaca and Paphos (CMEC, 2011).

Therefore, programmes in nine museums in the four regions of the island are offered by the CMEC (Table 4, Table 5). The educational programmes are designed on the basis of experiential, inquiry-based and collaborative learning theories and aim to develop observation and exploration skills and critical thinking among the participants (CMEC, 2011). Inspectors of primary education, museum educators and to some extent museum curators collaborate in developing the programmes, which target specific areas of the curriculum. The duration of the programmes is 90min each and their attendance is compulsory for particular age groups in formal education. The target audience is exclusively primary school children, thus, teachers specialised in museum education develop and deliver the programmes, once or twice per week. Typically a child is expected to take part in at least one programme every academic year.

Primary school teachers work as museum educators in these cities' museums and are responsible for organising, developing and implementing programmes. Every programme is designed for a particular year group of students and all the local primary schools take part in these programmes. One programme is being held in an art gallery focusing on art education, one in a Byzantine museum and others being held in archaeological museums, the latter of which have a strong historical focus. The main objective of these educational programmes is to offer rich experiences to pupils and to develop positive attitudes towards the

environment and the cultural heritage of Cyprus (Ministry Education and Culture, 2011).

	Museum	Title
Nicosia		
1.	Cyprus Museum (Archaeological)	'The talanto'
Limassol		
1.	Regional Archaeological Museum	'The Cypriot Aphrodite'
2.	Limassol Medieval Castle	'Behind the Loopholes'
3.	Municipal Art Museum of Limassol	'Our town through artists' palette'
Larnaca		
1.	Regional Archaeological Museum	'Thalassa, thalassa…invitation to an ancient symposium'
2.	'THALASSA', The Municipal Museum of the Sea (Pierides Foundation)	'In Ayia Napa…Ship of Kyrenia, set sail!
Pafos		
1.	Regional Archaeological Museum	'Travelling with the 'kyra' of Lempas'

Table 4: List of the educational programmes in Public Museums in Cyprus (2011-12)

	Museum	Title
Nicosia		
1.	Leventio Municipal Museum of Nicosia	'My town and me'
2.	Leventio Municipal Museum of Nicosia	'Snapshots of the past in Nicosia'
Larnaca		
1.	Pierides Archaeological Museum	'Animals, Birds, Monsters…'

Table 5: List of the educational programmes in Private Museums in Cyprus (2011-12)

Experienced teachers developing and delivering programmes in museums have been successful, because they can utilise their pedagogical expertise to great effect (Papanicolaou, 2000). Moreover, these programmes are considered successful by the Ministry of Education because the teachers have good knowledge of the content of the National Curriculum and are able to link museum and class learning which is considered to be an important factor influencing learning on field trips (Anderson et al, 2006; Piscitelli et al, 2003). In order for the programmes to be successful, the Ministry of Education began to offer in-service training to teachers concerning the activities they can do before and after the visit with their pupils (Ministry Education and Culture, 2011).

However, an issue that emerged from the discussions with the inspector, the museum directors and the museum educators is the lack of pre- and post-visit activities in school settings. The fact that museum education starts and finishes within the context of the museum was identified as the main problem; it seems that there is no extension of the visit in the school. I would also argue that there

is a lack of educational programmes offered in heritage sites, whereas there are plenty of sites on the island. It was also pointed out that teachers who take part in the museum educational programmes with their classes are not engaged during the programme. This, according to the inspector of the CMEC, is due to an existing 'problematic culture' among the teachers (Hadjigavriel, 2010).

The programmes are considered to be 'highly successful' (Hadjigavriel, 2010). However, their evaluation is currently based on unstructured observations from the museum educators, a questionnaire (similar for all programmes) given to some teachers once the programme is completed and on comments some teachers are asked to write in a visitors' book (only at the Thalassa museum do the children write their comments on a paper, but this is purely an initiative from the director). Additionally, evaluation seems to be based on some indications, like the oral responses from the children in the end of the museum programme or the number of calls they receive from headteachers asking to take part in the programmes, even though the visit is not compulsory for their school (Violari, 2010). The fact is that neither museums nor the external funding body ask for an evaluation report. At the end of each academic year though, museum educators should write and submit an annual report to the CMEC. Having read the reports from the two museums in Nicosia in 2012-13, it could be argued that these reports are brief personal constructions of how the museum educators experienced the programmes. Apart from a basic quantitative analysis of the data collected from the questionnaire, a list of the teachers' comments in the questionnaires and visitors' books is also included.

The recent policy paper in Cyprus regards museum education as connected to skills that might be considered closed to PT such as developing imagination, negotiating choices and solutions to problems and producing new alternative ideas for understanding the world (CMEC, 2011). It also suggests that a safe and collaborative museum context would help students explore different points of view, find problems, try out solutions and take decisions, being responsible for their choices.

A start has already been made in developing museum education and it is anticipated that educational practices in museum education will be further developed in the near future, improving and enriching the current position.

2.8. <u>Chapter summary</u>

This chapter provides theories on creativity; studies concerning creativity in education, and PT features as well as PT pedagogical features. Previous overviews of pedagogical approaches indicated that there is little evidence to support the use of particular approaches for increasing children's creativity and more specifically PT by using alternative resources of learning like museums. This study aims to fill this gap by establishing what research has been undertaken so far in the area of effective pedagogical approaches to nurture children's PT. Also, the keywords of this study which are pedagogy, creativity, PT, and projects within museums, as well as the research on pedagogies concerning creativity, PT and museum visits of primary education, have been explained in detail. In addition the Cypriot educational context was described and it has been mentioned that research into creativity in this context is limited.

In the following chapter the methodology and research design will be discussed. The discussion will be extended into the paradigm within which the research will be addressed; the advantages and limitations of the research method; data analysis; credibility; and ethics.

Chapter 3: Methodology

3.1. Introduction

This chapter discusses the research approaches of this study and explains and justifies the research's epistemological and ontological position. Then a summary is presented of the initial pilot study followed by a focus on the main study. Particularly, issues of the trustworthiness of the study are explained, along with the sampling procedures and the data collection methods. Also, the ethical considerations are discussed in detail.

3.2. Overview of the research

This case study seeks to explore the pedagogical practice of primary teachers in Cyprus for nurturing PT of 9-10 year old children by drawing on learning resources associated with museum visits. The ultimate aims of this research were to:

- Document the nurtured PT features.
- Document and analyse characteristic features of pedagogical strategies in nurturing PT.
- Explore the affordances that a teacher can perceive from the museum visits for nurturing children's PT.

As indicated previously, my research questions are seeking in-depth evidence about the nurtured PT features as well as the pedagogical features used by the teachers for nurturing PT.

Main question: How do primary teachers in Cyprus nurture the Possibility Thinking of 9-10 year old children by drawing on learning resources associated with museum visits?

Sub-questions:

1. What features of children's PT are nurtured?

2. What pedagogical approaches do the teachers use to nurture children's PT?

3. What affordances for nurturing children's PT do teachers perceive to be offered by learning resources associated with museum visits?

By asking these questions, this study sought to understand not only the pedagogy used and the PT features that were nurtured, but also the interaction and the relationship between the interactive museum visits and the nurturing of PT features.

3.3. <u>Philosophical paradigms in educational research</u>

The undertaking of educational research raises issues of the researcher's stance on central problems pertaining to philosophy, mainly the nature of reality, the nature of knowledge and the nature of conceptualising the research world. Researchers, in order to make sense of the world, approach educational inquiry through distinctive views. The different views in educational research are called paradigms. According to Denzin and Lincoln (2000), a paradigm can be defined as a net that includes researchers' ontological, epistemological and methodological premises.

Three different paradigms dominate educational research. These are the positivist, the interpretivist and the critical paradigm. Positivists believe only in the explanation of the world that can be verified with evidence. In their opinion, only empirical and mathematical statements can be verified (Crotty, 1998). According to positivists, all meaningful statements of theories and the body of knowledge that people develop must be locally reduced into statements about experiences. If these cannot be reduced into statements about experience, positivists do not consider them to be genuine statements at all. Therefore, the positivist paradigm in education seeks to reveal objective and experientially verified truth. It also seeks to generalise the research findings. It presents the world as an objective and measurable reality in which knowledge exists independent of human subjective thought. Its purpose is to

present causal explanations of social phenomena. Quantitative methods are used in order to generate accurate knowledge (Crotty, 1998).

The second paradigm follows the philosophical tradition of the interpretive theory. In interpretive research, the nature of knowledge is seen as relative. The emphasis is on the person rather than on physical things. This paradigm seeks to understand the meaning of actions. To understand a person's actions presupposes an understanding of their intentions and interpretations. According to the interpretive paradigm, research in education seeks to understand people's meanings, their intentions and their actions through which they understand their social reality (Collingwood, 1961; Schultz, 1962). In the interpretive paradigm, the world is viewed as multiple realities constructed by people (Ball, 1991). Knowledge is considered to be something that is created and negotiated between people (Candy, 1991; Van Maanen, 1990). Qualitative methods for collecting data are used to reveal people's understandings.

The third paradigm is the critical paradigm. It is based on critical theory, which concerns the ideological assessment of power, privilege and oppression. Research within the critical paradigm focuses on social and cultural analysis, which aims for transformation and emancipation (Freire, 1972; Habermas, 1972; Horkheimer, 1973). Research conducted within this paradigm is aimed at uncovering the constructs of inequality and injustice and, at the same time, displacing these with democratic institutions. One basic characteristic is the existence of social participation in actions.

The differences between the three paradigms exist mainly on the basis of the different philosophical perspectives of the ontology, epistemology and methodology. Thus, taking into consideration the above, the most appropriate paradigm for the current PhD research was the interpretive paradigm. The following section gives further justification for the selection of the interpretive paradigm for this research.

3.3.1. <u>Rationale for the interpretive paradigm</u>

The selection of a specific paradigm is a very important tool for researchers, as regards understanding educational practice. However, the distinction between the paradigms reveals a sharp contrast between two philosophical theories. This contrast is between the positivist view, which utilises a quantitative research approach that is appropriate to causality involved in the physical world, and the non positivist approach, (encompassing interpretive and critical) which applies a qualitative research approach that addresses issues relating to meanings. Dewey, (1916) has criticised this contrast as one that presents a dichotomy and a false dualism. Moreover, Pring (2000), in critiquing this dualism, writes that researchers fall into a philosophical trap following the dichotomy between the objective world, which is independent of our thinking, and the subjective world, which consists of multiple interrelated realities. The positivist paradigm can ideally serve an inquiry that can be explained with measurements and the comparison of numerical data. However, its inability to address issues relating to understanding and interpretation and the 'how' questions, is a significant concern. The interpretive approach seems more appropriate to make sense of pupils and teachers issues of lived experiences for the construction of knowledge in a particular social context.

Likewise, this PhD research was seeking to understand the teaching process in the class from the point of view of the participants. It was not seeking to predict or to discover explanations and facts, which would suggest positivist inquiry, neither was it seeking to change or to transform the research reality, which would constitute critical inquiry. The anticipated goal was to understand how children and teachers experienced museums-focused education in nurturing PT, and in particular how teachers can nurture students' PT by using alternative resources of learning associated with museum visits. Interpretive thinkers believe that actions are products of meaningful subjective understandings. According to Max Weber (1964, p.88, as cited in Radnor 2002, p.5), an 'action' is included in all human behaviour when and in so far as the acting individual attaches a subjective meaning to it. As an interpretive researcher, my main concern was to understand teachers' meaningful actions

concerning the nurturing of PT. I would be able to understand these meaningful actions and people's perceptions if I explored the intentional context of their actions and the system of meanings attached to these actions. The interpretive paradigm was the most appropriate of the three to fulfill the aim of the research, which was to interpret the all-meaningful perceptions and how the teachers understood their actions regarding the nurturing of students' PT.

The research then operated within the interpretive paradigm which has as a central endeavour an aim to understand the subjective world of human experience (Cohen, Manion & Morrison, 2007). Advocates of the naturalistic approach argue that 'the social world can be understood only from the standpoint of the individuals who are part of the ongoing action being investigated' (Cohen et al., 2007, p.19). Thus, in my research I adopted qualitative methods which are most consonant with the interpretive paradigm. Marshall and Rossman (2010) note that qualitative research implies a direct concern with experience as it is 'lived' or 'felt' or 'undergone'. Its aim is not only to understand the world but to understand it through the eyes of the participants whose world it is.

The nature of reality of this research

The interpretive paradigm considers the world as a function of human thought and perception and seeks to study how knowledge is constructed through the interaction of people. In interpretive research, the nature of knowledge is seen as relative. The emphasis is on the perception rather than on the objectivity of physical things. Research undertaken in this paradigm seeks to understand how people think; to understand a person's actions presupposes to understand their intentions and interpretations. Pring (2000, p.96) argues that the 'interpretive researchers claim that the social world constitutes the intentions and meanings of social actors and as a consequence to this as opposed to the positivist paradigm there is nothing to study, objectively speaking.'

According to the interpretive paradigm, research in education seeks to understand people's meanings, their intentions and their actions through

which they understand their social reality (Collingwood, 1961; Schultz, 1962). In the interpretive paradigm, the world is viewed as multiple realities constructed by people (Ball, 1991). Knowledge is considered to be something that is created and negotiated between people (Candy, 1991; Van Maanen, 1990). Setting up an experiment or using measurements cannot cover such an enquiry, since this research was seeking to uncover people's perceptions. Perceptions cannot be measured, only understood. The interpretive paradigm focuses on interpreting people's understandings of their actions (Pring, 2000). It aims to understand the different perspectives and shared meanings and the gaining of the insight of situations (Wellington, 2000). Thus the goal was not to capture only the pedagogies that teachers used, but also their interpretations about the pedagogies used as well as their thoughts and understandings about the affordances that the teachers can perceive from the visit programme for nurturing students' PT.

The theoretical assumptions behind the interpretive approach shape this PhD study. These assumptions led me to ask 'how' questions and to seek to reveal the whole picture of applying creative pedagogy in order to nurture PT because it rejects the view of a mechanistic reality of the world (Lin, 2010). Contrarily, the interpretivist situating of the study represents my understanding of the context of the research as a complex social world (Radnor, 2001), which leads me to explore different perceptions and interpretations. Thus, the reality and the context of this study form a complex social world, with unpredictable results of decision-making and involving participants with different backgrounds (Lin, 2010). The nature of my research is not to demonstrate what is learnt, or to measure the outcomes of the learning through museum visits, nor to evaluate the effectiveness of PT and the alternative resources of learning associated with in PT. The kind of knowledge of this research is in-depth understanding, drawn from multiple perspectives, of the pedagogies of nurturing Cypriot children's PT by using alternative resources of learning associated with in museum visits, rather than producing a generalised law or set of causal explanations.

Even though I decided to situate my research within the interpretive paradigm, it is important to note that the interpretive paradigm also has limitations.

Firstly, Garrick (1999) mentions that the findings of interpretive research cannot be generalised according to positivists. However, interpretive researchers do not aim to present data that can be generalised. As stated earlier, qualitative research takes into consideration the multiple constructions of the world and not the objective reality of quantitative research, in which verified laws could be implemented in other similar fields. To counter the challenge of non-generalisability, qualitative research seeks to offer enough description of the research case to allow the reader to form his/her own conclusion. The second limitation comes from critical theorists who consider that personal experience, which is the 'starting point of interpretive research' (Garrick, 1999 p.148), can result in the inappropriate representation of subjective experience of a weak negotiator, skewed under the influence of a dominant ideology or a powerful negotiator (Casey, 1995; Giroux, 1983; Usher, 1993; Wexler, 1995).

However, despite the above limitations, the interpretive approach seems to be more appropriate for making sense of teachers' experiences. For my research it is the exploration of the pedagogies that teachers in Cyprus adopt in order to nurture PT by using alternative resources of learning associated with in-museum visits, and their perspective on this. Thus, this study explored the different views and multiple perspectives of the teachers and also of me as a researcher and as a teacher. In choosing an interpretive paradigm Radnor (2001) argues that a researcher sees reality as a social world filled with different perceptions and interpretations to explore and describe.

The essence of my enquiry is not to demonstrate what is learnt, to measure the creative outcomes of the learning through museum visits, nor to evaluate the effectiveness of the pedagogies. For me, it is rather to reveal the whole picture of the complex phenomenon and revealing the responses of all who engaged in the processes. In choosing an interpretative paradigm, I reject a view of the research context and the subjects as simple measurable constructs and operational factors in an orderly world. Instead, within this paradigm, I see reality as a social world (Radnor, 2001) filled with different perceptions and interpretations to explore and describe. From this perspective, one single and objective truth is unlikely to be achieved and is

not my goal as a researcher. In the following, I shall discuss the philosophical assumptions of the interpretative paradigm that inform my methodological choice and the kind of data I collected.

3.3.2. <u>The interpretive philosophical dimensions of this study</u>

In this section the ontological and epistemological assumptions behind the interpretive approach will be discussed, how the relationship between researcher and researched is conceived of, and how the ontological and epistemological assumptions imply what kinds of questions to ask, and what knowledge it is possible to achieve through inquiry.

The following three central interpretive philosophical dimensions guided the design of the research:

- *Ontology:* Subjective reality
- *Epistemology:* Social constructed knowledge
- *Methodology:* Qualitative research approach, Case study methodology

Ontology is 'the study of being' (Crotty, 1998, p.10) and it defines the assumptions held of reality, the nature of existence, and the structure of reality (Crotty, 1998; Eisner 1998). Likewise, interpretive research implies the belief that reality cannot exist independently of human consciousness (Crotty, 1998; Radnor, 2001). Thus, people understand the world, interact with others and make decisions. All these everyday activities involve interpreting, a dynamic process of the human mind engaging with reality. The ontological premise of this research can be summarised as the multiple realities in the indoor and learning-outside classroom lessons, which were constructed by the various understandings of the teaching practices and pedagogies of the eight teachers. This is the ontological position of the interpretive paradigm, which claims that the world is a construction of many multiple realities, as many as there are individuals (Denzin & Lincoln, 2000; Pring, 2000; Radnor, 2002).

The other philosophical dimension of this research relates to the epistemological premise of the study. According to Pring (2000, p.96),

researchers used the interpretive paradigm to approach education as a 'subjective' world constructed by the meanings of social actors in their effort to 'understand and experience life'. The world has as many constructions and multiple interpretations of reality as there are individuals relating to these constructions. The assertion of multiple realities is a corollary of the ontological premise of the paradigm. The interpretive paradigm considers the world as a function of human thought and perception. Interpretive research seeks to study how knowledge is constructed through the interaction of people. The purpose of interpretive research is to interpret each person's account of a situation, which ultimately reflects a unique perspective. Truth is considered a matter of 'consensus'. This is consistent with the epistemological premise of this paradigm. The methods used to understand people's perceptions are qualitative, through observations and interviews based on people's own accounts. The research findings serve only as interpretations. Participants are respected in the sense that they are the subjects who construct the world they live in based on their own personal views.

The third dimension in the description of the paradigmatic assumptions of this research is that of methodology. Within the interpretive paradigm I have applied a qualitative approach. According to Merriam (1998), the considerations about multiple realities and socially constructed knowledge are linked with qualitative research. More specifically, qualitative research is interested in understanding how people make sense of the world they experience and live in (Merriam, 1998). Thus, qualitative methods for data collection and also the analysis of the data are based on discussion and not on numbers, because the research aims to gain a deeper understanding of social phenomena. Qualitative methods were chosen, to provide a deeper understanding of the research situation, in this case of the teaching process. Thus, the qualitative approach allowed for the interpretation of the thoughts and perceptions of the teachers about the teaching process in the classroom because the scope of qualitative research is to understand how people make sense of the world.

3.4. Methodology adapted to research in creativity, possibility thinking and museum projects in education

There is tension between different perspectives in educational research regarding how to study creativity. The growth in creative studies over the past twenty years may be most obvious in the social and behavioral sciences. Employing qualitative research as a methodology to explore teachers' skills, expertise and preferred pedagogies can produce insights not only into what teachers do but also into how and perhaps most crucially, why they operate as they do (Thomson & Sefton-Green, 2011). However, there is another point of view in researching creativity in educational research; this is the use of quantitative research.

As was mentioned above, one of the views regarding creativity is that creativity is measurable. According to Gallagher (2007) we equate creativity with the production of creative achievements (i.e. new and valuable products) gained through emphasising skills instead of improvisation. In other words, creative development is evaluated by what is achieved rather than looking at how development is achieved. Despite experimental studies on creative development verified through the use of standardised tests, Moga et al. (2000) point out that such studies simplify complex real-world contextual factors. In their meta-analysis, Moga et al. called for more qualitative measures of creativity outcomes to expand the current findings. However, there is considerable disagreement about the extent to which the available tests measure creativity in a reliable way (Weisberg, 1999), and about the effectiveness of creativity programmes. Gallagher (2007) also casts doubt on the aptness of using paper-pencil tests to judge the kinesthetics or to calculate the accidental creative moments in learning; she adds to the plea of Moga et al. (2000) that more attention should be paid to post-positivist qualitative research as well as to discourse analysis regarding creativity research in education.

Furthermore, several studies have investigated the concept of creativity based on qualitative data collection (e.g. Griffin, 2004; Herne, 2006; Xanthoudaki, 1998). Chappell's research of three dance professionals working on projects

under the auspices of the Laban dance centre in south-east London took a qualitative interpretive stance and used a multi-case educational case-study approach in order to consider how creative learning was facilitated in dance education (Chappell, 2008). Similarly, Pringle's qualitative research was designed as interlocking case studies (Pringle, 2008). More specifically, this study examined the relationships between art practice and pedagogy through focusing on five artist-educators operating within the community education programme at Tate Modern, London (Pringle, 2008).   In both of the above studies the data collection was done through semi-structured interviews and participant observation. However, Chappell also involved video, photography, documentation and reflective diaries. According to Thomson and Sefton-Green (2011) by adopting these methods, both researchers were able to gain insights into practitioners' perceptions of how they worked with participants and what it was they were 'teaching'.

Focusing further on PT which is the area of interest of this study, it was observed that all the studies focusing on PT were qualitative empirical studies. Empirical studies into PT started in 2002 and are currently ongoing. These empirical studies aimed to note what 'characterised' PT in the early years classroom and investigated individual characteristics of PT (e.g. Burnard et al., 2006; Chappell et al., 2008; Cremin et al., 2006), using a qualitative, interpretive approach. The empirical work can be seen as working in three stages, focusing on specific factors in each stage, including: characterising PT; teachers and their pedagogical approaches: and children and the questions they pose.

The first stage of the current research on PT focused on developing a qualitative methodology for exploring PT, aiming to identify what characterised PT in children aged three to seven, and to understand how teachers may foster PT and the potential pedagogical strategies (Burnard et al., 2006). This phase of research used a wide range of data sources including video, still images, interviews, observation, analysis of relevant documents and teacher reflection. The second stage of the research aimed to investigate children and their questions posed inside the classroom (Chappell et al., 2008). Video data and transcripts were used as data sources to identify features and potential

categories of question posing and responding in children. This used a qualitative approach to data analysis, comparing the data to the refined framework established in stage one of the research. The third stage of the research aimed to characterise PT in the strategies of teachers and the learning experiences of children in Key Stage 2 (aged 7 to 11), expanding on the initial empirical work and indeed literature, which focused on the early years. In a small-scale qualitative study, the paper features episode analysis of naturalistic video data featuring children aged 9-11 in two schools (Craft et al., 2012).

Over the past few years, assessment of museums has become a concern, as indicated in the rising number of studies in the UK and America. This is because of a paradigm shift within the museum world. Museums are now responding to the public on how to make objects more accessible to the community. The evaluation efforts in the museum are commonly prompted by the need to justify existence. The justification closely linked to funding, is determined by political climate (Hicks, 1996). Starting in the 1970s, museums began visitor studies that reported satisfaction levels and attendance counts. During that time, this was the necessary information needed by governing officials to satisfy reporting and justification. Like the contemporary business model, the success of a museum was based on the quantity of people it served (Hudson, 1993). As educational programs grew, evaluation efforts remained the same. The climate changed over the course of the 1990s when museum professionals began to question their own field (Ames, 1993; Hicks; Loomis, 1987; Rice, 1995). This occurred for several reasons: a developing interest in professionalisation of the field, pressures from society, and a growing need for greater accountability (Ames, 1993; Dierking & Pollock, 1998; Martin, 2004).

With the explosion of many studies in the museum, there became a need for a greater level of organisation and structure to classify these studies. Miles (1993) made a distinction in characterising the difference between research and evaluation. Both use similar techniques in acquiring data. According to Miles, the key differences are in the purpose and the approach. Research is rigorous efforts to develop generalisations, whereas evaluation is pragmatic

work to make judgments. In reviewing museum assessment literature, the distinction is a consideration. A distinction between evaluation and research is an initial step in organising and structuring evaluation efforts. While progressions in the idea of research and evaluation continue to develop, the notion of what is being assessed remains an issue.

Focusing further on my study and my research questions, the qualitative approach to research is more appropriate. Qualitative research aims to describe events (Cohen, Manion & Morrison, 2007) and the aim of my study was to explore the pedagogical practices of primary teachers in nurturing students' PT by using an alternative resource of learning associated with museum visits. I therefore envisaged my research to use an interpretive approach using qualitative data. Data was collected using a variety of tools, such as observations (filed notes, video-recordings, still images),teachers' reflections, researcher's reflective journals, semi-structures interviews and using video data as a means of providing stimuli for teacher reflection, providing a rich data set from which conclusions could be made.

However, this study also aimed to refine a pre-existing framework constructed from the literature review. The inductive-deductive approach to data analysis of a large qualitative data sample using a variety of data collection methods demonstrated in the first stage of empirical work allowed for construction of theories of research to be 'grounded' in the data whilst providing information about pre-existing models (Burnard et al., 2006, Craft, Cremin, Burnard, Dragovic & Chappell, 2012; Cremin, Chappell & Craft, 2013). This inductive-deductive approach used in the empirical research on PT provided a good example of how to proceed in researching a pre-existing framework. The following section elaborates the rationale for my own research question, the research framework and the methods of inquiry for this study.

3.5. Methodological approach – Choice of case study

After reviewing the literature and further exploring the research that has been done until now in the educational field I strongly believed that a qualitative

approach to research would be more appropriate for my research. Seeking to develop the unique and in-depth understanding on pedagogies that the teachers used in order to nurture students' PT in a sophisticated context, a case study methodology was adopted.

A growing body of research argues that the basic intent of case study is the desire to better understand a phenomenon (Bell, 2005; Cohen and Court, 2003; Denscombe, 1998; Wellington, 2000; Yin, 2003). This was the reason for selecting the case study approach in order to investigate this area of interest. However, it is important explain what a case study is. According to Yin (2003, p.13-14) a case study is a research strategy, which has as its scope:

> 'An empirical enquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident, […] copes with technically distinctive situations in which there will be more variables of interest than data points and as one result on multiple sources of evidence….'

In other words it focuses on a phenomenon or relationship and also on capturing the interactions between the participants, context, events (Yin, 2003). Drawing on Yin's (2003) guidelines, a case study is a research in the broadest sense, often including evaluation and regularly using multiple methods for data collection. It is empirical, since it relies on the collection of evidence about what is going on, and it focuses on a particular phenomenon and its context.

According to Merriam (1998) the case study approach is appropriate if the researcher is seeking to answer 'how' and 'why' questions. The current research involved a 'how' question and more specifically: 'How can a primary teacher nurture children's PT by using alternative resources of learning associated with in-museum visits?' Apart from the aim to understand and answer the 'how' question, the research was undertaken because of my personal interest in gaining a better understanding of this concept of learning.

Here, it is important to clarify that according to the literature there are different types of case study. Stake (1995) and Yin (2003) use different terms to describe a variety of case studies. Stake identifies case studies as intrinsic, instrumental, or collective. However, this study is not compatible with what Stake suggests. More specifically this study cannot be characterised as intrinsic because according to Stake (1995) the purpose of an intrinsic case is not to understand some abstract construct or generic phenomenon. Additionally, it cannot be characterised as instrumental because according to Stake (1995) this case study is used to accomplish something other than understanding a particular situation. Also, it cannot be characterised as collective because these case studies are similar in nature (Stake, 1995). Yin categorises case studies as explanatory, exploratory, or descriptive. He also differentiates between single, holistic case studies and multiple-case studies.

However, to define this research more specifically, Yin's category of descriptive case study was chosen, which is appropriate for fulfilling the purpose of this study. Descriptive case study was the most suitable type of case for the research because this type of case study is used to describe a phenomenon and the real-life context in which it occurs (Yin, 2003). The use of this kind of case study is to describe specific context/events, to capture the interaction between the context, events and the participants and to describe how participants view and respond to the process. More specifically, a descriptive case study approach was found to be appropriate for two reasons: it is compatible with the research aims to describe and understand and it is sufficiently flexible to tailor a unique study approach. Therefore, a descriptive case study was employed to examine and describe the characteristic features of pedagogical strategies in nurturing PT, along with the PT features that were nurtured during the lessons.

It must be acknowledged that this PhD study includes more than one case. Thus, if a study contains more than a single case then a multiple-case study is required. A multiple case study enables the researcher to explore differences within and between cases. The goal is to replicate findings across cases. Because comparisons will be drawn, it is imperative that the cases are chosen carefully so that the researcher can predict similar results across cases, or

predict contrasting results based on a theory (Yin, 2003). A multiple-case study allowed the researcher to analyse within each setting and across settings. In a multiple-case study, several cases were examined in order to understand the similarities and differences between the pedagogies used for nurturing PT and also what PT features were nurtured. Thus, it could be argued that this study was a combination of descriptive and multiple-case studies.

Given the rationale for choosing a case study, I will now refer to the trustworthiness of my research, the pilot study, how I carried out my study, data collection and also to some issues of the study such as the ethical considerations.

3.6. <u>Trustworthiness of the study</u>

Smith and Heshusius (1986, as cited in Hoepfl, 1997) argue that the researchers who do qualitative research can offer only an 'interpretation of the interpretations of the others' and that to assume an independent reality is 'unacceptable' for the qualitative researcher. Thus, taking into consideration the above statement as a researcher of a qualitative study I had to establish trustworthiness for my research. This means that I had to ensure that the research is carried out fairly and the findings presented 'as closely as possible to the experiences of people who are studied' (Ely et al., 1991, p.93). It is the quality control of a qualitative research that makes the study credible and the results trusted (Bassey, 1999; Ely et al., 1991; Radnor, 2002). To ensure trustworthiness, the use of multi-method data collection in this study (semi-structured interviews, observations-filed notes, video recordings, still images, teacher's reflections and researcher's reflective journals) helped to reduce uncertainty and produce wider and more secure results. Also, the anonymity should reduce bias in participants' responses.

However, in the literature of qualitative research there are other alternatives for judging and establishing trustworthiness. Thus, in an attempt to collect and analyse the data of this study in a way to represent as closely as possible the

experiences of those studied, I followed the criteria for trustworthiness, quality and rigour offered by Lincoln and Guba (1985): credibility, transferability, dependability and confirmability. My underlying epistemological stance for viewing learning as socially constructed is articulated through the collection and analysis of the data. Hence, for more articulate data, the principles mentioned above were adopted in this study to ensure trustworthiness. Table 6, presents a comparison of criteria for analysis of research data: the quality of quantitative versus qualitative research. In the following sections these criteria will be discussed in detail for judging the overall trustworthiness of a qualitative study.

Traditional criteria used for quantitative research	Alternative criteria used for qualitative research
Internal validity	Credibility
External validly	Transferability
Reliability	Dependability

Table 6: Comparison of criteria for analysis of research data
(adapted from Hoepfl, 1997)

3.6.1. <u>Credibility</u>

Credibility is an essential principle in ensuring the quality of qualitative studies and it depends on the richness of the information gathered and also on the analytical abilities of the researcher (Patton, 1990). How can we be sure that the inferences are correct and that the evidence is convergent? Yin (2003) points out that the tactics for achieving this test, although they are not easy to identify, occur during the data analysis process.

According to Hoepfl (1997), credibility is a criterion for qualitative research. Credibility for this study is warranted by using several techniques and different sources. There are several other ways of establishing credibility and ensuring the quality of collected data, including prolonged engagement in the field and persistent observation of emerging issues (Bassey, 1999; Ely et al., 1991). However, the most crucial technique for establishing credibility is

triangulation, which includes multiple resources of data gathering or multiple researchers studying the same phenomenon. According to Patton (1990), there are four types of triangulation:

- Triangulation of the methods (multiple resources for data collection ensure credibility because it provides a more detailed account of the phenomenon being researched)
- Triangulation of the data
- Triangulation through multiple analysts (discussion with an independent peer enhances credibility)
- Theory triangulation.

As far as my study is concerned, I used multiple resources of data collection as will be discussed in detail later, and the accounts from different perspectives were gathered by observation, interviews, teacher and my reflective journals. In doing so, the descriptions and interpretation of the case would have been strengthened or enriched with multiple perspectives. Therefore, other sources of description (e.g. teachers' observations from the selected cases of video-taped lessons) helped to make credible or clarify the data.

The technique of peer checking (Guba & Lincoln, 2000) was also used for establishing credibility in all the stages of the study. Two peers who are studying for their PhD at the School of Education in the University of Exeter were used, as they come from the same background (they are both Cypriot primary teachers). I explained the steps of the analysis, in general, and showed them interpretations and conclusions in order to elicit their comments and allowed them to point out any subjectivity of their opinions in the analysing process. Furthermore, there was also theory triangulation with the existing ongoing research on PT and also generally on education, filled by comparing and contrasting my findings.

3.6.2. <u>Transferability</u>

Transferability is another component of the trustworthiness of qualitative studies. The issue of generalisation is one of the main challenges of case

study design. As a general rule, researchers who conduct case studies hesitate to generalise from one case to another because the contexts of the cases differ. Yin (2003) points out that in case studies the method of generalisation is 'analytic generalisation', where a theory developed by one case is used as a template to compare if another case study supports the same theory. If two or more cases support the same theory, then it might be claimed that there is a replication. Thus, transferability refers to the richness or depth of the descriptions involved in the study.

Although interpretive researchers do not aim to present data for generalisation, they do acknowledge that some of their findings might have transfer value to other contexts. Qualitative research takes into consideration, as stated earlier, the multiple constructions of the world and not the objective reality of quantitative research, where verified laws can be implemented in similar fields. It offers sufficient description of the research case so that the reader can form his/her own conclusion. What was researched, because of its unique character, cannot be appropriate and open to generalisation, but the insights gained from the researched case can have transfer value, as the unique situations are in some aspects unique but not in others (Pring 2000).

The transferability in this study was raised by presenting both more precise and broad descriptions of the different perspectives of the sample, clearly identifying the details of the settings, as well as giving detailed descriptions of the participants' experience. The main purpose of improving transferability is to present clarity and richness of description of the phenomena so that the reader might be able to apply the results to other contexts. However, this research does not intend to make any extreme generalisations. Instead, it aims to investigate the pedagogical features used in a specific group of people for nurturing their PT. It is anticipated that its findings may contribute to fill the gap that currently exists in the classroom lessons and outside of the classroom lessons (museum visit programme), since we have not yet developed adequate pedagogies and practices for this group of pupils.

3.6.3. <u>Dependability</u>

The criterion of dependability shows that the results of the study have consistency and could be repeated in other settings (Lincoln & Guba, 1985). As Merriam underlines, reliability is a problematic concept for qualitative research as 'the question is not whether findings will be found again, but whether the results are consistent with the data collected' (1988, p.206). Lincoln and Guba (1985) propose one measure in order to enhance the dependability of qualitative research. This measure is the use of 'an inquiry audit' (Lincoln & Guba, 1985, p.317) in which reviewers examine both the process and the product of the research for consistency. For this reason, in this study dependability was boosted by the wider explanations and details of the procedures and processes used to collect, analyse and interpret the data that were given as far as possible, though it should be acknowledged that in qualitative studies it is not possible to include all data, as emphasised by Lodico et al. (2006).

3.6.4. <u>Confirmability</u>

As was mentioned previously qualitative research is considered to be subjective because of the fact that it relies on interpretations. Such subjectivity may lead to unreliable results (Hoepfl, 1997). However, Lincoln and Guba (1985) argue that through confirmability the researchers can demonstrate the neutrality of the research interpretations, through a 'confirmability audit'. This can be achieved by providing an audit trail consisting of: raw data; analysis notes; reconstruction and synthesis products; process notes; personal notes; and preliminary developmental information (Lincoln & Guba, 1985, p.320-321). In the present study, member checking was carried out over several stages. Additionally, interviewing teachers more than once allowed participants to confirm their ideas and my interpretation of their experiences and views. Furthermore, it is important to note that at the end of each interview I shared my interpretations and conclusions, as an

essential stage for both member checks and ethics, in order to see if my interpretations had sufficiently represented their experiences regarding PT features and also the pedagogical features that were used for nurturing students' PT.

The following sections present in detail the pilot study, the methodology adopted in this study as well as the kind of data methods that were used to collect the data of the study.

3.7. Pilot study

The pilot study of this research was conducted prior to the main phase of the study (eight months before the main research) in order to provide an insight into the development of the research plan. The purpose of conducting the pilot study was to help me to develop my research questions, identify possible weaknesses in my methods and methodology and help me have a clearer inside view of the Cypriot educational system. Thus, the pilot study had implications for the research design, techniques, and instruments for data collection. Also, the pilot study offered a first attempt in using qualitative analysis in forming data categories, documenting participants' views and attitudes towards teaching pedagogies and researching issues like interaction between teacher and students inside and outside the classroom. The pilot study used the same methodological procedures and ethical principles as adopted in the main study, which will be discussed later in this chapter.

3.7.1. The pilot project context and sample

The pilot study was conducted in January 2012 before the main study which started in September 2012. Compared with the formal study, the time scale of the pilot was shorter (only two weeks) and the sample size of the teachers was smaller. It was conducted in Cyprus and more specifically in Larnaca. Larnaca is on the southern coast of Cyprus and is the third largest city after Nicosia and Limassol. It is the island's second largest commercial port

and an important tourist resort. Also, the island's largest airport is located on the outskirts of the city. There are over a hundred educational institutions in the city (some of them are public schools and others are private institutions). The primary school in which the pilot study was conducted is a public institution and is located in Larnaca. Next to this primary school is a church where the children worship at regular intervals. It is one of the older schools and magnitude in Larnaca. Despite being old, this school has big playgrounds and lot of modern facilities for the students and the stuff.

The sample consisted of one teacher of a fourth-grade class and her 23 pupils aged 9 and 10 of mixed abilities. The sample of the pilot study was limited to one primary teacher because of unexpected illness of the second planned participant. Thus, the schedule for the pilot study was adapted on account of this fact (Table 7). However, the selection of the teacher was not a random one. Several factors were taken into consideration for the selection of this sample. Firstly, it was her teaching experience. The teacher had nineteen years' experience and she had taught in all the levels of primary school students. Secondly, she had as her primary goal to nurture her students' creative thinking – the terminology she gave for creative thinking included all the PT features and as a result it was understood that she was trying to nurture students' PT. Moreover, she had participated in museum visit programmes in the past and thus was considered to be experienced in connecting the museum visits with the classroom teaching. These factors made her an experienced teacher and a purposive sample for my study. According to Cohen, Manion and Morrison (2007), this kind of sample is satisfactory to the researcher's specific needs because in many cases the purposive sampling is used in order to access 'knowledgeable people'. Additionally, the sample can also be characterised as a convenience sample because she was one of the two primary teachers who were going to have a museum visit in Larnaca during the time period of the pilot study. Cohen, Manion and Morrison (2007) argue that through convenience sampling the researcher chooses the sample from those to whom she has easy access. Thus, this sample can be characterised as a combination of 'purposive sampling' and 'convenience sampling'.

Pilot Study Programme			
Dates			
11/01/2012 School based lesson	12/01/2012 School based lesson	13/01/2012 Musuem based lesson	16/01/2012 School based lesson
• Interview (20 min) • Observation (45 min) • Researcher reflective Journal	• Observation (45 min) • Researcher reflective Journal	• Observation (1:30) • Interview (20 min) • Teacher's Reflective Journal • Researcher reflective Journal	• Observation (1:30) • Interview (20 min) • Teacher's Reflective Journal • Researcher reflective Journal

Table 7: Pilot study data collection

The classroom lessons and the museum visit programme were video-recorded, observed and notes were kept. The British Educational Research Association Ethical Guidelines (BERA, 2011) were adhered to in the research design, and informed consent and the right to withdraw for any reason was ensured for all the participants. More specifically, consent (written consent form) was sought from the Ministry of Education and Culture in Cyprus (Appendix 1, p.305), the school principal and the classroom teacher (verbal consent). Here, it is important to clarify that the Ministry of Education and Culture at the beginning of each school year sends to parents and students a consent form to sign for the participation of the students in all the research that is going to take place in school. This consent form is not only for the participation of the children but also covers the video-recordings of the lessons and also the photographs. Thus, I did not need to send them a consent form to sign for my pilot study in order to have their permission for

photographing and video recording the lessons. However, I sent the parents a letter to inform them about my research, the time that I would be inside the classroom with the students and how I would be involved in the daily school life of their children (Appendix 2, p.307). Also, I included my mobile-phone number, my email address and the email address of one of my tutors (Anna Craft's email address) for further clarifications as far as my research is concerned. Anonymity and confidentiality of participants were assured.

3.7.2. <u>Data collection</u>

The data were gathered from a variety of sources (Table 7 & Table 8). The research tools and the sample involved were as follows:

3.7.2.1. <u>*Classroom lessons and museum visit programme observations*</u>*:* The four lessons of the project (three indoor lessons and one learning-outside classroom lesson) that I observed were video-recorded, and notes were kept. In the pilot study, one observation schedule was designed based on relevant research literature (Radnor, 2002; Robson, 2002) in order to help me take notes. The structured schedule was divided in two categories named 'looking' and 'thinking'. In the thinking category specific issues were allocated such as pedagogy, ethos and environment[4] (see Appendix 3, p. 308). I wrote my notes during the observations and I also added some PT episodes after I transcribed the video recordings. The video-recordings in the classroom were with a static camera which was in the left back corner of the classroom in order to capture the teacher and the

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[4] Definitions of:
Pedagogy: e.g. asking questions for thought/ settings tasks for exploratory work/ activity for individual and collaborative work/ make use of space for creative learning
Ethos: teacher's attitude towards children (e.g. encourage and cherish pupils)
Environment: teacher's making use of classroom space/ the group dynamic/ teacher-pupil relationship

general picture of the children. As far as the video-recordings of the museum visit are concerned the camera was not used in the same way as it was used inside the classroom. More specifically, I video-recorded specific episodes which I identified as offering potential evidence relevant to my research questions.

3.7.2.2. *Semi-structured interviews:* I interviewed the teacher, coded as Teacher, given for the needs of securing anonymity. I interviewed the teacher four times: before the first lesson; after the second lesson; after the museum visit; and at the end of the last lesson (Table 7). All the interviews took place in the school and more specifically in the 'Multi-facility classroom[5]' because it was quiet and the only pace available for interview discussion with the teacher in school. The interviews were audio-recorded and were for approximately twenty minutes each time.

3.7.2.3. *Teachers' Reflections:* The teacher's reflective journal included eight open-ended questions designed by me, whereupon the teacher was invited to reflect and interpret the teaching practices of the day. Although it was anticipated the teacher would write in her reflective journal regularly (after each lesson) instead the teacher wrote in her reflective journal only twice (after the visit to the museum and at the end of the project). Moreover, she included in her reflective journal some writing works of the children that she considered to be creative (writing material from the final lesson).

3.7.2.4. *Researcher's Reflective Journal:* After each lesson, I was writing my reflections. Also, I was watching the digital video-recorded file daily and added further reflections which included my reflections on the evaluation of the practice*s,* personal thoughts about my pilot study in general, conversations with the teachers and the pupils, photos and drawings, with my thoughts and

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[5] The 'Multi-facility classroom' is a classroom which is bigger than the normal teaching class. This terminology is given by the Ministry Education and Culture in Cyprus because of the lots facilities that this classroom can offer to a teacher during the teaching process. More specifically, this classroom has big round tables suitable for group work, computers, a library, a projector and some other useful media. It is important to say that all the schools in Cyprus have one of this type of classroom.

interpretations. It is important to say that, in total I wrote five reflective journals. By writing my journals, I intended to provide another perspective to triangulate the data, as well as to make illustration of the context and the whole experience more holistic.

3.7.2.5. *Still images:* Photos were taken during all the phases of the pilot study and were part of my reflective journal. Thus, through these still images I had the opportunity to capture specific moments that were really interesting as far as my research is concerned.

Instruments/Methods	Data type
Interviews	Transcripted audio-recordings and notes
Observations	Field-notes and transcribed digital recordings
Teacher's Reflective Journal	Notes
Researcher reflective Journal	Notes, Photos, Drawings
Documents	Documents with activities, lesson structures, leaflets and children's written work

Table 8: Method and data type

The research instruments/methods together with the type of data each generated are summarised in Table 8 will first refer generally to my data analysis and later to the implications and alterations that came up to the surface after the pilot study was conducted.

3.7.3. Data reduction

The data reduction in the pilot study involved the narrowing in on four out of six selected episodes (one from the first lesson inside the classroom, one from the second lesson inside the classroom and two from the museum visit). The selected episodes were considered to be representative for descriptive

codification. Then, (after the episode selection) I carried out a focus analysis and I developed analytic codes through an inductive and deductive process.

The reason for choosing these specific key episodes were the detection of children's PT through their actions or through their participation in a discussion. The identification of PT features in the episodes were derived from existing PT frameworks like Burnard et al. (2006), Craft et al. (2012), Craft (2002), Cremin et al. (2006) and Chappell et al. (2008). More specifically, the characteristics of PT that were taken into consideration were:

1. Question posing: investigative behaviour (question framing, question degree and question modality)
2. Question responding: responding to investigations by self and others
3. Play: being in an 'as if' space
4. Self-determination: self chosen actions
5. Intentionality: action that has a clear goal
6. Being imaginative: 'as if' thinking
7. Immersion: concentration
8. Innovation: original outcome
9. Risk-taking: not fear of failure.

The key episodes were drawn from the detailed transcriptions of observations (field notes, digital images and video-recordings), semi-structured interviews, teacher's reflections and researcher's reflective journals. The analysis was drawn from the transcriptions of the key episodes of teaching and children's interactions. Then the analytical findings from each episode were examined against the framework of PT.

3.7.4. <u>Contextualising the episodes</u>

The first episode was chosen from the first lesson, which took place in the classroom. The target of this lesson was for the children to learn about the

ancient symposium[6] (what it is, who took part, how and why it was organised) and the importance of the sea in the daily life of the ancients, in order to later make the links with the museum visit which had the title 'Sea, sea… an invitation to an ancient symposium'. More specifically, the first lesson was about the understanding of the word 'symposium'. The students explored and learned information about the symposium, who were participating, why they were participating in the symposium and how the symposium was organised. The segment for the first episode drawn upon for closer analysis was taken from the classroom discussion and it was about the shape of the copper which was one of the products that the rich people who were participating in the symposium were buying and selling. During this episode the students were exploring further with each other different shapes that the copper could have in order to be easily transferred to the market.

The second episode was chosen from the second lesson inside the classroom before the museum visit took place. The target of this lesson was for the children to learn more of what a museum really is, how it is divided and how they can use it effectively. Thus, after a classroom discussion the teacher set an open-ended task of each group creating their own museum collection (a room into a museum with a special collection) and gave them time and space to explore how to do that. The episode chosen for closer analysis comes from a group of children that created a whole museum collection and not just a room as was the target of the activity. Their museum had cartoons as a theme.

The third and the fourth episodes were drawn from the museum visit. Through the museum visit the children learnt about how the life of the ancient citizens of Larnaca was, how their lives were connected with the sea and with trade. Also they learnt about the symposium that took place in ancient times in Larnaca. More specifically the third episode drawn upon for closer analysis

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[6] The symposium was held by aristocrats (4th century b.c.) to celebrate special occasions, such as victories in athletic and poetic contests, to celebrate the introduction of young men into aristocratic society, or simply to revel with others. Also, they would discuss many topics like philosophy or even the differences between genders. Food and wine were served and also entertainment was provided. The entertainment was depending on the occasion and could include games, songs, flute-girls or boys, slaves performing various acts. Poetry and music were central to the pleasures of the symposium (Michael, 2000).

involved three children (two boys and one girl) exploring an object of the museum collection (an anchor). The fourth and last episode was from the role-playing activity of the participation of the children in an ancient symposium.

3.7.5. <u>Data analysis process</u>

The research adopted mainly an inductive approach for analysing the pilot study data. In the analytical process of my research, I was aware that there was a need to shift from an inductive to deductive approach, from time to time, in order to solicit themes, in-depth understanding, and solid argument. This was necessary because I was using an existing framework (PT framework) and as a result the deductive analysis was appropriate. The analysis followed the basic coding sequence (open, axial, selective) iteratively between primary data and the emerging theoretical framework (Wartburton, 2005) as the analysis of the main study.

I undertook the data analysis on the original transcripts in Greek-Cypriot dialect in order to consider the nuances of the conversations and then carefully translated into English. The analysis had both inductive and deductive character. The analysis was mainly inductive through identifying emergent categories and relationships. Burgess (2006, p.47) argues that 'such inductive approach is particularly useful where the literature around your chosen research question is relatively underdeveloped'. Indeed there are gaps in the literature regarding for example the pedagogy for nurturing PT by using an alternative resource of learning like the museum visits. It was also deductive in the sense of testing theories and working with an existing set of categories, for example the features and pedagogy of PT (Burnard et al., 2006; Craft et al., 2012; Craft, 2002; Cremin et al., 2006; Chappell et al., 2008).

Regarding PT characteristics I worked deductively testing the eight codes from the literature, i.e. posing questions, immersion, innovation, being imaginative, self-determination, risk-taking and intentionality (Burnard et al.,

2006; Chappell et al., 2008; Craft et al., 2012; Craft, 2002; Cremin et al., 2006) and simultaneously searched for other possible PT characteristics. In relation to pedagogy I worked deductively with five codes from the empirical work on the pedagogy that nurtures PT, i.e. standing back, creating time and space, profiling learner agency and providing enabling context (Cremin et al., 2006) and simultaneously searched also for other possible pedagogies. I defined themes in a way to 'reflect the meaning of the retrieved word or phrases' by my subjectivist interpretations (Yin, 2009, p.128). For example, if a teacher posed a question to the children, I tried to identify if it was open or further to a follow-up question, and noted it down.

The next stage was to create tables of themes and meaning units including evidence from video, interview transcripts in separate tables and enriching them with field notes. Triangulation of findings helped to review and refine themes as well as to identify connections among the various data. Patterns substantiated by triangulation identified me to enable categories. However, when analysing the video data it was challenging to comprehend the symbols used by the teacher and the children verbally.

3.7.6. <u>Findings of the Pilot study</u>

The different levels of analysis revealed thematic findings related to the research questions, which were: students' PT features, pedagogical features, and affordances that a teacher perceived from the visit. These three thematic findings were related to my research question. More specifically, the first thematic finding focuses on students' PT features that were fostered when the teachers used alternative resources of learning associated with museum visits combined with their classroom teaching. The second thematic finding addresses the main thematic findings that emerged from the qualitative data analysis in relation to my second research question. The third thematic finding focuses on the affordances that the teachers of this study perceived for fostering students' PT by using the alternative resource of learning associated with museum visits.

The analysis revealed several pedagogical approaches that the teacher used in nurturing children's PT. Some of the pedagogical approached that were identified are highlighted also by other researchers. These are creating space and profiling learners' agency. However, the pilot study managed to reveal several strategies concerning the teacher's pedagogy which is capable of nurturing children's PT by using museum visits. Particularly these are the teacher's question-posing combined with the technique of waiting time, the use of group work technique, teacher's narrative talk, the use of the expert groups and the technique of role playing. Also, it must be acknowledged that as far as the features of children's PT are concerned not all of them were identified to the same extent. The feature of risk-taking was absent. It is important to note that the findings of the pilot study were not presented in detail because of the small sample that participated. As far as the third research question is concerned, insufficient data were available because of the general comments of the teacher concerning the opportunities that the museum visit programme offers to her for nurturing students' PT.

The findings of the pilot study are not presented in detail here because the main purpose of conducting the pilot study, as was mentioned earlier, was to develop my research questions, to identify possible weaknesses in my methods and methodology and to offer me a first attempt in using qualitative analysis. The following section will refer in detail to the implications and the alterations from the pilot study.

3.7.7. <u>Implications and alterations from the pilot study</u>

The sets of implications from the pilot study were concerning my research questions and also the research instruments.

3.7.7.1. About the research questions

At the beginning of this pilot study I created four sub-questions which guided my data collection. However, after the end of the pilot study I realised that these sub-questions should be changed and rephrased for the needs of the

main study and for answering my main research question. More specifically, my research questions before I conducted the pilot study were focused only on the teacher. However, during the data analysis of the pilot study I realised that I was focusing first to identify and select the episodes where students' PT features were identified, and then on the teacher's pedagogical features for nurturing the students' PT. As a result a research question focusing on what student's PT features were nurtured had to be added among my research questions. The following table (Table 9) shows how the research questions changed for the needs of the main study.

Research questions before the Pilot study	Research questions after the Pilot study
How can the pedagogical practices of primary teachers in Cyprus nurture upper primary age children's PT by using museum visits? 1. What pedagogical approaches do primary teachers use in nurturing PT of upper primary pupils? 2. How and what opportunities do teachers take advantage of from a museum visit for nurturing children's PT? 3. How do teachers think about the pedagogies they use in nurturing PT by using museum visits?	How do primary teachers in Cyprus nurture the Possibility Thinking of 9-10 year old children by drawing on learning resources associated with museum visits? 1. What features of children's PT are nurtured? 2. What pedagogical approaches do the teachers use to nurture children's PT? 3. What affordances for nurturing children's PT do teachers perceive to be offered by learning resources associated with museum visits?

Table 9: Research questions

Here it is important to say that the analysis of the pilot study data analysis was based on the new research questions above and not the old ones because they were more appropriate after the collection of the data.

3.7.7.2. About the research instruments

The rationale for using the methods below will be presented later in the section on the main study in this chapter, while here I will refer to the changes that I have made for the needs of the main study.

- *Semi-structured interview schedule*

The interview schedule was semi-structured and this helped me a lot during the pilot study because I had the opportunity to feel freer to ask further questions and clarifications. However, the pilot study with the teacher revealed the need to change the schedule. I erased some of the questions which were not necessary to be asked and I added some others which I decided were more relevant to investigating the teachers' views in nurturing PT (see Appendix 4, p.309). More specifically, in the second part of the first interview (Views towards creativity) I add further questions on the teacher's understanding for creativity and the creative pedagogies. The questions are 'How do you think the school environment can help the children become creative? How do you think the teachers can help the children to develop their creativity? How do you think teaching activities can help children develop their creative thinking?' It is important to say that the order of the questions during the interviews has to be in a flexible way. In addition, the interview after each lesson will be slightly adapted according to the context of the lesson, the observations and the teacher's reflective journal. This is necessary because the findings through the lessons cannot be predicted. Practically speaking, during the pilot study phase I found that sometimes I could have asked a follow-up question but missed the right time to ask, because of the fact that I was not experienced in interviewing people. Thus, in the main study I tried to be more open to ask question beyond the questions that I had planned.

- *Observation*

In using the schedule that I had created, I found that it was really helpful but I would prefer larger spaces for each of these three areas for scribbling and drawing (see Appendix 5, p.312). Thus, the problem that I came up with

during the observations was that I did not have enough space not only for drawing but also for writing my observations.

- *Teachers' reflections*

I found that there was the need to discuss with the teachers what to note down by explaining to them further each of the questions that I had written in the reflective journal and also to revise some of the questions. The pilot study showed that the teacher tended to give a broad comment concerning a whole lesson instead of particular moments or events. More specifically, she did not give any details about the activities (which had worked and which had not for the nurturing of children's PT) and how she thought that she could further develop the next lesson. Also, she did not make any interpretations of how she managed to nurture children's PT. Therefore, I found the need to discuss with the classroom teachers in order to make them understand that through the reflective journal I hoped they could try to capture some more details and interpretations about their teaching practices. However, at the same time I hoped not to exert too much influence on their own way of recording and thinking. I changed the question schedule by erasing, revising and adding some questions in order to help them more in their reflections. More specifically, in the original teacher's reflective journal schedule I revised the questions and I added some specific points to have in mind when they answer the questions in order to have more focused reflections (Table 10).

As already discussed earlier the purpose of conducting the pilot study was to check instruments, my research questions and to try out analysis. As far as the aim of checking the instruments and my research questions are concerned, the pilot study made me realise that they need some changes. I revised the interview questions and the questions for the teacher's reflections and made more extensive use of still images because they can capture specific moments which the teacher interpreted at a later stage. Thus, these changes were therefore made in the main study.

Original Teacher's reflective journal schedule	Adapted Teacher's reflections schedule (main study)
1. What's your view about today's lesson? 2. Was it as you had expected it? 3. What activities worked during the lesson and why? 4. What activities did not work and why? 5. Can you evaluate your lesson as far as the creativity target is concerned? 6. Do you think your teaching practices help to develop pupils' creativity? How? 7. How do you think you will further develop your lesson? 8. Can you talk about how you feel or anything you want to say?	**Points to have in mind while answering the above questions:** ▪ Reflect on the opportunities that they had in nurturing children's PT as far as the pedagogy is concerned in each lesson ▪ Reflect on what activities worked in terms of nurturing children's PT and why. Also, present examples of children's PT ▪ Reflect on what activities did not work in terms of nurturing children's PT and why ▪ Reflect on the opportunities that the museum visit offered on nurturing children's PT.

Table 10: Questions schedule for the Teachers' reflections

The analysis of findings was a demanding procedure which involved the open coding of all ideas, the axial coding by grouping the ideas of similar content into groups and finally the over-arching codes. However, some interesting findings came out at the end about the pedagogies used by the teacher for nurturing PT by using alternative resource of learning associated with in-museum visits. Moreover, the research reported in this chapter revealed also some interesting points for the other two research questions. However, I will not refer further to the findings of the pilot study for the reasons that I have discussed earlier.

In terms of the main study, what is becoming clear from the ongoing analysis of the pilot study data is that I have to be more focused not only answering my first two research question but also the third one which was only weakly answered by my pilot study data. Thus, there are important relationships to

be understood between the teaching practices for nurturing PT and the museum visit programme in general. For example, what elements from the museum visit does a teacher perceive for nurturing PT and how? What are the teacher's perceptions about the pedagogies that they use by linking the museums into the teaching process? In my main study I seek to respond to these questions alongside my main research questions in order to have a clear idea about nurturing children's PT through the classroom lessons and learning outside the classroom.

3.8. Main study

As was mentioned previously this case study seeks to explore the pedagogical practice of primary teachers in Cyprus for nurturing the PT of 9-10 year old children by drawing on learning resources associated with museum visits. The ultimate aims of this research were to:

- Document the nurtured PT features
- Document and analyse characteristic features of pedagogical strategies in nurturing PT
- Explore the affordances that a teacher can perceive from the museum visits for nurturing children's PT.

3.8.1. Research questions and studied constructs

As indicated previously, my research questions are exploratory, seeking in-depth evidence about the nurtured PT features as well as the pedagogical features used by the teachers for nurturing PT (Table 11).

Main question: How do primary teachers in Cyprus nurture the Possibility Thinking of 9-10 year old children by drawing on learning resources associated with museum visits?

Sub-questions:

1. What features of children's PT are nurtured?

2. What pedagogical approaches do the teachers use to nurture children's PT?

3. What affordances for nurturing children's PT do teachers perceive to be offered by learning resources associated with museum visits?

Research Questions	Data collection tools[7]					
	In	Ob			TRJ	RRJ
		FN	VR	P		
What features of children's PT are nurtured?		√	√		√	√
What pedagogical approaches do the teachers use to nurture children's PT?	√	√	√	√	√	√
What affordances for nurturing children's PT do teachers perceive to be offered by learning resources associated with museum visits?	√	√	√		√	

Table 121: Summary of research design in the main study

The above table shows how my interpretive epistemology and my data collection method link with my research aims. Thus, through my methodology my research generated the type of knowledge which can satisfy the aims.

3.8.2. Sampling and sampling procedures

Johnson and Christensen (2010, p.216), argued that sampling is 'the process of drawing a sample from a population'. In the qualitative approach, which is

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[7] In: Interview; Ob: Observation; TRJ: Teacher's Reflective Journals; RRJ: Researcher's Reflective Journal; FN: Filed notes; VR: Video Recordings; P: Photos

the approach that this study follows, the dominant sampling approach is the purposeful strategy, contrasted with the quantitative perspective in which the representative and random sampling is chosen. The sampling strategy I adopted was a non-probability sample, also known as a purposive sample. According to Silverman (2000), this is a common strategy among many qualitative researchers. The non-probability sampling does not aim for generalisations, but to collect in-depth data and select a sample from which the maximum can be learned (Merriam, 1998). The reason for choosing a non-probability sample is that the qualitative research aims to understand the conditions within which the researched phenomena occurred rather than emphasising the generalisability of findings.

More specifically, the sample of this study consisted of eight case study teachers with their students, aged 9-10 years old. I chose eight cases in order to 'make a compromise between the difficulties of multi-case and the limitations of a single case study' (Lin, 2010, p.112). These eight cases helped me to collect numerous and different perspectives on the issues raised during the process of nurturing PT by using alternative resources of learning associated with museum visits, and therefore to give a more holistic understanding of the research problem. These eight teachers were located in four schools (two cases-teachers in each school) as shown in the Figure 11 and Figure 12.
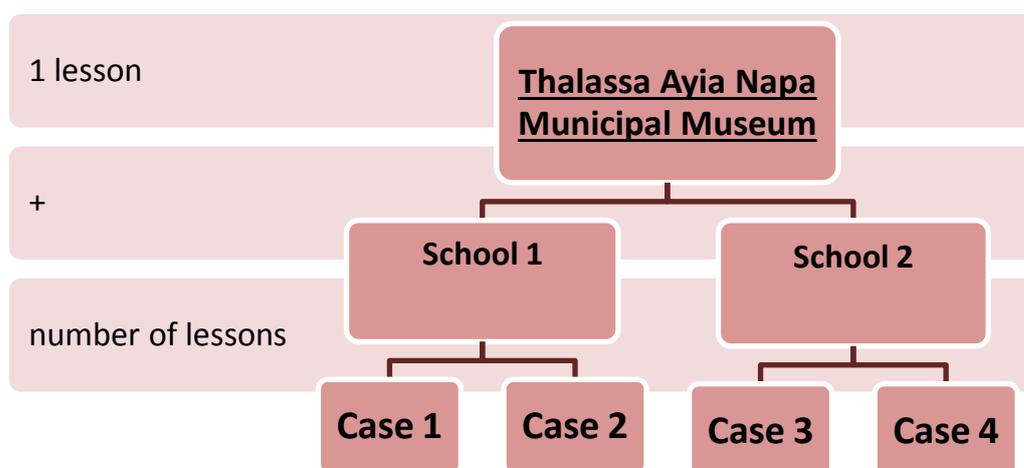
Figure 11: The four cases which participated in the same museum project in Ayia Napa

It important to note that, this study refers to each teacher and each school that were observed and studied with pseudonyms in order to ensure the anonymity of the participants. Thus, I refer to the teachers as Case 1, Case 2, Case 3, Case 4, Case 5, Case 6, Case 7 and Case 8. The same happened also for the schools like School 1, School 2, School 3 and School 4. Nevertheless, I did not give pseudonyms to the museums because this study is interested only on the students' journey through the visit programme and not to evaluate the museums or the museum programme.
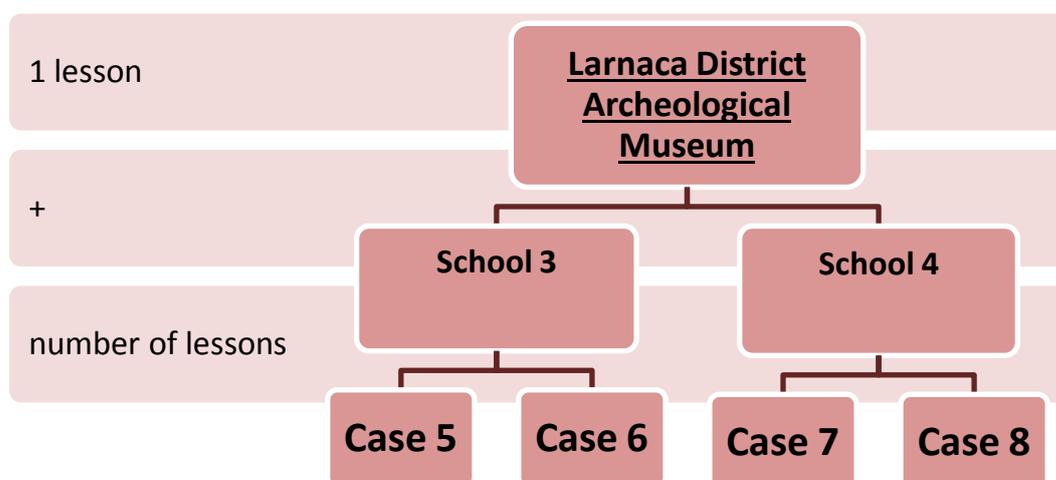
Figure 12: The four cases which participated in the same museum project in Larnaca District Archeological museum

The sample of the study was limited to this number according to specific criteria which were important for the selection of an appropriate sample for this study. The first criterion that the teacher should have for participating in this study was the fact that they should teach students aged 9-10 during the time period that the study was conducted. The reason for choosing this age group was the fact that at the time that my research took place there was no previous study on PT focused on this age group of students. The second criterion was that the selected teachers had as their primary goal to foster and inspire creativity and creative thinking in their students. Thirdly, another important premise is that they had previously attended educational programmes that are currently offered by local museums to this age-group of children. This was important because if they had experienced museum

programmes before they were considered to be more experienced on how to link the learning outside classroom with the classroom lessons for nurturing creativity and creative thinking. Fourthly, these eight teachers were participating in a museum project during the time period of my data collection, and they were working in public schools in which I could have easy access for conducting the study. Lastly, these four schools were selected based on location (accessibility) and availability. It is important to note that I chose to cooperate with two teachers in each school and the reason was that it was easier for me to collect my data as well as they were participating in the same museum visit. The above reasons made these teachers to be experienced teachers and a purposive sample for my study.

This study consisted of eight case study teachers with their students, aged 9-10 years old. However, the selection of this age group was not random. This is an age group that I am familiar with as a teacher. I have had the opportunity to teach in a variety of primary schools and different age groups of children but most of the time this was the age group of students that I was teaching. Additionally, this age group has several characteristics which made it an interesting sample for investigating. The students of age 9-10 according to the International Centre for Human Rights Education (2008) enjoy learning new things, enjoy moving and being active and they are curious. Also, they learn best when involved in a concrete project, they enjoy playing and taking up group challenges and they can freely express their thoughts, what they like or do not like (International Centre for Human Rights Education, 2008). These characteristics were considered to be crucial for this study as it can be helpful for the PT to be nurtured.

As is shown in the two figures above (Figure 11 and Figure 12), I preferred to observe two different museum programmes. This decision combined with the number of the teachers that I had decided to observe gave me the opportunity to collect numerous and different perspectives on the issues raised and therefore to give a more a holistic understanding of the research problem. Here, it is important to note that the selection of the museums was done by the teachers and as a result I was following the teachers' choices. According to Cohen, Manion and Morrison (2007), this kind of sample is satisfactory to

the researcher's specific needs because in many cases the purposive sampling is used in order to access 'knowledgeable people'. Additionally, my sample can also be characterised as convenience sample because they were among the teachers who were going to have a museum visit in Larnaca and Ayia Napa during the time period of my pilot study. Cohen, Manion and Morrison (2007) argue that through convenience sampling the researcher chooses the sample from those to whom they have easy access. Thus, my sample can be characterised as a combination of 'purposive sampling' and 'convenience sampling'.

3.8.3. <u>Context of the study</u>

The main study began in September 2012 and it was four months long. It was conducted in Cyprus and more specifically in Larnaca. Larnaca is the third largest city on the island of Cyprus after Nicosia and Limassol, and is on the southern coast. It is the island's second largest commercial port and an important tourist resort. Also, the island's largest airport is located on the outskirts of the city. There are over a hundred educational institutions in the city (some public schools and others private institutions). The four primary schools which the main study was conducted are public institutions and are located in Larnaca.

3.8.4. <u>Museum visits programmes</u>

The educational programmes of the museum visits are designed on the basis of experiential, inquiry-based and collaborative learning theories and aim to develop observation and exploration skills and critical thinking among the participants based on the National Curriculum requirements (CMEC, 2011). Inspectors of primary education, museum educators and to some extent museum curators collaborate in developing the programmes, which target specific areas of the curriculum. The duration of the programmes is 90 minutes each and their attendance is compulsory for particular age groups in public primary education. The target audience is exclusively primary school children, thus, teachers specialised in museum education develop and deliver

the programmes once or twice per week. Typically a child is expected to take part in at least one programme every academic year.

More specifically, for the needs of this study I observed the visits in two museums; the programme in Thalassa Ayia Napa Municipal Museum and the programme in Larnaca District Archeological Museum. Several reasons were taken into consideration from the teachers as it was their choice for choosing these two museum visits programmes. Firstly, it was the experiential and interactive nature of the programmes. Secondly, the theme and the areas of the curriculum in which these two programmes were involving the students (both of the visits have a narrative nature) have as a target to nurture students' creativity and creative thinking. Last but not least, an additional factor for choosing these two museums was the easy access from the teachers and students for participating and observing the programmes.

3.8.4.1. Thalassa Ayia Napa Municipal Museum

The Thalassa (= Sea) Museum was inaugurated in June 2006 and comprises the cornerstone of the local cultural infrastructure of Ayia Napa, Cyprus. The museum has the Sea as its subject matter and its main aim is to present to both local and foreign visitors the impact and the significance of the sea upon the history of the island. The exhibits of the museum span the chronological periods from paleontological times, through the prehistoric era, until the present time (Figure 13).

The museum is a three storey building constructed of marble, onyx, wood and metal, and offers unique experiences that appeal to all the senses through its 'bird's eye view'. It is subdivided into six levels and the exhibits are presented in four different styles: in underground free-standing showcases where the visitors are able to walk and view the objects from above; in modern showcases freely distributed around the museum, while others hang in the roof space. Here, it is important to say that the museum education programme for the primary schools takes place on the first and ground floors (Figure 14).

Figure 13 Location of Ayia Napa Thallassa Museum

The Ayia Napa Municipal 'Sea Museum' and the Ministry of Education and Culture organise training programmes of Museum Education for fourth grade (ages 9-10) students of primary schools in the city and district of Larnaca and Famagusta, entitled 'In Ayia Napa which is surrounded by the sea ... Ship of Kyrenia open sails'.

In the programme the children, with the help of the magical mermaid and Triton (which are characters from Greek mythology) travel back in time and listen to the secrets of the sea. The idea behind the programme and for using these two characters is that the museum draws on the children's own current cultural experience as an entry point to the exhibits in the museum in order to have an interesting and fascinating programme. The students are converted into archaeologists and with an underwater excavation reveal the findings of the Kyrenia wreck. Then, they board the 'Kyrenia II' and go travelling around the Mediterranean, where they have the chance to travel to new places, meet new people and exchange their goods. Avoiding the pirates and making paddles, they manage to successfully back on the golden beaches of Cyprus, wiser and richer in mind and heart. However, the mermaid did not stop wandering into the sea. She continues wandering, exploring and looking for Alexander the Great (who is her brother according to the legend).
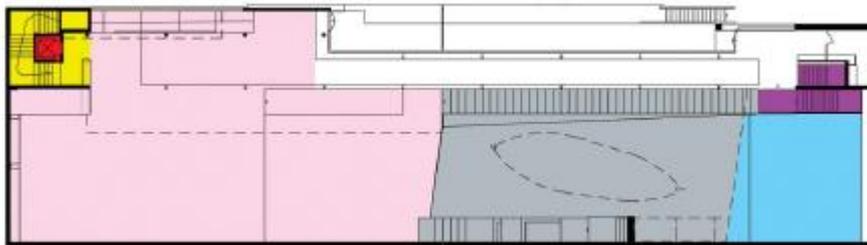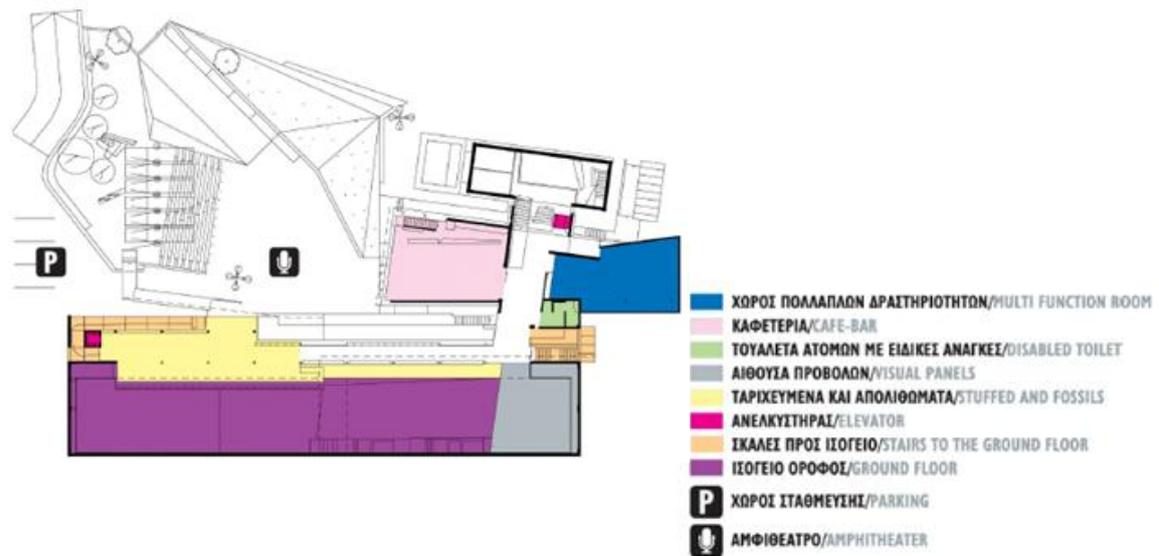
Figure 14 Plan of Ayia Napa Thallassa Museum

3.8.4.2. Larnaca District Archaeological Museum

The Archeological Museum of Larnaca is in the centre of Larnaca (Figure 15). The provincial museum of Larnaca was founded in 1936 but originally was hosted in the assembly hall of the Church of St. Lazarus. In 1948 the collection was transferred to the Ottoman castle of the town until 1969 and later it was transferred to the building in which it is now located. This museum

building initially included two halls. In 1987-1988 a new room was added and as a result there was a reclassification and enrichment of the museum collection.
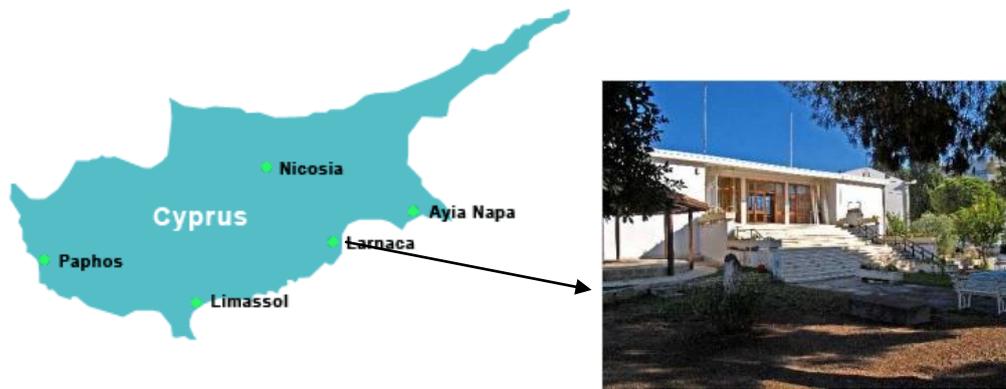
Figure 15: Location of Larnaca District Archaeological Museum

The museum currently has four halls, where the exposure of objects follows a chronological order, so that the visitor has a complete picture of the history of the city and district of Larnaca. The massive stone findings are hosted under one roof in the courtyard of the museum. To the north of the shelter is a rebuilt olive press which was excavated at Mari village. This olive press comes from the Hellenistic period (Figure 16).

The programme in the Larnaca Archaeological Museum is titled 'Sea, sea ... An invitation to an ancient symposium.' Through an experiential approach, children will learn about the culture of Cyprus, they will come to appreciate their heritage and the culture of other peoples.

In the museum hall, the children can discover in the archeological findings related to the sea. They will find on display vases and other ceramics (large dishes jugs, jars, cups, plates) from potters who lived on the island and have designs from the world of the sea (fish, squid, scales and octopus). Moreover, they will find objects brought in by Cypriot traders from neighbouring countries (Egypt, Phoenicia, Greece, etc.). Also, during the visit the children will be transformed into inhabitants of ancient Kition, will be invited to a symposium

and will travel to the neighbouring countries through role-playing activities that stimulate their imagination.

Main entrance of the museum

Neolithic period to the end of the Middle Bronze Age (7000-1650 BC)

Last period of copper - emphasizes Mycenaean objects (1650-725 BC)

Cypriot-Geometric and Cypriot-Archaic periods (725-475 BC)

Classical period to the end of Antiquity (475-325 BC)
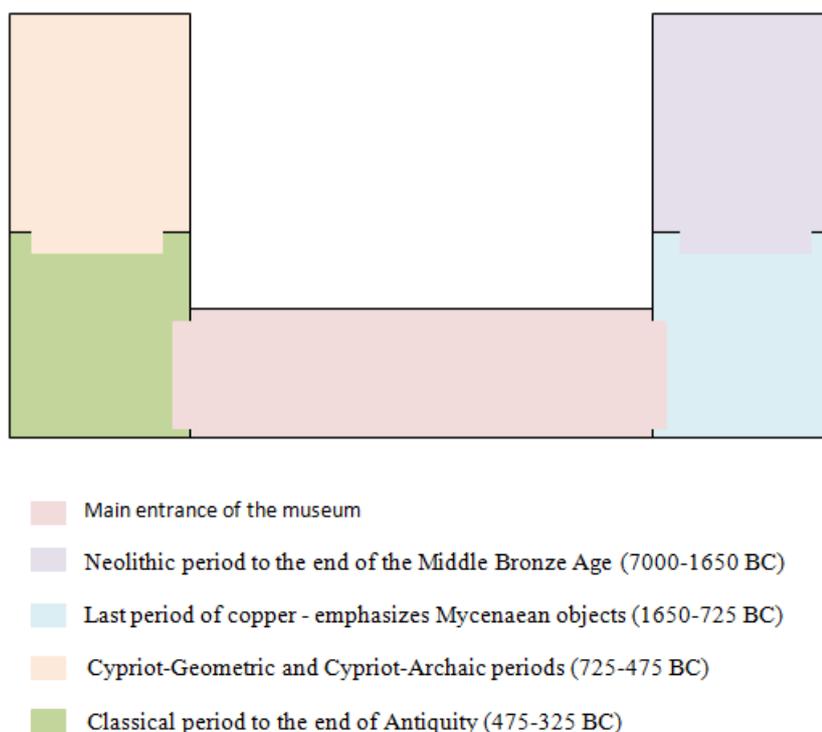
Figure 16: Plan of the Larnaca District Archaeological Museum

3.8.5. Data collection

The study is situated within the interpretive paradigm, seeking a deep understanding of participants' experiences. Therefore data collection involved a variety of naturalistic methods. A significant reason for selecting the interpretive paradigm was to allow insight into the lived experience of the teachers when nurturing students' PT and to understand the children's experiences when PT. Based on the methods associated with interpretive paradigms I decided to use one-to-one interviews with the teachers; classroom and museum visits observations (field notes, video-recordings and

still images); teachers' reflections and my own reflective journals for gathering qualitative data.

The process of data collection in this case study involved several stages. The teachers engaged in two of the three stages; the first stage involved observations of teacher-pupil interaction in the classroom and the museum context, the second involved the teachers in having a discussion with the researcher about their reflections on their classrooms after they had watched selected episodes of the video-taped observations. They were also asked to expand upon and discuss their reflections and the observation notes. The third stage involved reading the new data (which came out from the discussion with the teachers) and re-reading the old data (the initial observations that the researcher made during the lessons) with a focus on specific pedagogical strategies and PT features.

The first stage of data collection was the interviews, which were conducted with teachers to get a greater depth of knowledge regarding the fundamental issues of the study. Additionally, I conducted an interview at the end but also during many faces of the study. These interviews had the character of a discussion. The main reason for all these interviews was to collect teachers' experiences of teaching and nurturing PT.

The second stage involved classroom and museum lesson observations. This required the researcher to enter the educational setting and to observe the teachers' strategies. Each teacher was observed, together with their students, regarding their actual practice of teaching and nurturing PT. The aim of the observations was for me to begin to investigate the actual situation regarding the teaching pedagogies. During all the lessons the teachers seek to undertake reflection-on-action (Schon, 1987) in their diaries. Also, the researcher undertook reflections through this second stage of data collection. This reflective documentation is important in identifying and characterising common strategies in pedagogy which foster the nurturing of PT.

The third stage involved the clarification and triangulation of research findings and also the collection of further reflections from the teachers. More specifically, the teachers watched specific episodes of the classrooms videos

and reflected upon these observations, discussed them with me, and I shared my interpretations from the naturalistic and systematic observations. This stage is considered to triangulate the data. This integration of methods is advocated by Manson (cited in Cohen et al., 2007) who states that it enables the researcher to explore different elements or parts of a phenomenon (in my case teachers nurtured PT during the classroom based and learning outside the classroom lessons), to answer the research question in different ways and from different perspectives, to give greater depth and breadth to analysis and different data about the same phenomenon through a process of triangulation.

The main concerns throughout the process of data collection were connected to ethical considerations and the trustworthiness of the research, especially credibility, transferability and dependability, as were discussed in Chapter 3.

3.8.5.1. <u>Semi-structured interviews</u>

The main purpose of choosing the interview as a method is to engage with participants in order to elicit their experiences of teaching with a depth of understanding and to allow participants to express their own opinions in their own words. In my research, the use of the interviews is threefold: firstly, to follow up unexpected observations; secondly to investigate more deeply the motivations of interviewees and their reasons for responding as they did; and thirdly to afford greater insight to my interpretation of the qualitative data. Similarly, Lincoln and Guba (1985, cited in Cohen et al, 2007) affirm the multipurpose use of interviews and their contribution to verifying, amending and extending data.

Wellington (2000) suggested that there are several kinds of interview: structured, unstructured and semi-structured. In this study the type of interview that was used was the semi-structured, as it offers flexibility and provides opportunities for interaction. Robson (2002, p.270) cites that the semi-structured interview

> […] has predetermined questions but the order can be modified
> based upon the interviewer's perception of what seems most

appropriate. Question wording can be changed and explanations given; particular questions which seem inappropriate with a particular interviewee can be omitted, or additional ones included.

(Robson, 2002, p.270)

Semi-structured interviews were used during different phases of the research: before the beginning of the project, before and after the visit to the local museum and at the end of the project. I considered the semi-structured interview the most appropriate instrument because it would give a 'voice' to my participants. According to Cohen et al., (2007) interviews enable participants to discuss how they interpret the world in which they live and to express how they understand things with their way of thinking. It is considered to be a reflexive and powerful tool for data collection, 'enabling multi-sensory channels to be used: verbal, non-verbal, spoken and heard' (Cohen et al., 2007, p.349). The main advantages of interviews are that the researchers can give further clarifications to the respondents, can correct any misunderstandings about the questions and ask for further clarification on the participants' answers (Papanicolaou, 2003).

However, it should be noted that interview data from respondents can have some disadvantages (Robson, 2002). The data might be affected by the characteristics of the respondents, their memory, their knowledge, experience, motivation and personalities. Moreover, respondents do not necessarily report their beliefs and attitudes and may respond in a way that is intended to show them in a good light. These problems will be mitigated with methodological triangulation, i.e. the use of different methods on the same object of study (Cohen et al., 2007).

It should be noted that the interview schedule was piloted with one primary teacher before the pilot study and this trial helped me to identify possible weaknesses and make essential changes to further improve my interview questions schedule and skills. I also asked for feedback from the pilot interviewee because as Robson (2002, p.289) points out interview skills 'require practice, preferably under low risk conditions where it is possible to receive feedback on your performance'. Furthermore, the valuable for the study data from semi-structured interviews depends partly on the schedule,

partly on interview dynamics, i.e. the skill of the interviewer, time available, and rapport established (Arksey and Knight, 1999). Thus, piloting my interview questions was essential as I am not an experienced interviewer.

My interview schedule had open-ended questions in order to eliminate issues and encourage in-depth participant contributions, with the aim of exploring their perceptions and to reconstruct their own experiences about nurturing their students' PT by using alternative resources of learning associated within a museum (Appendix 4, p.309). These questions were written down by considering the literature as well as my previous experiences from the pilot stage of this study. The interview questions schedule was first written in English, and then translated into Greek to be administered to participants and then translated back into English.

Interviewing classroom teachers:

The interviews with the eight teachers were face-to-face individual interviews and took place at different stages of the projects (before the project began, during and at the end). These semi-structured interviews were asking questions mainly regarding their views on creativity and how they nurture PT during the classroom lessons and the museum visit lessons, their evaluations on their lessons in nurturing PT and their expectations towards their students.

As was mentioned earlier the semi-structured interview used open-ended questions that were flexibly. These types of questions allowed participants to develop their own descriptions about the reality of which they were a part. The questions were drawn from theoretical constructs as well as my observations and also from the video-taped lessons. The interviews lasted approximately 15 minutes. It is important to add that the semi-structure interviews were audio-recorded, as was devised from Creswell (2007) and Robson (2002).

The trustworthiness of the interviews was taken into consideration through corroboration of data in terms of relevance and later through returning the transcribed recordings to participants for their confirmation about what has been transcripted.

3.8.5.2. <u>Observations</u>

Observation is one of the commonest data collection methods used in case study research because it does not rely on what participants say, rather it is based on direct evidence of the eye to see the events (Denscombe, 1998). The purpose of the observation was for the researcher to begin to investigate the actual situation regarding teaching strategies in the classroom. Thus, classroom and museum visits observations were a significant data source yielding direct visual evidence which could ascertain whether participants behaved in the way they claimed to behave through the interviews.

As stated earlier multiple sources of evidence were utilised that are highly complementary to each other. Therefore, for triangulation purposes several naturalistic observations were conducted during the project, in order to see what happens in action in each setting regarding pedagogical approaches that help the children to nurture their PT. Observations enable the researcher to develop a greater understanding of the situation (Walford, 2001). According to Briggs and Coleman (2007), qualitative data requires aggregation and sorting in order for meanings to become clear. Thus, during observation, the qualitative study researcher needs to keep a comprehensive record of events.

Simpson and Tuson, (1995) argue that flexible observation allows the researcher to consider the context of the behaviours, their sequence and their meanings, by simply having some flexible pre-set categories. Therefore, during the observations I focused my attention on the pedagogies of nurturing PT. Furthermore, I observed students' interaction with their peers and with the teaching staff and who initiates the interactions most of the time. During the observations I took field notes, photos and the lessons were videotaped in order to note any critical events. The videotaping gave me the opportunity to identify key episodes. Later, the key episodes were transcribed from Greek into the English language in order to allow me further interpretation. Here, it is very important to clarify that all of the key data of my research was transcribed from Greek into English because the research took place in Cyprus, where the official language is Greek.

a) <u>Field notes</u>

The classroom observations were conducted by me as a researcher without any help by using an observation schedule which was designed based on relevant literature (Radnor, 2002; Robson, 2002) in order to help me take notes. The structured schedule was divided in two categories named 'looking' and 'thinking'. In the thinking category specific issues were allocated such as pedagogy, ethos and environment (Appendix 5, p.312). I started each observation with video-recording which, like the field notes, was carried out in every lesson in order to cross-check what I had written when I needed it. Each of the case study classes was observed for a minimum of five class periods and throughout the museum visit programme. I chose to take the role of classroom participant rather than observer in order to have more detailed information about the teaching strategies of nurturing PT. The classroom observations lasted for approximately forty-five minutes (the length of each lesson inside the classroom is forty-five minutes) and each museum visit observation lasted approximately one hour and a half. However, one essential limitation of observation is that different individual perceptions of events may produce different accounts of the same case. Thus, Denscombe (1998) suggested that to reduce this effect, systematic observations grounded on an observation schedule should be used and this was done in this study.

b) <u>Video-recordings of the lessons</u>

In addition to the written records, each of the indoor and learning outside classroom lessons during the project was video-recorded as supportive/counter evidence of observation and my own reflective journals. It is argued that, through camera recording, both verbal responses and nonverbal elements (e.g. sounds, gestures, facial expressions, quietness) during the interaction can be faithfully captured (Ely et al., 1991). Nevertheless, even a camera cannot record everything that is happening. The limitation of video recording is its single-angle view; sometimes 'a camera must be aimed at a specific area of interest, neglecting other areas' (ibid: 83).

I did not analyse all fifty video recordings of forty five minutes each. I analysed selected episodes and more specifically the episodes where the students' PT was identified. Further justification for the selected episodes will be given in the following chapter (Chapter 4: Analytic Approach). The video recordings of the lessons were used also as a support when I wrote my reflective journal.

c) **Photographs and still images**

The use of images is not a new methodology but is rooted in disciplines such as anthropology and sociology (Harper, 2002). Collier (1957, as cited in Harper, 2002) highlighted the value of photographs as a visual tool in social research after using a photographic survey to help researchers to categorise the quality of housing in an examination of the environmental basis of stress (Harper, 2002). The use of photos improved the quality of the interviews in many ways. It prompted memory, reduced misunderstandings and elicited higher quality and more comprehensive interviews (Harper, 2002).

One advantage of visual methods is that they can aid the interview process by breaking the ice, prompting memory, improving the flow and content of the interview and helping establish rapport and shared understanding (Harper, 2002; Bagnoli, 2009). The use of images can place control of the interview process with the participant, bringing out issues that are meaningful to them (Frith et al., 2005). The use of a novel medium also provides participants with the opportunity to reflect on experiences in a different way. This has been described as 'breaking the frame' of experience (Harper, 2002). This also elicits details that might otherwise be difficult to talk about leading to the disclosure of more sensitive issues and emotional details (Bagnoli, 2009).

However, photo elicitation and other visual methods have encountered some scepticism amongst social scientists and have only recently entered the mainstream (Frith et al., 2005). Such wariness has been attributed to doubt over the images, which are ambiguous and open to multiple and subjective interpretations. This did not fit with psychology's desire for objective data representing an accessible reality (Frith et al., 2005; Guillemin, 2004). Following the 'crisis of representation' in social science there was a shift in

thinking towards exploring meaning-making and the construction of multiple realities. From this perspective the ambiguous nature of visual data is not a difficulty because, like all data, it should not be interpreted as reflecting a stable reality that the researcher can access. Instead it is a way of constructing multiple realities influenced by social and cultural factors and situated in a particular time and space (Frith et al., 2005; Guillemin, 2004). This has led to an increasing acceptance that visual methods can provide valuable data about issues of concern to the social sciences and there have been calls for further application of these methods to psychological questions (Frith et al., 2005).

Ethical issues for the still images

The need for confidentiality and informed consent may mean that images have to be shared in an altered form e.g. in videos and photos, faces may be blurred and voices disguised (Frith et al., 2005). Even then, participants could be identified by those who know them e.g. by location or build (Gibson & Riley, 2010). Other ethical issues include questions around copyright ownership and potential negative interpretations following publication that are beyond the control of both researcher and participant (Frith et al., 2005). All the above were taken into consideration in order to protect the participants.

3.8.5.3. <u>Teachers' reflections</u>

Much has been written about the role that reflective writing plays in teachers' professional growth. The uses and benefits of these forms of writing have been illustrated and discussed particularly with reference to initial teacher preparation (Francis, 1995; Hoover, 1994; Numrich, 1996; Porter et al., 1990), but also in the context of in-service teacher training (Jarvis, 1992), and the ongoing personal–professional development of practising teachers (Appel, 1995; Bailey, Curtis and Nunan, 1998; Brock, Yu and Wong, 1992; Holly, 1989). The collective message emerging from this work is that reflective writing can provide much insight into the personal and often implicit processes which teachers experience in their work and development, and that

these written accounts have benefits both for the writer, as well as – where the writing is made public – for the reader. In broad terms, by documenting and reflecting on their experience, writers benefit from an enhanced awareness of themselves as people and as professionals, an awareness which makes for more informed professional decision-making (Holly, 1989). The point I want to make here, then, is that reflective writing is acknowledged as a useful tool for both promoting and understanding teachers' professional activity.

The teachers were invited to keep longitudinal reflective journals over the period of this study. More specifically, after each lesson, teachers were required to write or record their reflections, which included the answering of some specific questions and also anything they would like to note down or to comment on. These specific questions were given to the teachers in order to have focused reflections on specific points (Appendix 6, p.314) because otherwise there was a possibility to give general comments which were not going to be useful for this study. Generally, these questions were asking for reflections and thoughts about the opportunities that they'd had in nurturing PT, the activities which had succeeded in this target, the opportunities that the museum visit had offered them for nurturing PT and examples of their students' PT.

The reflections were collected throughout all phases of the project to enable me the opportunity to have a discussion with the teachers, ask for their comments and clear up any misunderstandings. Unfortunately, a limitation this data collection method may have is that the teachers may feel stressed during this procedure and not feel free to express their thoughts. Here it important to say that there were alternatives for the teachers who did not have the time to write the reflective journals, like the replacement of written reflections with recorded reflections or conceptual mapping. According to Veale's (2005) work, the method of conceptual mapping was designed to encourage participants to think about the teaching strategies they used and how successful these are in nurturing children's PT, how the museum visits helped, and how they take advantage of the museum visits for nurturing PT. The reflective journals gave me the opportunity for further discussion with my

participants and allow for a different kind of approach within the research without expecting closure or a 'right answer'.

3.8.5.4. <u>Researcher's reflective journals</u>

I used my own reflective notes to give personal accounts, as was suggested by Clandinin and Connelly (1998). I wrote my reflective journals after each lesson and teacher's interviews and through the research process from time to time in order to capture small fragments of experience including records and reflections on the practices, personal thoughts, interactions or conversations with the teachers and the pupils, adding drawings with my thoughts and sociogrammes. Moreover, the reflective journals helped me to make sense of phenomena. Therefore, the journals were used to reflect on the practices from a personal and professional standpoint, as well as to help my thinking as a researcher, an insider and an interpreter.

3.9. <u>Ethical considerations</u>

Ethical issues are of great importance in research and should be indivisible from every step of the research process, including the research problem and the purposes of the project, the data collection and analysis and during the writing process (Creswell, 2009). Therefore, ethical issues have been taken into serious consideration in this research plan and comply with the guidelines issued by the British Educational Research Association (BERA, 2011). The ethical concerns of doing research in general are mainly about respect for the participants and avoiding doing them any harm. It is the researcher's responsibility to protect the participants' rights and to build relationships between the researcher and the participants on a democratic basis (Bassey, 1999; Fontana & Frey, 1998). In my research study the ethical issues that could be raised are related to the anonymity of the participants, their right to withdraw, confidentiality of their personal data, informed consent and the storage of data.

A crucial element in ethical procedure is informed consent and protection from harm. This is often addressed through use of a consent form that should be given to the participants for signature. According to BERA (2011), the consent form makes participants aware that participation is voluntary and they can withdraw from the research at any point in the study for any and no reason. More specifically, consent form (written consent form) was sought from the University of Exeter – the same consent form was used also for the pilot study (Appendix 7, p.315), the Ministry of Education and Culture in Cyprus (Appendix 8, p.321), the school principals and the classroom teachers (verbal consent). It is important to note that the Ministry of Education and Culture at the beginning of each school year sends to parents and students a consent form to sign for the participation of the students in all the research that is going to take place in school. This consent form is not only for the participation of the children but also covers the video-recordings of the lessons and also the photographs. Thus, there was no need to send to the parents a consent form to sign for my main study in order to have their permission for photographing and video-recording the lessons. However, I sent the parents a letter to inform them about my research, the time that I will be inside the classroom with the students and how I will be involved in the daily school life of their children (Appendix 9, p. 322). Also, I included my mobile-phone number, my email address and the email address of one of my tutors (Anna's Craft email address) for further clarifications as far as my research is concerned. Anonymity and confidentiality of participants were assured.

As indicated above, I recognised the right of the teachers and children to withdraw from the research for any and no reason at any time and I informed them of this right. Thus, no data concerning a participant who withdrew would be analysed or published in the study, or saved but would be destroyed. According to BERA (2011), these issues are very important for ensuring the integrity of the research procedure. However, none of the participants withdrew during the data collection.

Additionally, the children were informed that the video data was purely as a record and would only viewed by me as the researcher, by their teacher and

by my two supervisors. Moreover, the teachers were asked for their consent to be interviewed and to be recorded. Also they were informed of their right to refuse. It was ensured that the interviews were conducted in a non-threatening manner and would be stopped if it were evident that the teachers found it stressful.

As far as the privacy is concerned I treated participants' data with confidentiality and anonymity to cover their right for privacy. I used pseudonyms for children (capital letters of the alphabet), teachers (e.g. Case 1), and schools (e.g. School 1). However, I did not use fictional names for the museums as I was not evaluating the museum visit programme; I was interested in the children's journey. Moreover, I informed the parents of my participants and the teachers how and why their personal data were stored, how I used it and to whom it might be available. Thus, I informed them that I kept the data only for personal use and no other person will have access apart from me and my two supervisors. Among the ethical questions that a researcher may encounter, Wellington (2000, p. 55) refers to the way the researcher will give 'details of context, e.g., size of school, region, gender/age of an informant, without compromising confidentiality/anonymity'. Taking into consideration what Wellington (2000) refers to, I tried during the writing of all chapters to avoid portraying directly or indirectly, the particular school that participated in the research.

Concerning ethical issues arising during the data analysis procedures I shared my interpretations with the teachers. This is important in establishing quality in qualitative research. It provides the participants with the chance to express their agreement or disagreement with the specific interpretations and thereby ensures reliable data. Finally, during the writing-up process a detailed account of the research design and procedures was given, so that the readers could determine for themselves the credibility of the study (Neuman, 2000).

3.10. Chapter summary

In this chapter, I stated the purpose and focus of my research on PT, the philosophical assumptions behind the interpretative paradigm, and the

rationale for descriptive case study. I also looked at the limitations of my research, including my own influence, and how I ensured the trustworthiness of the research.

In generally reviewing this chapter, the ontological and epistemological views I adopted suggest that the endeavour to achieve objective or absolute truth is in vain, since the reality that I wanted to explore and investigate is a complex social world that involves different minds to make sense of it through various lenses. The knowledge I hope to attain through this research, therefore, consists of multiple perspectives and in-depth understanding of the unique research context and experience. This goal is achieved through a combination of descriptive and multiple case studies, with its flexible and multi-method approach in arriving at a deep description of the experience. Also, discussed were the issues of the trustworthiness of the study, the sample, as well as the data collection methods, namely, the observation, teachers' and researcher's reflections, interviews, video-recording and still images. Finally, the ethical considerations were discussed.

Having presented the theoretical framework behind the methodology of this research, in Chapter 4 I will present the details of the main study (i.e. data collection procedures and data analysis).

Chapter 4: Analytic Approach

4.1. Introduction

This chapter discusses the main stages of the analytic approach to the data that were applied during this study. The chapter begins by presenting the data collection procedures and then it focuses on the data analysis of the main study that took place after the pilot study. The data analysis unit presents the key ideas by linking them with the research questions and the data collection instruments. As was mentioned earlier the data analysis focused on the main research question 'How do primary teachers in Cyprus nurture the Possibility Thinking of 9-10 year old children by drawing on learning resources associated with museum visits?' and the following sub-questions: 'What features of children's PT are nurtured?; What pedagogical approaches do the teachers use to nurture children's PT?; and What affordances for nurturing children's PT do teachers perceive to be offered by learning resources associated with museum visits?'.

4.2. Main study

The main study was conducted during the four months from the 1st of September to 20th of December in the academic year 2012-2013, after the completion of the pilot field study. In this study, I used both inductive and deductive analysis by adopting constant comparative analysis method from grounded theory as the analysis technique. The use of deductive analysis was necessary as my data were heavily framed by the PT framework. Interviews, classroom and museum observation, teachers' and researcher's reflections, video recordings and still images were the data collection methods adopted in this study, a combination which contributed further insights to the research data, as well as enhancing credibility by triangulation of the data.

There were eight case teachers and their students and five main instruments of data collection. Thus, in order to get a better understanding of the issues,

the data from the main instruments of data collection were analysed across all eight cases; and then several episodes from each case were selected for more thorough study. The focus was on events that occurred in the classroom and museum visits regarding the research questions, to yield a better understanding of the phenomena of the study.

4.3. <u>Data reduction</u>

The data reduction in my main study involved the narrowing in on seventy-eight selected episodes out of ninety-five. The selected episodes were considered to be representative for descriptive codification. Then, (after the episode selection) I carried out a focus analysis and I developed analytic codes through an inductive and deductive process.

The reason for choosing these specific key episodes were the detection of children's PT through their actions or through their participation in a discussion. The identification of PT features in the episodes were derived from existing PT frameworks such as those of Burnard et al. (2006), Craft et al. (2012a), Craft et al. (2012b), Cremin et al. (2006) and Chappell et al. (2008). More specifically, the characteristics of PT that were taken into consideration were:

1. Question posing: investigative behaviour (question framing, question degree and question modality)
2. Question responding: responding to investigations by self and others
3. Play: being in an 'as if' space
4. Self-determination: self chosen actions
5. Intentionality: action that has a clear goal
6. Being imaginative: 'as if' thinking
7. Immersion: concentration
8. Innovation: original outcome
9. Risk-taking: not fear of failure
10. Narrative

The key episodes were drawn from the detailed transcriptions of observations (field notes, digital images and video-recordings). The analysis was drawn from the transcriptions of the key episodes of teaching and children's interactions. Then the analytic findings from each episode were examined against the framework of PT, both inductively and deductively.

4.4. <u>Data analysis</u>

In the analysis of the qualitative research,

> 'the researcher must make a series of deliberate, critical choices about the meanings and values of the data he has gathered, and making sure that his decisions are justified in the terms of the research, the context in which it was carried out and the people who were involved in it.'

(Creswell, 2007, p.164)

According to Briggs and Coleman (2007), qualitative researchers will have to analyse parts of the data whilst they are designing the project; when they are conducting their desk-based research; when they are conducting their fieldwork; whilst they are storing, retrieving and handling their records; when they are building and testing their theories; and when they are writing up their report.

In the following section, I will discuss how I analysed my data and look at some common features of qualitative analysis of which the characteristics can be seen in my qualitative approach. Then, I will focus on more specific issues concerning case study analysis, and on systematic procedures I have gone through to analyse the data.

4.4.1. <u>Data analysis adopted in this research</u>

The data analysis of this study was both inductive and deductive analysis as my data were heavily framed by the PT framework.   In the analytic process of

my research, I was aware that there was a need to shift from an inductive to deductive approach, from time to time, in order to solid themes, in-depth understanding, and solid argument. This was necessary, because I was using an existing framework (PT framework) and as a result the deductive analysis was appropriate in some stages. However, mainly the qualitative data were analysed through the inductive approach, in which categories were derived from data themselves and coding emerged from the data. The analysis follows the basic coding sequence (Open Axial Selective) iteratively between primary data and the emerging theoretical framework (Warburton, 2005).

The rationale for using constant comparative analysis method from grounded theory is based on the importance of integrating analysis with data collection within the current study. This approach normally entails moving back and forth between primary data collection and analysis, starting during the time in the field. Therefore, one of the main rationales for using grounded theory in data analysis was the generation of concepts of teaching strategies based on ideas emerging from the data.

The process of data analysis using grounded theory follows the following stages (see Figure 17). The first stage is 'Open coding'. The process at this stage entailed inductive coding that emerged from the data including concepts (which involve coding the primary data), categories (classifying and combining concepts into structures) and condensing of the categories (condensing and merging categories into new concepts).   At this first stage the basic coding are grouped into categories and then compared with each other iteratively, between primary and emerging coding. Here, it important to say that this was carried out using each data collection method, gathering and building on the ideas of all data methods and then recognising thematic topics. The second stage was the 'Axial coding' which clarifies relationship between categories and uncovers consequences of those relationships inductively. This stage attempts to yield understanding and interpretation of the research phenomena among the participants. The third stage is the 'Selective coding'. Through this stage I discovered and combined the main categories which emerged throughout the data analysis. This stage shaped the understanding of the relationship between the main categories and categorised each theme

together with other concepts in order to create a theoretical framework for the study as a whole.
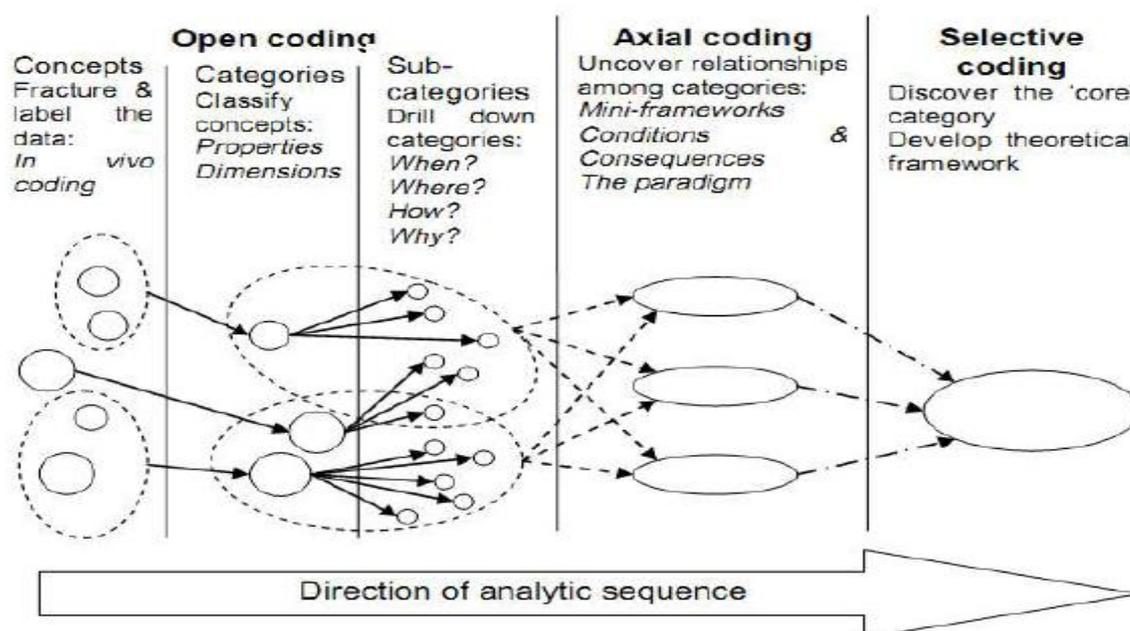
Figure 17: The grounded theory analytic process (adapted from Harwood, 2002, cited in Warburton, 2005, p.7)

In the data analysis I aimed first to identify open and axial codes in both the two core strands of the research: students' PT and teacher pedagogical features. Regarding PT features, I worked deductively having in mind the research literature i.e. posing and responding to questions, play, immersion, innovation, being imaginative, self-determination, risk-taking and intentionality/action (Burnard et al., 2006; Craft et al., 2008) and remained open to other possible PT features which might emerge from the analysis. In relation to teacher pedagogical features I followed the same way of working as I have done with students' PT features. More specifically, I worked deductively having in mind the five codes from the research literature i.e. time, space, standing back, 'meddling in the middle' and learner agency (Cremin et al., 2006; Craft et al., 2012b). Regarding the affordances that the teachers perceive from the museum visit programme for nurturing their students' PT, I worked deductively having in mind my earlier literature search (about the affordances of the museum visits in general) and attempted to enrich them with open coding. Thus my primary aim was to identify categories and concepts emerging from the texts, and then to link them into the axial codes. It

is important to note that Appendix 10 (page 323) has some examples of the analysed data.

Through the above stages, the organising categories of analysis are largely derived from the PT framework. The analysis process requires continual checking and improvement of the findings and concepts. During this procedure, I became aware of new codes within the PT features and also new codes within the pedagogical features used for nurturing PT. This re-examination of the data aims at making them more conceptual and reclassifies them into inclusive categories leading themes based on their meaning. Also, during the data analysis, comparison of the data processes required moving back and forth among the data, continuously aiming for more insights regarding the research questions, and looking for more meaning within the data through the case studies.

4.4.2. <u>Multiple-case analysis</u>

The work of multiple-case analysis can be much more complicated than single-case study; the researcher needs to cover broader issues and look for general explanations that fit each of the individual cases (Miles & Huberman, 1994; Yin, 2003). Yin (2003) suggested a strategy called cross-case synthesis in order to overcome this problem. By this he means to create word tables that bring and display the data in one uniform framework, which 'array a whole set of features on a case-by-case basis' (ibid, p.135). In this way, the analysis of the entire collection of word tables enables the researcher to make comparisons, consider further interrogation, see patterns and similarity across the cases and lead to conclusions.

However, according to Silverstein (in Huberman & Miles, 1998) this cross-case synthesis sometimes raises a tension. He identified that bringing together several cases can highlight the uniqueness of the individual case or pursue the generic patterns that work across cases. Yin (2003) suggested that the displayed data can reflect unique categories of individual cases and raise insightful results along with making comparisons and establishing generalisations. I also confronted this issue as I adopted cross-case

syntheses and comparisons in order to have a more focused data display to develop further analysis. I agree with Yin's view; therefore as I developed interpretations and arguments based on the comparisons of eight different settings, I bore in mind that the unique instances or features would be revealed and should be carefully discussed to contribute to a more holistic view and in-depth understanding.

4.5. <u>The dilemma of data analysis – translation</u>

To translate the data display at every stage could be time-consuming, and also raised the problem of the trustworthiness of the analysis. The issue was that the translation may in some way change the meaning of the texts, though I had to report and translate the results at some stage. In fact, translation was involved in the research as soon as the instruments were designed; the diary points and interview schedules, for instance, were already translated into Greek. I worked in English from the interim analysis stage, using English themes and codes to analyse the Greek materials (or English, in some of my journals) not only for communicative reasons, but also for making the analysis process and methods open for examination.

Although coding the texts in English, as I analysed and made direct interpretations of the data, I worked with the original texts alongside the translated codes and syntheses, to keep the two languages working side by side in my analysis and writing. The reason that I felt the need to go back to the Greek texts was because the translated syntheses gave less vivid images for me to recall as I went further into the interrogation of the data. That was the best way I could think of to cope with the doubtful trustworthiness of the translated codes, syntheses and results. In practice, a large space (or table) was required for spreading out all the materials I needed, and a very organised system (possibly only existing in my mind) was needed for easy access to the raw, unanalysed data or tables.

4.6. <u>Assessing the quality of data analysis</u>

The method used in assessing the quality of the data analysis is an important aspect of all research and therefore deserves separate attention. According to Neuman (2000), it is important that researchers to consider that in reality data analysis is not a linear process, but in fact there is a great deal of overlap and tracking backwards and forwards between the stages of analysis. It is important that the aim of interpretive research is not objective knowledge in order to ensure the quality of the research. Thus, for ensuring the strengths of this research, at the different stages several methods were adopted. Firstly, a pilot study was conducted in order to refine both the plan of the research as well as the data collection instruments. Secondly, the triangulation of the data was established by the collection of the eight different perspectives of the same experience in order to strengthen the data. Thirdly, as mentioned above a systematic approach was applied for the data analysis and as a result the conclusions from the respondents were checked and cross-checked.

'Weighting the evidence' is a tactic used to assess the quality of data analysis (Robson, 2002, p.232). Moreover, as Robson (2002) argues, some data is stronger than others. For example, greater emphasis was given to the data emerging from direct contact with the participants (i.e. naturalistic observations and semi-structured interviews), than the data emerging from indirect contact (i.e. documentation). Further, a check on the data from participants was carried out immediately after the data collection sessions. Data checking also took place once more during the coding phase of the data analysis process. The initial coding was shared with the participants and their suggestions and feedback was taken into consideration. Additionally, in order to avoid any premature conclusions, I studied the data critically for negative evidences. At this point help from my supervisors and primary teachers was sought, as Miles and Huberman (1994) suggest. I made the conclusions available to them along with free access to my database with a request that they make me aware of any evidences that disconfirm the conclusions. In such cases alternative explanations were investigated.

In the following section, I will explain my methods of organising and analysing the data collected through different instruments: semi-structured interviews, classroom and museum visit observations (field notes, video-recordings, still images), teachers' reflections and researcher's reflective journals.

4.7. <u>Instruments of data collection and analytic approach for each one</u>

For each of the main tools, the following analytical approach was adopted:

a. <u>Semi-structured interviews</u>: Thirty seven interviews were carried out in total. Each of the eight case teachers was given a particular code during the coding analysis data process, the teachers' pseudonyms as well as the number of interview and the data that the interview took place. For example (In, Case 1, 8/10/2012).

b. <u>Observations</u>: Fifty classroom observation lessons and eight museum visit observation lessons were carried out for all the eight cases. Each of the eight cases were given a particular code during coding analysis and data process, the teachers' pseudonyms and the number of the classroom/museum observations. For example (Ob, Case1, L1-E1) or (Ob, Case1, MV-E6). It is important to note that this category also includes still images, naturalistic field notes and video-recordings, as was mentioned in Chapter 3.

c. <u>Teachers' Reflective Journal</u>: The eight case teachers wrote fifty eight Reflective journals in total. Each of the eight case teachers was given a particular code during the coding analysis data process, the teachers' pseudonyms and the date that the journal was written. For example (TRJ, Case 1, 9/10/2012).

d. <u>Researcher Reflective Journal</u>: As a researcher I wrote sixty six Reflective journals in total. I gave a particular code during the coding analysis data process, the teachers' pseudonyms and the date that I wrote the reflective journal. For example (RRJ, Case 1, 9/10/2012).

4.7.1. <u>The teachers' interviews data analysis</u>

Sixteen main semi-structured interviews were conducted with teachers throughout the main study stages in order to collect the teachers' experiences of nurturing students' PT by using alternative resources of learning associated with museums (see Table 12. The average interview lasted about twenty minutes and was carried out in the schools where each of the case teachers work. The main interviews were conducted at the beginning and at the end of the project. However, several other interviews were implemented after the classroom observation in order to understand and confirm the data which were collected from classroom/museum observations (see Table 13). Thus, some cases had more interviews that the others because further interviews were held to provide further evidence for the perspectives expressed. Also, another important factor for implementing more interviews in some of the cases was the available time that the teacher had for an interview.

Case	Number of main interviews	Number of supplementary interviews
1	2	3
2	2	2
3	2	5
4	2	1
5	2	1
6	2	3
7	2	3
8	2	3
Total	16	21

Table 12: Numbers of interviews

During the main study teachers' interviews were audio recorded and after each interview I transcribed the recording and checked the whole transcription in detail with the interviewee. This had the result of paying attention to every detail in order to cross-check the data. During the period of the interviews the first phase of the data analysis began. The 'open coding' started to be emerging and the formation of concepts started to be shaped from the data. However, a huge amount of data through this stage was created across the eight cases and dealing with this was one of the challenges which I come across in this study.

After all eight cases recordings had been transcribed, each case's teacher interviews were coded in a way that derived from the data themselves, for example (In, Case 1, 8/10/2012), from the 'enjoyment' code a more detailed code list was generated:

- Enthusiasm in participation
- Happiness
- Excitement
- Enjoying their participation
- Active engagement.

The second stage involved comparing grouped data, building the ideas into thematic categories, clarifying relationships between categories and then reexamining and selecting the main coding through all the eight cases. For example 'enjoying their participation' was an open coding which continued to emerge from the different cases from both teachers' interviews, observations, and teachers' and researcher's reflections. This led to a focus on relationships between categories and then a re-examination of the ideas into the 'enjoyment' theme as axial coding. During this stage, I became conscious of new codes that might be relevant to my aims.

4.7.2. The classroom/museum observation data analysis

The rationale for the classroom/museum observation was to see how teaching strategies and pedagogies were enacted in the actual situations. These

observations were necessary for me as the researcher to produce comprehensive, descriptive and recorded accounts of actual practice and interaction and to highlight the pedagogies which the teachers use for nurturing students' PT. The observation open-ended field notes were used for gathering the data.

During the three month period of the case study, fifty classroom observations and eight museum observations were carried out over all my cases. The classroom observations were implemented throughout the whole lesson which was approximately forty-five minutes. The observation instrument was applied as this the more appropriate technique for the theoretical framework of this study.

Table 13 summarises the number of classroom and museum observations. As mentioned earlier, the reason for observing different numbers of lessons in different case classes was because of the way that the teacher organised his/her time to teach the project and because of the richness of case information.

Case	Number of classroom observations	Number of museum visit observations
1	6	1
2	8	1
3	7	1
4	5	1
5	6	1
6	5	1
7	7	1
8	6	1
Total	50	8

Table 13: Numbers of classroom and museum visit observations

Field notes and Video-recordings

The initial data procedures, such as coding and identifying early thematic topics, took place after each classroom observation, when I checked in detail what was written in the 'observation draft schedule' and my notes. As a result, the open coding began to take shape and the concepts started to be formed. In a later stage the axial coding took place by shaping the main themes of this study. Also, sometimes I returned to the video recording - every lesson was recorded - in order to cross-check what I had written.

After all eight cases classroom and museum visit observations were completed every case's classroom observation was coded, the coding being derived from the data themselves. For example, (Ob, Case 1, L1-E1). Following this, the main ideas were identified from the data code and then the main ideas generated a new list of codes. For example 'short learning activities' coding generated new code lists:

- Limited time for role-playing
- Limited time for written narrative
- Limited time for group discussion
- Quick switching of activities.

Then, the thematic topics were classified by grouping content during the classroom/museum observations. Later, the similar wider content was used to create the main categories. As with the interview data analysis, the second stage of the classroom/museum observation data analysis process consisted of comparing the main ideas identified, building the ideas into thematic categories, illuminating the relationships between categories, then reviewing the main coding selected during all eight cases, with the assumption that the new codes would emerge throughout this operation.

For example 'Limited time for role-playing' was an open coding which continued to emerged from the different cases from observations and also from the other data collection tools like the semi-structured interviews, and teachers' and researcher's reflections. This led to a focus on relationships between categories and then a re-examination of the ideas into a 'contained

time group work' theme as axial coding and then into a 'Contained time' theme as a selective coding. These processes of data analysis contributed to a more meaningful understanding of teaching practices in classrooms throughout all the case studies.

Photographs and still images

The photographs and still images in this study were used as an additional angle of presenting, triangulating and strengthening the analysed data. The analysis of the photographs often involves identification of themes which construct experience. One framework recommends asking questions about the production of the image, the image itself and the relationship between the image and its audiences (Rose, 2001, as cited in Guillemin, 2004). Bagnoli (2009) uses a narrative analysis, looking for the story told with multi-media coding, linking data collected through different mediums.

Examining the process through which an image was created is often viewed as a vital part of the analysis (e.g. Radley & Taylor, 2003). Attention is paid to what is made visible and what remains hidden. This is relevant to understanding the construction of a particular reality (Frith et al., 2005). Other important considerations include: acknowledgement of the researcher's part in the production process; identification of contradictions within the data; and analysis of images within the context of data collected through other means (Bagnoli, 2009).

4.7.3. Analysis of teachers' reflections

Dornbrack (2008) shows in her study of professional development that when teachers were given journals to write, they simply gave summaries of the academic readings they were given without adding any personal comments. This was the case during my pilot study. The teacher simply praised herself on how well she had taught the lesson, without really getting to the bottom of why the lesson worked or not or focusing on teaching pedagogies for nurturing PT.

Therefore during the main study I tried to encourage every teacher I worked with to reflect in the journal. The teachers and I discussed how to reflect on their teaching, like the process of their understanding about how to do things, what problems they encounter and how they could solve them. We also discussed how journal writing gives us space and opportunities to build on the knowledge we share while trying to improve our reading and writing strategies for the classroom. Moreover, because there is not enough time during school hours to write or record their reflections, at short break (ten minutes) or long break (twenty minutes) the teachers agreed with me that we should use reflective journals as a tool for keeping in communication and exchanging ideas outside of school time.

During the four month period of the case study, the teachers wrote or audio-recorded fifty-eight reflective journal entries in total (see Table 14). The structure and the form of the reflective journals were left open and the guidelines were broadly to:

- Reflect on the opportunities that they had in nurturing children's PT as far as the pedagogy is concerned in each lesson
- Reflect on what activities worked in terms of nurturing children's PT and why. Also, present examples of children's PT
- Reflect on what activities did not work in terms of nurturing children's PT and why
- Reflect on the opportunities that the museum visit offered on nurturing children's PT.

Each teacher was writing or audio-recording his/her reflections after each lesson. However, each of my cases had a different number of reflective journal entries because of the different numbers of lessons that each teacher had organised to complete this project. Also, another factor for instigating more reflective journalentries in some of the cases was the available time that the teacher had for reflection. It is important to note that each reflective journal entries were coming into my hands the next day, in order to read it. This meant I was able to pay attention to every detail in order to cross-check the data with the teacher by asking him/her further clarifications for a point that was not clearly written or explained.

Case	Number of teachers' reflections for classroom lessons	Number of teachers' reflections for the museum visit
1	5	1
2	7	1
3	6	1
4	4	1
5	5	1
6	4	1
7	6	1
8	5	1
Total	50	8

Table 14: Numbers of teacher's reflective journals for classroom lessons and museum visit

Each journal was read for a first time to identify its general meaning; after that, it was read again in order to identify, and the reflections upon specific teaching strategies in every lesson. The 'open coding' started to emerge and the formation of concepts started to be shaped from the data. However, a huge amount of data through this stage was created across the eight cases and dealing with this was one of the challenges which I came across in this study. After this second reading, each reflective journal was read a further two times in order to identify levels that may have been omitted in the previous analysis.

Each case's teachers reflections were coded in a way that derived from the data themselves, such as (TRJ, Case 1, 9/10/2012). For example, from the 'contained time on discussion' code a more detailed code list was generated:

- Creating hypothesis in contained time
- Limited time for first responding
- Limited time for responding to one another's ideas.

The second stage involved comparing grouped data, building them into thematic categories, illuminating the relationships between categories, then

reviewing the main coding selected during all eight cases, with the assumption that the new codes would emerge throughout this operation. For example 'Limited time for first responding' was an open coding which continued to emerge from the different cases from teachers' reflections. This led to a focus on relationships between categories and then a re-examination of the ideas into the 'Contained time on discussions' theme as axial coding and into the 'Contained time' theme as selective coding. These processes of data analysis contributed to a more meaningful understanding of teaching practices in classrooms throughout all the cases.

4.7.4. <u>Analysis of the researcher's reflective journals</u>

Forms of reflective writing such as diaries and journals are widely acknowledged as important tools in promoting both the development and the understanding when conducting a research because they enable researchers to reflect more effectively on their work and hence to experience the process benefits. The benefits related to the process of journal writing are those which derive, interactively, from the actual activity of making journal entries. As a researcher, it was really important for me to have a place of recording what I was doing and the thoughts that I was having for the teaching practices that I had observed during every day's lessons. This was to make sure that I was not going to lose any valuable thinking I may have had. The journal was not just a place where I recorded events or documented existing thoughts, but more importantly, as Maxwell (1996) suggests, a forum for reflection where ideas were generated and explored and discoveries made in and through writing.

During the three-month period of the case study, I wrote sixty six reflective journal entries in total for both classroom lessons and museum visits (see Table 15). The structure and the form of the reflective journals were left very open. However, I wrote my reflective journals after each lesson, teacher's interview and through the research process from time to time in order to capture small fragments of experience including records of and reflections on

the practices, personal thoughts, interactions or conversations with the teachers and the pupils, drawings with my thoughts, and diagrams showing my observations of student and teacher interactions.

Case	Number of researcher's reflective journals for classroom lessons	Number of researcher's reflective journals for the museum visit
1	7	1
2	9	1
3	8	1
4	6	1
5	7	1
6	6	1
7	8	1
8	7	1
Total	58	8

Table 15: Numbers of researcher's reflective journals for classroom lessons and museum visit

Each reflective journal entry was read in order to identify, and the reflections upon specific teaching strategies in every lesson. The 'open coding' started to emerge and the formation of concepts started to be shaped from the data. It was at this stage that the very large amount of data that came of the eight cases began to become apparent. After this second reading, each reflective journal entry was read a further two times in order to identify levels that may have been missed in the previous analysis.

Each of the researcher's reflections were coded in a way that derived from the data themselves, such as (RRJ, Case 1, 9/10/2012). For example, from the 'emotional facilities' code a more detailed code list was generated:

- Teacher's caring relationship
- Eye contact
- Giving feedback

- Clear instructions.

The second stage involved comparing grouped data, building it into thematic categories, illuminating the relationships between categories, then reviewing the main coding selected during all eight cases, with the assumption that the new codes would emerge throughout this operation. For example 'teacher's caring relationship' was an open coding which continued to emerge from the different cases from the researcher's reflective journals. This led to a focus on relationships between the cases and then a re-examination of the ideas into an 'emotional facilities' theme as axial coding and into a 'stimulus space' theme as selective coding. These processes of data analysis contributed to a more meaningful understanding of teaching practices in classrooms throughout all the cases.

4.8. <u>Chapter summary</u>

This chapter presented an overview of the analytic approach for the present study. The findings emerged from the data analysis by using grounded theory analysis techniques on the data collected by the several instruments. The process of analysing the data of the study that were obtained from each instrument was explained. Different levels of analysis were involved in order to relate to the research questions. Therefore, these were not really analytically-derived themes as such but instead inductively frame the analytic findings. In the following chapter, the analysed data will be presented and discussed in relation to the research questions of this study.

Chapter 5: The nurtured PT features

5.1. Introduction

This chapter focuses on students' PT features that were nurtured when the teachers used alternative resources of learning associated with museum visits combined with their classroom teaching. As will be seen, this study revealed all the PT features already identified in earlier studies, except from one and proposes one new PT feature. However, one of the PT features from earlier studies is absent. These features were documented through the interviews with the teachers, classroom and museum visit observations, teachers' and researchers reflective journals and from the still images. In this section the themes are exemplified through quotes, still images and vignettes from the case studies which demonstrate the nurtured features of PT during the classroom lessons and the museum visits.

5.2. The overarching thematic findings for Research Question One: 'What features of children's PT features are nurtured?'

The analysis involved mainly inductive processes, drawing on categories derived from the existing PT theoretical framework using the following definitions:

a) being imaginative: 'as if' thinking

b) innovation: original/unique outcome/behaviour

c) play/playing: being in an 'as if' space, improvising

d) question-posing: investigative behaviour, verbal and non-verbal

e) question-responding: behaviour responding to investigations by self and others, both verbal and non-verbal

f) intentional action: activity/behaviour having a clear goal

g) immersion: concentration, absorption, orientation

h) risk-taking: danger, failure, fear, 'going to the edge'

i) self-determination: self-directed actions, self-chosen

j) narrative: historical/fantasy/everyday narrative with focus on character/s, plot, sequence of events, significance to children and emotional/aesthetic investment.

(Craft, Cremin, Burnard, Dragovic & Chappell, 2012, p. 9-10;

Cremin, Chappell & Craft, 2013)

Across all eight cases most aspects of PT were reinforced as follows. The features varied in depth and range. In addition to the deductive analysis, through the inductive analysis I remained open to the identification of new features of the concept of PT. Thus, data analysis revealed key features in relation to the research question 'What children's PT features can be nurtured?'. More specifically, a new feature is suggested, 'self-confidence', and the other PT features indentified were: being imaginative, play, innovation, question posing and question responding, intentionality, immersion and self-determination. Additionally, the data of this study revealed that narrative played a foundational role in students' PT. However, risk-taking could not be seen in the data. These thematic topics can be summarised as follows:

- Narrative
- Existing Features: Being imaginative, Innovation, Play, Question Posing and Question Responding, Intentionality, Immersion, self-determination
- Absent Feature: Risk-taking
- The new feature this study suggests: Self Confidence

The feature of 'narrative' will be discussed first during the following sections even though it was one of the latter findings revealed from the literature. This happens because the data of this study agreed with Cremin, Chappell and Craft (2013) that narrative plays a foundational role in PT.

The following table (Table 16) shows the overall analysis process of the students' PT features identified in the eight cases with the overall plan of the

instruments used for the data analysis process. Explaining and interpreting these thematic topics holistically, with illustrations relating to Research Question One will be undertaken in the following pages.

5.2.1. <u>Narrative</u>

Possibility Thinking has been investigated both conceptually and empirically in early year's settings and in primary classrooms. Thus, several PT features were identified like question-posing, question-responding, self-determination, intentionality, being imaginative, play, immersion, innovation and risk taking. However, the latest study of Cremin et al. (2013, p.135), revealed that 'narrative' plays a 'fundamental role in PT, and that reciprocal relationships exist between questioning, imagination and narrative, layered between children and adults'. Synthesising the findings of this study revealed that narrative had a really important role in PT as Cremin et al. (2013) suggested through all the cases of this study.

The analytic process identified the key features of narrative which are character/s, plot, sequence of events, significance to children and emotional/aesthetic investment. Additionally, most of the episodes were characterised as fantasy and historical narratives concerning their nature. However, as far as who began the narratives is concerned, most of the times in this study they were teacher initiated and this happened because of the control that the teacher had on framing the learning process. Also, analysis highlighted that narrative was constructed individually, collaboratively or communally across all the episodes.

Data Analysis Process for Research Question 1							
Stage one: Open Coding						**Stage two: Axial Coding**	**Stage three: Selective Coding**
The main ideas of thematic topics of the data analysis	**Instruments of data collection**					**Grouping of ideas into similar content**	**Combined the main categories which drawing together the overarching categories**
	Int	Ob	TR	RR	Ph		
Characters	√	√	√	√	√	Historical and Fantasy Narrative	Narrative
Plot	√	√	√	√			
Sequence	√	√	√	√			
Significance to students	√	√	√	√			
Emotional/Aesthetic investment		√	√	√			
As if thinking	√	√	√		√	Being imaginative	Possibility Thinking Features
What if thinking	√	√	√		√		
Beyond what is possible in reality	√	√	√		√		
Fictional	√	√	√		√		
Not expected answer for others	√	√	√	√		Innovative ideas	
Not expected answer for teacher	√	√	√	√			
Thinking beyond the expected	√	√	√	√			
Acting beyond the expected	√	√	√	√	√		
Explore ideas	√	√	√	√	√	Play with concepts	
Explore concepts	√	√	√	√	√		
Play with combinations	√	√	√	√	√		
Leading Question		√		√		Children's Question Posing	
Service Question		√		√			
Follow through Question		√		√			
Predicting	√	√	√	√		Children's Question	

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Item	Int	Ob	TR	RR	Ph	Category	Group
Completing	√	√	√	√		Responding	
Rejecting	√	√	√	√			
Rejecting and completing	√	√	√	√		Children's Question Responding	
Accepting and adding	√	√	√	√			
Clear goal	√	√	√	√		Intentionality	
Thriving into the activity	√	√	√	√			Possibility Thinking Features
Interaction with the task	√	√	√	√			
Intellectual engagement		√	√	√	√	Immersion	
Emotional engagement		√	√	√	√		
Behavioral engagement		√	√	√	√		
Physical engagement		√	√	√	√		
Independent in decision making		√	√	√		Self-determination	
Self-chosen actions		√	√	√			
Engaged with confidence		√	√	√			
Focus		√	√	√			
Active participation in role play	√	√	√	√	√	Self-confidence	New feature
Participation in role discussion	√	√	√	√			
Believe in their selves	√	√	√	√			
Express ideas with confidence	√	√	√	√			
All students are involved	√	√	√	√	√		

Table 16: Data Analysis Process of RQ 1

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Int: Teacher's Interview   **Ob**: Observations (classroom and museum visit)   **TR**: Teacher's Reflective Journal   **RR**: Researcher's Reflective Journal   **Ph**: Photographs and still images

The findings of this study revealed that children were responding to the teachers' questions/tasks by placing themselves into an 'as if' context (verbal or non-verbal) and by testing, predicting, undoing, accepting, rejecting, evaluating, compensating, and completing. It was strongly evidenced through all the episodes that the narrative was teacher-initiated and with the nature of the narrative to be historical and fantasy (Ob, Case 1: L1-E1, L2-E2, L4-E4, MV-E6,10; Ob, Case 2: L1-E1, L6-E7, MV-E6; Ob, Case 3: L1-E1, MV-E4, Ob, Case4: MV-E1,4 , L1-E7; Ob, Case5: L1-E1, MV-E8 , L5-E11; Ob, Case6: MV-E1, L2-E7; Ob, Case7: MV-E3, L1-E5, L2-E7; Ob, Case8: MV-E3, L1-E6).   Additionally, students' narrative was evidenced through their participation into a role-playing activity through which they put themselves into specific characters, into plots with sequence and significance (Ob, Case 2: L4-E3, L6-E7, MV-E10,11; Ob, Case 3: L2-E3, MV-E5, L6-E10, L7-E11; Ob, Case4: MV-E,5,6; Ob, Case5: MV-E9,10; Ob, Case6: MV-E4, L2-E8; Ob, Case7: MV-E4, L1-E6, L2-E7; Ob, Case8: MV-E4,5, L2-E7,8 L4-5-E9).

The data of this study revealed the foundational role of narrative for nurturing students' PT. However, this was an expected finding as it was something identified from earlier studies as well as the nature of the project that the children participated has strong narrative nature. Additionally, it was identified that all the PT features were interwoven with narrative, developing further what Cremin et al. (2013) highlighted in their study. More specifically, the data of this study agreed with the reciprocal relationships between question posing, question responding, imagination and narrative that Cremin et al (2013) identified in their study. However, it was evident also that narrative was seen to be working in complex combination with all the PT features.   The following episodes will discuss and present in detail the findings concerning the relationship of narrative and PT.

For example, in Case 1 (Ob, Case 1, L2-E2), during the episode of the Myths and Legends, the teacher had posed a problem-solving question to the students on how the myths were created. The students used this possibility space, imaginatively responding to the questions, introducing new elements and shaping the narrative; they engaged individually and collaboratively to construct it. They created stories and plots by placing themselves into

different positions and times in order to give answers and explain this problem. This question involved the students developing invented stories going beyond what is possible in reality, like *'we saw a mermaid like the mermaid Thessaloniki and we manage to be saved from her.'* (Ob, Case1, L2-E2). The characters of their stories were magically non-human and were also most of the time participating in these plots with inexplicable weird events occurring, like '*maybe they thought that something big which was under the sea was creating these big waves'*. Also, students expressed innovative and unexpected ideas, possibilities and hypotheses according to their teacher (TRJ, Case1, L2-E2), like *'Maybe the waves made the ship to go up and down and have the same movement like the movement of a fish' [the girl does the movement of a fish by moving her hand]* (Ob, Case1, L2-E2). The students were developing invented stories/scenarios/plots going beyond what is possible in reality by creating characters for their stories which were magically non-human most of the time and with the nature of narrative to be historical or fantasy.

Cases 2, 3 and 5 offered examples of students' narrative through role-playing activities. The children used this possibility space imaginatively, by engaging individually and collaboratively to construct it. This kind of narrative shaping was under the teacher's initiated attempt up to a point, after which students continued to drive their narrative themselves. Thus, they engaged individually and collaboratively to construct it. More specifically, in Case 2 historical and fantasy narratives appeared fully to be an important component for the students' innovative writing by being imaginative and playful when they had to continue the story of what Botticelli was presenting into his painting 'The birth of Venus'. In the episode where Venus arrives at Olympus (Case 2, L1, E1), the narrative required the groups to invent and create stories by combining previous knowledge, innovative imagination and playful spirit. They created plots, and gave human characteristics to the characters of their stories. For example, it was a possibility in this narrative for Venus to arrive at Olympus, be flirted with by the other gods and also to make Hera really angry. Hera was presented to start shouting and breaking things in Olympus when she learned that Venus was one of Zeus's children (Ob, Case 2, L1-E1).

In one of the episodes that reciprocal relationships between all the PT features and narrative were strongly evidenced was in Case 3 (Ob, Case3, L2-E2). More specifically, during this episode the students had to present a scene based on the myth of Arion and the dolphins in order to answer the teacher's question 'What would happen if we take the story a step further?' The students of one of the groups used this possibility space given from their teacher and responded through their scene imaginatively and shaped the narrative. It was observed that they engaged individually and collaboratively to construct it. Here, PT questioning, responding and imagination shaped the narrative during their group work and improvisation. In their scene the king (Arion asked for the king's help for protecting him) was talking and shouting to imaginary soldiers asking for them to punish the sailors (Ob, Case3, L2-E2).

Findings emerging from Case 5 (Ob, Case 5, L1-E1) also indicate this kind of narrative shaping. During this lesson the teacher invited students to be transformed into kings and it was observed that they feel, think and act in context very successfully. The Case 5 teacher attempted to put the students into roles from the beginning until the end of the lesson. This had the result that the students were able to feel, think and act in context very successfully. More specifically, during the first lesson (Ob, Case 5, L1-E1) the students were 'transformed' into kings of the twelve kingdoms that were in Cyprus in the ancient years (the children chose by themselves which kingdom they wanted after they saw the map with the kingdoms). During the lesson the students learnt all the information concerning their kingdoms and each also created a plan on how he/she was going to plan the trade for their kingdom. At the end of the lesson during the last activity they had to participate in a kings' conference. However, during this role-playing activity an argument started between the kings. This was not planned to happen, according to the students. The following quotes shows what happened during this conference:

> *[…]*
>
> *King of Tamassos: I intend to cooperate with the King of Kition if the kings want. I was thinking to export my copper to some of the Greek islands like Crete and Milos [the king showed to the other kings the two*

islands on the map]. What do you think, King of Kition? Are you interested? I will give you 20% of the profits.

King of Idalion: [the king of Kition was going to talk but the King of Idalion interrupted him] Ah… just a minute. This was my plan also. I will do it. Not you. My kingdom is full of copper. What I am going to do with it? Forget it. [said angrily]

King of Tamassos: What are you talking about? I said it first. This was my idea.

King of Idalion: Yeah, right. I will give you 25% of the profits, King of Kition.

King of Kition: Well… [King of Tamasos interrupted King of Kition]

King of Tamasos: I will give you 30%.

King of Idalion: I will give you 35%.

King of Kition: My friends, we will find a solution. […]

(Ob, Case 5, L5-E5)

This example showed students' narrative which was driven by a teacher up to a point and then students drove their narrative forward by having this unexpected argument. The children used the possibility space offered by the teacher, responding to the task imaginatively, in an innovative, playful, and intentional way, and shaping the narrative. It was observed that they engaged individually and then collaboratively to construct it. This episode identifies also the core features: characters, plot, sequence of events, significance to the children and emotional investment.

The analytic process resulted in the identification of the key features of PT though the episodes; the narrative played a foundational role for the evidenced PT features of being imaginative, innovative, playful, question posing and question responding. More specifically, the data revealed many examples of narrative as a core feature and his relationships with the other PT features of being imaginative, innovative and playful (Ob, Case 1 L1-E1, L2-E2, L3-E3, L4-E4, MV-E6,7,8,9; Ob, Case 2 L4-E3, MV-E6,7,8,9, L8-E12; Ob, Case 3 MV-E4,5,6; Ob, Case 4 MV-E1,2,3; Ob, Case 5 L1-E1, L2-E2, MV-E6,7,8; Ob, Case 6 MV-E1,2,3,4, L1-E6; Ob, Case 7 MV-E1,2,3, L1-E5, L2-

E7; Ob, Case 8 MV-E1,2,3, L2-E7,8). Finally, this study also revealed many examples of narratives important role in shaping students , question responding and question posing in less extend (Ob, Case 1 L1-E1, L2-E2, L3-E3, L4-E4, MV-E6,7,8,9; Ob, Case 2 L4-E3, MV-E6,7,8,9, L8-E12; Ob, Case 3 MV-E4,5,6; Ob, Case 4 MV-E1,2,3; Ob, Case 5 L1-E1, L2-E2, MV-E6,7,8; Ob, Case 6 MV-E1,2,3,4, L1-E6; Ob, Case 7 MV-E1,2,3, L1-E5, L2-E7; Ob, Case 8 MV-E1,2,3, L2-E7,8). The students used the possibility spaces given from their teachers by responding imaginatively to their questions, introducing new elements and shaping the narrative. Nevertheless, it is important to note that according to observations, through all the cases the students were engaged individually, collaboratively and communally to construct the narrative.

Narrative identified to be a core feature in nurturing students' PT in this study. The teacher participants of this study attempt to put the students into narrative contexts which involved them in fictional worlds. It was observed that the narratives were teacher-initiated and they were individually, collaboratively and communally constructed. Additionally, the data identified the features of fantasy and historical narratives: characters, plot, sequence of events, and significance to the children. Finally, the data analysis revealed that the narratives had strong relationships with all the PT features. The following sections will present in detail the data findings on the PT features already identified from earlier studies.

5.2.2. <u>Existing Features: Being imaginative, Innovation and Play</u>

The study, focusing on PT features, reinforced three of the features already documented in the earlier work of Burnard et al. (2006). Burnard et al. (2006, p.5) identified eight features of PT among which were the features of being imaginative, innovation and play. The analytic process resulted in a great number of episodes where the PT features of being imaginative, innovation and play were strongly evidenced (Ob, Case 1 L1-E1, L2-E2, L3-E3, L4-E4, MV-E6,7,8,9; Ob, Case 2 L4-E3, MV-E6,7,8,9, L8-E12; Ob, Case 3 MV-

E4,5,6; Ob, Case 4 MV-E1,2,3; Ob, Case 5 L1-E1, L2-E2, MV-E6,7,8; Ob, Case 6 MV-E1,2,3,4, L1-E6; Ob, Case 7 MV-E1,2,3, L1-E5, L2-E7; Ob, Case 8 MV-E1,2,3, L2-E7,8). However, it is important to note that that these three features are presented under the same section because of the strong relationship that they had with each other as well as because of the common episodes that were identified.

For example in Case 1 (Ob, Case 1, L2-E2) during the Myths and Legends episode, the teacher posed a problem-solving question to the students: 'Can you make a hypothesis for why the ancient Greeks created myths and legends?' The students created stories and plots by being imaginative and playful with ideas and concepts in order to give answers and explain this problem. This question involved the students developing invented innovative stories going beyond what is possible in reality (like *'we saw a mermaid like the mermaid Thessaloniki and we manage to be saved from her.'*). The characters of their stories were magically non-human and they were also much of the time participating in these stories with inexplicable weird events that occurred, like '*maybe they thought that something big which is under the sea is creating these big waves. Only a big fish could create these enormous waves by shaking his tail',* or *'Maybe the waves made the ship to go up and down and have the same movement like the movement of a fish.' [the girl does the movement of a fish by moving her hand].* The students, through this learning activity, were being imaginative and playful by being in an 'as if' space. Children were highly motivated by their interests and were highly engaged in the task, by thinking concepts, engaging closely with one another, imagining and solving diverse problems. By being imaginative and playful they lead to innovative concepts and solutions for the problem posed by their teacher. The teacher reflected that (TRJ, Case 1, L2-E2) the students expressed innovative and unexpected ideas, possibilities and hypothesis on these issues by being in roles. This had as a result to create unique stories based on their fantasy.

Interesting episodes were also evident during the museum visits. One of the strongest episodes was observed during the visit of the Case 7 teacher. More specifically, during the last activity (participation in an ancient symposium) a

group of girls hold Aspasia[8] in their hands while they are talking to each other. They also include Aspasia in their conversation (Picture 1). One of the girls took Aspasia and started moving the puppet's head giving the sense that Aspasia was participating in the conversation (Picture 2). After a couple of seconds while the girl had two roles (herself and Aspasia) she decided to talk and participate in the conversation as Aspasia.

Aspasia: How are you girls? Are you having fun?

C.A: Yes Aspasia, we are fine. We are having a great time.

C1: Yes, thank you Aspasia for organising this symposium for us. You and your brother are so kind.

Aspasia: You are our friends. Zenon and I are so happy to havee you here. Do you need more wine, shall I call the servant?

C2: No thank you, we are fine.

Aspasia: Any food?

C2: No, no thank you.

Aspasia: Are you sure? I would like for you to feel at home.

C1: Yes Aspasia. Thank you very much for your hospitality. We will never forget you.

(Ob, Case 7, MV-E4)

Pictures (two pictures) with children in circle playing with puppet Aspacia

Picture 1   **Picture 2**

(Ob, Case 7, MV-E4)

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[8] Aspasia was a puppet - one of the main characters of the museum visit programme of Larnaca museum.

It was observed that this group of students was being imaginative and playful over their participation in the symposium allowing their ideas to develop by being in an 'as if' space. They were highly engaged in their playfulness engaging closely with one another and co-imagining during their scene. It was observed that the students were once again imaginative, innovative and open to be playful in narrative concepts.

Additionally, a strong episode was identified during the follow-up lesson of Case 4 when the teacher engaged the students in an imaginary scenario. According to the scenario, the students were sailors who were captured from pirates, and they should create a secret encryption code in order to communicate with their companions to agree on how to escape. One of the groups created a code that looks like a drawing (Picture 3). The drawing represents a story, in which the sailors had to wait until the moon takes the place of the sun and until the pirates fall asleep. Then all of them had to surround the pirates and to throw them into the sea. In the drawing they represented themselves with the shape of a vase because they transferred a lot of vases with their ship 'Kyrenia I'. The sailors were linked with chains because of the fact that the pirates locked them up by using chains. Also, they put their codes into a circle with a lot of other drawings, in order not to be identified that it was a secret code from the pirates.

The teacher reflected that (TRJ, Case4, 15/11/2012) *'They had a lot of possibilities on their hands because they emulate with concepts and language in order to tell their own stories by writing in symbols'.* She added that (TRJ, Case 4, 15/11/2012) this group considered a variety of factors in order to create their story and they managed to do it in a really creative and innovative way. However, before they drew their final idea they were playing with different shapes of representation and with different ideas and concepts. For example they made a lot of experimentations as to how they were going to represent themselves. They used different kinds of symbols like circles and triangles before they come up with their final symbol. It was observed that the students immersed themselves in an 'as if' context and acted in 'what if' environments and were engaged extensively in imagining and making playful

connections between ideas (RRJ, Case 4, 15/11/2012). Once again the students were highly engaged in their playfulness, imagining many scenes and solving different problems (RRJ, Case 4, 15/11/2012).

This symbol represents the night (they will attack at night)

This symbol says that the sailors will wait for the pirates to fall asleep and then to attack

This is the symbol of attack. In the Greek language 'ε' is the first letter of the word attack (Greek word of attack is 'επίθεση')

The snake represents the pirates.

This symbol represents the sea, waves.

This symbol represents that together the sailors will encompass the pirates, attack them and later throw them into sea.

These shapes are symbolising the sailors. Inside of each vase there is another symbol. Each vase has different symbols. These are the pseudonyms of the sailors.

Picture 3: Story using symbols (Ob, Case 4, L2-E8)

Overall, the analysis brought out commonalities across the cases in terms of these three PT features (being imaginative, innovative and play). What the current study reveals is that these three features were strongly evidenced and were observed in a great extent through all the analysed episodes. It was noted that the teacher was framing the creative work and then the children were following their own ideas and explorations by being imaginative, innovative and playful with ideas, thoughts and possibilities in 'as if' space.

5.2.3. Existing Features: Question Posing and Question Responding

Question posing and question responding were identified as PT features in the earlier study of Burnard et al. (2006). However, a later stage research focuses further on students' question posing and question responding unpacked further these two features. This research identified three dimensions to question posing: question framing, question degree and question modality. Question framing is concerned with the purpose within the questions, identified as leading, service and follow through questions, while questions degree related to the possibility inherent within the questions, possibility broad, moderate or narrow (Chappell et al., 2008). Question modality is concerned with the manifestation of modality inherent in children's questions (verbal and non-verbal forms). Several categories of question responding were identified: testing; predicting; accepting; rejecting; evaluating; compensating; completing; and repeating (Chappell et al., 2008).

In articulating the findings of this current study, students' question posing was identified to a medium degree, while student's question responding was strongly evidenced. This may have happened because of the control the teachers had during the learning procedure. Within each, children's questions could be classified on a spectrum from moderate to narrow relating to inherent possibility. The findings of this study revealed that children were responding to the questions by placing themselves into an 'as if context' and by testing, predicting, undoing, accepting, rejecting, evaluating, and completing (Ob, Case 1 L1-E1, L2-E2, L3-E3, L4-E4, MV-E6,7,8,9; Ob, Case 2 L4-E3, MV-E6,7,8,9, L8-E12; Ob, Case 3 MV-E4,5,6; Ob, Case 4 MV-E1,2,3; Ob, Case 5 L1-E1, L2-E2, MV-E6,7,8; Ob, Case 6 MV-E1,2,3,4, L1-E6; Ob, Case 7 MV-E1,2,3, L1-E5, L2-E7; Ob, Case 8 MV-E1,2,3, L2-E7,8).

One of the episodes in which students' question posing was evidenced was observed in Case 1, during the fourth lesson (Ob, Case 1, L4-E3). More specifically, one of the students posed a question after they had a discussion about the myth of the Argonauts and the Symplegades stones. During the classroom discussion about the Symplegades stones a girl raised her hand

and asked the teacher: *'Why did they not go around from the rocks in order to avoid them and they insisted to pass through them with the ship?'* In this episode, the first question is clearly framed by this student at the beginning of the episode. This was a leading question possibility moderate, which curtails the degree of possibility for consideration for her classmates. However, the students use this possibility space to respond imaginatively to this question by placing themselves into an 'as if'. It was observed that the students were asking further service questions possibility narrow for answering the leading question framed by their classmate. The following extract presents us an abstract from this episode.

> *C1: Well, I think that these stones were huge and covered all the sea. Thus, the sailors and the captain did not have any other choice than to pass through them. They wanted to return home as soon as possible and I am sure that this was the only way. If I was the captain and thought I was not going to risk my life, but this is my opinion and how I am thinking. […]*
>
> *C2: Maybe they were cursed by the Gods? (SQ, PN[9])*
>
> *C3: Yes, probably. Or maybe there are other rocks beside the Symplegades covering the entire sea area. […]*
>
> *C4: But what if we look at it from the point of view of the person who created the story? (SQ, PN) From the point of view of the writer?*
>
> *C5: Well, if I was the writer I would add this obstacle and many more other obstacles in their way in order to make my story more interesting and less boring because otherwise no one would listen to this story. I was not going to listen to it. I am a girl. I am not interested in listening to a story with a ship and a lot of sailors. So as a listener I am expecting something to happen. […]*
>
> (Ob, Case 1, L4-E3)

However, the data provides us with examples where the teacher's question posing drove students' further questions and question responding during their group work. More specifically, in Case 8 when the teacher asked from the students to change the flow of the ancient history, the students in their groups created stories through which they had active participation. The following

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[9] SQ: Service Question
PN: Possibility Narrow

quotes shows that the teacher's leading question had great importance for the group to start creating scenarios, exploring different possibilities and start asking further questions driven by their imagination and curiosity.

> *C1: Well if we travel back in time we have first to introduce ourselves to their king.*
>
> *C2: And to tell them what? (SQ, PN[10]) That we have a time machine and that we know what will happen in a couple of days and that we want to help them? They will not believe us. Come on. They will think that we are magicians.*
>
> *C3: And that we are witches. They are going to burn us. No way! I am not doing that. I am too young to die.*
>
> *C1: Yes maybe you are right. But how we can help them? (SQ, PM)*
>
> *C3: Well maybe when we come up with a plan, travel back in time and send them a letter. This letter will include our plan and some words. We will write that we are one of their allies and that we want to help them.*
>
> *C4: And if they did not pay attention to the letter? Then what? (FQ, PM)[11]*
>
> *C2: Then we will have no other choice than to go and talk to them. To tell them that we come from 2012 and we know what is going to happen to them.*
>
> *C1: Yes we will not have any other choice. Now let us think more carefully about our plan.*
>
> *The children created a defensive plan for the defence of the city. However, they also thought of how to pile the city with food and also to send letters to the allies of Cyprus in order to help the Cypriots.*
>
> (Ob, Case 8, L8-E.15)

In this episode, and in the most of the episodes observed in this study, the leading question was clearly framed by the teacher: '*How you are going to change the flow of ancient history? What are you going to do if you have a time machine and travel back in time?*' These are leading questions, possibility moderate which curtails the degree of possibility for

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[10] FQ: Following through questions
PN: Possibility narrow
[11] PM: Possibility moderate

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consideration. In dealing with that question the students engage in the question responding and some of the time ask further questions, either service or follow-through questions by attempting to add themselves into certain scenarios by accepting, rejecting or adding one another's ideas. These questions had moderate amounts of possibility space, imaginatively responding to their questions and introducing new elements.

An additional example of question posing and question responding was observed in Case 7, episode 3 during the museum visit in Larnaca museum. The children sat in front of a big vase. The museum educator asked the children to observe the drawings and to tell her what these drawings represented. It is important to note that the drawings are faded. Thus the children started to give their opinions by trying to understand the drawings and imagine the parts that were missing.

> *C1: I can see legs. Maybe the missing part represents the body of an octopus.*
>
> *C2: An octopus? How? (SQ, PN)*
>
> *C1: Look… These lines can be the legs of an octopus (C1 interrupted C2)*
>
> *C3: Yes I agree. It looks like to me that I can see his eyes. (C3 interrupted C1)*
>
> *C4: How? (SQ, PN) And what about this part? (SQ, PM) Here I can see a flamingo. Certainly it is a flamingo. Look. It holds a fish in its mouth. So how can a flamingo be linked with an octopus on the same vase? (FQ, PN)*
>
> *C5: Can these two be linked together? (FQ, PN)*
>
> *C6: A flamingo and an octopus? I do not know. Maybe the artist who painted the vase created an abstract art? (C7 interrupted C6)*
>
> *C7: No way. This is a science fiction scenario. (C6 interrupted C7)*
>
> *C6: Why? This was going to be an interesting and unique idea for that time period. If I was the artist I would decorate the vase like this, I would include different animals, fish and mammals. […]*

<div align="right">

(Ob, Case 7, MV-E3)

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There are several questions evidenced here, from the students in this episode. The questions were focused on understanding the shapes on the vase. Thus, the questions were service or following through questions with possibility moderate or narrow. In dealing with the question from the museum educator of what the vase drawings were representing the students engaged in the question responding activities of predicting and imagining what the missing parts of the picture might represent.

Overall, the analysis brought out commonalities across the cases in terms of students' question posing and responding. What the current study reveals is that students' question posing was not as strongly evidenced as the question responding in their creative learning. This may reflect the teachers' control over the nature of the task in each case; as this was the teachers' agenda, the children were undertaking their creative work on teachers' terms. Thus, the teacher was framing the creative work and the children were following the teacher without challenging the task or asking further questions.

5.2.4. <u>Existing Feature: Intentionality</u>

An additional feature that was strongly evidence in all the cases was students' intentionality to the task. Previous studies that had taken place describe intentionality as powerful intentional interaction/behaviour into a learning environment by having a clear goal (Craft, Cremin, Burnard, Dragovic & Chappell, 2012, p. 9-10). Synthesising the findings of this study, students' intentionality was evidence when they were thriving in complex, interdependent and diverse learning activities (Case 1: L1-E1, L2-E2, L4-E4, MV-E6,10,11,12, Case 2: L1-E1, L4-E3, L6-E7, MV-E6,10,11, Case 3: L1-E1, L2-E3, MV-E4, L6-E10, L7-E11, Case 4: MV-E1,4,5,6, L1-E7, L2-E8, Case 5: L1-E1, MV-E8,9,10, L5-E11, Case 6: MV-E1,4, L2-E7,8, Case 7: MV-E3,4, L1-E5,6, L2-E7, Case 8: MV-E3,4,5, L1-E6, L2-E7,8 L4-5-E9). It was apparent from the data that students' intentionality was evidenced both verbally and non-verbally (through expressions, gesture and body language). Thus, this

study defines intentionality as verbal or non-verbal interaction with a task and with each other by having a clear goal.

For example, the Case 2 teacher involved the students in a role-playing activity through which they had to transform into merchants. Each group was presenting their scene to their classmates by improvising because of the fact that the teacher did not give them much time for preparing their scene. However, a student from one of the groups had the role of a merchant from Palestine and when his turn came, he was talking with an accent similar to the accent the foreigners have when they try to talk the Greek language (Ob, Case 2, L6-E5). The student was thinking and acting in an 'as if' context ('as he was a merchant from Palestine) by having powerful intentional behaviour towards the task and with a clear goal in his mind. The teacher reflected that this was something unexpected and that this student created a character in his mind for his role with a specific profile which had several characteristics and behaviours (TRJ, Case 2, 01/11/2012).

Similarly, powerful intentional actions were evidenced throughout Case 4 in which the teacher engaged the students into several cross-curricular activities. More specifically, in one of the lessons the students had to cook and create a recipe from specific ingredients. The students during this activity had to create and cook a recipe inspired from the evidenced of the 'Kyrenia I' wreck. During this group work it was observed that all the members of the teams were acting like chefs by tasting their food though all the procedure of cooking and they were adding or rejecting ingredients in order to create the result they wanted (Ob, Case 4, L6-E5).

Furthermore, a strong example of students' intentionality can be seen in Case 3 (Ob, Case 3, L2-E3) and specifically in the episode of 'The Symplegades stones'. Student's intentionality in this episode was presented both verbally and non verbally. The students during this episode had to present the myth in a role-playing activity. As it is obvious this was an activity clearly framed by the teacher. Nevertheless, during this role playing it was observed that the students followed their own ideas within the boundaries of the framed activity. More specifically, the boys created a ship with their bodies and they decided

that the captain was going to be placed in the front of the ship in order to lead the ship (Picture 7). Also, they decided to create a sail by using a tablecloth that they found inside their classroom by tying it into a big wooden ruler that they also found inside the classroom (Picture 8). The findings indicated that the students were very much inspired by their roles and the captain of the ship was able to give instructions to his sailors in order to pass successfully through the Symplegades stones that were represented by the girls.

> Picture with the boys created a ship with their bodies and they decided that the captain was going to be placed in the front of the ship in order to lead the ship.

Picture 7 (Ob, Case 3, L2-E2)

> Picture with the students to hold a sail which they created by using a tablecloth that they found inside their classroom by tying it into a big wooden ruler that they also found inside the classroom

Picture 8 (Ob, Case 3, L2-E2)

Concluding, the findings of this study categorise intentionality as one of the important features of PT in this study as it was the driving force for the other PT features to nurture. The data provides evidence that the nature of the learning activity played a key role in students' intentionality action or behaviour in the classroom or in the museum environment. Thus, having quick, intentional activities that are rooted in the teacher's teaching process can support children's PT throughout the day. However, these kinds of

activities must be activities with no obvious answers, activities that help the students to be motivated and inspire their intentionality.

5.2.5. <u>Existing Feature: Immersion</u>

Earlier studies (Burnard et al., 2006, p. 5) identified immersion as when the children were deeply immersed in a loving environment in each classroom. Synthesising the findings of this study revealed that the students were deeply immersed into the learning procedure as the earlier studies of PT identified in the past. This study revealed that the students' immersion involved a blend of different characteristics like intellectual, emotional, behavioral and physical engagement. These characteristics come to unpack further the feature of immersion by introducing a clearer picture about the characteristics of this feature and how it is shaped. More specifically, the students were active participants by exploring and playing with different ideas, assumptions and possibilities collaboratively, communally or individually by accepting, adding or rejecting concepts during this procedure. Students through the feature of immersion are intrinsically motivated by curiosity, interest and enjoyment about the learning activity. Cases 2,3,5,6, and 7 offered strong examples of students' immersion into several learning activities either inside the classroom or during the museum visit (Case 2 L2-E2, L4-E4, L5-E6,7, MV-E10,11; Case 3 L1-E1, L2-E2,3, MV-E9,10 , L7-E11; Case 5 L1-E1, L2-E2, L3-E3, MV-E9,10; Case 6 MV-E5, L3-E4, L4-E5,6; Case 7 MV-E4, L2-E2, L4-E4, L5-E6,7).

Case 3 (Ob, Case 3, L1-E1) offers an example of students' immersion action in a task. More specifically, during the lesson the teacher invited the students to create the scene of the birth of Venus but without using words (only movements and face expressions).

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Two pictures with the girls representing the Hours dressing the goddess Venus.

Picture 4(Ob, Case 3, L1-E1)

Picture 5 (Ob, Case 3, L1-E1)

In the above two pictures (Picture 4, Picture 5) we can see the girls representing the Hours dressing the goddess Venus. The Hours were laughing and smiling while they were dressing the goddess Venus. The girls were into their roles, using facial expression very well and by having powerful intentional interaction with each other (RRJ, Case3, L1-E1, p.6). The girls representing the Hours took a white and red tablecloth in their hands from which they created a dress for the goddess Venus. It is interesting to say that in order to decide how they were going to create the dress, the Hours tried different ways of tying by rejecting and accepting some of these ways. The video sequence shows the girls both verbally and non-verbally accepting and rejecting one anothers' ideas of how they were going to create the dress of the goddess Venus. Also, some of the girls make Venus's hair while some others took jewellery from their necks and hands for the goddess. As the teacher pointed out in her reflections '*I did not think or imagine that the girls were going to be so much engaged in the task and with each other. They even use a tablecloth that we have in the classroom and create clothes for the goddess Venus*' (TRJ, Case3, 30/10/2012). According to the teacher this was an evidence of how concentrated and focused they were on the task and they managed to show that by not using any words (TRJ, Case3, 30/10/2012).

Picture 6 (Ob, Case 5, MV-10).

Additionally, another strong non-verbal example took place in the museum visit in Larnaca (Ob, Case 5, MV-10). More specifically, through a role-playing activity students had to participate in an ancient symposium. They wore their tunics and chose the object that they would like to hold. By choosing the object they automatically chose their character in this role-playing activity. Thus, they had to act as if they were the character and the person who held their object.

The Picture 6, shows a girl dancing. Her role was as one of the participants of the symposium. However, she decided to start dancing for a while in order to have fun as she was one of the guests of the symposium. It was affirmed by her physical engagement that she was acting as if she was one of the participants of the symposium. The videos and the transcriptions showed that she was clapping her fingers in order to have a rhythm from the music that she imagined that they were listening to. She was into her role. She was so concentrated to what she was doing. Suddenly, the student who was the musician of the symposium went next to her and it was as he was singing to her (RRJ, Case 5, 23/11/2012). The analysis of this episode also noted that the features of immersion and intentionality were driven at first individually (by the girl dancing) and later become collaborative with the boy who was predenting to be the musician of the symposium.

Furthermore, the museum visit offered two other episodes in which students' immersion was evidenced (Ob, Cas6, MV-E5; Ob, Case 7, MV-E10). During the visit of the class of Case 6, it was observed that when the children were trying to find out the place where the symposium was taking place a child asked a statue where the house of Zenon was (where the symposium was

taking place). Then, one of his classmates told him *'Why did you ask him? He does not have a head, he will never give you an answer. We can ask this one.'* (Ob, Case 6, MV-E5). Similarly, during the visit of the Case 7 class the students were transformed into fishermen and were trawling fishes from the display cases of the museum. It was observed that one of the students told his classmate that his sack of fish was too heavy for him; a girl started shouting that one of her classmates had stolen some of her fish – she took back her fish; and two other students were discussing with each other about what kind of fish they had caught (Ob, Case 7, MV-E6). These episodes, showed the students concentration to the teacher's task by responding to it cooperating with each other as well as having a clear goal but at the same time being in an as if thinking.

The analysis brought out commonalities across the cases in terms of this PT feature. As was mentioned previously, this study adds further characteristics to the feature of immersion unpacking further this feature. Thus, to boil down the descriptions above and get at the essence of student immersion for this study, whether through verbal actions or non-verbal actions, immersion means students are deeply immersed into the learning procedure through intellectual, emotional, behavioral and physical engagement. The above elements were strongly evidenced in all the cases.

5.2.6. <u>Existing Feature: Self-determination</u>

Taking into consideration previous studies, self-determination was evidenced when the students showed independence in making decisions, and self-directed/self-chosen actions which had valued contributions (Cremin et al., 2006). Teachers, in those cases, encouraged learning from experience as both empowering and generative, which enabled children to move with confidence into original and creative spaces (Cremin et al., 2006). The findings of this PhD study identified that the students' investigations were framed by the teacher rather than being driven by child-initiated exploration. The children had self directed and self chosen actions, independence in decision making and confidence to express their thoughts and ideas in the

context, boundaries and the task that the teacher had formed for them (Case 1 L1-E1, L2-E2, L3-E3, L4-E4, MV-E6,7,8,9; Case 2 L4-E3, MV-E6,7,8,9, L8-E12; Case 3 MV-E4,5,6; Case 4 MV-E1,2,3, Case 5 L1-E1, L2-E2, MV-E6,7,8; Case 6 MV-E1,2,3,4, L1-E6; Case 7 MV-E1,2,3, L1-E5, L2-E7; Case 8 MV-E1,2,3, L2-E7,8). Thus, the feature of self-determination identified with a slightly different way because of the constrained environment created from the teachers.

A detailed and strong example of self-determination can be seen in Case 3 (Ob, Case 3, L2-E3) and specifically in the episode of the 'Symplegades stones'. As it was mentioned earlier, the students during this episode had to present the myth in a role-playing activity, this was an activity clearly framed by the teacher. Nevertheless, during this role playing it was observed that the students followed their own ideas within the boundaries of the framed activity. More specifically, the boys created a ship with their bodies and they decided that the captain was going to be placed in the front of the ship in order to lead the ship (Picture 7). Also, they decided to create a sail by using a tablecloth that they found inside their classroom by tying it into a big wooden ruler that they also found inside the classroom (Picture 8). The findings indicated that the students were very much inspired by their roles that the captain of the ship was able to give instructions to his sailors in order to pass successfully through the Symplegades stones that were represented by the girls.

> The boys created a ship with their bodies and they decided that the captain was going to be placed in the front of the ship in order to lead the ship (Picture 7).

Picture 7 (Ob, Case 3, L2-E2)

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The students decided to create a sail by using a tablecloth that they found inside their classroom by tying it into a big wooden ruler that they also found inside the classroom (Picture 8)

Picture 8 (Ob, Case 3, L2-E2)

Additionally, strong episodes of self-determination were evidenced through the learning activities that the students participated in not only during the classroom lessons but also during the museum visits. During the museum visit in the Thalassa museum of Ayia Napa the museum educator involved the students in a role-playing activity by giving the title of their scene. Then the students had to build and present a scene by taking into consideration the title that the museum educator gave them. One of titles was 'In an ancient market near the port' and one of the groups presented the following scene.

One of the members of the group (a boy) was walking towards his classmates, stretching his hands towards to them trying to sell olive oil. After a couple of seconds he went to the back of the stage making us to understand that he continued to advertise the product but without speaking – he was moving his mouth and his hands only. Then a girl came in front of the stage and also started advertising her product (Ob, Case 2, MV-E 10).

> C1: I have the best wine. Only from me you can find the best tasting and sweetest wine in the entire island. *She was walking towards her classmates trying to sell them wine. Suddenly one member of her group told her that he wants to buy a bottle of wine.*
>
> C2: I would like to buy a bottle. How much is it? *She told him the price but he thought that it was too expensive. Thus they started negotiating about the price. Finally, they agreed and she gave him a bottle.*
>
> (Ob, Case 2, MV-E 10)

Then, she was walking towards her classmates trying again to sell them wine. Suddenly, the classroom teacher took part into the scene. She tasted the wine and by shaking her head showed that she liked the wine very much but she did not buy any wine. Then the girl went also to the back of the stage making us believe that she continued to sell wine but without speaking – she was moving her mouth and her hands - while the last member of the group was advertising her product (Ob, Case2, MV-E 10). The analysis of this episode revealed that the students were creative in their roles, nevertheless that all their improvisations, actions and behaviours were constrained within the boundaries of the activity that the museum educator formed for them by giving them the title of their scene. It was observed that even though the students had self-direction actions they managed to create a story by using their imagination and playfulness.

The feature of self determination was evidenced in Case 4 in a cross curricular activity (Ob, Case 4, L1-E7). During the Home Economics lesson[12], the students had to create and cook recipes by using specific ingredients and also one ingredient of their choice. The ingredients that they had were those that the sailors of 'Kyrenia I' had in the ship for cooking their daily meal like olives and figs, almonds, sinkers for fishing and oil containers. During their work they were accepting, adding and rejecting concepts, being imaginative, innovative and playful with the materials. All these features were again within the boundaries that the teacher had created for this activity. Thus, the students once again had self-chosen actions, independence in decision making and confidence to express their thoughts and ideas in a specific context. Three of the recipes according to the teacher were really interesting and inspiring. According to the teacher (TRJ, Case 4, 8/11/2012) *'Cooking praises children for experimenting and making something different. Students were acting as chefs'.* He also reflected that through this activity the children had the opportunity to create their own recipe by using specific ingredients that were given to them and this had as a result to be creative and unique (TRJ, Case4, 8/11/2012). He argued that the constrained activity that he

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[12] This is a lesson where the children start learning about healthy eating and also start to have firsthand experience of cooking. This lesson takes place in a big classroom that looks like a house kitchen. Also, it includes big round tables for group work activities.

formed for them gave them the chance to experiment further by following their own ideas (TRJ, Case 4, L1-E7).

Regarding all the data of this study, the general conclusion to be drawn is that the existing feature of self-determination identified to have a constrained character because of the teachers' control over the learning activities. However, the teacher may have the control over the activities but managed to encourage a blend of perspectives, to encourage exploration and inspire the students' narrative experimentations.

5.2.7. Absent Feature: Risk-taking

Risk-taking by students in these eight cases seemed to be absent or maybe it just could not be observed. In the case of these children age 9-10, the absence of risk-taking may reflect the teacher's control over the nature of the task in each case; as this was the teacher's agenda, the children were undertaking their PT on the teacher's terms. It may also be a possibility of acceptance within these classrooms where the teacher's framing of creative work was not challenged by the children. The absence of this feature can be linked also with the one refinement of PT features that this study suggests: the 'self-determination'. As was mentioned earlier this feature was refined for the purpose of this study because the findings revealed that the students had independence in decision making but in learning activities that the teacher has clearly framed and created for them.

5.2.8. The new feature this study suggests: Self-confidence

The present study sought to interrogate and build upon earlier studies, documenting and analysing characteristic features of PT. Cremin et al (2006) suggested seven features as core to PT. These were posing questions, play immersion, innovation, risk-taking, being imaginative, self-determination and intentionality (Cremin et al., 2006, p.116). Stage Two research further investigated children posing questions and this led to further refinement of the concept of PT. More specifically, question responding along with question posing was added to the PT features. Later study of Cremin et al. (2013,

p.135), revealed that 'narrative' plays a 'fundamental role' in PT and that reciprocal relationships exist between questioning, imagination, and narrative layered between children and adults. Taking into consideration the findings of this study, the data suggests a new feature of PT. The new feature that the data highlighted is 'self-confidence' (Ob, Case 1, L1, L2, L3; Ob, Case 2, L1, L2, L8; Ob, Case 3, L1, L2, L3, L4, L5, L6; Ob, Case 4, L1, L2, L3, L4, L5, L6, L7; Ob, Case 5, L1, L2, L3, L4, L6; Ob, Case 6, L4, L6, L7, L8; Ob, Case 7, L1, L2, L3, L5; Ob, Case 8, L1, L2, L3, L4, L5).

Self-confidence is considered to be an important characteristic of children in the observed cases. The current study focused on self-confidence as one of the features of PT. In considering the role of self-confidence and how features interrelate with the PT, the data analysis focused further on looking for relationships between PT features. Three already identified PT features were highlighted by the data analysis as interwoven with the feature of self-confidence. These were being imaginative, play and innovation. Figure 18 shows the relationships of self-confidence with these three PT features during the inspiration of novel ideas and outcomes which were identified through all the cases of this study and presented into the episodes that will be examined in detail in this section.
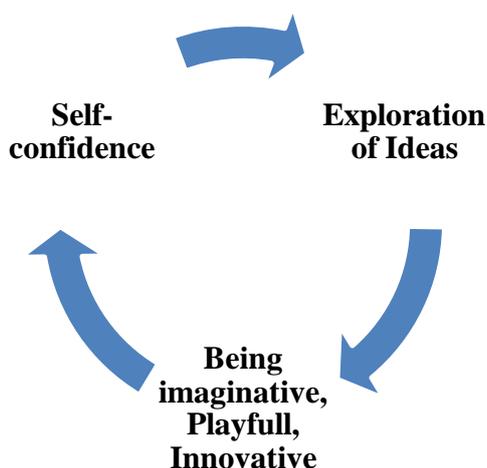
Figure 18: Self-Confidence driving exploration of ideas

Case 3, offers two strong examples through which the PT feature of self-confidence is strongly evidenced. More specifically, the first episode was

observed during the role-playing of the birth of Venus (Ob, Case 3, L1-E1). The students chose to give the lead role (the role of Venus) to a low learning ability girl who according to them had all the necessary characteristics for the needs of this role. However, the fact that she has lower learning abilities did not stop her from participating in the role playing activity and having the protagonist role by being imaginative and creative because of the trusting and supporting atmosphere that the teacher managed to create in her class. Thus, because of her self-confidence she managed to give to her role a unique character. She was improvising by adding dialogues between herself and the Hours and also between herself and the Winds. Additionally, she added also movement to her character like dancing with the Hours and laughing with them while they were dressing her (Ob, Case 3, L1-E1).

Similarly, another strong episode of students' self-confidence was evident during the second lesson in Case 3 (Ob, Case3, L2-E2) and more specifically during the episode in which the students had to present a scene based on the myth of Arion and the dolphin in order to answer the teacher's question 'What would happen if we take the story a step further?' More specifically, after Arion has asked for the king's help the following scene took place:

> *'The king was looking sceptical and was touching his mouth. Then he turned to his left side (there was no one there) and started shouting.*
>
> *King: Guards! Guards, go straight to the harbour. Arrest the sailors who tried to kill Arion, take all their gold and bring them in front of me on their knees. [Then he turned to Arion.] They will apologise to you and then we will go through them to the sea. They will not hurt you again.*
>
> *Arion: Thank you my King.'*

<div align="right">(Ob, Case 3, L2-E2)</div>

The children managed to invent and create a story that was going beyond of what is possible in reality. They created characters that were not existed and managed to involve them into their scene by being imaginative, playful and innovative. The above scenario was something unexpected from the teacher's point of view knowing the children's character. As she commented

in her reflective journal '*This was fantastic. He believed in himself. He felt safe and confident.*' (TRJ, Case3, 1/11/2012). She argued that he was confident and as a result he presented his ideas about his role without any fear of failure or with the fear that his other classmates were going to judge him and make him feel uncomfortable (TRJ, Case3, 1/11/2012).

Building on student's self-confidence is also well exampled in the role-playing activity in Case 2 during the episode of the merchant from Palestine. This student during his role playing had incorporated an accent into his character. The classroom teacher reflected that she did not expect this to happen (TRJ, Case2, 01/11/2012) '*I did not expect this happen because I knew that the other students were going to laugh at him. However, he did it.*' She also added that even though his classmates started laughing, this did not stop him from doing it. He showed to all of us how confident he was to stand there and show us how he imagined his role (TRJ, Case2, 01/11/2012). The analytic process showed that this student by being self-confidence managed to be in role and place himself in an as if space and as a result to give a unique character to his role.

However, students' self-confidence was not only observed during role-playing activities but also during classroom discussions. For example, in Case 7 (Ob, Case 7, L2-E7) the teacher posed to the students a question in order to promote discussion. The question was about the ancient port of Larnaca: '*Why was the port placed here? In this location? Why did they create the port here since there is no sea?*' It is important to note that the teacher insisted that no one raise their hands or shout the answer before she chose someone to talk, in order to discourage the typical scenario in which the five students in the front row immediately volunteer to answer the question and everyone else to sigh in relief. This improved students' engagement, challenged them to think and as a result were self confident to express and extend their ideas and identify alternative elements by adding, accepting and rejecting one another's ideas. It is clear that if the students were not self-confident they would not have been involved so easily in the classroom discussion. The following

quotes show examples of students sharing their ideas which in a later stage were rejected by their classmates.

> *C1: Well, one possible explanation is that they put their port in that place because they were afraid of the pirates. Thus, in this place they could protect the port and their market which was near the port.*
> *(Teacher waited a couple of seconds and chose C2 to talk)*
> *C2: I disagree with C1. This is not a reasonable explanation. Pirates did not come away from the sea. They were attacking the ships not the ports. I think that the only reason to create the port in that place was to protect the port from natural disasters. [...]*
> *C5: Well I think that I will agree with C's3 scenario. A big earthquake hit Cyprus and as a result this part was covered with land.*
> *(Teacher waited a couple of seconds before she talked)*
> *Teacher: Hm... What do you think, C6?*
> *C6: I think that what C5 suggests could be a reasonable explanation but I was thinking of something else.[...]*

(Ob, Case7, L2-E7)

The analytical process result showed that self-confidence was a feature strongly evidenced when students' PT was observed. The findings obtained from the classroom/museum observations and from the teachers' reflections revealed that the students, by being in a team where they felt security, trust and well guided were self-confident to develop and extend their ideas without thinking about the factor of failure. It was observed that when students felt confident about themselves, they were imaginative, innovative, explored and played with ideas and created unique and innovative contexts. This had as a result to nurture their PT.

5.3. Chapter Summary:

This chapter focused on the main thematic findings that emerged from the qualitative data analysis in relation to Research Question One which was about the children's PT features that were nurtured during the observed lessons. Summarising the findings of the first research question, this study proposes one new PT. More specifically, the new feature that this study suggests is 'self-confidence'. Meanwhile, the other PT features identified were: being imaginative, play, innovation, question posing and question responding, intentionality, immersion and self-determination, with narrative playing a foundational role in PT. However, risk-taking was absent.

The dominant feature of possibility thinking was narrative, which was identified to play a foundational role on PT for this age group of students and was one of the major features identified throughout all the project phases (Figure 19). Thus, narrative through a dramatic process that was inspired from museum interactivity was observed to be the driving force for the children's PT to be nurtured. This study connected the feature of narrative further with the other PT features, compared to the earlier studies on PT, through this dramatic process that the students were participating in. Narrative is seen to be working in complex combination with all the PT features and not only with questioning and imagination, as it was identified in the study of Cremin et al (2013). Question posing in this study was not strongly identified because of the teachers' active role during the learning procedure. Thus, question posing was not at the heart of PT for these students as it was identified from earlier studies (Chappell et al., 2008). Nevertheless, this study does not argue that question posing is not among the major features of PT but it was not strongly identified in these eight cases. Imagination was woven into the question responding that ensued from the teachers' questioning, so together with the
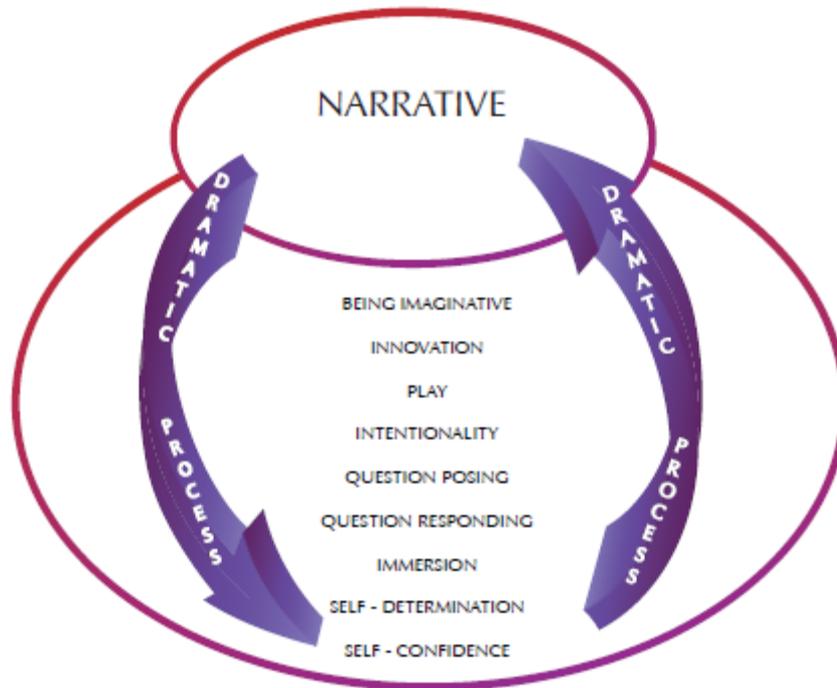
Figure 19: Narrative and Possibility Thinking Features

other PT features that were identified, it shaped and drove the narratives across all the analysed episodes. Self-confidence was the new feature identified. This was among the features of a creative person identified in the past and now this study's data also connects it with PT, developing further our understanding of the PT features of this age group of students. The findings of this study help to develop a new representation of PT, given in Figure 19. This figure shows how a new analysis extends the previous studies in this area.

The following chapter will focus on the thematic findings in relation to Research Question Two which is about the pedagogical approaches that the teachers used in order to nurture children's PT.

Chapter 6: The pedagogical approaches that the teachers use for nurturing students' PT

6.1. Introduction

This chapter addresses the main thematic findings that emerged from the qualitative data analysis in relation to my second research question which was: 'What pedagogical approaches do the teachers use to nurture children's PT?' The data analysis took into account this research question and allowed insight into the findings from the semi-structured interviews, classroom/museum visit observations, photo/still images, and teachers' and researchers' reflective journals. As will be seen, this study proposes the refinement of three of the already existing pedagogies and also proposes a new pedagogy. It is important to note that one of the pedagogical features from earlier studies is absent. In this section the themes are exemplified through quotes and vignettes from the case studies which demonstrate the pedagogical features of PT during the classroom lessons and the museum visits.

6.2. The overarching thematic findings for Research Question Two: 'What pedagogical approaches do the teachers use to nurture children's PT?'

The data analysis of Cremin et al (2006) suggested that there were four pedagogical features that were key to PT: standing back; offering time and space; and profiling learner agency. Whilst research is still in progress, this empirical research focusing on PT has reinforced a further refinement of the representation of the pedagogies and the features of PT. More specifically, the empirical research of Craft et al. (2012) building on previous studies that have documented PT suggested in terms of the pedagogy that the teacher's standing back was blended with the teacher's stepping forward into the children's play-space and co-imagining. This was called 'meddling in the

middle' (McWilliams, 2008) because the teachers were observed and it was reflected that they were both standing back and observing their students while there were moments when they become involved and helped their students to develop their learning.

This PhD study took into consideration the findings of the previous research on PT but meanwhile it was open to identify new pedagogies for nurturing students' PT. Synthesising the findings of the research questions, analysis revealed four overarching thematic findings related to teaching pedagogies in nurturing students' PT. The findings of the study revealed that three of the existing pedagogies on PT needed to be refined for the needs of this study. The pedagogy of offering 'Time' was unpacked further to include a subcategory named as 'Contained time', the pedagogy of offering 'Space' to 'Stimulus space' and the pedagogical feature of profiling 'Learner agency' was unpacked further to include a subcategory named as 'Constrained learner agency'. A new pedagogy is also suggested from the analysis of the data of this study. This is the pedagogical feature of 'Narrator Facilitator'. However, the pedagogy of standing back (pedagogy identified from earlier studies) seemed to be absent throughout these eight cases and the pedagogy of 'meddling in the middle' was identified a little bit differently. These overarching thematic topics will be discussed in this chapter with reference to specific examples from all eight cases of this study along with teachers' reflections about the importance of these pedagogies for nurturing students' PT. These thematic topics can be summarised as follows:

- Contained time *(pedagogy)*
- Stimulus space *(refined pedagogy)*
- Constrained learner agency *(pedagogy)*
- Standing back *(absent)*
- Narrator facilitator *(new pedagogical feature)*

It is important to clarify the term of 'refined pedagogy' in this study. More specifically, by the term 'refined pedagogy' this study describes the pedagogical features that have been already identified in previous studies and were refined by adding further features according to the data of this study.

The following table (Table 17) shows the overall analysis of the pedagogies used to nurture students' PT, identified in the eight cases with the overall plan of the instruments used for the data analysis process. Explaining and interpreting these thematic topics holistically, with illustrations relating to Research Question Two will be undertaken in the following pages.

6.2.1. <u>Pedagogy: Contained Time</u>

Taking into consideration previous studies on PT, the pedagogy of time was identified completely differently from the findings revealed in this study. More specifically, earlier studies on PT (Cremin et al, 2006, p.115) argued that 'the provision of stretchy time encouraged children's full immersion in extended playful activities'. Similarly, Craft et al. (2012) noted that by allowing time, the children have the opportunity to authentically respond to the provocations. Contrarily, this study showed the teacher's attempt to engage students into contained time (ten minutes) learning activities[13]. It was observed that at this age (9-10 years old) the fast switching of activities can nurture their PT, as was evidenced through the observations. This teaching technique, according to teachers' reflections, is intended to make the students active (rather than passive) participants in learning (TRJ, Case 2, L1-E1,16/10/2012; TRJ, Case 3, L2-E3, 1/11/2012; TRJ, Case 4, L2-E7, 8/11/212; TRJ, Case 6, L4-E8, 30/11/2012; TRJ, Case 8, L3-E6, 3/12/2012). Otherwise, according again to teachers' reflections, they feel bored and the inspiration of PT seems to be weaker or even does not exist. Contained time activities, are designed to take the students out of their books, sometimes out of their seats, sometimes out of their classroom, sometimes out of their school and out of their familiar ways of thinking (TRJ, Case 2, L1-E1,16/10/2012; TRJ, Case 3, L2-E3, 1/11/2012; TRJ, Case 4, L2-E7, 8/11/212; TRJ, Case 6, L4-E8, 30/11/2012; TRJ, Case 8, L3-E6, 3/12/2012).

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[13] Learning activities refer to teacher-guided instructional tasks or assignments for students

Data Analysis Process for Research Question 2							
Stage one: Open Coding						**Stage two: Axial Coding**	**Stage three: Selective Coding**
The main ideas of thematic topics of the data analysis	**Instruments of data collection**					**Grouping of ideas into similar content**	**Combined the main categories which drawing together the overarching categories**
	Int	**Ob**	**TR**	**RR**	**Ph**		
Limited time for role-playing	√	√	√	√		Contained Time on group work	Contained Time
Limited time for written narrative		√	√	√			
Limited time for group discussions		√	√	√			
Quick switching of activities	√	√	√	√			
Creating hypothesis in contained time	√	√	√	√		Contained Time on discussions	
Limited time for first responding		√	√	√			
Limited thinking time for responding to one another's ideas		√	√	√			
Large working areas	√	√	√	√	√	Physical Facilities	Stimulus Space
Group work areas	√	√	√	√	√		
Access to computers	√	√	√	√	√		
Access to a library	√	√	√	√	√		
Electronic facilities (like projector and interactive whiteboard)	√	√	√	√	√		
Teacher's personal contact with the students	√	√	√	√		Emotional Facilities	
Eye contact		√	√	√			
Giving Feedback		√	√	√			

Table 17: Data Analysis Process of RQ2

Int: Teacher's Interview   **Ob**: Observations (classroom and museum visit)   **TR**: Teacher's Reflective Journal   **RR**: Researcher's Reflective Journal   **Ph**: Photographs and still images

Stage one: Open Coding						Stage two: Axial Coding	Stage three: Selective Coding
The main ideas of thematic topics of the data analysis	Instruments of data collection					Grouping of ideas into similar content	Combined the main categories which drawing together the overarching categories
	Int	Ob	TR	RR	Ph		
Clear instructions	√	√	√	√		Emotional Facilities	Stimulus Space
Teacher open to new ideas	√	√	√				
Teacher open to discussion	√	√	√	√			
Teacher's caring relationship with students	√	√		√			
Use of different types of materials	√	√	√	√		Learning Facilities	
Use of different kind of learning activities	√	√	√	√			
Cross-curricular nature of teaching	√	√	√	√			
First hand experiences	√	√	√	√			
Collaboratively, communal and individual way of working		√		√			
Teacher's question posing		√	√	√		Framed discussions	Constrained learner agency
Teacher leading the discussion		√	√	√			
Teacher active participant to the discussions		√	√	√			
Framed mini role playing activities		√		√		Framed group activities	
Framed cross-curricular activities		√		√			
Framed written narrative activities		√		√			
Role-playing activities	√	√	√	√	√	Scenarios through role-playing	
Narrative simulations		√	√	√			
Collaboratively, communal and individual		√	√	√	√		

	Int	Ob	TR	RR	Ph		Narrator Facilitator
ways of working							
Creation of a plot/scenario for the whole lesson	√	√	√	√			
Verbal Questions-	√	√	√	√		Scenarios through exploratory questioning and waiting time	
Dimension 1: Leading questions		√		√			
Dimension 1: Service question		√		√			
Dimension 1: Follow through questions		√		√			
Dimension 2: Possibility moderate		√		√			
Dimension 2: Possibility narrow		√		√			
Wait Time 1	√	√	√	√			
Wait Time 2	√	√	√	√			

Table 18: Data Analysis Process of RQ2

Int: Teacher's Interview   **Ob**: Observations (classroom and museum visit)   **TR**: Teacher's Reflective Journal   **RR**: Researcher's Reflective Journal   **Ph**: Photographs and still images

This feature of 'contained time' has not been revealed in previous episodes of analysed time in earlier PT studies. In order to document the time period of the learning activities at which the teacher involved the students, I listened to the video recordings of the classrooms several times and I measured and wrote down in a list how long each of the learning activities lasted. The average time that the teacher allowed the students to work in each of the activities was ten to fifteen minutes. This time period of ten to fifteen minutes in each case was less than what earlier studies suggest. According to Cremin et al (2006, p.9), time was flexibly handled and as students' ideas and explorations were expanded, consequently the time was also expanded. More specifically, as they comment, 'The rhythm of learning was governed by engagement rather than the clock' (Cremin et al., 2006, p.9). Thus, generally speaking the findings of previous studies support that allowing time and space to the children to drive their learning according to their needs can nurture their PT. Consequently, the term of 'Time' as it was suggested from earlier studies on PT was identified as 'Contained Time' in this study. This pedagogy was evidenced in many episodes across the cases (Case 1 L1, L2, L3, L4, MV; Case 2 L1, L2, L3, L4, MV, L6, L7, L8; Case 3 L1, L2, L3, L4 MV, L5, L7; Case 4 L1, L2, L3, L4, L5, MV; Case 5 L1, L2, L3, MV; Case 6 MV, L1, L2, L3, L4, L5; Case 7 MV, L1, L2, L3, L4, L5; Case 8 MV, L2, L3, L4, L5, L6). However, this PhD study argues that the notion of Time can be considered as a super category which includes the subcategories of flexible time as it was described from earlier studies on PT (Cremin et al., 2006) and the 'contained time' as it is described from the findings of this PhD thesis.

Analysis of the lesson observations revealed strong episodes of 'contained time' throughout all the eight cases. It was evident that the teachers used to involve their students in ten-minute activities like mini-role-playing activities, writing activities and discussions. One of the strongest episodes was observed in Case 3 (Ob, Case, L2-E2) and more specifically during the episode in which the students had to present a scene based on the myth of Arion and the dolphin in order to answer teachers question 'What would happen if we take the story a step further?' The groups had ten minutes in order to create and present their scene. More specifically, the following

extract from their role-playing scene shows that even though the students had limited time in order to create their scene, this did not affect their ability to be creative and their PT to be nurtured by placing themselves really quickly into the characters of their plot.

'[…]The king was looking sceptical and was touching his mouth. Then he turned to his left side (there was no-one there) and started shouting.

King: Guards! Guards go straight to the harbour. Arrest the sailors who tried to kill Arion, take all their gold and bring them in front of me on their knees. [Then he turned to Arion] They will apologise to you and then we will throw them into the sea. They will not hurt you again.

Arion: Thank you my King.'

(Ob, Case 3, L2-E2)

The above scenario was something unexpected according to the teacher. As she commented in her reflective journal, '*This was fantastic. They were really acting as their characters'* (TRJ, Case3, L2-E2). This episode shows that the contained time activity that the teacher involved the students did not affect students' PT or limited the possibilities for innovative and imaginative results.

However, this was evident not only during the classroom lessons but also during the museum visits. More specifically, during the museum visit in the Thalassa museum of Ayia Napa the museum educator involved the students in several contained time learning activities. One of these activities was the mini role-playing activity. The students were split into their groups and the museum educator gave them a title. Then the students had to create a scene in ten minutes by having in mind the title that the museum educator had given them. Similarly, during the museum visit in Larnaca museum the last activity that the students participated in was again a role-playing activity (participation in an ancient symposium). Here, again the students were improvising in an activity that lasted fifteen minutes overall. All the teachers agreed that the museum visit programme was like a continuous journey

through which their students had the opportunity to take part in a great range of contained learning activities which nurtured their PT.

The teachers insisted on the powerful effect of contained time learning activities. They argued that this strategy, combined with the quick switching of the activities, can promote students' PT (TRJ, Case 1, 8/10/2012; TRJ, Case 2, 18/10/2012; TRJ, Case 3, L2-E3, 1/11/2012; TRJ, Case 4, L2-E7, 8/11/212; TRJ, Case 5, 22/11/2012; TRJ, Case 6, L4-E8, 30/11/2012; TRJ, Case 7, 03/12/2012; TRJ, Case 8, L3-E6, 3/12/2012). One of the teachers pointed out in his reflections that '*Knowing how to channel the students' energy, or when to 'stir' and when to 'settle' children; you have to achieve balanced lessons without children becoming over-excited on the one hand or bored on the other.*' (TRJ, Case 1, 8/10/2012) He reflected that this can be achieved by involving the students into short, quickly switched activities because they are less likely to become discouraged than during long-term tasks (TRJ, Case 1, 8/10/2012). Building on this point the Case 3 teacher argued that the use of contained time activities has as a result the inspiration of new, fresh, imaginative and innovative ideas (TRJ, Case 3, L2-E3, 1/11/2012). According to the Case 4 teacher, contained time activities give to the students the chance to be active, to experiment and improve their problem-solving skills by coming across with different types of problem solving (TRJ, Case 4, L2-E7, 8/11/212). Adding to this view, the Case 6 teacher reflected that this strategy helps the students to be energetic, to discuss, consider varying perspectives, examine relationships with their peers, share their thoughts and ideas, think of alternatives and possibilities and increase their imagination by adding to one anothers' ideas and thoughts in a short time period.' (TRJ, Case 6, L4-E8, 30/11/2012).

The Case 8 teacher referred to a specific episode from her classroom lesson through which the students managed to put themselves into roles in a contained time period. More specifically she reflected that the students were into roles and they were thinking as their character was going to think and write the journal of his daily routine and this was something that they managed to do in a contained time period (TRJ, Case 8, L3-E6, 3/12/2012).

Furthermore, she stressed the importance of giving to the students a really interesting learning activity in order to be involved in. She pointed out that '*if you give them a really interesting theme and a specific time period to do it then the children become really excited and creative for writing an essay.[…]*' (TRJ, Case 8, L3-E6, 3/12/2012). Consequently, the provision of contained time in each of the settings of this study was one of the key teaching strategies that the teachers used for nurturing their students' PT, not only through the classroom teaching but also through the museum visits.

6.2.2. Refined Pedagogy: Stimulus space

The pedagogical feature of space can play an important role in nurturing students' PT especially in this age group. Taking into consideration previous studies on PT, it was observed that 'children were offered open access to a wide range of learning resources and broad choices over what and how to engage' (Cremin et al., 2006, p. 115). The teachers, by having the role of 'negotiative gatekeeping' offered the opportunity to their students to be involved and play through their own scenarios and offered children's ownership of ideas (Craft et al, 2012, p. 57). Findings from all the research instruments of this study revealed that the pedagogical feature of space is much broader and includes several perspectives that were not identified in earlier studies.

Regarding the data of this study, by the term 'space' we mean the indoor (classroom space) and outdoor environments (out of the classroom/school space like museums) which a teacher can offer to the children. These spaces must provide to the students a range of physical, emotional and learning facilities for nurturing students' PT. Consequently, the findings of this current study suggest that the term of space needed to be refined as 'stimulus space'. Thus, by the pedagogical feature of 'stimulus space' this study means the classroom and the out of the classroom environments which can provide the students with a range of physical, emotional and learning facilities for nurturing their PT.

It was evident, from both classroom and museum observations, teachers' interviews and researchers' reflections that one of the features of a stimulus space is the physical facilities that it can provide to the students, like group work areas, large spaces of working and spaces full of a great range of objects, materials and resources which were important elements in setting the scene for nurturing students' PT (Figures 1, 2, and 3). According to the Case 4 teacher (TRJ, Case 4, L3-E9, 20/11/2012) *'it is really important to provide your students with classrooms full of facilities in order to inspire them to start their research and have the space to work and cooperate'*. It is interesting to note that most of the classroom lessons of all the cases took place in a classroom which is called a 'Multi-facility classroom' (Ob, Case 1, L4; Ob, Case 2, L4, L6, L7; Ob, Case 3, L2, L6, L7, L8; Ob, Case 4 L3, L4, L5, L6, L7; Ob, Case 5 L2, L4; Ob, Case 6 L3; Ob, Case 7 L3, L4; Ob, Case 8 L3, L4, L5).

The 'Multi-facility classroom' is a classroom which is bigger than the normal teaching class. This terminology is given by the Ministry Education and Culture in Cyprus because of the lots of facilities that this classroom can offer to a teacher during the teaching process. The Multi-facility classroom (Figure 20) was situated on the ground floor of the school and includes a big library, computers and round tables which were helpful for group work activities. The teachers used this classroom for the majority of the lessons because of the facilities that this classroom can give to the children. The physical environment of this classroom is made up of big round desks, chairs, instructional materials, computer equipment and library, as well as interactive whiteboard, projection screen, and several educational gadgets for students and teachers who have come together for the purpose of teaching and learning. It is important to say that all the schools in Cyprus have one of this type of classroom.

One of the strong examples that shows how the stimulus space can nurture students' PT can be identified in Case 5 (Ob, Case 5, L1-E1) during the lesson in which the students were transformed into Cypriot Kings. The lesson took place in the multi-facility classroom. During the lesson the students had the opportunity to do their research and find out all the information needed for

their kingdom by using the computers and the library books. This helped the students to get into their roles easier and as a result to manage and create a trade plan for their kingdoms. In a later stage of the lesson, this multi-facility classroom space transformed into a conference room for the kings, something that could not have happened in their normal classroom because of the lack of space. According to the Case 5 teacher (TRJ, Case 5, 12/11/2012) it is crucial for her as a teacher to have a classroom space in which her students have the opportunity to drive and extend their learning as they want by working with different resources and materials. She added that '*The classroom space must have the ability to be transformed according to the needs of the students'* (TRJ, Case 5, 12/11/2012). This seemed to be an important factor for the students in order to imaginatively transfer their selves into an as if concept.
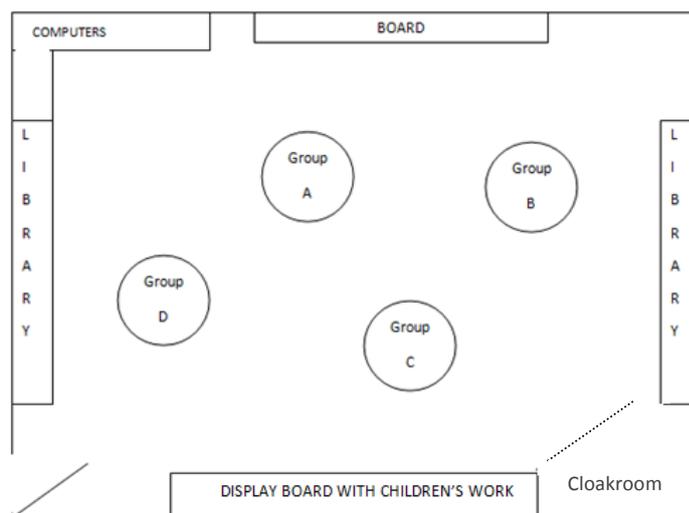
Figure 20: Multi-facility classroom

Similarly, the museums where the visits took place offered to the students a great range of physical facilities. More specifically, Thalassa Agia Napa Municipal Museum is a three story building constructed of marble, onyx, wood and metal, which offers unique experiences that appeal to all the senses through its 'birds eye view'. It is subdivided into six levels and the exhibits are presented in four different styles: in underground free-standing showcases where the students are able to walk and view the objects from above; in modern showcases; freely distributed around the museum; while others hang

in the roof space (RRJ, AYN-MV, 16/10/2012). During the visit this large space of the museum with the different levels was used by the museum educator in order to nurture students' PT. The students had the opportunity to travel with a magic shell into the shipwreck of 'Kyrenia I', to be transformed into archeologists, to take part in an excavation, to do their research on the findings of the shipwreck and to take part into a mini role-playing activity at the end of the visit (RRJ, AN-MV, 19/10/2012). The visit programme using the different levels and the different facilities that this particular museum offers was like a continuous journey and the museum space helped a lot for achieving that. Additionally, Larnaca District Archaeological Museum has four halls, where the students had the opportunity to explore and experience a great range of activities for nurturing their PT like making research with real objects and participating in an ancient symposium at the end of the programme (RRJ, L-MV, 17/10/2012).

The other important feature that a stimulus space has is the 'emotional facilities' that it can offer to the students for nurturing their PT. In an emotionally rich environment, teachers stay on top of the emotional energy in the classroom. The Case 6 teacher (In, Case 6, 29/11/2012) pointed out during her interview, that it is really important to create an emotionally safe environment for the students in which they feel safe and confident to ask questions, explore and experiment with ideas and hypotheses. The same teacher added that '*as teachers we must listen to students, support them and create a safe and pleasant environment for them to work and create new ideas*' (In, Case 6, 29/11/2012). During all the lessons I observed that the teachers were moving around the classroom during instructional sessions and quiet work periods, talking to individuals and groups of students, using personal contact to expand students' understanding of new concepts and skills.

Teachers were providing immediate, specific feedback on positive behaviours, establish eye contact with students, clarify instructions, and provide the students with support and encouragement for having the ownership of their ideas (Ob, Case 1, L1, L2, L3; Ob, Case 2, L1, L2, L8; Ob, Case 3, L1, L2, L3, L4, L5, L6; Ob, Case 4, L1, L2, L3, L4, L5, L6, L7; Ob, Case 5, L1, L2.L3, L4,

L6; Ob, Case 6, L4, L6, L7, L8; Ob, Case 7, L1, L2, L3, L5; Ob, Case 8, L1, L2, L3, L4, L5). All the teachers of this study were trying to establish a caring relationship with each student, learn about the students' individual needs and strengths, and provide the support and encouragement each student needs to be a successful learner. They were also flexible and had high expectations and believe that all students are capable of being creative (TRJ, Case 3, 26/10/2012; TRJ, Case 4 ,8/10/2012; TRJ, Case 7, 24/11/2012; TRJ, Case 8, 25/11/2012; In, Case 1, 16/10/2012; In, Case 2, 18/10/2012; In, Case 5, 26/11/2012; In, Case 6, 29/11/2012).

Two strong examples can be identified in Case 3. More specifically during the lesson 1 (Ob, Case 3, L1-E1) the protagonist of the role-playing (the role of Venus) had a girl who according to the teacher has low learning abilities. However, this fact did not stopped the girl for participating in the role playing activity and being imaginative and creative, because of the trusting and supporting atmosphere that the teacher managed to create inside her classroom. Building on the point above an additional example from the same case was observed in lesson 2 (Ob, Case 3, L2-E2) again during a role-playing activity. In the Arion and the Dolphin episode the boy who had the role of the king did something unexpected during his improvisation. More specifically, after Arion asked for help the king was looking sceptical by touching his mouth. Suddenly, he turned to his left (there was no-one on his left) and start shouting for the guards. He commanded them to go to the harbour, arrest the sailors who tried to kill Arion, take all their gold and bring them in front of him (Ob, Case 3, L2-E2). As was evident from the above two examples, the feeling of belonging in a team where they feel security, trust and well-guided by their group mates and teacher had as a result for them to be open to nurture further their PT (Ob, Case 1; RRJ, Case 1; Ob Case 2; RRJ, Case 2; Ob Case 3; RRJ, Case 3; Ob Case 4; RRJ, Case 4; Ob Case 5; RRJ, Case 5; Ob, Case 6; RRJ, Case 6; Ob, Case 7; RRJ, Case 7; Ob, Case 8; RRJ, Case 8).

Learning facilities is another key aspect identified as a pedagogical feature of stimulus space. This feature of stimulus space refers to the open access to a wide range of learning activities and broad choices on how to engage. This

was confirmed through the classroom observations where teachers provided different types of learning activities and resources, with the students to have the ownership in exploring and developing their own ideas (Ob, Case 1 L1-E1, L2-E2, L3-E3, L4-E4, MV-E6,7,8,9; Ob, Case 2 L1-E1,L2-E2, L4-E4, L5-E6,7, L4-E3, MV-E6,7,8,9,E10,11 ;L8-E12; Ob, Case 3 L1-E1, L2-E2,3, MV-E4,5,6 E9,10; Ob, Case 4 MV-E1,2,3, Case 5 L1-E1, L2-E2, L3-E3, MV-E6,7,8,9,10; Ob, Case 6 MV-1,2,3,4, L1-E6; Ob, Case 7 MV1,2,3, L1-E5, L2-E7; Ob, Case 8 MV-E1,2,3, L2-E7,8). Additionally, the stimulus space, because of its characteristics that were described above, offered to the students the opportunity of working collaboratively, communally and individually with each other and also with their teachers through a dramatic process which helped further the nurturing of PT.

For example, in the lesson 1 of Case 4 during the home economics lesson (Ob, Case 4, L1-E7) the students had to cook a recipe inspired from the findings in the 'Kyrenia I' shipwreck. They could also use one ingredient of their choice. However, during their cooking the students, and under the role of a chef, had plenty of opportunities regarding which ingredients to choose and also several ways of cooking. During their cooking they were observed to accept, add, or reject ingredients or one another's ideas, to work collaboratively, communally and individually as well as to make their own research in books or on the internet about their ingredients. All of these possibilities could happen because of the stimulus space in which the lesson was taking part.

Summarising the above, the findings of this study unpacked the pedagogy of space much further than how earlier studies had suggested. This study suggested the refinement of the 'space' into 'stimulus space' as it was observed to provide to the students with physical, emotional and learning facilities which help them to nurture their PT.

6.2.3. Pedagogy: Constrained learner agency

Regarding earlier studies on PT (Craft et al., 2012; Cremin et al., 2006) one of the pedagogies that were identified for nurturing students' PT was the profiling of learners' agency. More specifically, Cremin et al. (2006) argued that the teachers created multiple opportunities 'in which the children could initiate their own activities or make their own choices within a loosely framed activity' (Cremin et al., 2006, p. 114). Adding to this, Craft et al. (2012) through their study identified the fact that the teachers offered a wide range of possibilities to the children in terms of where they might take their play but they also stressed the fact that the teachers may become involved during this procedure by leading, directing or introducing resources and ideas. However, the data of this study identified something different than what Craft et al. (2012) and Cremin et al. (2006) argued in their studies. More specifically, the classroom observations revealed that all the teachers created boundaries and framed activities through which the investigations were being driven by child-initiated exploration. As a result this PhD study argues that the notion of Learner agency, as it is described from Craft et al. (2012) and Cremin et al. (2006) can be considered as a super category that includes the pedagogy of constrained learner agency suggested from the findings of this thesis.

For example the pedagogy of 'constrained learners' agency' was strongly evidenced in all the phases of the classroom and museum visit like during the classroom discussions when the teacher asked problem-solving questions to the students in order to nurture their PT or when the teacher involved the students in role-playing activities (Case 1 L1-E1, L2-E2, L3-E3, L4-E4, MV-E6,7,8,9; Case 2 L4-E3, MV-E6,7,8,9, L8-E12; Case 3 MV-E4,5,6; Case 4 MV-E1,2,3, Case 5 L1-E1, L2-E2, MV-E6,7,8; Case 6 MV-E1,2,3,4, L1-E6; Case 7 MV-E1,2,3, L1-E5, L2-E7; Case 8 MV-E1,2,3, L2-E7,8). More specifically, in Case 1 (Ob, Case 1, L2-E2) when the teacher asked the students to make a hypothesis on why the ancient Greeks created myths and legends the students had the opportunity and the independence to think of different possibilities in order to answer this question. This learning activity was strictly framed by the teacher and as a result the students' actions were

constrained. However, it was evident this was not an obstacle for the students to be imaginative, playful and have innovative ideas.

Additionally, strong episodes of constrained learners' agency were evidenced through the role-playing activities that the students participated in, not only during the classroom lessons but also during the museum visits.   More specifically, during the museum visit in the Thalassa museum of Ayia Napa the museum educator involved the students in a role-playing activity by giving them the title of their improvisation. Then the students had to create and present a scene by taking into consideration the title that the museum educator had given them (Ob, Case1, MV-E11,12; Ob, Case2, MV-E10,11; Ob, Case3, MV-E8,9; Ob, Case4, MV-E5,6). Similarly, during the museum visit in Larnaca museum the last activity that the students participated in was again a role-playing activity (participation in an ancient symposium). Here, again the students were creative in their roles but it was obvious that all their narrative actions and behaviours were constrained within the boundaries of the activity that the museum educator had formed for them (Ob, Case5, MV-E9,10; Ob, Case6, MV- E5; Ob, Case7, MV-E4,5; Ob, Case8, MV-E5,6).

Constrained learners' agency was also evidenced in Case 4 in a cross curricular activity (Ob, Case4, L1-E7). During the Home economics lesson[14], the students had to create and cook recipes by using specific ingredients (the ingredients that they had were those that the sailors of 'Kyrenia I' had in the ship for cooking their daily meal like olives and figs, almonds, sinkers for fishing and oil containers) and also one ingredient of their choice. During their work they were accepting, adding and rejecting concepts, being imaginative, innovative and playful with the materials. All these features were within the boundaries that the teacher had created for this activity. According to the teacher (TRJ, Case4, 08/11/2012, p. 16) cooking encourages creativity because it allows children to make decisions, add extra features, and do as much of the work as possible. Additionally he pointed out the importance of praise to children for experimenting and making something different. *'For*

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[14] This is a lesson where the children start learning about healthy eating and also start to have a firsthand experience of cooking. This lesson takes place in a big classroom that looks like a house kitchen. Also, it includes big round tables for group work activities.

example, this activity [in] which the children were constrained to use specific ingredients gave them the opportunity to be creative and unique because these circumscriptions were there' (TRJ, Case4, 08/11/2012, p.16). The students once again had self-chosen actions, independence in decision-making and confidence to express their thoughts and ideas in a specific context.

The current study seeks also to have a deeper understanding on the pedagogical features used by the participants for nurturing their students' PT. Therefore, it is important to consider their thoughts, through the interviews and their reflective journals. Synthesising the findings of their reflections, all the teachers (In, Case 1, 9/10/2012; TRJ, Case 2, 10/10/2012; TRJ, Case 3, 30/10/2012; TRJ, Case 4, 08/10/2012; In, Case 5, 07/10/2012; In, Case 6, 28/11/2012In; Case 7, 29/11/2012; In, Case 8, 28/11/2012) stressed the importance of having specific control over the learning activities because otherwise if the students were left free to work by themselves and drive their own learning then it was observed that only the high ability students were participating in the learning procedure. The low ability students were standing back, not participating at all, and letting the other students do the activity for them.

Summarising the above, the findings of this study unpacked the pedagogy of learner agency much further than earlier studies had suggested. This study suggested that the pedagogical feature of Learner agency can be considered as a super category which includes the pedagogy of constrained learner agency suggested from the findings of this thesis. This, subcategory of learner agency showed the different types of learner agency that a teacher can use in order to nurture his/her students' PT. The findings of this study revealed that the teacher participants had the control over the learning activities and the children had independence in decision-making by driving their experimentations and explorations according to their ideas and interest.

6.2.4. Absent Pedagogy: Standing back

A previous study on PT (Cremin et al., 2006) argued that standing back was one of the pedagogies used for nurturing students' PT. Cremin et al (2006) decrypted that standing back was evidenced when the 'teachers positioned themselves, such as stopping and observing, and listening and noticing the nature of learners' engagement' (Cremin et al., 2006, p.113). Meanwhile, in an earlier study of Craft et al. (2012b) it was evidenced that teachers seek to stand back and then to become involved in the classroom practice, which was seen as progressive. This was decrypted as 'meddling in the middle' (Craft et al., 2012b, p. 59). However, the findings of the current study revealed that the pedagogy of standing back was absent and the practice of 'meddling in the middle' was evident in a slightly different way as the teachers of this study were active participants through the whole procedure of nurturing students' PT. The teachers were active throughout the whole procedure of students' work to transform what is to what might be, without standing back at any time of the learning procedure. Teacher and student were co-structuring and co-imagining together, through a dramatic process with the teacher to have an active role in nurturing his/her students' PT.

The absence of the pedagogy of standing back may reflect the teacher control over the nature of the task in each case, as well as the teacher's active participation in the learning activities for nurturing their students' PT. Also, the absence of this pedagogy can be linked with the refined pedagogy of learner agency to constrained learner agency and also with the new pedagogical feature that this study suggests, the Narrator Facilitator. The teachers according to the findings of this study had active engagement throughout all the learning activities and they were supporting their students in order to nurture their PT.

The data of this PhD study revealed that the teachers had active role and engagement during the learning process. More specifically, it was observed that the teacher had different roles during the learning process which consisted of them being active and engaged without standing back or meddling in the middle as earlier studies of PT described. Teacher and

student were co-structuring and co-imagining together through the dramatic process created by the teacher inspired by the museum resources and interactivity. The data provides us with a lot of examples of this dramatic process in which teachers were observed to be actively engaged throughout the learning activities in order to involve the students in scenario roles and nurture their PT (Ob, Case 1 L1-E1, L2-E2, L3-E3, L4-E4, MV-E6,7,8,9; Ob, Case 2 L4-E3, MV-E6,7,8,9, L8-E12; Ob, Case 3 MV-E4,5,6; Ob, Case 4 MV-E1,2,3; Ob, Case 5 L1-E1, L2-E2, MV-E6,7,8; Ob, Case 6 MV-E1,2,3,4, L1-E6; Ob, Case 7 MV-E1,2,3, L1-E5, L2-E7; Ob, Case 8 MV-E1,2,3, L2-E7,8). These analysed episodes showed that teachers' with their active role provided spaces for nurturing students' PT.

A detailed and strong example of the teacher being active through the students' learning activities and having the three roles described earlier can be seen in Case 5 (Ob, Case 5, L1-E1) and specifically in the episode of 'Kings and trade' in which the teacher created a story plot for her students. The students were transformed into kings and they were in their roles from the beginning until the end of the lesson. During their participation into the king's conference the teacher raised her imaginary glass of wine and told them:

> *Teacher: Let us make a toast for today's meeting. I hope that we will have a good year with lots of profit.*
>
> *-Cheers! [said all together and trying to clink their glasses]*
>
> *Teacher: For a long time now I wanted to organise this conference in order for us to talk to each other, my friends. We have to create a plan for our trade. We must agree the countries that each of the kingdoms will have trade with, in order for all of us to have profits and not to have any disagreement. Do you agree?*
>
> *-Yes… yes we agree. [said all together]*
>
> *Teacher: OK, let us start our conversation. What are your plans, King of Kition?[…]*
>
> (Ob, Case 5, L1-E1)

The findings indicated that the students were inspired so much in their roles as kings that during the conference two of the kings started arguing with each

other about the trade of their kingdoms. This was the case through all the analysed episodes and an important factor was that the teacher created an interesting and fascinating scenario that the students were participating in from the beginning until the end of the lesson. An additional important factor was that the teacher was an active participant in this scenario and she was supporting her students throughout the whole procedure to develop their ideas further, something that increased students' imagination and nurtured their PT. Teacher and students were co-structuring and co-imagining together and as a result this seemed to inspired further the children.

Here, it is interesting to note that the teachers by being involved during the procedure of nurturing their students' PT had as a result to recognise some of the PT features for themselves. PT features like being imaginative, playful with ideas, question posing, immersion, and self-determination were emphasized by the teachers as features recognized not only for their students' but also for themselves (In, Case 1, 9/10/2012; In, Case 2, 10/10/2012; In, Case 3, 13/10/2012; In, Case 4, 9/10/2012; TRJ, Case 5, 12/11/2012; In, Case 6, 27/11/2012; In, Case 7, MV, 30/11/2012; TRJ, Case 8, L1-E6, 03/12/2012). This is considered to be an expected result from the data of this study because the teachers were actively involved in the learning activities as was mentioned earlier.

Summarising, the above findings this study unpacked further the teachers' role inside the classroom by introducing a new point of view of how a teacher can nurture children's PT. The teacher's roles identified in the past, standing back and meddling in the middle, were not identified through the analysed data of this PhD study, as a new perspective was introduced, the teacher being actively engaged.

6.2.5. <u>The new pedagogy this study suggests: Narrator Facilitator</u>

The empirical work of Cremin et al. (2006) as mentioned earlier, created a framework for identifying the PT features. These features were fostered by teacher-child interactions in an enabling context in which teachers offered

children time and space, prioritised learner agency and stood back in order to observe children's work and decide when to intervene (Cremin et al., 2006). In the next phase, a study of Craft et al. (2012a) revealed a blending of individual, collaborative and communal creativity and a dynamic between teacher and student. It was observed that the teachers were stepping forward as well as standing back as the students transformed what is to what might be. The finding of the study of Craft et al. (2012a) is similar in a way with the findings of the current study. Findings from lesson observations and interviews indicated that the teacher's interaction with the learning procedure played a crucial role in promoting and nurturing students' PT.

However, what makes the findings of this study different from Craft et al. (2012a) is the fact that the teachers were active throughout the whole procedure of students' work to transform what is to what might be, without standing back at any time of the learning procedure. It was observed that the teachers had three intervention types during the learning process for nurturing their students' PT. These three intervention types were: creating the narrative space, participating into these narrative spaces, and supporting. Thus, as a result teacher and student were co-structuring and co-imagining together and the teacher was an active helper through the dramatic process that he/she created for students in order to nurture the PT as it was mentioned in the previous section. Consequently, this study suggests the creation of a new pedagogical feature for nurturing students' PT. This new pedagogical feature is called 'Narrator Facilitator' which has to do with the creation of the narrative spaces in which he/she has an active role.

The pedagogical feature of Narrator Facilitator includes two dimensions, the 'narrator' and the 'facilitator'. The dimension of narrator links with the important role of narrative in PT as the findings of this study revealed and as Cremin et al (2013) support in their study. The dimension of facilitator links with the teacher's role of creating learning spaces through which he/she has active participation by promoting further students' thoughts. Thus, by the pedagogical feature of 'Narrator Facilitator' this study describes the teacher who creates narrative learning spaces (scenario/plot) which attempt to put the

students into a certain position/situation in a particular time and space in order to nurture their PT, with the teacher to have active participation throughout the whole procedure (Picture 7, Picture 8, Picture 9, Picture 10). It is interesting to note that these narrative scenarios lasted from the beginning until the end of the lesson with the students able to be in roles throughout the whole procedure. Also, these scenarios involved the students to participate into a variety of learning activities but under the same role all the time.

The analysis revealed the significance of the teacher's role in supporting the successful implementation of nurturing PT in the classroom through the creation of a scenario by enabling the students into a wide range of learning activities. The data offered a great range of examples of embedding the students into mini role-playing activities (Case 2 L2-E2, L4-E4, L5-E6,7, MV-E10,11; Case 3 L1-E1, L2-E2,3, MV-E9,10 , L7-E11; Case 4 MV-E5,6; Case 5 L1-E1, L2-E2, L3-E3, MV-E9,10; Case 6 MV-E5; Case 7 MV-E4; Case 8 MV-E4,5) or into exploratory questions combined with the strategy of Wait-Time 1 (Wait Time 1 is the amount of time the teacher allows to elapse after she/he has posed a question and before he/she chooses a student to talk - Rowe 1986) and Wait Time 2 (Wait Time 2 is the amount of time that a teacher allows to elapse after a student concludes his/her thoughts and before the teacher starts talking again - Rowe 1986) (Ob, Case 1 L1-E1, L2-E2, L3-E3, L4-E4, MV-E6,7,8,9; Ob, Case 2 L4-E3, MV-E6,7,8,9, L8-E12; Ob, Case 3 MV-E4,5,6; Ob, Case 4 MV-E1,2,3; Ob, Case 5 L1-E1, L2-E2, MV-E6,7,8; Ob, Case 6 MV-E1,2,3,4, L1-E6; Ob, Case 7 MV-E1,2,3, L1-E5, L2-E7; Ob, Case 8 MV-E1,2,3, L2-E7,8) through these lessons scenarios. The dramatic process inspired form the museum objects was identified to be the major tool of the teacher as a Narrator Facilitator in order to nurture the students' PT.

Picture 7   **Picture 8**

(Ob, Case 3, L1-E1)

Picture 9 (Ob, Case 3, L2-E3)   **Picture 10** (Ob, Case 2, MV-E5)

6.2.5.1. Scenarios through role-playing

Cases 2,3,6,7, and 8 offered examples of the teachers as narrator facilitators in role-playing activities (Ob, Case 2 L2-E2, L4-E4, L5-E6,7, MV-E10,11; Ob, Case 3 L1-E1, L2-E2,3, MV-E9,10 , L7-E11; Ob, Case 4 MV-E5,6; Ob, Case 5 L1-E1, L2-E2, L3-E3, MV-E9,10; Ob, Case 6 MV-E5; Ob, Case 7 MV-E4; Ob, Case 8 MV-E4,5). A detailed, strong example of the pedagogical feature of the teacher as a narrator facilitator was evidenced during the museum visits in both of the museums. The museum educators created an interesting scenario for the students in which they had (the museum educators) an active role and continued participation. For example, at Thalassa museum in Ayia Napa the museum educator had the role of the mermaid Thessaloniki and she was travelling with students from activity to activity and helped them during their travelling to discover things and to be engaged in playful activities. The

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following quotes present some parts of the scenario that the museum educator as a narrator facilitator created for the students. More specifically, one of the first attempts of the museum educator to put the students into a scenario was the following:

> ME: Are you ready for our journey into the sea?
>
> Children: Yeeeees!
>
> ME: Ok, wear your masks, the uniform of the divers, take the oxygen bottles with you [the children were actually doing all the movements as if they were wearing all the things that the museum educator had told them] and get ready for a big splash into the sea. Let our journey begin!
>
> [The children did the imaginary splash into the sea.
>
> They are then transferred to a different hall of the museum.]
>
> ME: Whoa! What is that? A boat on the seabed! It is an ancient shipwreck. Let's get closer to take a closer look. Ah! See ancient objects. I have an idea. Would you like to become archaeologists and make an underwater excavation?
>
> Children: Wow…Yeeeees!
>
> (Ob, Case 1, MV-AY; Ob, Case 2, MV-AY; Ob, Case 3, MV-AY; Ob, Case 4, MV-AY)

Later after they had observed the identical copy of 'Kyrenia II' the museum educator put a magical shell next to her ear.

> ME: I can hear oars! Well, I can see a boat approaching. Quickly, let's ask the sailors: 'Is King Alexander alive?' Let's shout all together, my little friends. 'Is King Alexander alive?' They did not hear us ... I think it's time we become sailors and travel to lot of ports. But in order to have a safe trip, we must pray to the gods, to protect us. Let's say our own prayer.
>
> (Ob, Case 1, MV-AY; Ob, Case 2, MV-AY; Ob, Case 3, MV-AY; Ob, Case 4, MV-AY)

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Case 5 teacher (In, Case 5, 12/11/2012) stressed in her interview that the educator has an important role for operating a successful learning programme if the aim is the nurturing of PT. More specifically she used the phrase 'is the alpha and omega'. The educator is the person who, according to her/his personality is going to give life to the activities and is going to inspire children to participate, to be creative and imaginative. Also she added that '*It is true that not only is a really good scenario-programme necessary for a successful nurturing of creative thinking but also it is necessary to have the ability to handle it*' (In, Case 5, 14/11/2012). She argues that the teacher as an educator of a programme has to have theatrical characteristics and to be able to pull it off (In, Case 5, 14/11/2012). *'Being part of a team is also important. Being part of your classroom-team'* (In, Case 5, 14/11/2012). Teachers' role and more specifically teachers' active participation seemed to be extremely important in nurturing PT.

The data indicated that the teacher as a Narrator Facilitator nurtured students' PT through the creation of a scenario by enabling the students into a wide range of learning activities. This section focused on the episodes in which the teachers embedded the students into mini role-playing activities. It was observed that the students were acting and thinking in an 'as if' place. The following section will explore further the role of Narrator Facilitator through different types of learning activities but again activities that put the students into a particular plot. These learning activities were exploratory questions combined with the strategy of waiting time.

6.2.5.2. Scenarios through exploratory questioning and wait time

Building on the point above, it was observed that the teacher as a Narrator Facilitator used exploratory questions outside of the role-playing activities in order to involve the students into the narrative scenarios that lasted from the beginning until the end of the lesson. Nevertheless, it was also observed that the teachers' exploratory questioning was combined with an additional

pedagogical strategy of Wait-Time 1 and Wait-Time 2 in order to involve the students into a narrative scenario. The Case 7 teacher reflected that these few seconds of silence will give every student a chance to think about an answer (In, Case 7, 10/12/2013*). 'Their level of concern will be high since they don't know who I will call on. […]Now I have an opportunity to help the students individually into a classroom discussion and develop further their thinking.'* (TRJ, Case 7, 11/12/2013). These two strategies combined together promoted the active engagement of the students into the conversation and the inspiration of new concepts, ideas and possibilities.

It was evident that the teacher, rather than immediately choosing the student who will answer the question, was waiting before calling on someone to answer it. The wait time was generally short (five to ten seconds). The teachers insisted that no one raise his/her hand (or shout out the answer) before he chose someone to talk, in order to discourage the typical scenario in which the five students in the front row all immediately volunteer to answer the question, and everyone else sighs in relief. This waiting time forces every student to think about the question, rather than passively relying on those students who are fastest to answer every question. When the wait time was up, the teacher asked for volunteers or randomly picked a student to answer the question. It is interesting to note that the strategy of waiting time during classroom discussions was also evident in earlier studies (Rowe, 1986; Stahl, 1994; Tobin, 1985) but not in relation with the PT. Teachers who ask a question and wait about five to seven seconds before asking for a response (Wait Time 1), and wait again after the first response before reacting to it (Wait Time 2), get vastly improved student answers.

In order to document the speed at which teacher and students were exchanging ideas and thoughts, I listened to the video recordings of the classrooms several times. I was measuring and writing down the speech patterns and pauses during the classroom conversations. More specifically, as far as the wait time 1 is concerned the accumulation of pauses before the teacher speaks again or chooses a student to talk, in most of the recordings averaged five to seven seconds. With wait time 2, the accumulation of pauses between students expressing thoughts or before the teacher speaks again, in

most of the recordings averaged again five to seven seconds. This time period of five to ten seconds in each case was almost the same as the time period of earlier studies suggested (but not observed). According to earlier studies the waiting time that was observed was up to five seconds but they suggest that it is generally best to increase both wait time 1 and wait time 2 to a minimum of three to five seconds (Rowe, 1986).

This study, focusing further on teachers' question posing as a way for involving the students into narrative scenarios, reinforced the key dimensions of questioning for PT already documented in the earlier work of Chappell et al. (2008). It is important to note that Chappell's et al (2008) study aimed to investigate children and their question posing and question responding in the classroom as the driving features of PT contrarily with the current study which aimed to investigate teachers question posing for nurturing students' PT. The data provides us with a lot of examples of teachers' narrator facilitator exploratory questioning combined with wait time 1 and wait time 2 in order to involve the students in scenario roles and nurture their PT (Ob, Case 1 L1-E1, L2-E2, L3-E3, L4-E4, MV-E6,7,8,9; Ob, Case 2 L4-E3, MV-E6,7,8,9, L8-E12; Ob, Case 3 MV-E4,5,6; Ob, Case 4 MV-E1,2,3; Ob, Case 5 L1-E1, L2-E2, MV-E6,7,8; Ob, Case 6 MV-E1,2,3,4, L1-E6; Ob, Case 7 MV-E1,2,3, L1-E5, L2-E7; Ob, Case 8 MV-E1,2,3, L2-E7,8). These analysed episodes showed that teachers' questioning provided spaces for the developments of students' narrative through a scenario that they attempted to put to the students. Students were imaginative through question responding that ensued from the exploratory questioning that the teacher was posing to them.

The following example from Case 1 presents an abstract of the teacher's attempt to involve the students in a scenario through the use of exploratory narrative questions combined with wait time 1 and wait time 2. The evidence is that this abstract shows a representative episode selected from Case 1 through which the teacher as a narrator facilitator tries to engage his students to think and act in roles by placing themselves into characters through exploratory questioning. More specifically, (Ob, Case 1, L1-E1) the selected

episode relates to one of the classroom discussions about the Greek legend of the sack of Aeolus.

> T: What might happen if you were the sailors? What would you do then? If I came in our ship this morning and told you 'Do not open the sack because Aeolus has put inside all the bad winds that prevent us from going home'. *[pauses 7 seconds before he chooses C to talk - wait time 1)- LQ, PM[15]*
>
> C: Definitely I would open it. *[T pauses 7 seconds before he talks - wait time 2]*
>
> T: Why? *FT-PN[16] [teacher waits a couple or so seconds before he chooses P to talk – wait time 1]*
>
> K: I would open it too, because I would think that you were lying to us. I would imagine that you keep a treasure in the sack that you want for yourself. *[teacher waits a couple or so seconds before he chooses A to talk – wait time 2. Then pauses 7 seconds before he chooses M to talk – wait time 2. Then pauses 7 seconds before he chooses G to talk – wait time 2. Then pauses 5 seconds before he talks - wait time 1]*
>
> C: No, I strongly disagree. This was really dangerous for our lives. This was not the right time to test our loyalty. No, no definitely not. Also, we must not forget the fact that we had been trying to go to Ithaca for so long.[…]

(Ob, Case 1, L1-E1)

The above episode starts with the teacher's leading questions. The leading questions have moderate levels of possibility within which the teacher invited the students to place themselves into the role of sailors. The students used this possibility space to respond imaginatively and with the narrative to play an important role for being into roles. Within this episode, there were also several other questions like service questions or follow through questions, of either possibility moderate or possibility narrow, such as 'What are we going to do then?' and 'Why?' they had decided to have this plot. These questions combined with the wait time 1 and wait time 2 helped further the development and exploration of students' thoughts and ideas enabling them to go further

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[15] LQ: Leading Question
PM: Possibility Moderate
[16] FT: Follow Through
PN: Possibility Narrow

into the narrative scenario that the teacher had created for them. The Case 1 teacher (TRJ, Case 1, 9/10/2012) reflected that through exploratory questioning he managed to make his students think of alternatives, different possibilities, to see things from a different angle and to give a solution to a problem by placing themselves into a different point of view and by creating a scenario to think in an 'as if' space.

Regarding the data of this study, the general conclusion that comes out is that the teacher as a Narrator Facilitator played an important role in nurturing students' PT. The teacher with the pedagogical feature of Narrator Facilitator encouraged a blend of perspectives, encouraging exploration and guiding his students' narrative experimentation by being also part of their team and part of this dramatic process. The overall analysis brought out commonalities across the cases in terms of this pedagogical feature. What the current study reveals is that the pedagogy of the teacher as Narrator Facilitator nurtures student PT by creating narrative spaces which lasts from the beginning until the end of the lesson, through role-playing activities or exploratory questioning, with the teacher to have active and supportive participation through the whole procedure.

6.3. Chapter summary

This chapter focused on the main thematic findings that emerged from the qualitative data analysis in relation to the second research question: What pedagogical approaches do the teachers use to nurture children's PT? The findings of the study revealed that three of the existing PT pedagogies needed to be refined for the needs of this study. The pedagogy of 'Time' was refined to 'Contained time', the pedagogy of 'Space' to 'Stimulus space' and the pedagogical feature of 'Learner agency' was unpacked further to include a subcategory named as 'Constrained learner agency'. A new pedagogy is also suggested from the analysis of the data of this study. This is the pedagogical feature of 'Narrator Facilitator'. However, the pedagogy of standing back

(pedagogy identified from earlier studies) seemed to be absent throughout these eight cases.

The pedagogical themes identified as common across all the settings are contained time, stimulus space, constrained learner agency and narrator facilitator and these nurtured the development of aspects of PT. Pedagogy nurturing PT in this study involved practitioners offering children opportunities driven by provocation, involving practitioners valuing constrained learners' agency, offering them contained time and stimulus spaces, but what is much clearer in this study is how teachers were involved in this process by having the characteristics of a narrator facilitator. The teacher as a Narrator Facilitator inspired from museum interactivity uses as his/her dominant tool the dramatic process in through which he/her has an active role and engagement. These four pedagogical features were identified to work in a parallel way, integrating with each other and enclosing the nurturing PT features. The diagram below (Figure 21) shows through the spiral the teachers' role during the procedure of nurturing PT. The spiral encloses the procedure of nurturing PT (PT features and pedagogies) giving a clear idea about the teachers' role. The findings of this study help to develop a new representation of pedagogy nurturing PT, given in Figure 21. This figure shows how a new analysis extends the previous studies in this area.
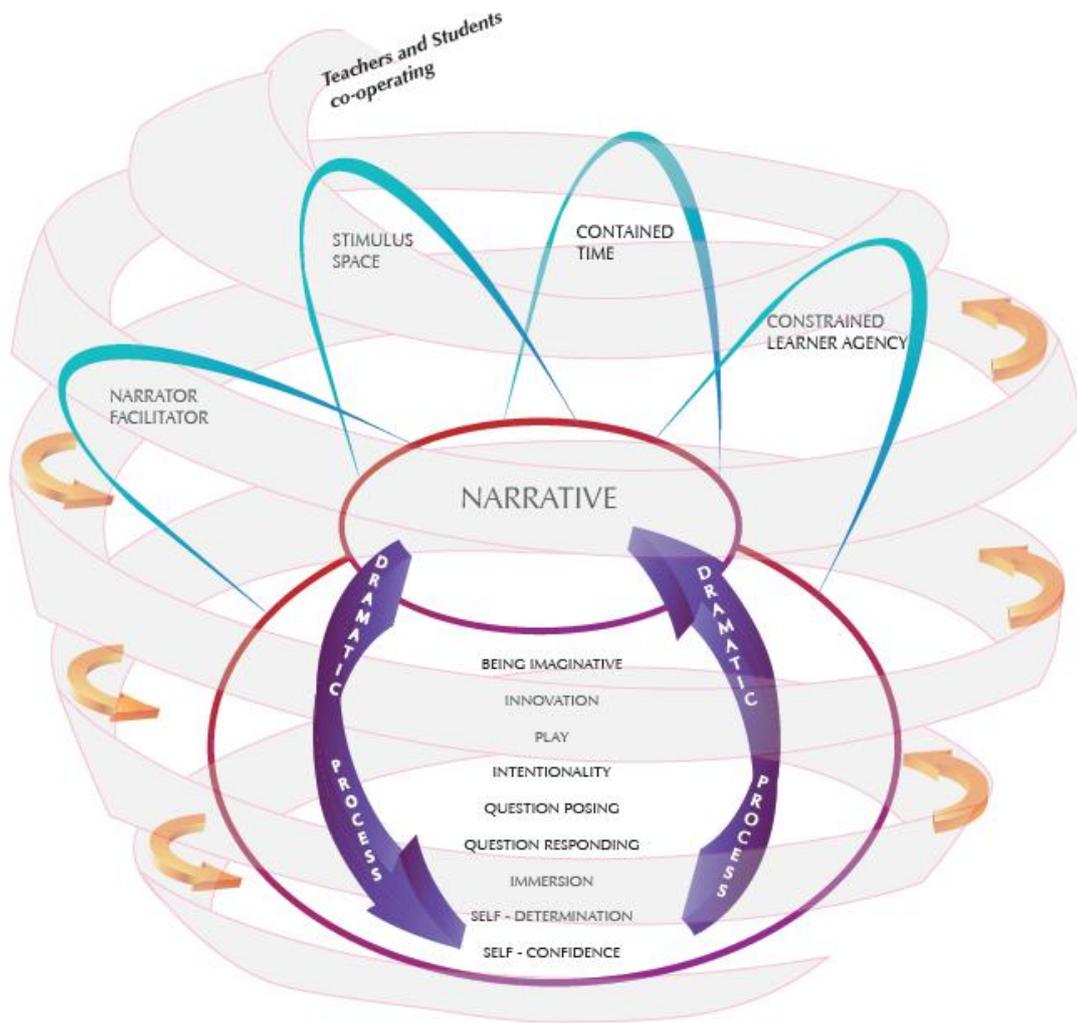
Figure 21: Pedagogy nurturing PT

The following chapter will focus on the thematic findings in relation to the affordances that the teachers perceive by using the alternative resource of learning associated with museum visits in order to nurture children's PT.

Chapter 7: The affordances that the teachers perceive from the museum visits for nurturing students' PT

7.1. Introduction

This chapter focuses on the affordances that the teachers of this study perceived for nurturing students' PT by using alternative resources of learning associated with museum visits. These perceptions were documented through interviews with the teachers, teachers' and researcher's reflections, classroom and museum visits observations, and still images. As will be seen, this study identified three affordances that the teachers perceived for nurturing students' PT. Illustrating perceived affordances from the perspectives of individual participants will help us better understand the importance of alternative resources of learning associated with museum visits for nurturing students' PT. In this section the themes are exemplified through vignettes and quotes from the case studies which demonstrate the nurtured features of PT during the classroom lessons and the museum visits.

7.2. The overarching thematic findings for Research Question Three: 'What affordances do the teachers perceive for nurturing children's PT by using alternative resources of learning associated with museum visits?'

The data analysis revealed key features in relation to the research question 'What affordances do the teachers perceive for nurturing children's PT by using alternative resources of learning associated with museum visits?' Synthesising the findings to the research question, analysis revealed three overarching thematic findings related to the affordances that museum visits can offer teachers for nurturing students' PT. These overarching thematic topics will be discussed in this chapter with reference to specific examples from all the eight cases of this study and can be summarised as follows:

- Enjoyment
- Narrative Improvisations

- Cross-curricular Opportunities

The following table (Table 18) shows the overall analysis process of the teachers' perceptions identified in the eight cases with the overall plan of the instruments used for the data analysis process. Explaining and interpreting these thematic topics holistically, with illustrations relating to research question three, will be undertaken in the following pages.

7.2.1. <u>Enjoyment</u>

Analysis of the lesson and museum visit observations, interviews, and teachers' and researchers' reflections reveal that one of the affordances that all the teachers of this study perceived from the visits for nurturing students' PT is students' enjoyment. The term 'enjoyment', according to the teacher participants of this study, is synonymous with a range of concepts such as fun and satisfaction. Students should find their learning challenging, engaging and motivating, which was evidenced during the museum visit programme (TRJ, Case 2, 18/10/2012; TRJ, Case 3, 30/10/2012; TRJ, Case 5, 12/11/2012; TRJ, Case 6, 27/11/2012).

During the discussions with the teachers, they also identified that the interest in the subject matter and perception of its usefulness is also really important for students' enjoyment and participation in the task. Indeed traditional curriculum tends to provoke the perennial student question, 'Why do I have to learn this?' or 'Why I have to do this activity?'. Motivation in learning, the teachers emphasised (In, Case1 , 9/10/2012; TRJ, Case 7, MV, 30/11/2012; TRJ, Case 8, L1-E6, 03/12/2012), depends on the students understanding what they are learning and if they find it exciting and enjoyable to do it. The Case 1 teacher (In, Case 1, 9/10/2012) pointed out in his interview that the feature of enjoyment cannot be easily identified in everyday lesson because of the strict time that they have for covering the curriculum. The same teacher added that '*these kinds of projects are the perfect chance for us to take advantage of our students' enjoyment that they perceive from the programme and nurture their creative thinking further inside the classroom*' (In, Case 1, 9/10/2012).

Data Analysis Process for Research Question 3

The main ideas of thematic topics of the data analysis	Instruments of data collection					Stage two: Axial Coding — Grouping of ideas into similar content	Stage three: Selective Coding — Combined main categories which draw together the overarching categories
Stage one: Open Coding	Int	Ob	TR	RR	Ph		
Enthusiasm in participation		√	√	√		Enjoyment	Affordances of the visit for nurturing PT
Happiness		√	√	√		Enjoyment	
Excitement	√	√	√	√		Enjoyment	
Enjoying their participation	√	√	√	√		Enjoyment	
Active engagement	√	√	√	√	√	Enjoyment	
Mini role-playing activities		√	√	√	√	Narrative Improvisations	
Problem solving	√	√	√	√		Narrative Improvisations	
Verbal Narrative		√		√		Narrative Improvisations	
Thinking upside down		√	√	√		Narrative Improvisations	
Greek Learning Activities	√	√	√	√	√	Cross-curricular Opportunities	
Art Learning Activities	√	√	√	√	√	Cross-curricular Opportunities	
Computer Science Learning Activities	√	√	√	√	√	Cross-curricular Opportunities	
Library Learning Activities	√	√	√	√	√	Cross-curricular Opportunities	
Home Economics Learning Activities	√	√	√	√	√	Cross-curricular Opportunities	

Table 18: Data Analysis Process of RQ3

Int: Teacher's Interview   **Ob**: Observations (classroom and museum visit)   **TR**: Teacher's Reflective Journal   **RR**: Researcher's Reflective Journal   **Ph**: Photographs and still images

Teachers recognise that enjoying learning makes the students concentrate on the task and the target of the activity. More specifically, Case 5 teacher (TRJ, Case 5, 12/11/2012) pointed out in her reflection that *'[…] because of the fact that they really enjoyed the museum programme they were open to cooperate, exchange ideas with their classmates'.* She argued that this happened because of the fact that the students did not feel that today's lesson was part of the curriculum and had as target to learn and be tested on something (TRJ, Case 5, 12/11/2012). This kind of attitude towards the classroom lessons is much more evident when the students return back from the participated projects outside school (TRJ, Case 5, 12/11/2012). Additionally, Case 1 teacher (TRJ, Case 1, 18/10/2012) argued that '*It was easier for me to make them create a hypothesis, be in an as if context and go beyond their everyday thinking ideas when they were enjoying the procedure of learning […]*' (TRJ, Case 1, 18/10/2012)*.* More specifically, he pointed out that when his students enjoy their classroom lesson then he observed that it was easier for him to challenge their thinking level and nurture their PT.

A teacher participant of this study argued (In, Case 6, 27/11/2012) during her first interview that students' enjoyment is one of the strongest affordances that they perceive from the museum visits programme. She strongly believes that the teachers must bring more play into the classroom, and the atmosphere of enjoyment that the museum visit offered to the students (In, Case6, 27/11/2012). More specifically, she considers that by enabling word games, role-playing and dozens of other methods can allow to the teacher to mix the emotional, social or cognitive challenge with fun and as a result can inspire students' nurturing of new innovative concepts (In, Case 6, 27/11/2012)*. 'The museum visit programme encouraged creativity and tapped into the children's sense of fun and as a result it was easier for me as a teacher to introduce even greater challenges in today's lesson. […]*' (In, Case 6, 27/11/2012)*.*
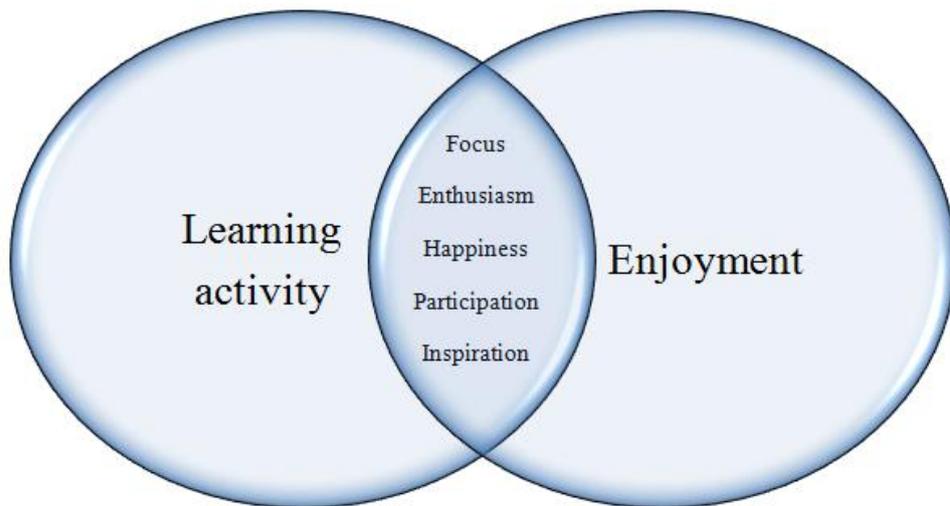
Figure 22: Enjoyment and Learning activity (TRJ, Case6, 27/11/2012)

Later the same teacher, in her reflections (TRJ, Case6, 27/11/2012), drew the above figure which shows exactly what she was arguing about the importance of students' enjoyment during the process of nurturing PT. She created two circles. One represents the learning activity (the activity that have as a target to nurture PT) and the other one represents students' enjoyment. The overlap of the two circles contains the characteristic features of students' attitude toward the teaching process when the learning activity is linked together with students' enjoyment. Thus, this figure indicated that when this combination is made then the students exhibit behaviours like higher focus, enthusiasm, happiness, participation into the task and inspirations of ideas. All these features can be indentified in the classroom lessons if the teacher takes advantage of the students' enjoyment which is one of the affordances that the museum visit programme offers to them. Consequently, all these features and more specifically the feature of inspiration can motivate students and nurture their PT during the classroom episodes.

Building on the points above, the data analysis revealed several episodes of students' enjoyment and how the teachers took advantage of it for nurturing their students' PT (Ob, Case 2 L2-E2, L4-E4, L5-E6,7, MV-E10,11; Ob, Case 3 L1-E1, L2-E2,3, MV-E9,10 , L7-E11; Ob, Case 4 MV-E5,6; Ob, Case 5 L1-E1, L2-E2, L3-E3, MV-E9,10; Ob, Case 6 MV-E5; Ob, Case 7 MV-E4; Ob, Case 8 MV-E4,5). More specifically, in an episode in a follow up lesson inside the classroom

(Ob, Case 3, L2-E2) students' enjoyment of the task was obvious from their body language. During this lesson the teacher invited the children to create a scene about what happened after Arion was saved by the dolphins. It was observed that one of the members of a group, a boy, seemed to be so excited, enthusiastic and happy about his ideas and thoughts and as a result he was standing up through all the time of their group work and was actively co-operating with his classmates by explaining his ideas about how he was thinking to improvise his role on their play and exchanging thoughts. He was so excited and he was enjoying so much this procedure that he could not sit on his chair (RRJ, Case 3, 30/10/2012). Moreover, phrases like 'this is fun' or 'this is exciting' were recorded during the group work discussions in several cases when the activity in which they were participating had a target to nurture students' PT.

Nevertheless, teachers pointed out in their reflective journals and also through the interviews that when students were focused on a task, they were not necessarily happy or felt enjoyment all the time (In, Case 1, 9/10/2012; TRJ, Case 7, MV, 30/11/2012; TRJ, Case 8, L1-E6, 03/12/2012). Thus, as the learners could move in and out of being focused, they moved beyond boredom and disappointment to get a sense of joy that comes when achievement seems possible. Thus, while working on tasks in the non-ordinary situations/scenarios, students tended to give themselves more positive judgments regarding their overall enjoyment, engagement and achievement than they did for ordinary learning circumstances. However, pleasure and joy in learning come with commitment, according with the teachers. Enjoyment cannot be extricated from focus and commitment to a task (TRJ, Case 1, 18/10/2012).

Summarising the above points, enjoyment in this study is conceived by the teacher participants as an affordance that they can get advantage for the museum visits for nurturing their students' PT. Otherwise, when the students are involved in learning activities without the factor of enjoyment there is a lack of motivation and enthusiasm for the learning process and for the generation and inspiration of new ideas and concepts. The affordance of enjoyment appeared to play an important role in nurturing students' capacity

to imagine alternatives, generate new ideas and consider possibilities in immersive contexts.

7.2.2. <u>Narrative Improvisation</u>

Regarding the findings of this study an additional affordance that the teachers perceived from the museum visit programme were the Narrative Improvisations. This study describes the term of 'Narrative Improvisation' as a teaching process through which the students were occupying a character in a particular time, space and position. This was achieved through the creation of a unique plot that the students were participating in filled with a range of experiential learning activities. Through this the students were acting, talking, problem solving, or reacting in the moment and this is something that the narrative nature of the museum visit programme enabled students to do (TRJ, Case 2, MV, 9/11/2012; TRJ, Case 3, MV, 9/11/2012; TRJ, Case 6, L2-E8, 30/11/2012; TRJ, Case 7, L3-E6, 27/11/2012; TRJ, Case 8, L2-E7, 05/12/2012). According to the teachers' perceptions (In, Case 1, 9/10/2012; TRJ, Case 2, MV, 9/11/2012; TRJ, Case 3, MV, 9/11/2012; TRJ, Case 4, L3-E9, 20/11/2012; TRJ, Case 5, L2-E7, 30/11/2012; TRJ, Case 6, 30/11/2012; TRJ, Case 7, 27/11/2012; TRJ, Case 8, 05/12/2012).

Narrative improvisation was one of the core affordances that the museum visit programme offered to them in order to nurture their students' PT and can be described as a process of imagining with adults. This teaching process has strong connections and links with drama, as the teacher inspired from the museum context, creates stories and characters in which invites the children to jump in. Then, by being in role children are actually learning by doing, experiencing the tension or confronting the problem themselves, instead of merely reading. The data revealed many episodes in which the teachers used this affordance that the museum visit offered them for nurturing their students' PT during the classroom follow up lessons. (Ob, Case 1 L1-E1, L2-E2, L3-E3, L4-E4, MV-E6,7,8,9; Ob, Case 2 L2-E2, L4-E4, L5-E6,7, MV-E10,11; Ob, Case 3 L1-E1, L2-E2,3, MV-E9,10 , L7-E11; Ob, Case 4 MV-E5,6; Ob, Case

5 L1-E1, L2-E2, L3-E3, MV-E9,10; Ob, Case 6 MV-E5; Ob, Case 7 MV1,2,3, L1-E5, L2-E7; Ob, Case 8 MV-E1,2,3, L2-E7,8).

A strong example can be identified in Case 7. This episode allows us to see how a teacher use the affordance of narrative improvisation that the museum visit offered her during the follow up lessons inside the classroom in order to nurture her student's PT(Ob, Case 7, L1-E5,6). It came during the first follow up lesson inside the classroom, when the teacher invited her students to write a comic by using the photos that she took during the museum visit and more specifically during their participation in the ancient symposium. It is important to note that she added speech bubbles with the use of a computer, near the heads of her students in order for the children to write dialogues and to create their own comic that had as a theme the ancient symposium. It was observed that some of the students added also some of the conversations that they had had during their participation in the symposium while some other groups were using their imagination to write the dialogues or even were combining the original dialogues (which they remembered) with dialogues based on their imagination. The teacher reflected that '*They were thinking as writers in order to create a unique meaningful story*' (TRJ, Case 7, 03/12/2012). Additionally, the teacher reflected that '*These pictures of them challenged them because my students were imagining what happened immediately before the picture and what will happen immediately after the picture*' (TRJ, Case 7, 03/12/2012). She argued that through this activity they managed to see their participation in the symposium differently and this made the lesson much more dynamic as their imagination was aroused (TRJ, Case 7, 03/12/2012).

Additionally, another interesting episode of the follow up lessons was observed in Case 3 through which it was evidenced that the narrative improvisations of the visit inspired students' PT during the classroom lessons (Ob, Case 3, L7-E11). During this lesson the students had to present a specific scene of what they had learnt. One of the groups decided to present a scene called 'Sailors of Kyrenia I'. The students had limited time to discuss and prepare their scene. The scene was about the trade and the ship of 'Kyrenia I'. However, the students added and also extended further their

scene with pirates, something that they came across and experienced during the museum visit programme. According to the teacher this group was strongly affected by the narrative improvisations of the museum visit. *'[…] Through this role playing the children added the incident with the pirates from the museum visit and took it a step further. They add dialogues and they improved it by using their imagination and their creative thinking.'* (TRJ, Case 3, L7-E11, 26/11/2012). In one of the scenes of their role-play there was a fight between the sailors and the pirates with imaginary swords. The sailors were killed and the pirates got all the gold from the ship (Ob, Case 3, L7-E11). Picture 11 shows the scene with the pirates as they experienced it through the museum visit, and the following pictures (Picture 12 and Picture 13) present the students during the role-playing, in the follow up lessons inside the classroom, in which they developed it further by adding a different plot, characters and dialogues.

Picture 11 shows the scene with the pirates as they experienced it through the museum visit, and the following pictures

Picture 11: Pirates attacking sailors (Ob, MV-AN, Case 3, 9/11/2012)

Picture 12 and Picture 13 present the students during the role-playing, in the follow up lessons inside the classroom, in which they developed it further by adding a different plot, characters and dialogues

Picture 12: Battle at the ship 'Kyrenia I' (Ob, Case 3, L7-E11)
Picture 13: Pirates 'killed' the captain of the ship (Ob, Case 3, L7-E11)

As was mentioned earlier, narrative improvisation was one of the affordances that the teachers perceived from the museum visits to be nurturing and developing students' PT. Summarising the data, this affordance was taken

advantage of by the teachers during the indoor classroom lessons in several cases either before or after the museum visit took place. This happened because all the teacher-participants of this study believed that the museum visit offered them this unique affordance that they cannot easily find during the everyday teaching lessons of the curriculum. As was mentioned earlier all the teachers agreed that narrative improvisations were ideal for nurturing their students' PT because their students can start thinking 'out of the box'.

7.2.3. <u>Cross-Curricular Opportunities</u>

The third educational affordance that the teachers perceived from the museum visit programme is the cross-curricular teaching opportunities for nurturing students' PT. According to teachers' reflections (TRJ, Case 3, MV, 9/11/2012; TRJ, Case 4, MV, 02/11/2012; TRJ, Case 5, MV, 22/11/2012; TRJ, Case 6, 30/11/2012; TRJ, Case 7, 27/11/2012; TRJ, Case 8, 05/12/2012) students were provided with a range of different experiences during the museum visit by being involved with first hand sources and by participating in an active learning process. This had as a result to improve many of their skills such as observation, researching, comparison and creativity. Thus, the teachers having in mind this museum programme affordance designed and structured some of their follow up lessons to have cross-curricular learning opportunities for their students for nurturing their PT. The data revealed many episodes through which this museum visit affordance was part of the indoor classroom follow up lessons (Ob, Case 3, L2:01/11/2012, L8:26/11/2012; Ob, Case 4 L3: 08/11/2012, L4:15/11/2012, L5: 16/11/2012, L6: 20/11/2012, L7: 23/11/2012; Ob, Case 5 L2: 15/11/2012, L4: 26/11/2012; Ob, Case 6 L3:30/11/2012; Ob, Case 7 L3:10/12/2012, L4:11/12/2012; Ob, Case 8 L3: 05/12/2012, L4:08/12/2012).

Synthesising the findings from the observations, teachers' and researchers reflections, it was evidenced that the multi-sensory experiences that the students came across during the programme as well as the museum programme interactivity inspired them to remain active and engaged through the visit and nurtured their PT. More specifically, the Case 5 teacher (TRJ,

Case 5, MV, 22/11/2012) reflected that the museum educator used a variety of great tools to inspire students' curiosity, engagement and imagination like exploratory games with museum objects, story-telling, hands-on craft, simulations, role-plays, adventure and encouraged learners to express creatively and as a result she retained a lesson full of experiences (TRJ, Case 5, MV, 22/11/2012). She also reflected that *'as a result in the follow up classroom lesson there was always still some of the sparking atmosphere that the visit created for the students and this continued into a cross-curricular atmosphere'* (TRJ, Case 6, 30/11/2012). Additionally, the Case 6 teacher (TRJ, Case 6, 30/11/2012) pointed out in her reflections that the different types of learning activities in which the students were engaged during the visit stimulated and challenged them.

Building on the points above, similar reflections were shared by the Case 8 teacher who argued that the museum visit helped her to enhance cross-curricular activities in order to nurture her students' PT. '*Well, the children managed to write incredible, innovative and creative journals in the Greek lesson. […] Thus, we can see how a good museum visit programme with a cross-curricular nature can affect and inspire them by providing them with innovative ideas.*' (TRJ, Case 8, L2-E7, 05/12/2012). Additionally, the Case 8 teacher used also art lessons during the follow up of the visit lesson. *'It can give them the opportunity to become creative, innovative and enterprising much more now after they have experienced such a powerful visit programme'* (TRJ, Case 8, L5-E9, 19/12/2012). According to her, through making art, children can benefit from a wide range of positive effects including development of creativity, thinking skills, better self-expression, and enriched personal satisfaction with their achievements (TRJ, Case 8, 05/12/2012).

As was mentioned earlier the data of this study offered a lot of examples of the teacher-participants using the cross curricular nature of the visit in their classroom. One of the strongest examples from the data can be seen in the Case 4 teacher who enabled his students into cross-curricular activities during the classroom follow up lessons. More specifically, taking into advantage several experiences that his students gained from the visit programme, the follow up lessons included a wide spectrum of cross-curriculum learning

activities into the lessons based on the museum visit programme such as the home economics lesson, Greek lesson, history lesson, computer science lesson and art lesson. According to the teacher, the nature of this museum programme inspired his imagination as a teacher to add, create and involve the students into cross-curricular activities like cooking (TRJ, Case 4, 08/11/2012).

The Case 4 teacher taking into consideration one of the activities that his students experienced during the museum visit decided to link it with the home economics lesson. More specifically, the students participated in the excavation during the visit, and among the findings were olives, figs, almonds, sinkers for fishing and oil containers. Thus, during this indoor lesson he praised his students for experimenting and making a recipe by taking into account their findings from the excavation. '*For example, this activity in which the children had the opportunity to create their own recipe gave them the opportunity to be creative and unique; the children managed to place themselves to the point of view of chef or to the sailors of* Kyrenia I' (TRJ, Case 4, 08/11/2012). Similarly, the same teacher was inspired by the fact his students came into contact during the visit with several symbols (TRJ, Case 4, 15/11/2012) and invited them to write a story by using symbols during the Greek lesson. According to the teacher *'Writing in symbols therefore provides children with freedom of expression enabling them to use their imagination to create stories without the normal limitations.'* (TRJ, Case 4, 15/11/2012).

The teachers of this study have witnessed first-hand the benefits of cross curricular affordances that these two museum programmes offer to their teaching for nurturing their students' PT. Synthesising the findings from the analysed data the museum visits managed to transfer to students through the cross-curricular nature of the programme the ability to use new knowledge, and to solve problems in new situations by applying acquired knowledge, facts and techniques in different ways (In, ME-AN, 9/10/2012; In, ME-LA, 12/11/2012). The findings of this study revealed evidence that the cross-curricular affordance of the visit programmes benefitted the students for nurturing their PT by providing them with learning tools to develop their thinking skills, to analyse questions, to solve problems, to work cooperatively,

and to inspire new creative synthesis. Concluding, it was evident from the observations that the eight teacher-participants took advantage of the cross-curricular affordances that the museum visit offered them for follow-up lessons in order to nurture their students' PT. However, there were variations in the way that the teachers used this affordance as the two of the eight teachers did not link as many curriculums lessons as the other six teachers, something that has to do with the teaching characteristics of each teacher.

7.3. Chapter summary

This chapter focused on the main thematic findings that emerged from the qualitative data analysis in relation to the third research question which was: What affordances do the teachers perceive for nurturing children's PT by using alternative resources of learning associated with museum visits? The data from this study revealed that the affordances that the teachers perceived from the visits for nurturing PT were: enjoyment, narrative improvisation and cross-curricular opportunities.
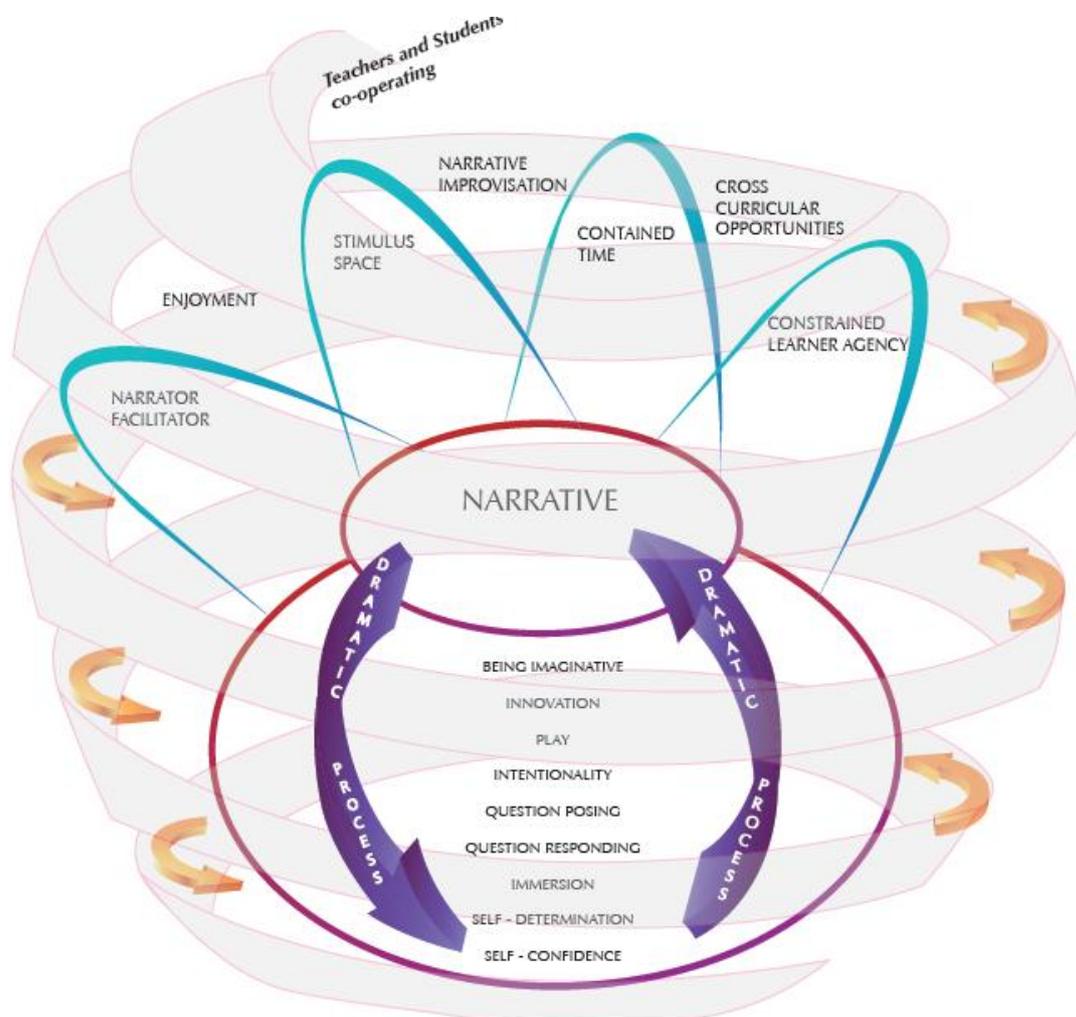
Figure 23: Pedagogies for nurturing possibility thinking and the museum affordances

The museum context was found to be powerful in enhancing children's PT, and the affordances that it can provide to the teachers appeared to have links with the creative pedagogies that were used inside the observed classrooms. Due to the frame of the project and the museum environment, children seemed to feel safe to try possibilities, experiment, explore and finally make their own choices after a discovery process. This study managed to enrich the theory on PT pedagogy related to museum projects by suggesting three affordances that teachers perceive from museums in order to nurture children's PT. These affordances are the children's enjoyment, the cross-curricular opportunities and the narrative improvisations, which were identified to work together with the pedagogical features presented earlier in order to nurture children's PT (Figure 23).

The following chapter will discuss in detail the findings of this study in relation to the existing literature.

Chapter 8: Discussion

8.1. Introduction

This chapter addresses the main thematic findings that emerged from the qualitative data analysis of the existing literature. The discussion takes into account the research questions concerning the nurtured PT features, the teachers' pedagogical features used and the affordances that the teachers perceived from the museum visits. In each section, I revisit the findings regarding the research questions and discuss them in relation to previous PT work and other related literature.

8.2. The overarching thematic findings of the study

Synthesising the answers to research questions, analysis revealed three overarching thematic findings related to how primary teachers in Cyprus nurture the PT of 9-10 year old children by drawing on learning resources associated with museum visits. These overarching thematic findings are discussed here with reference to the wider literature and can be summarised as follows thematic findings for Research Question One; thematic findings for Research Question Two; and thematic findings for Research Question Three.

The first thematic findings focus on students' PT features that were nurtured when the teachers used alternative resources of learning associated with museum visits, combined with their classroom teaching. As was earlier evident, this study proposes one new PT feature and two PT features that were refined from those that already exist in the literature. The second thematic finding addresses the findings that emerged from the qualitative data analysis in relation to my second research question which was about the pedagogical approaches that the teachers used to nurture children's PT. The data analysis took into account this research question and proposes the refinement of three pedagogical features and also proposes a new pedagogy. The third thematic finding focuses on the affordances that the teachers of this

study perceive for nurturing children's PT from the learning resources associated with museum visits. As was evident, this study identified three affordances that the teachers perceived for nurturing students' PT.

These findings will be discussed in detail along with the wider literature following the same order as they were presented in each of the thematic findings chapters. This discussion links connects and contradicts what already exists in the literature by presenting the differences between this study and what had been studied in the past as well as new findings that this study offers to the field.

8.3. <u>The overarching thematic findings for Research Question One: 'What features of children's PT are nurtured?'</u>

The data analysis revealed key features in relation to the research question 'What PT features are nurtured?'. As was discussed in Chapter 5, the PT features identified were: being imaginative, play, innovation, question posing and question responding, intentionality, immersion and self-determination. A new feature is suggested, 'self-confidence'. The data of this study revealed that narrative played a foundational role in students' PT. However, risk-taking could not be seen in the data. These findings were represented in the following structure in Chapter 5:

- Narrative
- Existing Features: Being Imaginative, Innovation, Play, Question Posing and Question Responding, Intentionality, Immersion, Self-determination
- Absent Feature: Risk-taking
- The new feature this study suggests: Self Confidence

The following sections will discuss the findings of the first research question that emerged from the qualitative data analysis in relation to the existing

literature, following the same order as they were presented in the thematic findings chapter (Chapter 5).

8.3.1. <u>Narrative</u>

PT has been investigated both conceptually and empirically in early year's settings and in primary classrooms. More specifically, nine PT features were identified in earlier studies: question-posing, question-responding, self-determination, intentionality, being imaginative, play, immersion, innovation and risk-taking. However, the latest study of Cremin et al. (2013, p.135), revealed that 'narrative' plays a 'fundamental role in PT, and that reciprocal relationships exist between questioning, imagination and narrative, layered between children and adults'. Synthesising the findings of this study revealed that narrative had a really important role in PT as Cremin et al. (2013) suggested through all the cases of this study.

The analytical process of this study resulted in and identified the key features of narrative which the study of Cremin et al., (2013) revealed, which are character/s, plot, sequence of events, significance to children and emotional/aesthetic investment. Additionally, most of the analysed episodes in this PhD study were characterised as fantasy and historical narratives. Contrarily, with Cremin et al.'s (2013) study everyday narrative was not identified in the analysed episodes. This happened because the everyday narratives were 'more grounded in what is realistically possible' (Cremin et al., 2013, p. 18), something that does not reflect the context of the project as it has as a theme the Greek myths and legends. Fantasy narratives were evident in the majority of the analysed episodes of this study and historical narratives appeared fully in ten episodes. This shows that in different contexts the nuance of how narrative manifests is different, something that was not identified in the earlier study of narrative.

Engel's (1995, 2005) work, alongside Nicolopoulou's (2002) and Paley's (1990) works argued that narrative and play are often closely intertwined. Also, Engel (2005, p. 516) asserts that in both play and narrative 'children

oscillate between what is and the "what if" domains experience'. Adding to this, Cremin et al. (2013) argued that this might not be the case in older children. More specifically, Cremin et al. (2012, p.28) pointed out that 'the curriculum requirements and time pressures, particularly with older children, impact upon the playful evocation of such fictional worlds and constrain creativity'. Contrarily the findings of this study showed this is not the case in the researched older children. The findings of this study indicated that the nature of the lesson is a factor that plays an important role in the students' playful evocation of such fictional worlds. Across all the episodes, the presence and manifestation of characters and the significance of the narrative to the children was clear.

However, as far as who began the narratives are concerned, most of the times in this study they were teacher initiated and this happened because of the control that the teacher had on framing the learning process. Siraj-Blatchford et al., (2002) in their early years' work identified that narratives appeared to be extended through play, reflecting the category of adult-initiated and child-extended play. The findings of this present study revealed that children were responding to the teachers' questions/tasks by placing themselves into an 'as if context' (verbal or non-verbal) and by testing, predicting, undoing, accepting, rejecting, evaluating, compensating, and completing. This was evidenced also through a range of different learning activities in all the cases. Students' narrative was evidenced through their participation into a role-playing activity through which they put themselves into specific characters, into plots with sequence and significance. This shows that even though the teacher was framing and leading the learning process and she/he had the control, students' narrative was strongly identified.

Analysis highlighted that narrative was constructed individually, collaboratively or communally across all the episodes. This finding agreed with the findings of Cremin et al. (2013). However, this statement was also identified from earlier studies. Chappell (2008) drew distinctions between collaborative and communal creativity on the basis of empirical studies of dance. Also, this links with other studies which reveal the contribution of peer collaboration in the context of creativity (John-Steiner, 2000; Vass, 2007; Rojas-Drummond,

Albarran and Littlenton, 2008). Craft et al. (2012a) in their earlier study identified that adults and children played together, something that had not been examined in earlier studies on PT. Adding to this Cremin et al. (2013) and also the findings of this current study identified that the narratives were constructed and co-constructed in unique combinations by children and teachers. This study unpacking further the teachers' role, added that the teacher played an important role in students' narrative as he/she was the one who initiated and involved the students in the narrative. However this will be discussed in detail later, in the section of 'Narrator Facilitator' (Section 8.4.5.).

As was mentioned earlier, the data of this study revealed once again the foundational role of narrative for nurturing students' PT as the earlier studies (Cremin et al., 2013) did. Nevertheless, the data highlighted also that all the PT features were interwoven with narrative, contrarily with what Cremin et al., (2013) highlighted in their study. Cremin et al. (2013) identified the reciprocal relationships between questioning, imagination and narrative. This PhD study argues that imagination was woven into question responding, question posing (to a lesser extent), and play that ensued from the immersion, self-determination and intentionality, and together all these PT features shaped and drove the narrative across the episodes. This dynamic interplay between all the PT features and narrative in and through the possibility spaces created by the teacher suggests a new set of relationships. It reveals that narrative plays a more central role in the nurturing of PT inside and outside the classroom lessons than had been formerly realised.

It was evident that, the students were creating stories and plots by being imaginative and playful with ideas and concepts. It was observed that they were developing invented stories/scenarios/plots going beyond what is possible in reality from the teachers' initiated attempt. They were creating magically non-human characters for their stories with the nature of a narrative to be historical or fantasy. This indicates that even where the teachers appear to have the initial control of the narrative, as was mentioned previously, there is still space for students to generate their own possibilities. As a result this might offer a response to the question of how PT can be possible in such a

controlled context in contrast to the much more student-led context in which PT was originally studied.

This study constitutes an important step beyond what had been previously identified as regards the PT features and their relationship with narrative as a central dimension. It reveals that narrative plays a central role in this age group of students towards the aim of nurturing PT and creativity in primary classrooms. The dynamic interplay between all the PT features and narrative and into the possibility spaces created from the teachers were identified and highlighted for the first time.

8.3.2. Existing Features: Being imaginative, Play and Innovation

This study focusing on PT features reinforced three of the features already documented in the earlier work of Burnard et al., (2006). Burnard et al, (2006, p.5) identified eight features of PT among which were the features of being imaginative, innovation and play. Craft et al., (2012a) in their study which focused on what characteristics of PT manifest in the learning engagement of children aged 9-11 in the classroom setting identified a range of relative strengths for these features. More specifically, students being imaginative and playing were strongly evidenced in the South-West site and medium evidenced in East Anglia site. The feature of innovation in the study of Craft et al (2012a) was evident to a medium degree. The analytical process of this PhD study resulted in finding that these three features were strongly evidenced in all the analysed episodes. This section discusses these three features together because of the common episodes and the relationships between them that were identified.

The observed children of this study manifested verbal forms of imagination combining spontaneous expressions with intentional actions. The children were identified to be in an 'as if' space in their imaginatively co-created worlds. Vygotsky (2004), in his work on imagination and creativity in childhood, argued that imagination can be defined as the ability of the human

brain to combine elements, but create new images or actions for the future. According to him, this was as the basis of every creative activity. The findings of my study are consistent with this conceptualisation of imagination as a fundamental feature of PT and every day creativity, echoing the results of other PT studies (Burnard et al., 2006; Chappell et al., 2008; Craft et al. 2012a, 2012b; Cremin et al., 2006, Cremin et al., 2013).

As with imagination, play has many different interpretations, providing a dilemma when attempting to study it. Craft originally conceptualised the notion of play as 'combinatory play' (Craft, 1999, p.146), and with the suggestion of 'play… with combinations' (Craft, 2001, p.58). The notion of play is 'extremely wide' (Craft, 2002, p.115) and 'infinitely varied and complex' (Wood & Attfield, 1996, p.4). Craft suggests that 'play which has a strong imitative, intellectual, convergent or neutral flavor seems to foster less creativity than experimental play' (Craft, 1999, p.146), suggesting that a 'type' of play is important to PT. The findings of my study are consistent with the findings of earlier studies on PT as far as the notion of play is concerned. However, it must be acknowledged that this PhD study was conducted with older children compared with earlier studies. According to Vandenberg (1998, p.302) 'play in preschool years can be about anything'. The findings of this study taking into consideration the age of the sample (9-10 years old) observed play during extended periods, that the children allowed ideas to develop and combined being in an 'as if' space like Burnard et al. (2006) suggest in their study. The students of this study were often highly engaged in their playfulness, engaging closely with one another, imagining many scenes, encountering and solving diverse problems.

The feature of play was strongly evident across the data alongside being imaginative. These two features together led to innovative ideas, thoughts and outcomes. It was observed that the students were being imaginative, playful and open to creating innovative narrative concepts. It is important to note that the documentation of innovation was difficult because of the nature of what is considered to be an innovative outcome. Innovation was defined for this study as unusual connection-making between ideas and actions in the learning process. This was found most prominently along side with the features of

being imaginative and playful because the innovative ideas were observed most of the times during the group work activities. Echoing the results of previous PT studies (Chappell et al., 2008; Craft et al., 2012a, 2012b) innovation in this study is considered as a PT outcome.

There is great range of literature suggesting the importance of imagination and play in creativity. Wood and Attfield (1996, p.8), for example, suggest that 'playfulness and creativity are inextricably linked', while Duffy suggests that creativity and imagination are clearly connected' (Duffy, 1998, p.20). Similarly, there is much literature suggesting links between imagination and play. The NACCCE report (1999) describes the importance of 'imaginative play' in creativity, thus linking imagination and play. Given this and the previous discussions of the features this study suggests that being imaginative and playful lead to innovative results. As a result these three features have strong relationships with each other and considered to be extremely important PT features.

8.3.3. <u>Existing Features: Question Posing and Question Responding</u>

Question posing and question responding were identified as PT features in the earlier study of Burnard et al., (2006). However, a later stage research is focusing further on students question posing and question responding identified and unpacked further these two features. Chappell et al. (2008) identified three dimensions to question posing: question framing, question degree and question modality. Several categories of question responding were identified: testing; predicting; accepting; rejecting; evaluating; compensating; completing; and repeating (Chappell et al., 2008). The data analysis of this PhD study identified that question posing was not as strongly evident as it had been identified in earlier studies of PT. This will be discussed in detail in this section.

Craft (2000, p.5) argues that PT 'is about posing lots of questions'. She also suggests that 'children enter schools and other learning institutions [posing

questions] naturally' (Craft, 1999, p.145). Craft's work repeatedly emphasises the importance and centrality of posing questions, with numerous references to posing questions as, for example, a 'necessary quality of possibility thinking' (Craft, 2001, p.58), and as the generator or 'operator' of PT (Craft, 2002, p.113). However, this was not the case in the present study. Children's question-posing was not documented to such an extent. In articulating the findings of this current study, student's question posing was identified to a medium degree while student's question responding was strongly evidenced. The study of Chappell et al., (2008) in which question posing emerged as the dominant feature driving the PT process comes in contrast with the findings of this study. This may reflect the teacher's control during the learning procedure.

It is important to note that, the relatively infrequent coding of question posing does not necessarily mean that it was not important in this context. Question posing has been previously analysed as a key driver of PT not because it was more common but because of the potency of asking questions as part of the PT process (Chappell et al., 2008); PT has been especially seen to be driven by the posing of the question 'what if?' in multiple ways and contexts, together with perspective-taking, or 'as if' thinking (Cremin, Chappell, & Craft, 2013). In my study children's question posing was identified in a few episodes during group work discussions; this was documented in 'what if' questions and 'as if' questions.

The quotes shows that the teacher's leading questions had great importance for the students groups to start creating scenarios, exploring different possibilities and for asking further questions driven by their imagination and curiosity. The analysed data agreed that the posing of the question 'What if?' in a variety of ways appears to be the most important factor. These may be described as generative questions that may themselves lead to more questions (Craft, 2000). In this way, the posed questions from the teacher generated a number of possibilities for the students. On a more cognitive level, posing questions within the context of PT involved the teacher as 'moving' along the continuum of questioning from asking the concrete question 'What is this and what does this do?' to the abstract question 'What can you do with

this?'. The children responded to the teachers' questions making 'what if' hypotheses, building upon previous verbal and non-verbal contributions, negotiating, clarifying, reasoning and sometimes managing to solve collaboratively-found problems through enactment. As a result, question responding was prominent during all the episodes in which the children explored issues more, usually in group work setting or classroom discussions.

Overall, the analysis brought out commonalities across the cases in terms of students' question posing and responding. What the current study reveals is that students' question posing was not as strongly evidenced as the question responding. This may reflect the teachers' control over the nature of the task in each case; as this was the teachers' agenda, the children were undertaking their creative work on the teachers' terms.

8.3.4. <u>Existing Feature: Intentionality</u>

An additional feature that was strongly evidenced in all the cases was students' intentionality to the task. Previous studies that had taken place describe intentionality as powerful intentional interaction/behaviour into a learning environment by having a clear goal (Craft et al., 2012a, pp. 9-10). The feature of intentionality was also strongly evidence in both sites in Craft et al.'s (2012a) study. It was apparent from the data that students' intentionality was evidenced both verbally and non-verbally (through expressions, gesture and body language).

This study defines intentionality as verbal or non-verbal interaction to a task and with each other by having a clear goal. The feature was prominent in all the observed episodes, because the children attempted to be involved in classroom discussion or to present a scene to their classmates and their teacher. However, a recent PT study (Craft et al., 2012a) with children aged 9-11 considered intentional action as an outcome of the PT process. The findings of this study categorised intentionality as one of the important features of PT in this study and agreed with the findings of earlier studies. However, what was important to recognise in the data was that children acting

intentionally, whether verbally or non-verbally, worked out possibilities in a creative process of learning.

The data of this study also provides evidence that the nature of the learning activity played a key role in students' intentionality action or behaviour in the classroom or in the museum environment, something that was not mentioned from any earlier study on PT. It was observed that, by having contained time, intentional activities which are rooted in the teacher's teaching process can support children's PT throughout the day. This happened because the students were focused for a contained time into an activity and as a result their intentionality was in the maximum and consequently their inspiration of ideas was increased. This will be discussed in detail into the following section of the pedagogical features.

These empirical insights expand further the features of intentional action and intentionality, expanding the PT work so far. What was important to recognise in the data was that children acting intentionally worked out possibilities in a creative process of learning, and so the feature of intentionality comprised one of the major PT features in the study.

8.3.5. <u>Existing Feature: Immersion</u>

The analysed data of this study revealed that the term of immersion as it is evident in previous studies was evidenced with the same extend in this study. Earlier studies on PT (Buranrd et al., 2006, p. 5) identified immersion when the children were deeply immersed in a loving environment. Craft et al. (2012a) observed that the feature of immersion was evident in medium/strong range in each of the site investigated. This study unpacked and explored further the feature of immersion and identified several characteristics under this feature. This study revealed that the students' immersion involved a blend of different characteristics like intellectual, emotional, behavioral and physical engagement.

The students were active participants by exploring and playing with different ideas assumptions and possibilities collaboratively, communally or individually by accepting, adding or rejecting concepts during this procedure. Data suggested that through the procedure of immersion students were intrinsically motivated by curiosity, interest, and enjoyment about the learning activity. These findings further unpick and develop this feature than earlier studies on PT (Burnard et al., 2006; Craft et al. 2012a, 2012b; Chappell et al., 2008; Cremin et al., 2006, Cremin et al., 2013) had brought to the surface.

It must be acknowledged that this study investigated 9-10 years old students while earlier studies on PT investigated younger children (Burnard et al., 2006; Chappell et al., 2008; Craft et al. 2012a; Cremin et al., 2006, Cremin et al., 2013). This fact can lead us to the understanding that each age group has a different type of immersion. The students this study observed were older and as a result there was a need to be engaged not only with the learning activity but also with each other and with the wider classroom environment in order to fulfill the learning task. However, it will be very interesting if we can also investigate different age groups and discipline areas in order to understand better the feature of immersion in each age group.

The general conclusion that comes out is that for the purposes of this study the existed feature of immersion includes different type of engagement reflecting the needs of the researched students. This study explored further the feature of immersion and identified that students were engaging with the task as well as with each other. This finding contributes to the further development of this feature beyond what had been previously identified in the research of PT features.

8.3.6. <u>Existing Feature: Self-determination</u>

Previous studies on PT argued that self-determination was evidenced when the students showed independence in decision making, and self-directed/self-chosen actions which had valued contributions (Cremin et al., 2006). Teachers, in those cases, encouraged learning from experience as both

empowering and generative, enabling children to move with confidence into original and creative spaces (Cremin et al., 2006). Craft et al. (2012a) during their earlier study observed that the feature of self-determination was strongly evident in both sites. Contrarily, in this study it was observed that the students' investigations and actions were framed by the teacher rather than being driven by child-initiated exploration. It was observed that the children had self-directed and self-chosen actions, independence in decision making and confidence to express their thoughts and ideas in the context, boundaries and the task that the teacher had formed for them. As a result the feature of self-determination identified to be slightly different as it was described by earlier studies on PT.

Ryan and Deci (2000) argued that self-determination implies intrinsic motivation behind one's choices and decision-making; an active attempt to transform an extrinsic motive into personally endorsed motives. The findings of my study provide evidence on how extrinsic motives stimulated by the teacher through questioning, provocative behaviour and affirmative feedback, were becoming intrinsic to the child. This process of internalisation reinforces the socio-constructivist character of PT suggesting that self-determination can be nurtured through co-determination of decisions with the teacher and classmates. This argument is in tune with Craft's (2000) assertion that creativity is self-working in relationship with self, others and the domain and that self-actualisation occurs in relationships when being creative.

This study may also argue that when the students are under constrained learning activities they have more chances to promote innovative and creative outcomes. This happens because the students start their experimentations base with specific tools and then with the freedom given by their teacher can be inspired and led to innovative outcomes. These kind of constrained activities in this age group (ages 9-10) give them the opportunity to experiment following their ideas by adding new concepts to existing ones given by the teacher.

These empirical insights expand further the features of self-determination as it was evident in earlier studies on PT. The findings of this study refine and

expand our understanding about the feature of self-determination as it was identified to have a slightly constrained character. However, it will be interesting to investigate this feature further by taking into consideration different age groups of students in order to see how their self-determination is shaped.

8.3.7. <u>Absent Feature: Risk-taking</u>

The feature of risk-taking seemed to be absent, or maybe it could not be observed. This reflected the earlier empirical work with children in PT phase 1 and phase 2, although a later study (Craft et al., 2011) has identified the feature of risk-taking in child-initiated play. The absence of this feature was also evident in Craft et al.'s (2012a) study which investigated the same age group of students as the current study.

There are several explanations about the absence of risk-taking from the PT features. According to Craft et al., (2012a), 'in the case of these children age 9-11, the absence of risk-taking may reflect the teacher control over the nature of the task in each case; as this was the teacher's agenda, the children were undertaking their PT on the teacher's terms'. It may also be a possibility of acceptance within these classrooms where the teacher's framing of creative work was not challenged by the children. This could also be a possible explanation for the absence of this feature in this study. An additional possible explanation is the different age group that this study investigated compared with earlier studies and as a result this may reflect the different learning needs of this student context and ways of generating ideas. However, the most likely explanation for the absence of risk-taking was the identification of the new feature that this study proposes (the feature of self-confidence). The identification of this feature seems to dislocate the characteristics of the risk-taking among the features that the observed students appear to have. This new feature will be discussed in detail through the following section.

Nevertheless, the absence of risk-taking does raise the question of whether it is actually necessary to PT as Craft et al. (2012a) also argues. Risk-taking was only occasionally documented, though it was not absent as in Craft et al., (2012a), that examined 9-11 year olds in two UK sites during science, mathematics and arts-based tasks. Risk-taking was totally absent in this current study. However, PT can occur without risk-taking as the data of this study revealed, but it must be acknowledged that if someone take risks then it may be more possible to be innovative.

8.3.8. <u>The new Feature this study suggests: Self-Confidence</u>

The findings of this study further unpicking PT, suggests a new feature. This new feature is 'self-confidence' and has not been mentioned in earlier studies of PT. However, a number of studies have been carried out over recent years into the educational field link between self-confidence and creativity.

Many authors and studies have looked at the characteristics of creative children and found them to have: self-confidence, imagination and perseverance in the face of obstacles, whereas fear and weakness can drive creativity away or make it more difficult to find. It is interesting to note that, when other researchers focussed on the personality variables identified in childhood creativity, that self-confidence was among the characteristics of a creative people. For example, Barron and Harrington (1981, p.453) concluded their section on personality with the following:

> 'The empirical work of the past 15 years on the personality characteristics of creative people brought few surprises. In general, a fairly stable set of core characteristics (e.g. high valuation of aesthetic qualities in experience, broad interests, attraction to complexity, high energy, independence of judgment, autonomy, intuition, self-confidence, ability to resolve antinomies or to accommodate apparently opposite or conflicting traits in one's self-concept, and, finally, a firm sense of self as "creative") continued to emerge

as correlates of creative achievement and activity
in many domains.'

(Barron & Harrington, 1981, p.453)

Kimbell et al. (1991) found that confidence is an important contributor to success. In Fryer's (1996) research, which involved 1028 teachers, concluded: 'Just about all the staff said that they thought that building children's confidence was crucial to the development of creativity'. There can also be a self-fulfilling prophecy effect according to a social work lecturer: 'if you tell people they are creative, they are more likely to be creative' (Fryer, 1996, p. 82). The same beliefs were aired by the teachers of this study. The findings obtained when students feel good about themselves are that they are much more likely to be imaginative, explore and play with ideas and create unique and innovative contexts. This nurtures their PT.

Even though the above studies are relatively old, they show that self-confidence was well established as one of the important features for creativity. There is a well-established link between self-confidence and PT in this study which teachers recognised and attempted to promote. Thus, taking into account the analysed data and also the notion that PT is the heart of creativity according to Craft (2001, 2002), self-confidence can be considered as an additional PT feature. The data revealed from the findings that the students by being in a team where they feel security, trust and well-guided were observed to be self-confident and to develop and extend their ideas without thinking about the factor of failure. It was observed that when students feel good about themselves, they are much more likely to be imaginative, explore and play with ideas and create unique and innovative contexts. These were the reasons why the feature of risk-taking was exposed from this new feature.

Self-confidence is considered to be an important characteristic of the children in the observed cases. Abraham Maslow categorised self-confidence as one of the basic human motivations. In his concept of the hierarchy of needs, esteem comes near the top. First comes physical needs, such as food and sleep, then security or safety needs, next social needs, meaning love and affection from others, followed by esteem needs, reflection of personal worth

and accomplishment, followed only by self-actualisation, where one can finally fulfill their full potential (Maslow, 1987). Based on this hierarchy of needs, a child's level of self-confidence is a good way to determine the level of success for being more creative. It is clear that one can look at self-esteem in many lights and under multiple contexts. The current study focused on self-confidence as one of the features of PT. In considering the role of self-confidence and how features interrelate with the PT, the data analysis focused further on looking for relationships between PT features. All the identified PT features were highlighted by the data analysis as interwoven with the feature of self-confidence.

It was evident for the first time in the studies of PT that as the students' self-confidence grows so does their ability to think and share increasingly creative, innovative and unique ideas. The teacher plays a key role in this procedure and must help to start the process. If this first idea is crushed, so is the possibility of a student's imaginative growth and creative development. If it is heard then begins the possibility thinking procedure which is potentially the beginning of new concepts and innovation.

8.3.9. <u>Section Summary</u>

This section focused on children's PT features that were manifest in the observed classroom and museum visit lessons, which were linked and contrasted with the existing literature, developing further what was known about PT features. This study extended previous work on PT as far as the features are concerned in three ways, firstly by connecting further the role of narrative with all the PT features, secondly by investigating further the existing PT features, and thirdly by revealing a new feature which extends our understanding about the absence of one of the features.

The findings of this study as well as the first part of the model that this study proposed (Figure 19), compared with existing models proposed by the literature ,contribute to the field in a number of ways. Firstly, the dominant role

of narrative as a feature in nurturing students' PT was identified for this age group of students and was one of the major features identified throughout all the project phases. Thus, narrative through a dramatic process inspired by the museum interactivity nurtured students' PT. This study further connected the feature of narrative with the other PT features compared to the earlier studies of PT through the procedure mentioned above. As a result this model provides an image of narrative to be working in complex combination with all PT features with the dramatic process being the driving force of this process. This provides us with an understanding of the dynamics of the narrative as collaborative within the PT features, and in a later stage, within the wider process of nurturing PT.
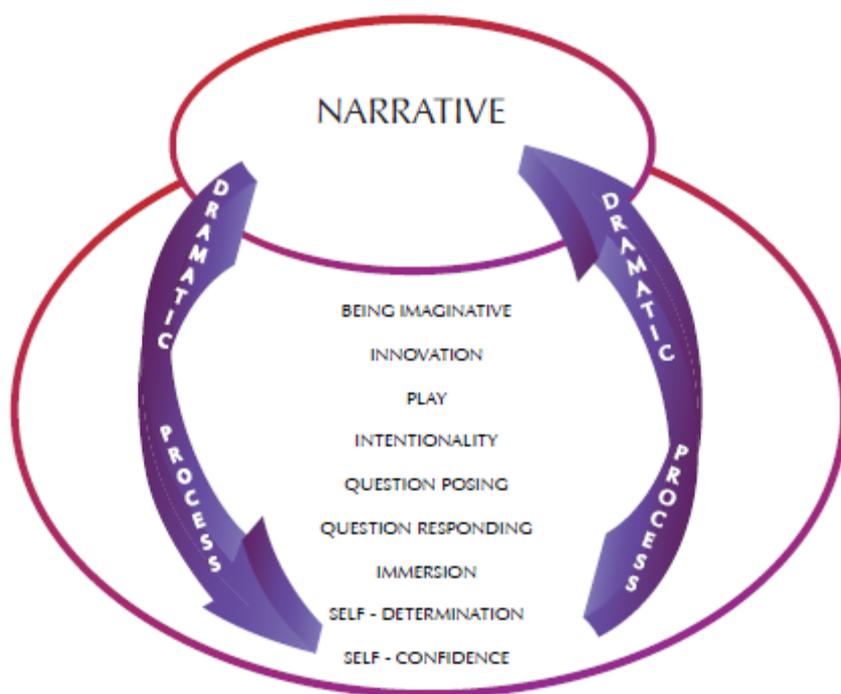
Figure 19: Narrative and Possibility Thinking features

Secondly, self-confidence was the new feature identified and the reason why risk-taking was absent. This was among the features of a creative person identified in the past and now the data of this study connected it also with PT, developing further our understanding about the PT features of this age group

of students. Self-confidence allows students to think, explore and review many options, and be imaginative and playful without the fear and the consequences of failure. This observation led to one of the major explanations about the absence of the feature of risk-taking in this study.

Thirdly, the absence of risk-taking reflected that this was not an important feature for the observed age group of students in order that PT be nurtured. The children were observed to have self-esteem and confidence in themselves, and as a result their actions were not considered to be risk-taking. The children were creative and their PT was nurtured without the need to take risks. However, this may not reflect the needs of other age groups of students in different contexts.

The teachers' control over the learning activities was identified. Nevertheless, this control over the narrative and also through all the children's actions and behaviours did not stop the children generating their own possibilities and for PT to be nurtured. Teachers' control and engagement were observed to inspire children's explorations and not lead their experimentations down the paths that the teachers were expecting. This was something new that this study comes to add into the bigger picture of PT research. This will be explained and discussed further in the next section.

In conclusion, this study argues that PT features vary in depth and extent according to the age group of students as well as the context in which they are participating. In the next section, the findings of the research study in relation to Research Question Two will be presented, which is about the pedagogical approaches that the teachers used in order to foster children's PT.

8.4. The overarching thematic findings for Research Question Two: 'What pedagogical approaches do the teachers use to nurture children's PT?'

The data analysis of this study revealed that three of the existing pedagogies on PT needed to be refined for the needs of this study. The pedagogy of 'Time' was refined to 'Contained time', the pedagogy of 'Space' to 'Stimulus space' and the pedagogical feature of 'Learner agency' was unpacked further to include a subcategory named as 'Constrained learner agency'. The pedagogy of standing back seemed to be absent throughout these eight cases. A new pedagogy is also suggested from the analysis of the data of this study. This is the pedagogical feature of 'Narrator Facilitator'.

The following sections will present the findings of the second research question that emerged from the qualitative data analysis in relation to the existing literature, following the same order as they were presented in the thematic findings in Chapter 6. This discussion will allow connections and contradictions with what already existed in the literature as far as the pedagogical features identified in this study are concerned.

8.4.1. Pedagogical feature this study suggests: Contained time

Time on task is an important variable in schools that directly relates to students' learning and achievement (Horn, 2007). However, meaningful time on task is a misnomer because it is not exactly about time; learning in schools is about completing tasks that directly relate to the curriculum goals. These lesson tasks tend to be either open-ended, such as developing critical thinking skills or improving composition skills, or alternatively are tightly focused, such as covering content on a high-stakes state-wide test. The relationship between time and learning has been investigated a lot in the educational field (Clariana, 1997; Horn, 2007; McMurrer, 2007). This study investigated further

the pedagogical feature of time, not generally in learning but focusing further on how this pedagogical feature nurtures students' PT.

The findings of this PhD study brought to the surface a different understanding about the pedagogical feature of time and how it can be used inside and outside the classroom for nurturing students' PT. The current study argues that the use of strict time learning activities can inspire students' active engagement and take-up of new ideas and concepts. Questions of 'How long will an activity take?' or 'Should the teachers allow each activity to go on until students run out of steam?' are raised. This study argues that the notion of time must be programmatised from each teacher according to the needs of the classroom.

However, this finding comes in contrast with what earlier studies on PT suggest. Cremin et al (2006, p.9), argued that time was flexibly handled and as students' ideas and explorations were expanded consequently the time was also expanded. More specifically, as they comment, 'The rhythm of learning was governed by engagement rather than the clock' (Cremin et al., 2006, p.9). Earlier studies on PT (Cremin et al, 2006, p.115) argued that 'the provision of stretchy time encouraged children's full immersion in extended playful activities'. Similarly, Craft et al. (2012b) noted that by allowing time, the children have the opportunity to authentically respond to the provocations. Generally speaking the findings of previous studies support that allowing time and space to the children to drive their learning according to their needs can nurture their PT. Thus, this PhD study argues that the notion of Time can be considered as a super category which includes the two subcategories which are: the flexible time as it was described by earlier studies on PT (Cremin et al., 2006) and the 'contained time' as it is described from the findings of this PhD thesis.

The pedagogical feature of 'Contained time' constitutes an important step beyond what had been previously identified regarding not only the characteristics of the pedagogical feature of Time but also regarding how this pedagogical feature was investigated. Firstly, the earlier studies on PT always explored and discussed the pedagogical feature of 'Time' along with the

feature of 'Space'. More specifically as was mentioned earlier, Cremin et al (2006) argued that the observed cases prioritised stretching time and enriching space. This study unpacked and developed further the pedagogy of Time identifying that for this age group of students this pedagogy was used differently. Secondly, this finding is considered to be important for the study of pedagogical features because of the age group that the study was focused on. Earlier studies on PT were focused on younger students. The students of this study are older (age 9-10) and as a result have different needs from younger students in order to nurture their PT. The only study that focussed on a similar age group of students was the Craft et al (2012a) study. However, the focus of Craft et al. (2012a) was on answering the question, 'What characterises PT as manifest in the learning engagement of children aged 9-11?' and did not focus on pedagogical features as this study does.

Building on the points above, the teacher participants of this study insisted on the powerful effect of contained time learning activities. They argue that this strategy, combined with the quick switching of the activities, can promote students' PT. Consequently, the provision of contained time in each of the settings of this study was one of the key teaching strategies that the teachers used for nurturing their students' PT not only through the classroom teaching but also through the museum visit. It is important to note that this study does not give a specific time period in which the learning activities must take place as only the teacher can identify exactly how much time is needed inside her/his classroom, according to the needs of the students. However, this study argues that time must be framed and handled by the teachers.

8.4.2. <u>Refined Pedagogy this study suggests: Stimulus space</u>

The pedagogical feature of space can play an important role in nurturing students' PT especially in this age group. According to previous studies on PT, 'children were offered open access to a wide range of learning resources and broad choices over what and how to engage' (Cremin et al., 2006, p. 115). The teachers, by having the role of 'negotiative gatekeeping', offered the opportunity to their students to be involved and play through their own

scenarios and offered children the ownership of ideas (Craft et al, 2012b, p.57). Findings of this study reveal that the feature of space is much broader and includes several perspectives that were not identified in earlier studies. More specifically, regarding the data of this study by the pedagogical feature of space means the classroom space and the out-of-the-classroom space which a teacher can offer to the children. These spaces must offer the students a range of physical, emotional and learning facilities for nurturing students' PT.   These were environments of possibilities, were packed with ideas and experiences, resources and choices, as well as time for emotional space. Thus, for the needs of this study it was refined as 'stimulus space'.

The stimulus space further expanded our understanding about the notion of space, as it must provide to the students a range of facilities for nurturing their PT, according to the evidence in this study. In Reggio Emilia, a northern Italian town whose early childhood programmes are internationally acclaimed, classrooms feature displays of children's work, collections of 'found' objects, ample space for supplies (all aesthetically arranged), and clearly designated spaces for large- and small-group activities. Reggio Emilia educators stress the need for a classroom environment that informs and engages the child. They consider the physical environment to be 'another teacher' and in the sense that it can motivate children, enhance learning, and reduce behavioural problems, environment really is an extra teacher (Reggio Emilia, 2013). This statement agreed with the findings of this study about the notion of space and how important it can be for the students to be more creative thinkers and as a result for their PT to be nurtured. However, it must be acknowledged that this study does not neglect the important role of the teacher and the fact that the teacher is the one that according to the findings of this study drives and leads students' explorations and experimentations.

Additionally, another important feature that a stimulus space has according to the findings of this study is the 'emotional facilities' that it can offer to the students for nurturing their PT. During lessons observations the teachers were moving around the classroom during instructional sessions and quiet work periods, talking to individuals and groups of students, using personal contact to expand understanding of new concepts and skills, provide immediate,

specific feedback on positive behaviours, establish eye contact with students, clarify instructions and provide the students with support and encouragement for having the ownership of their ideas. Khine and Chiew (2001) argue that the 'classroom learning environment refers to a space or a place where learners and teachers interact with each other and use a variety of tools and information resources in their pursuit of learning activities'. This statement reflects the data of this study as the teachers were observed to interact and support their students in order to make them feel safe and happy to participate in every learning activity that the teacher introduced. This angle of 'emotional facilities' has not been identified in earlier studies of PT. The data of this current study revealed how important this angle is for nurturing students' PT and developing further the notion of space as it was identified and described in the past.

The third aspect of the stimulus space identified is the learning facilities. This feature refers to the open access to a wide range of learning activities and broad choices on how to engage. Jeffrey and Woods (2003) have shown that learning facilities can affect every aspect of the environment, which is stimulating, but is also a valuable teaching resource. Active modes of learning and problem solving approaches which include independent investigation require accessible resources of various kinds, so the richer and more multi-facetted range a teacher can offer the better. This supports genuine choice, speculation and experimentation, happy accidents and flexibility (Burke & Grosvenor, 2003). This was confirmed through the classroom observations where teachers provided different types of learning activities and resources, with the students to have the ownership in exploring and developing their ideas. This aspect of stimulus space links with the terminology of space as it was given in the earlier studies on PT (Craft et al, 2012b; Cremin et al., 2006) in which the students were offered a wide range of resources and choices to engage, play through their own scenarios, and were offered their ownership of ideas.

Xanthakou (2007) urges teachers to forget about the way things have always been done and to visit museums, libraries, other schools, and colleagues' classrooms to identify different ways of organising learning space. This is

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what this current study suggests and supports from the analysed findings. The term of 'space' needed to be refined as 'stimulus space' as it was revealed to include several characteristics that were not identified from earlier studies of PT in the past. Thus, by the pedagogical feature of 'stimulus space' it developed further and added knowledge to the bigger picture of the pedagogical feature of space by bringing to the surface the important role that the environment plays for nurturing students' PT so it can be considered as another teacher inside or outside the classroom. Nevertheless, this as it was mentioned earlier does not mean that the teachers' role has not a great importance during the learning procedure, as this study explored further the teachers' role.

8.4.3. Pedagogical feature this study suggests: Constrained Learner Agency

Regarding earlier studies on PT (Craft et al., 2012; Cremin et al., 2006) one of the pedagogies that were identified for nurturing students' PT was the profiling of learners' agency. Cremin et al. (2006) argued that the teachers created multiple opportunities 'in which the children could initiate their own activities or make their own choices within a loosely framed activity' (Cremin et al., 2006, p.114). Adding to this, Craft et al. (2012, p.57) through their study identified the fact that the teachers offered wide possibilities to the children in terms of where they might take their play but they also stressed the fact that the teachers may become involved during this procedure by leading, directing or introducing resources and ideas. However, the data of this study identified something different than what Craft et al. (2012) and Cremin et al. (2006) argued in their studies. More specifically, the classroom observations revealed that all the teachers created boundaries and framed activities through which the investigations were being driven by child-initiated exploration. As a result the pedagogical feature of Learner agency can be considered as a super category which includes the pedagogy of constrained learner agency suggested from the findings of this thesis. This, subcategory of learner agency unpacked further the pedagogical feature of Leaner Agency and introduces a

different type of learner agency that a teacher can use in order to nurture his/her students' PT.

It was interesting to note that, all the teacher participants of this study reflected and stressed the importance of having a specific control upon the learning activities. This control had to do with the age group of the observed students and not so much with the content of the lessons. According to the teachers, if this age group of students were left totally free to drive their learning then it was observed that only the high ability students were participating in the learning procedure. The low ability students were standing back, not participating at all, and letting the other students do the activity and complete the tasks for them. Thus, if the activities were framed and controlled then it was observed that all the students were involved as they find it easier to find their own role in the task. All these findings come in contrast with what the research of PT had revealed in the past. Nevertheless, it must be stressed here that the level of constraint an activity is going to have, or how constrained the learner agency is going to be is up to the teacher and the needs of the students.

However, taking into consideration the wider literature, Schwartz and Okita (2010) developed the below table (Table 19) to compare and contradict high versus low agency learning environments. The findings of this PhD study showed that the level of students' agency was approximately in the middle of the two columns presented in the below table. As a result the characteristics of a 'constrained learner agency' according to the data of this study can be summarised as follows: student centered under teacher's lead, student voice under teacher's instruction, transmission and constructivism, student's active participation, watching and doing, compulsory but with elective actions, assembly line with intent participation and medium control.

High Agency	Low Agency
Student Centered	Teacher Centered
Student Voice	Authoritarian
Constructivism	Transmission
Active	Passive
Doing	Watching
Elective	Compulsory
Intent Participation	Assembly Line
In Control	Programmed

Table 19: Learner Agency (Schwartz & Okita, 2010)

The pedagogical feature of 'constrained learners agency was strongly evidenced during the classroom and museum visit observations in Chapter 6. The findings showed that the combination of choice and control motivated the students. Deci and Ryan (1987) argue that intrinsic motivation is regulated by opportunities for choice and control. Indeed, their research demonstrates that choice and control are motivating. Thus, this study with the refinement of this features add to existing literature of PT as the children could initiate their own choices within a framed activity. The following table (Table 21) presents the two categories suggested by Schwartz and Okita (2010) and also the category of constrained learner agency proposed by this PhD thesis.

High Agency	Constrained Agency	Low Agency
Student	Student centered under teacher's lead	Teacher Centered
Centered	Student voice under teacher's instruction	Authoritarian
Student Voice	Transmission and constructivism	Transmission
Constructivism	Student's active participation	Passive
Active	Watching and doing	Watching
Doing	Compulsory but with elective actions	Compulsory
Elective		
Intent Participation	Assembly line with intent participation	Assembly Line
In Control	Medium control	Programmed

Table 20: Three types of Learner Agency

However, this pedagogical feature comes once again to develop further the pedagogical features for nurturing PT as they were decrypted and identified in the past. Observing students aged 9-10 it was evident that the teacher was the one that framed and created the learning activities, with the students to have the flexibility and the freedom to interact, explore and experiment based on their own ideas, needs and interests.

8.4.4. <u>Absent Pedagogy: Standing back</u>

A previous study on PT (Cremin et al., 2006) argued that standing back was one of the pedagogies used for nurturing students' PT. The researchers of this study (Cremin et al., 2006) decrypted that standing back was evidenced when the 'teachers positioned themselves, such as stopping and observing, and listening and noticing the nature of learners' engagement' (Cremin et al., 2006, p.113). However, the findings of this study revealed that the pedagogy of standing back was absent. The absence of this pedagogy can be linked with the refined pedagogy of 'learner agency' to 'constrained learner agency' and also with the new pedagogical feature that this study suggests, the 'Narrator Facilitator'.

Meanwhile, an earlier study of Craft et al. (2012b) argued that teachers seek to stand back and then to become involved into the classroom practice, which was seen as progressive. This was decrypted as 'meddling in the middle' (Craft et al., 2012b, p. 59).This was also evident from professional development studies by Paige-Smith and Rix (2011), Chappell and Craft (2011) and Craft (2011c). However, the findings of this study revealed that the practice of 'meddling in the middle' was evident in a slightly different way. The teachers of this study were active participants through the whole procedure of nurturing students' PT by having an interactive role through the activities. This links with what Paige-Smith and Rix (2011) mentioned that teachers can play many roles in the course and this may facilitate learning and for this study this nurtured PT. This statement reflects the teachers' role in this study as it was observed to have active participation into the learning activities for nurturing their student's PT.

Nevertheless a key question is raised: What is the role of the teacher in the context of nurturing PT? There has been little sustained analysis of the role of the teacher. In general, we have been preoccupied with the details of the content of the teaching and with the range of education strategies adopted for nurturing PT. This study explores further the teachers' role in nurturing students' PT suggesting a new perspective on the teachers' role compared to that identified in earlier studies. This study presents the teachers' active engagement during the learning process with a spiral. As can be seen in Figure 21 this spiral represents teachers' and students' co-operation and co-imagination which is considered to be vital, according to this study, for nurturing the PT. This spiral encloses the pedagogical features used as well as the PT features. These kinds of relationships are presented for the first time in PT research through this PhD study. Teacher and student were co-structuring and co-imagining together and the teacher was an active helper through the nurturing of students' PT.

It was observed that the teacher had different roles during the learning process and they were engaged without standing back or meddling in the middle as earlier studies of PT described. As the data in Chapter 6 revealed, the teacher had three roles: creating the narrative space, participating into these narrative spaces, and supporting. The data of this study revealed that the teacher by having an active role during the dramatic process inspired further students' exploration and imagination as he/she could act in the moment helping further their students'. This interaction between teacher and the learners is crucial and occurs through the dramatic process by questioning, discussing and open dialogue. However, this links further with the literature discussed in Chapter 2 where Neelands (1990, p.49) describes this as "co-authorship": "In a sense, the teacher is using role to start 'writing' the drama with the difference that in this PhD study the teacher had an active and supportive role also. However, it must be acknowledged that is a delicate balance between adult and child cooperation, as the adult's expectations have the potential to permeate the child's actions.

Instead of doing virtually all the talking, modeling and explaining themselves, teachers must encourage and expect students to do so. This highlights the

importance of the teachers' interactive role either by participating in the activities (NCTM, 1991) or by listing specific kinds of questions in order to stimulate student further exploration and experimentation (NCTM, 1991). For example, 'Does anyone else have the same answer but a different way to explain it? How did you reach that conclusion? How did you think about the problem?', and specific practices such as regularly following students' statements with 'Why?', 'What if?', 'As if?' or by asking them to explain further their thoughts. These come in agreement with the findings of this study and also as an explanation for the absence of the pedagogical feature of standing back.
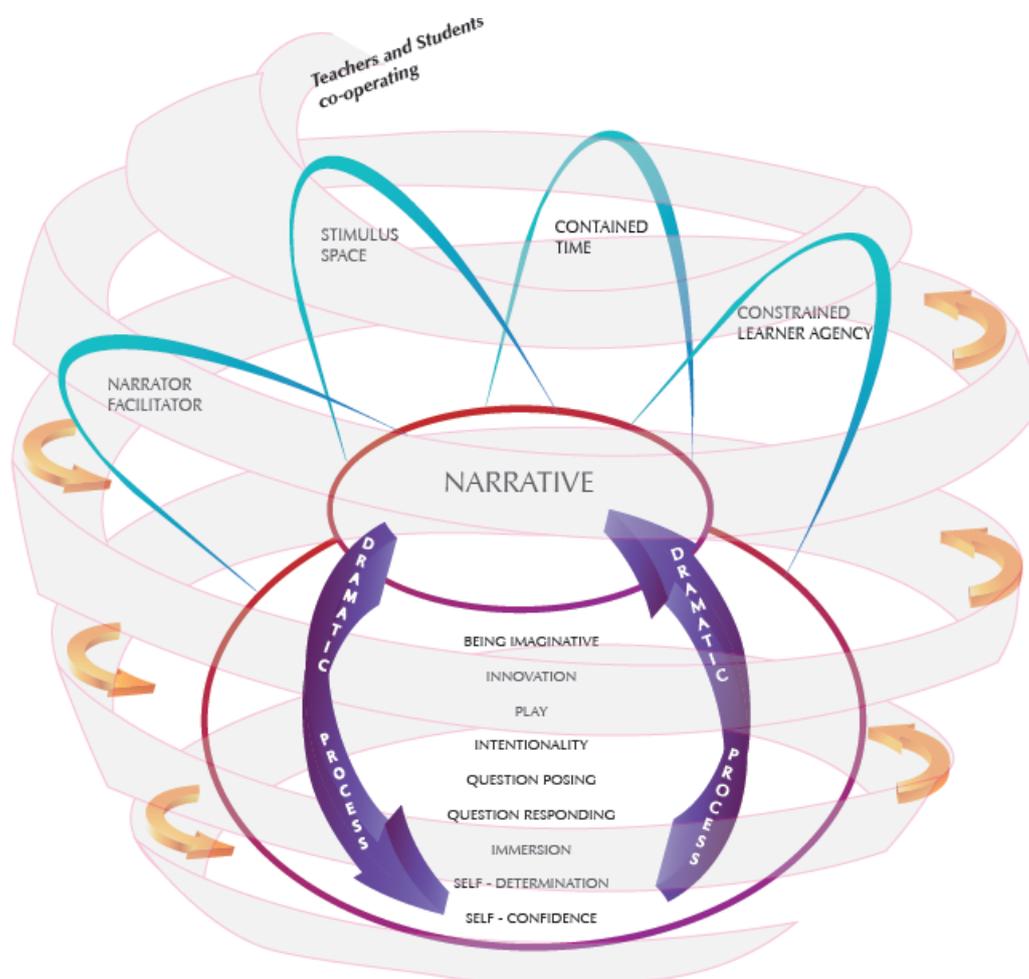
Figure 21: Pedagogy nurturing PT

It is important to note that this study does not argue that the teacher's role must be active and fully engaged all the time. This depends on the lessons and the student group. However, the data of this study revealed that the

teachers' role in these eight cases was active and fully engaged. As a result, the findings of this study come to add a different perspective of teachers' role and enrich what was identified in earlier studies.

The following section, discusses further the teachers' role under the scope of a new pedagogical feature that the findings of this PhD study revealed.

8.4.5. <u>A new pedagogy this study suggests: Narrator Facilitator</u>

The empirical work of Cremin et al. (2006), as was mentioned earlier, created a framework for identifying the PT features. These features were fostered by teacher-child interactions in an enabling context in which teachers offered children time and space, prioritised learner agency and stood back in order to observe children's work and decide when to intervene (Cremin et al., 2006). In the next phase, a study of Craft et al. (2012a) revealed a blending of individual, collaborative and communal creativity and a dynamic between teacher and student. It was observed that the teachers were stepping forward as well as standing back as the students transformed what is to what might be. The findings of the study of Craft et al. (2012a) are similar in a way with the findings of this study. Findings from lesson observations and interviews indicated that the teacher's interaction in the learning procedure played a crucial role in promoting and nurturing students' PT. However, what makes the findings of this study different from Craft et al. (2012a) is the fact that the teachers were active through the whole procedure of students' work to transform what is to what might be, without standing back at any time during the lessons. Teacher and student were co-structuring and co-imagining together and the teacher was an active helper through the nurturing of students' PT.

This study explores further the teachers' role in nurturing students' PT and suggests a new pedagogical feature. This new pedagogical feature is called 'Narrator Facilitator', and it contains two dimensions which were explained

and discussed in detail in Chapter 6 (the 'narrator' and the 'facilitator'). The dimension of narrator links with the foundational role of narrative in PT as the findings of this study revealed and as Cremin et al (2013) support in their study. The dimension of facilitator links with the teacher's role of creating learning activities through which he/she has active participation by promoting further students' thoughts. This study describes as the 'Narrator Facilitator' the teacher who creates narrative learning activities (scenario/plot) which attempt to put the students into a certain position/situation in a particular time and space in order to nurture their PT, with the teacher having active participation throughout the whole procedure. The key point here is that the teacher creates one scenario with a variety of learning activities in which the children were participating under the same role. Thus, narrative spaces were created through a dramatic process which was inspired from museum interactivity and the museum objects. However, these dynamics will be discussed in Chapter 9 where the contributions to knowledge of this study are discussed.

As was mentioned earlier, (section 7.3.1. Narrative), the data of this study revealed that narrative played a foundational role for nurturing students' PT and the teacher had active engagement in this. The students were observed to develop and invent stories/scenarios/plots going beyond what is possible in reality from the teachers' initiated attempt. Teachers and students were co-imagining and con-structuring ideas and concepts, with the children to have the freedom to develop their ideas and their investigations as they wanted. This indicated that even where teachers appear to have the initial control of the narrative there is still space for students to generate their own possibilities. This was achieved through the drama techniques and the creation of narrative spaces which the teacher invited their students' to participate. This is the response to the question of how PT can be possible in such a teacher controlled context, in contrast to the much more student-led context in which PT was originally studied.

The pedagogical feature of Narrator Facilitator revealed the three way relationship between creative teaching, teaching for creativity and creative learning which Lin (2010) describes in PT in drama in the primary school. As

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mentioned above, teachers' techniques and interactive relationships between learners help to prioritise children's ownership, engagement and autonomy. Children are encouraged to make their own decisions about their own stories in drama class; they are encouraged to engage in, to control and to contribute to their own learning, instead of "learning by authority". Also, creative learning is encouraged through the drama process which provides gaps/problems to investigate and chances to experiment, balanced with some "hands-on learning" (Zimmerman, 2004, p.3). The learning process in drama gives children autonomy over their learning, encourages children's active engagement, and at the same time involves children's creative capacities. The teacher as a Narrator Facilitator uses drama improvisations by involving also his/herself during this learning process for nurturing students' PT.

It is interesting to note that when revisiting the literature, not only on PT but also the educational literature in general on teacher's pedagogies, it was identified that the strategy of 'Simulation' has similarities with the pedagogical strategy of 'Narrator Facilitator'. The purpose of an educational simulation is to motivate the learner to engage in problem solving, hypothesis testing, experiential learning, schema construction, and development of mental models (Duffy & Cunningham, 1996; Winn & Snyder, 1996). Simulations, according to the literature, have many categories. One of them that relates to this study is the category of 'Situational simulations'. These simulations often employ role playing as a vehicle to allow students to explore different options and decision paths (Wilson & Cole, 1996). However, what make the pedagogical feature of 'Narrator Facilitator' different from 'Simulations' is the important and active role that the teacher plays for constructing the narrative and the creation of narrative learning activities (scenario/plot). These narrative scenarios lasted from the beginning until the end of the lesson with the students in roles through the whole procedure, with teacher having active participation throughout. Nevertheless, the use of simulations is a relatively new phenomenon about which research is limited. Even so there are ongoing efforts towards developing and evaluating the use of simulations to facilitate situated learning. The findings of this study unpacked further the development of this category.

Regarding all the data of this study, the general conclusion is that the teacher as a Narrator Facilitator played an important role in nurturing students' PT. The teacher as Narrator Facilitator encourages a blend of perspectives, encourages exploration and guides his/her students' narrative experimentations by being also part of their team and learning through drama ctivities. The findings constitute an important step beyond what had been previously identified by developing further our understanding of the pedagogical features for nurturing PT and more specifically about the role that the teacher has in this age group of students, something that was not explored in earlier studies on PT.

8.4.6. <u>Section Summary</u>

The findings of this study extend our understanding of how pedagogy nurtures PT by studying older children. The analysis extends previous work on PT as far as the pedagogies are concerned in three ways: firstly by revealing more about the pedagogical features already identified from earlier studies; secondly by showing how teachers were engaging in the learning process; and also in revealing that teachers' control over the learning procedure does not affect the nurturing of students' PT. This section discussed the findings of this research study in relation to Research Question Two, making connections to the literature.

The documented pedagogy was seen to be highly significant in relation to supporting children's purposeful engagement through the dramatic process in creative learning and the four pedagogical themes in evidence were thus added to the evolving conception of PT. The pedagogic themes identified as common across all the settings are contained time, stimulus space, constrained learner agency and narrator facilitator, which all nurtured the development of aspects of PT. Pedagogy nurturing PT in this study involved teachers offering children opportunities driven by provocation, involving teachers valuing constrained learners' agency, offering them contained time and stimulus spaces. But what is much clearer in this study is how teachers

were involved in this process by having the characteristics of a narrator facilitator. These four pedagogical features were identified to have different dynamics in the relationships between them as well as with the PT features. In terms of the role of pedagogical features for nurturing PT, the model proposed by this study (Figure 21) shows how the new analysis extends the previous studies in this area. The pedagogical features are bound together and at the same time invest in and help the procedure of nurturing the PT features.

These new findings offer further insight into the dynamic relationships between teachers and students and more specifically into the teachers' role during the whole procedure of nurturing PT. Teachers and students were co-imagining and co-operating through the whole procedure of nurturing and creating ideas, with the teacher in a supportive role. The teacher was not leading students' ideas and explorations but was creating space for the students for further experimentation and he/she was like the animating spirit during the students' experimentations and explorations. Teachers were observed to frame the learning environment, however, it was identified that there was still space for the students to generate their own possibilities. The teacher inspired by museum interactivity uses as his/her dominant tool the dramatic process through which the students identified the space to generate their own ideas. The data from this study revealed a new understanding of the area of PT, as the children can be creative thinkers and their PT can be nurtured even within the boundaries and the frames that their teacher creates for them.
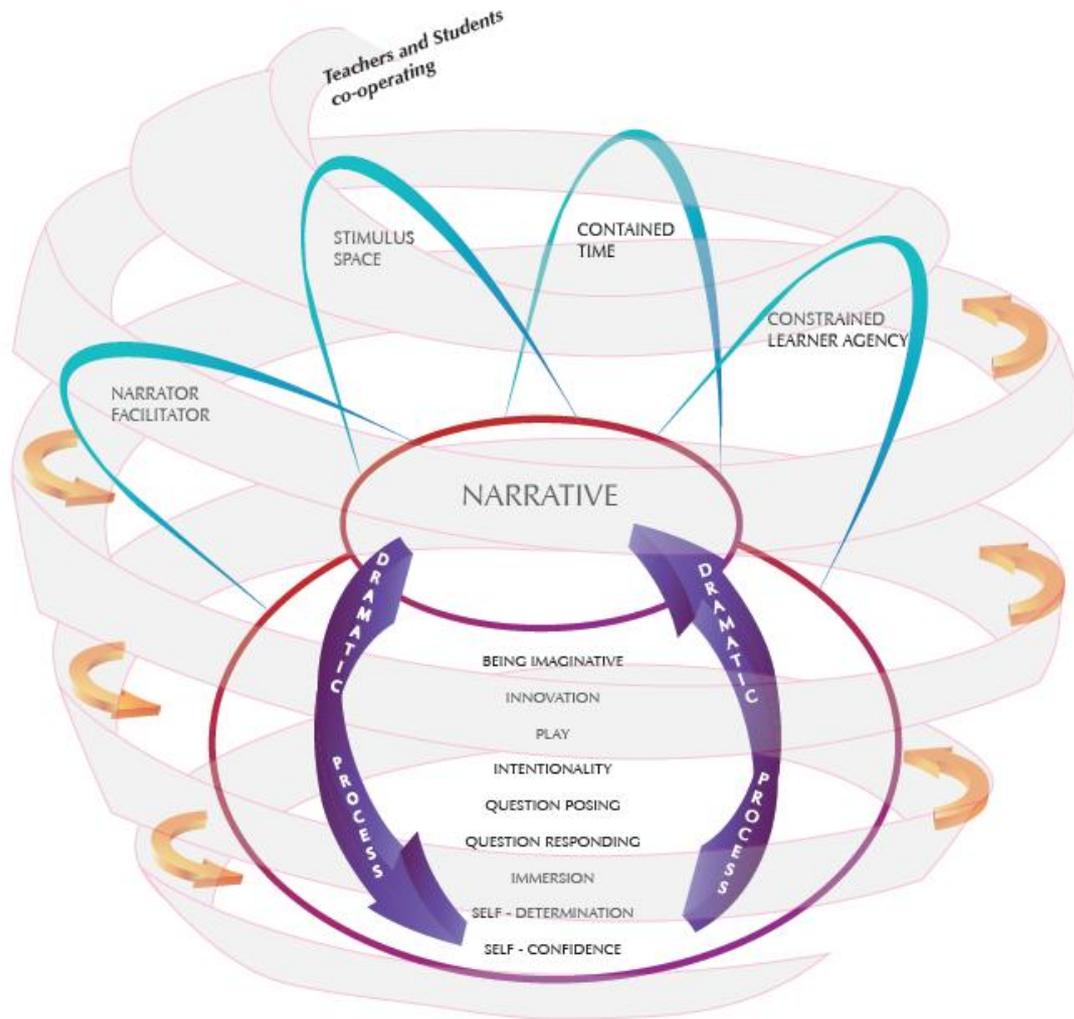
Figure 21: Pedagogy for nurturing PT

The findings of this study enrich further what has been already identified from earlier studies concerning the pedagogical features for nurturing PT. The teachers' role was investigated in depth and linked further with the important role of narrative for shaping PT. Also, the pedagogical features of time and space were developed and enrich further with several characteristics. Additionally, one important finding that this study offers to the field is that the teachers' control over the activities as well as the contained time offered to the students did not affect the PT features to be nurtured. However, it must be acknowledged that the teachers' control alter the manifestation of students' question posing as it was prioritised differently in this study contrarily with earlier studies on PT.

The next section will discuss the findings of the research study in relation to Research Question Three, which is about the affordances for nurturing children's PT that the teachers perceive to be offered by learning resources associated with museum visits.

8.5. The overarching thematic findings for Research Question Three: What affordances for nurturing children's PT do teachers perceive to be offered by learning resources associated with museum visits?

The data analysis revealed key features in relation to the research question, 'What affordances do the teachers perceive for nurturing children's PT by using alternative resource of learning associated with museum visits?'. Synthesising the findings to the research question, analysis revealed three overarching thematic findings related to the affordances that museum visits can offer to the teachers for nurturing students' PT. These overarching thematic topics can be summarised as follows: enjoyment; narrative improvisations; and cross-curricular opportunities.

The following sections presents the findings of the third research question that emerged from the qualitative data analysis in relation to the existing literature, following the same order as they were presented in the thematic findings chapter (Chapter 7). This discussion links and contradicts what is already existed in the literature as far as what affordances for nurturing children's creativity do teachers perceive to be offered by learning resources associated with museum visits. This was the case as there were not identified any literature linking PT and museum visits.

8.5.1. Enjoyment

Students' enjoyment was reported by the teachers as one of the affordances that they perceive from the museum visits compared to the daily teaching and learning curriculum. Work undertaken in the formal education sector found that teachers who balanced teaching and fun and made efforts to make

schoolwork interesting and enjoyable were better able to engage students in school learning (Martin, 2004). The students felt excited and looked forward to the lessons connected with the visits, according to the teachers, more than they did for conventional learning. The term 'enjoyment', according to the teacher participants of this study is synonymous with a range of concepts such as fun and satisfaction. Students should find their learning challenging, engaging and motivating something that was evidenced during the museum visit programme. The students in this study loved the challenges and when they found the learning process difficult still persisted to the end. This is echoed by the view of the social psychological approach that intrinsic motivation brings enjoyment and passion and supports people to keep engaging in challenges (Collins & Amabile, 2000).

Students' lack of enjoyment of learning has been mooted as a cause of multiple failures in education. However, Blunsdon et al. (2003) have reviewed research since the 1950s which has attempted to find a relationship between the two, and report inconsistent results. Some studies appear to show a high correlation between enjoyment and learning. Other studies argue that the two are antagonistic (Rieber & Noah, 2008). The present study appears to show high correlation between enjoyment and the nurturing of students' PT features. The students of this study showed high levels of engagement and participation throughout the project, which were key indicators that they were enjoying the project. There were often times when students observed in this study to continue to work into lunchtime to further develop their ideas and many students cited the project as a real highlight of their week during conversations throughout the project.

However, fun and enjoyment is one component of learning that has not been examined in the museum literature in a great deal of detail (Dierking & Griffin, 2001). Griffin (2004) found that school children visiting the Australian Museum felt that having fun just looking around and enjoying themselves didn't necessarily count as learning to them. Griffin suggested that this could be due to the tension that can exist between the perception of playing and learning among the adults accompanying the students. This current study investigated

the affordances that the teachers can perceive from the museum visit and enjoyment was one of these affordances.

More recent research in cognitive neuroscience (Damasio, 2003) and positive psychology (Fredrickson, 2001; Seligman, 2004) has suggested that simply feeling 'happy' promotes optimum conditions in both mind and body, and also ensures constructive and secure relationships. The teachers of this study stressed the importance through their interviews and reflections about enjoyment and interesting lessons for nurturing their students' PT. In addition they consider this affordance essential because it not only motivates the children's learning (Dickinson & Neelands, 2006; Stenberg, 2003), but also nurtures children's PT by exploring alternatives and daring to challenge.

A Curriculum for Excellence (Scottish Executive, 2006) argues that the learning outside the school improves: the challenge and enjoyment of learning; the breadth, depth and coherence of learning – drawing on different experiences; relevance of learning – by contextualising experiences; expression and creativity – responding imaginatively to stimulating settings. This statement agrees with the findings of the study in which enjoyment is conceived by the teacher participants as an affordance by which they can gain advantages from the museum visits for nurturing their students' PT as this study suggests. Otherwise, according to the teachers, when the students are involved in learning activities without the factor of enjoyment there is a lack of motivation and enthusiasm for the learning process and for the generation and inspiration of new ideas and concepts. The affordance of enjoyment appeared to play an important role in nurturing students' capacity to imagine alternatives, generate new ideas and consider possibilities in immersive contexts.

8.5.2. <u>Narrative Improvisation</u>

Regarding the findings of this study an additional affordance that the teachers perceived from the museum visit programme is the teaching technique of 'Narrative Improvisation'. The Narrative Improvisation was observed when

the students inhabited a character in a particular time, space and position. This was achieved through the creation of a unique plot that the students were participating in, filled with a range of experiential learning activities. Through this the students were acting, talking, problem solving, or reacting in the moment and this is something that the narrative nature of the museum visit programme enabled students to do. It is interesting to note that the affordance of narrative improvisation was not indentified from earlier studies into the educational research.

The teaching technique of narrative improvisation is different from imagining with adults as the narrative improvisation uses as can be characterised as a process of imaging with adults. As it was mentioned in chapter 7, the teachers have three intervention types during this process: creating the narrative space, participating into these narrative spaces, and supporting. Thus, the teacher is the one that creates and start participating to the scenario by having active role and inspired further children's ideas. Also, the teacher creates further areas of exploration by flexible leading the procedure of improvisations. Contrarily, during the procedure of imagining with adults the teachers work interchangeably within mentor and observer roles, at times each taking the lead with the children and critiquing each other's practice.

Similar connections can be made with the strategy of simulations that were discussed in the section on pedagogies. As was mentioned previously, the purpose of an educational simulation is to motivate the learner to engage in problem-solving, hypothesis testing, experiential learning, schema construction, and development of mental models (Duffy & Cunningham, 1996; Winn & Snyder, 1996). Once again this strategy is similar in a way with the affordance of narrative improvisation but there are major differences. The affordance of narrative improvisation did not only attempt to put the students into roles and improvise but also attempted to put the students into narratives with fantasy or historical nature.

Narrative which can be argued to be the heart of narrative improvisation, which is proposed by this PhD study, has been explored and identified recently by research in museums. It is recognised that humans are natural

storytellers - since ancient time humans have been using stories that represent an event or series of events as ways to learn (Abbott, 2009). Bruner et al (1986) described imaginative narrative as leading to good stories, gripping drama, believable (though not necessarily 'true') historical accounts. According to the teachers' perceptions of this study, narrative improvisation was one of the most crucial and important affordances that the museum visit programme offered to them in order to manage to nurture their students' PT inside the classroom. The data revealed many episodes in which the teachers used this affordance that the museum visit offered them for nurturing their students' PT during the classroom follow-up lessons.

Museums are ideal places where stories can be told that encourage visitors to make their own meanings. Dickinson and Neelands (2006) noted that: Stories are the most fundamental way we learn. They teach without preaching, encouraging both personal reflection and public discussion. Stories inspire wonder and awe; they allow a listener to imagine another time and place, to find the universal in the particular, and to feel empathy for others (Dickinson & Neelands, 2006). This was the case in this study. The learning is made important, fun, and relevant to children's lives through drama activities (Dickinson & Neelands, 2006). Drama activities can be also linked with Narrative Improvisation. Creative learning is encouraged through the drama process which provides problems to investigate and chances to experiment, balanced with some 'hands-on learning' (Zimmerman, 2004, p.3) rather than merely sitting and listening. Therefore creative learning methods are required in the learning process in drama (Mages, 2006). In sum, the learning process in drama gives children autonomy over their learning, encourages children's active engagement, and at the same time involves children's creative capacities. The above characteristics of drama can be linked with the narrative improvisations as every child is encouraged to participate, work out ideas, and to share improvisations inspired from the museum content.

Chase (2005) and Denzin (2000) considered that narrative was a powerful way that cultural and social history museums, in particular, engaged visitors with historical facts. Chase even proposed that storytelling was the "real work" of museums. This can be linked with drama and the technique of

improvisation even though there are several differences. Improvisation is a state of being and creating action without pre-planning and reacting in the moment and in response to the stimulus of one's immediate environment and inner feelings (Abbot, 2009). In short, improvisations not only employ imaginative, flexible and innovative techniques, but also involve effective pedagogical strategies to foster children's creativity. It includes the features and focus of both teaching for creativity and creative teaching, as well as teaching for nurturing students' PT. Children are encouraged to make their own decisions about their own stories; they are encouraged to engage in, to control and to contribute to their own experimentations and explorations with the narrative playing a foundational role. As a result, this study argues that narrative improvisation is considered to be one of the strongest affordances that the museum programme can offer to the primary teachers for nurturing their students' PT as it cannot be easily identified during the everyday lessons.

Narrative improvisation was one of the affordances that the teachers perceived from the museum visits in nurturing students' PT. The teachers used this affordance during the classroom lessons in several cases either before or after the museum visit took place. This affordance constituted an important step beyond what had been previously identified regarding the affordances that a teacher perceives through the museum visit. It was evident from the data that the affordance of narrative improvisation was the only affordance that actually links one of the PT features (the narrative) with the museum programme, something that was not identified in the past.

8.5.3. <u>Cross-Curricular Opportunities</u>

The third educational affordance that the teachers perceive from the museum visit programme is the cross-curricular teaching opportunities for nurturing students' PT. Kerry (2011) argues that cross-curricular work helps children develop thinking skills such as problem-solving and reasoning. The same view is supported by Barnes (2011), because children not only apply

knowledge and skills learned in one subject to another, but will also synthesise information and ideas from a range of sources. According to teachers' reflections students were provided with a great range of different experiences during the museum visit linked with first-hand sources through participating in an active learning process. Children were observed to develop thinking skills like problem-solving because they had the opportunity to synthesise ideas from a range of resources. This finding agrees with what Craft argued according to Banaji, Burn and Buckingham (2010). Craft sees the national curriculum definition of creativity as a 'cross-curricular thinking skill' as being misleading in linking creativity to a singular 'skill' that is not based on a domain of knowledge.

The Education Committee (2004) undertook an inquiry into outside the classroom learning which recognised the cross-curricular nature of out-of-classroom learning. It found that outdoor education contributes to learning in a range of curriculum areas. This statement makes the argument of this study stronger as the teacher participants argued that one of the affordances perceived from the visit was the cross-curricular opportunities for their classroom lessons. However, what this study adds to the above arguments is that the cross-curriculum affordance that the teachers perceive from the visit programme helped them to nurture their students' PT, and not only to enrich their experiences and abilities.

As children get older and the curriculum becomes more formal, that sense of playfulness and discovery is lost according to the teachers of this study. The opportunities for interaction and the use of a range of the senses all came into play as the students participating in this study experienced the museum visit programme. Falk and Dierking (2000) observed that learning is becoming equated with active participation and interaction with that which the museum offers. The teachers who participated in this study greatly valued those occasions when their students could handle exhibits and interact with them and also when their students were participating in several interactive activities which did not only focus on history. The teachers' view is that a cross-curricular approach has provided a creative way of linking subjects through a common theme to give pupils a meaningful, practical and holistic context to

learning that is very motivating. Pupils are enabled to use similar skills in different subjects with the same context or problem. They are helped to see that events do not happen in isolation, thus showing the relevance of history lessons in a wider context. It must be acknowledged that the NACCCE report on creativity (NACCCE, 1999) encouraged all schools to relish creativity, regardless of subject matter or perceived restrictions in the National Curriculum.

The teachers in this study have witnessed first-hand the benefits of cross curricular affordances that these two interactive programmes offer to their teaching for nurturing their students' PT. Synthesising the findings of this study revealed evidence that cross-curricular affordances of the visit programmes benefit the students for nurturing their PT by providing them with learning tools to develop their thinking skills, to analyse questions, to solve problems, to work cooperatively, and to inspire new creative synthesis. It was evident from the observations that the six out of the eight teacher participants took advantage of the cross-curricular affordances that the museum visit offered them for the follow-up lessons in order to nurture their students' PT. The Education Committee (2004) was convinced that learning outside the classroom can benefit pupils of all ages and can be successful in a variety of settings. The teachers were convinced that out-of-classroom education can provide them cross-curricular opportunities for their classroom lessons in order to nurture PT.

8.5.4. <u>Section Summary</u>

In this section I discussed the findings of my research study in relation to the affordances that the teachers of this study perceive from the museum visit programme for nurturing their students' PT, and compare them with the existing literature. The museum context was found to be powerful in enhancing children's PT, and the affordances that it can provide to the teachers appeared to have links with the creative pedagogies that were used

inside the observed classrooms. Due to the frame of the project and the museum environment, children seemed to feel safe to try possibilities, experiment, explore and finally make their own choices after a discovery process. This study managed to enrich the theory on PT pedagogy by suggesting three affordances that the teachers perceived from museums in order to nurture children's PT. These affordances are the children's' enjoyment, the cross-curricular opportunities and the narrative improvisations that were identified to work alongside the pedagogical features presented earlier in order to nurture children's PT.
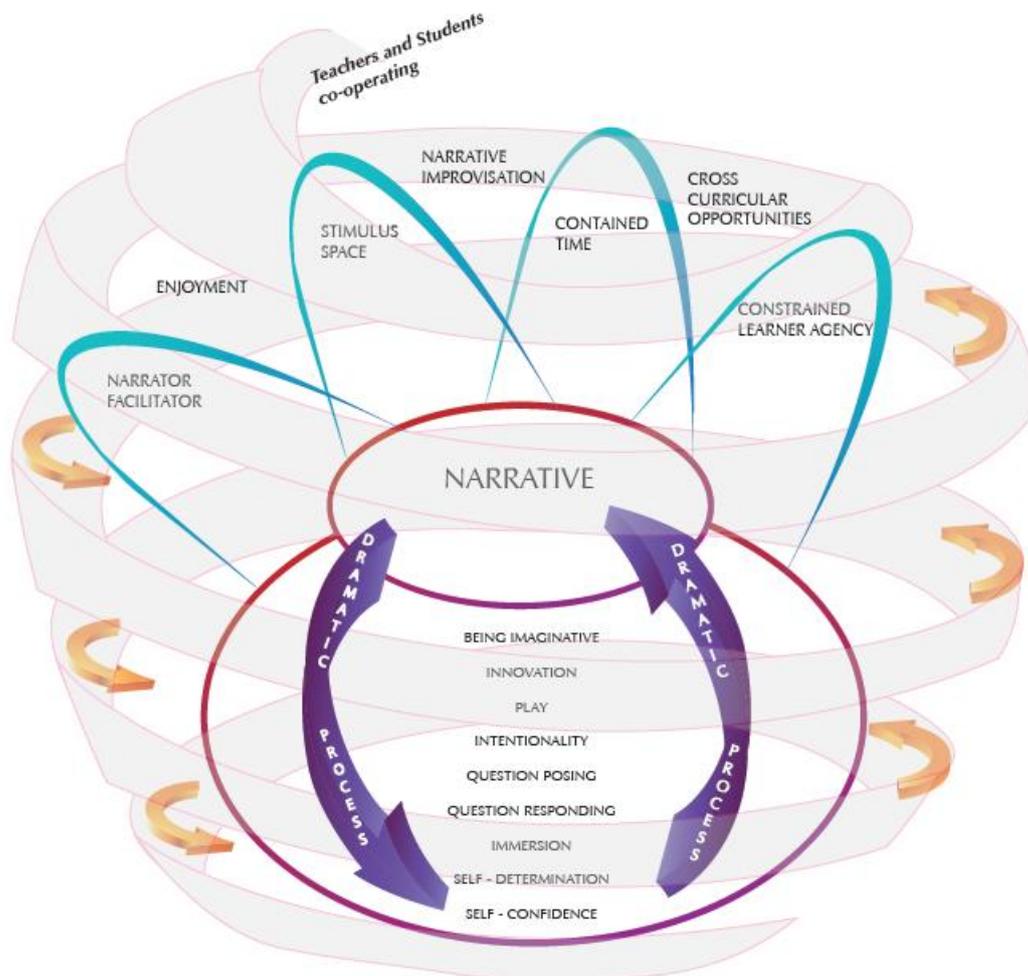
Figure 23: Pedagogies for nurturing PT and the museum affordances

8.6. <u>Chapter summary</u>

This chapter focused on the main thematic findings that emerged from the qualitative data analysis in relation to the existing literature. The study was based on three research questions concerning the features of children's PT, the pedagogical features used by the teacher for nurturing students' PT and the affordances that the teachers perceived from the museum programme. In each section I revisit the findings in light of these research questions and discuss them in relation to previous PT work and other related literature.

This study represents a breakthrough in the study of PT revealing that it can be nurtured by using the alternative resource of learning associated with museum visits. Both the literature and the case studies confirm that teachers can play a crucial role in the nurturing of children's PT, if the appropriate teaching strategies are used. The analysis supplements the earlier focus on PT (Burnard et al., 2006; Chappell et al., 2008; Craft et al. 2012a, 2012b; Cremin et al., 2006, Cremin et al., 2013) and substantially expands the understanding on PT for children aged 9-10 years. New and refined characteristics of teacher pedagogy for nurturing students' PT as well as new and refined PT features were identified and have opened new paths for further research. It is important to note that this research builds on previous studies that have documented PT and pedagogical strategies which foster it by adding an extra factor, which was the interactive museum visit. The findings of this PhD thesis revealed that museum interactivity involved the students into a dramatic process which was the driving force for the PT to be nurtured.

This work differed from previous investigations of PT in several ways. The relationship between narrative and all the PT features was clearly investigated adding to the existing literature (Cremin, Chappell and Craft, 2013). It refined some of the existing features as well as identifying a new one (self-confidence) which until now was only connected with creativity and not with PT. The identification of self-confidence was the explanation for the absence of risk-taking, an issue that created concerns about the existence of PT. The teachers' role was investigated and explored in depth revealing the

importance of teachers' active engagement for the PT process. Teachers were co-structuring, co-working and co-imagining along with children during the whole procedure of dramatic process for nurturing the PT compared with what previous studies had identified (Craft et al., 2012b). Finally, this study argues that limitations can force PT to be nurtured, contrarily with the earlier studies on PT in which this was not the case. It is important to note that this study refers to the term of limitations as the framed environment and framed learning activities created by the teacher.

In addition, this PhD thesis presented a model of PT by developing the existing models suggested by earlier studies on PT. This new model (Figure 23, Table 21) explains the ways in which this study understands and describes the new relationships and dynamics between all the features and pedagogies that were identified. First of all, narrative which is in the centre of the whole diagram was identified to play a vital and fundamental role in nurturing students' PT through a dramatic process which was inspired by museum interactivity. This can be seen with the flow of the arrows, which are surrounding all the identified PT features. The pedagogical features were identified to embrace the narrative and the PT features as well as to interact with each other during the whole procedure. The affordances of the museum visit are placed among the pedagogical features as they are considered to be helpful factors for the teachers in nurturing their students' PT. This dynamic procedure is presented to be inside of a spiral which contributes to our understanding of how the teachers practically developed and nurtured students' PT. This was achieved through supporting and leading the learning procedure as a key way of contributing of the nurturing of PT.

The following table (Table 21) shows how this current study developed further the existing models of PT presented from earlier studies. This model differed from previous models of PT in several ways. This study formulated a model showing the synthesis and integration of key pedagogical features, PT and museum affordances. Also, the relationships between the features and the pedagogies are more dynamic and the role of the spiral comes to unpack further the strong teachers' role during the whole procedure of nurturing PT, as was explained above. Additionally, the fundamental and dominant role of

narrative throughout the whole procedure and the relationships between narrative and PT features are clearly presented as well as the interactions between them.

The next chapter concludes the current study; it includes critical reflections upon the limitations of the work, the contribution of this thesis to theory and research and consideration of the emerging implications for practice, policy and further research.

The latest models of the studies on PT	The model that this study suggests
Figure 9: Pedagogy nurturing possibility thinking (Craft, McConnon & Matthews, 2012)	
Figure 10: The role of narrative in PT (Cremin, Chappell and Craft, 2013)	
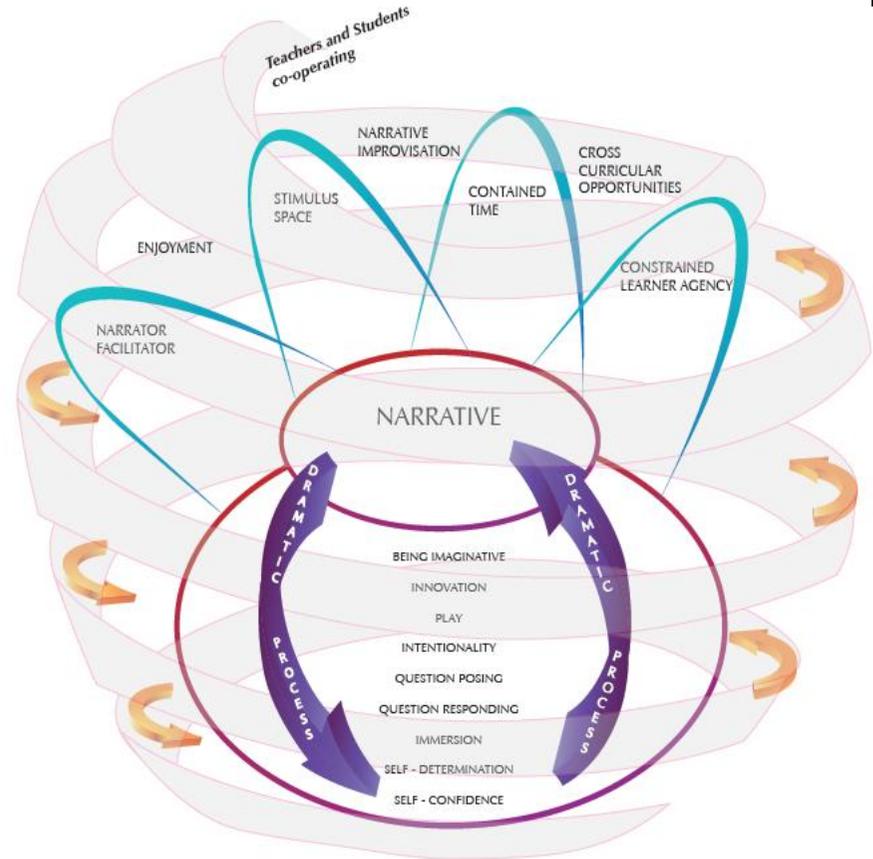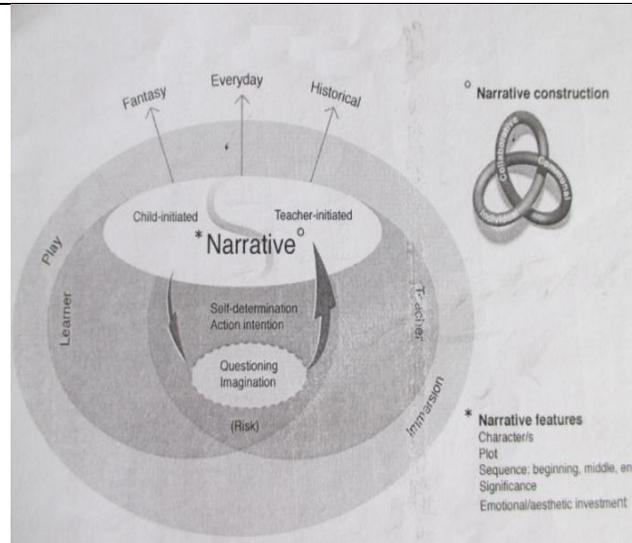
Figure 23: Pedagogies for nurturing possibility thinking and the museum affordances

Table 21: Comparing models

Chapter 9: Conclusion

9.1. Introduction

This study has documented PT in Cypriot primary classrooms which had included a museum visit into their lesson. The findings constitute an important step beyond what had been previously identified regarding features of children's PT, pedagogies and the affordances that the teachers perceive from such projects. In particular the findings focus on the PT features and the ways in which they are made manifest before, during and sometimes after the museum visit and the teachers' pedagogies used which were seen to be helped further with the museum affordances in order to nurture students' PT. Conclusions derived from the above findings are presented in this chapter, seeking to make clear the contribution of this study both to theory and research. Limitations are also presented, as well as possible implications for policy, practice and further research.

9.2. Overview of the study

The study was carried out to gain a deeper understanding of how primary teachers in Cyprus nurture the PT of 9-10 year old children by drawing on learning resources associated with museum visits.

 The study's aims were to:

- Document and analyse the nurtured PT features.
- Document and analyse characteristic features of pedagogical strategies in nurturing PT.
- Explore the affordances that a teacher can perceive from the museum visits for nurturing children's PT.

In order to pursue these aims, the research questions were formulated as follows:

1. What features of children's PT are nurtured?

2. What pedagogical approaches do the teachers use to nurture children's PT?

3. What affordances for nurturing children's PT do teachers perceive to be offered by learning resources associated with museum visits?

To answer the research questions the interpretive paradigm was used which was appropriate for the aims of the study, in order to investigate the phenomenon through a range of sources within its natural environment, as well as to relate it to the interpretivist, social-constructed method to give in-depth, detailed and illuminating understanding of the issue studied. Several instruments were used for collecting data: semi-structured interviews, classroom and museum visits observations (field notes, video recordings and still images) teachers' reflections and the researcher's reflective journals. These supplied a rich variety of data regarding pedagogical features and the PT features, permitting triangulation which strengthened the findings.

9.3. Key findings and contribution of the research

The findings presented in this thesis respond to the three research questions that were addressed in Chapters 5, 6 and 7. The following concluding discussion revisits the main research findings, seeking to make clear the contribution of this work to the field, and then considers the emerging issues. Nevertheless, the findings of this PhD study brings a fresh perspective to the field as the teachers in Cyprus started to nurture and foster creativity and creative thinking into their classrooms relatively recently.

9.3.1. The identified children's PT features

The main features of children's PT manifested in this study were question responding, imagination, play, innovation, intentionality, immersion and self-determination, whilst question posing was also documented to a lesser extent. Risk-taking was absent. Additionally, this study proposes self-confidence as a new feature. However, what this study contributes to the field about PT features, excepting the identification of the new feature of self-confidence as well as the dominant role of narrative, is the fact that the PT features shaped

and presented differently in a different age group of students from what has been investigated in the past.

The study provides further analysis of the notion of self-determination as including self-directed and confident choices and decisions, and spontaneous expressions but within the constraining frames created by the teacher. The findings expand the understanding of this feature and raise questions for further research in other contexts and age groups. My study also provides empirical insights around immersion. This age group of students was identified to be deeply immersed into the learning activities with each other and with their teacher while they were exchanging ideas and creating concepts into groups. The students were deeply engaged not only with the environment but also were deeply engaged with each other as well as with the learning activities. This study revealed that the students' immersion involved a blend of different characteristics like intellectual, emotional, behavioral and physical engagement.

Risk-taking was not identified in this study and in this age group of students as it was in a recent PT study (Craft et al., 2012). The absence of risk-taking in this study may reflect the teachers' control over the learning procedure as well as the identification of a new feature (the feature of self-confidence) that this study proposes. As a result, because of the students' self-confidence the characteristics of risk-taking were not identified.

Nevertheless what this study extended further from earlier studies on PT was the role of narrative which shaped PT. Narrative was identified to play a foundational role on PT for this age group of students and was one of the major features identified through all the project phases. This study connected further the feature of narrative with the other PT features compared with the earlier studies on PT. Narrative is seen to be working in complex combination with all PT features and not only with questioning and imagination as was identified in the study of Cremin et al., (2013).

It was strongly identified from the data of this study that children and teachers together were in an 'as if' space and assumed fictional roles in imaginatively co-created worlds. Children responded to teachers' questions by bringing into possibility broad hypotheses, often building upon previous contributions, usually negotiating, clarifying, reasoning, problem-finding and sometimes problem-

solving by being in 'as if' and 'what if' spaces (Burnard et al., 2006; Chappell et al., 2008; Craft et al., 2008, 2012a, 2012b; Cremin et al., 2006).

9.3.2. <u>The identified pedagogical features</u>

The main pedagogical features manifested in this study were contained time, stimulus space, constrained learner agency and narrator facilitator. These four pedagogical features were identified to work in parallel with each other and at the same time enclosing the procedure of nurturing PT, something that was not identified in the past. The documented pedagogy was seen to be highly significant in relation to supporting children's purposeful engagement in creative learning and the four pedagogical themes in evidence were thus added to the evolving conception of PT.

The rephrased pedagogical feature of 'Contained time' constitutes an important step beyond what had been previously identified regarding the characteristics of pedagogical feature of Time. Earlier studies on PT (Cremin et al., 2006, p.115) argued that 'the provision of stretchy time encouraged children's full immersion in extended playful activities'. Similarly, Craft et al. (2012b) noted that by allowing time, the children have the opportunity to authentically respond to the provocations. Generally speaking the findings of previous studies support that allowing time and space to the children to drive their learning according to their needs can nurture their PT.

The pedagogical feature of 'stimulus space' was also identified in this study that plays an important role in nurturing students' PT especially in this age group. Taking into consideration previous studies on PT, it was observed that 'children were offered open access to a wide range of learning resources and broad choices over what and how to engage' (Cremin et al., 2006, p.115). The findings of this study reveal that the pedagogical feature of space is much broader and includes several perspectives that were not identified in earlier studies. These spaces provided the students with a range of physical, emotional and learning facilities for nurturing students' PT.   These were spaces of possibilities, which were packed with ideas and experiences, resources and choices, as well as time for emotional space.

Regarding earlier studies on PT (Craft et al., 2012; Cremin et al., 2006) one of the pedagogies that was identified for nurturing students' PT was the profiling of learners' agency. However, the data of this study identified something different to Craft et al. (2012) and Cremin et al. (2006). More specifically, the classroom observations revealed that all the teachers created boundaries and framed activities through which the investigations were being driven by child-initiated exploration. As a result the pedagogy of 'profiling learner's agency' was unpacked further to include a subcategory named as 'constrained learner agency' for the needs of this study. Nevertheless, this study argues through the findings that the teacher's control does not affect students' PT as there is still space for exploration and experimentation.

This study differs from previous investigations of how teachers nurture PT as the teachers were active through the whole procedure of students' work to transform what is to what might be, without standing back at any time of the lessons. Teacher and student were co-structuring and co-imagining together and the teacher was an active helper through the nurturing of students' PT. Children were observed to benefit as far as PT is concerned from teachers designing, assembling and editing alongside them. Additionally, this study proposes a new pedagogical feature which is called 'Narrator Facilitator'. This study describes as the 'Narrator Facilitator' the teacher who creates narrative learning activities (scenario/plot) which attempt to put the students into a certain position/situation in a particular time and space in order to nurture their PT with the teacher to have active participation through the whole procedure linking further the narrative with the teachers' role.

9.3.3. The identified museum affordances

The data analysis revealed key features in relation to the third research question, 'What affordances do the teachers perceive for nurturing children's PT by using alternative resources of learning associated with museum visits?'. Synthesising the findings to the research question, analysis revealed three overarching thematic findings related to the affordances that museum visits can offer to the teachers for nurturing students' PT. These overarching thematic

topics were enjoyment, narrative improvisations and cross-curricular opportunities. This study enriches the theory on PT pedagogy and museum projects by suggesting three affordances that the teachers can perceive from museums in order to nurture children's PT. These affordances were identified to work alongside the pedagogical features presented earlier in order to nurture children's PT. This new material offers further insight into the dynamic between PT and interactive museum projects, something that was explored for the first time in the field of PT.

9.3.4. Contribution to knowledge

The story, or the content of an interactive museum, can involve social issues, or themes from other subjects such as historical event, unfinished stories told by the teacher, needing to be developed by learners. There is always a tension in the story, which is something that makes the story interesting and enables teachers to set a context that not only involves experience related to children's everyday life, but also trigger children's curiosity. This happens when teachers create problems that needed to be solved, with tasks that require gaps to be filled, with information and ideas to synthesise into new relationships. Museum environments inspire narratives based on their collection in which the students' are participating. It is argued from the data of this study that is the combination of these two elements (interactive museum and narrative spaces) that are the foundation for this study's key contributions to the field of understanding PT and how it is nurtured.

Learning beyond the classroom offers a whole host of opportunities that the children will struggle to find within the confines of their classroom's four walls. Research over the last decade into school groups that visit museums reveal their unique educational value, if appropriate approaches and methods are used (Anderson, Kisiel & Storksdieck, 2002). More specifically, as the data of this study showed, the environment of an interactive museum can provide instances of learning through narrative related to objects and museum resources that can be motivating in ways that school-based learning rarely can. When students participate in out-of-class activities and events, develop a portfolio of out-of-class learning experiences and learn skills (e.g. being creative, imaginative, playful with ideas, self-confided) valuable for their daily lives. Museums are now brokers of

experiences, not just collectors of objects (Emery, 2001; Freedman, 2000; Matheson, 2006). However, what makes the museum environment special for this procedure is relation to the objects in the collection, the museum atmosphere and the dynamics between these two. Students are provided with rich experiences grounded in the objects and the museum atmosphere. They are provided with the opportunity to work, and to research with first hand sources, so participation in the active learning process is assured; the improvement of many skills such as observation, doing research, comparison, critical thinking, being creative, imaginative, playful and self-confident comes into prominence. As a result, the first contribution that this PhD study offers is that by participating in an interactive museum project the children have the opportunity to gain a spectrum of skills when they are involved in narrative spaces connected to museum environments, dynamics and objects. Thus, the students can use these skills linked with PT in other parts of their daily lives. This links further with the notion of little c creativity and PT which have as their target the nurturing of everyday creativity.

Also, by taking learning beyond the classroom teachers have the opportunity to make learning concepts, real and relevant by involving their students in a more realistic context. Many concepts which seem too difficult to grasp in the classroom are a lot easier to understand when they are set in context, and when the children are more engaged and motivated to understand and learn (Hooper & Greenhill, 2000). Taking children beyond the classroom they are free to explore and they can develop creative results no matter what subject they were studying. This happens because children's curiosity and their active engagement are aroused. As they experience delight in learning a new story, they are also offered the opportunity to experience the tension themselves, to solve the problem, or explore the gap by being in roles imaginatively (Lemons, 2005). Children not only live through their knowledge by acting in a different role, but also learn to pose questions, find out more possibilities, be self-confident, and be playful in inventing new ideas (Lemons, 2005). These features, reflect the notion of PT as well as linking further PT, drama and museum interactivity. This PhD thesis argues that dramatic process, inspired by the museum learning resources as well as all the additional elements that an interactive museum can offer are the vehicle through which children's PT can be fostered inside and outside of an interactive museum. This is

also an additional key contribution to the field of understanding PT and how it is nurtured.

Furthermore, the analytic process identified that, most of the episodes were characterised as fantasy and historical narratives. Museums are ideal places where stories can be told and to encourage visitors to make their own meanings (Emery, 2001; Freedman, 2000; Matheson, 2006). It was evident that, the students were creating stories and plots by being imaginative and playful with ideas and concepts based on the museum collection, going beyond what is possible in reality. This happened because of the combination of the interactive museum environment (which aims to raise interest, curiosity and imagination through the historical objects) and the narrative spaces that the students were involved in. Thus, strong relationships are created among historical and fantasy narrative as the procedure of the dramatic process was created based on the story behind the museum objects. These stories inspired by the museum objects and museum history allowed the students to travel with their imagination in another time and place by being in role, thinking and acting in an as if context. This is one of this study's key contributions to the field of understanding PT and how it is nurtured outside from the classroom environment. Thus, it is argued from this study that when a museum has an interactive nature can nurture children's PT because of the historical and fantasy narrative spaces that can be created through a dramatic process. These findings helps to reveal the extent to which older children, move in and out of fictional world creation within the curriculum and the ways in which teachers use narratives to foster creativity, extending the findings of Cremin et al. (2013).

Earlier studies on PT argued that teachers' standing back (Cremin et al., 2006) or 'meddling in the middle' (Craft, McConnon & Matthews, 2012) fosters learners' autonomy and provides students the opportunity to follow their own interests gaining agency in their learning can nurture PT. These can help the engagement of children by allowing them to make decisions and take responsibility for learning (Cremin et al., 2006). However, this PhD thesis argues that even where the teachers appear to have the initial control of the whole procedure, there was still space for students to generate their own possibilities and nurture their PT. The major reason for that was the involvement of the students in an interactive museum environment combining the dramatic process as the main vehicle for the PT to be fostered. Thus, the students were

involved in drama process related to the museum objects, the museum atmosphere and the dynamics between these two. A combination of ordinary displays of objects and creative interactions offered the necessary space for the students to develop their own thoughts and explore their ideas based on their thinking within the boundaries created by their teachers. As a result this offers a response to the question of how PT can be possible in such a controlled context in contrast to the much more student-led context in which PT was originally studied. This study argues that PT can be nurtured in a framed and controlled environment if this environment gives the students the interactive engagement and atmosphere for example offered by the museum to the student participants of this study.

9.4. <u>Limitations of the study</u>

The current study has several limitations that due to the constrained time could not be explored. One of these limitations is geographic as the study was confined to one specific region of Cyprus. The four schools which participated in the study were all located within one city of Cyprus. This presents possible limitations to any transferability of the findings to other projects in which other primary schools participate. However, it may be possible if there were more time available to extend the study to other regions, to explore the findings across the museum projects.

Also, the teacher participants' gender could be one of the limitations of the study. Six out of eight participants of this study were female. This happened randomly and one possible explanation is the fact that there are more female teachers in primary schools than male. Nevertheless, this does not limit the possibility of extending the findings as far as male teachers are concerned because as was mentioned earlier each teacher must adjust the proposed pedagogies according to their own needs and that of their students. However, if more male teachers were to participate it may be a possibility to have a different perspective and a different teaching attitude comparing to female teachers.

Another limitation is related to the rich data that was obtained from the eight cases regarding teaching strategies. There was richness to the material and multiple data resources, in addition to multiple interpretations of experiences of

the teaching and learning thinking processes. Thus, the wide research environment was made visible and open to challenge, but at the same time, it formed a limitation of the study in terms of the richness of the material. The analysis may have not managed to document all the pedagogical strategies offered by the teachers and which were related to children's PT during the lessons. Some of these gaps will be suggested as future research as will be mentioned later in this chapter.

9.5. <u>Implications of the study</u>

This PhD study aims to connect PT theory and the use of the museum visits with educational practice and is based mainly on empirical data derived from the context of primary education. As a result, the study's implications concern school practices and policies as well as PT research. The findings of the study may have a variety of significant practical implications which could improve nurturing creativity and PT in the primary context. Identifying these implications could assist in improving the successful dynamic of teaching and learning. These implications are described below.

9.5.1. <u>Implications for policy</u>

This study argues that policy makers and curriculum designers need to further link the experiential projects outside the school environment with the classroom lessons and the nurturing of PT. In order to achieve that, they need first to establish an open dialogue with the teachers on why, when and how teachers could foster creativity and PT through education. Then, it will be really helpful to define creativity in the primary education framework and also to provide examples of how to nurture it through the entire curriculum. Lastly, it will be really helpful to design and implement appropriate programmes in order to achieve all the above.

Policymakers and educational authorities must design and implement training programmes based on teachers' needs for nurturing PT, and creative thinking in general. Several researchers (e.g. Perkins, 1990) have pointed out that the

nurturing of students' creativity links with the pre-service and in-service education of teachers as it requires new styles of interaction between teachers and students. This PhD thesis reveals the importance of up-to-date and in-service training on how they should foster students' PT and creative thinking. Many of the great pedagogues and philosophers of education emphasise the importance of creative thinking in children's development. For instance, Piaget (1972; see also Cohen & Ambrose, 1999) claims that early childhood is the most creative period in life because this is when young children form understandings of the world. Primary schools strive to incorporate and put the theories into practice, attempting to become more students-centered than teacher-centered, to connect school to real life situations, and to focus on understanding and thinking rather than on memorisation, drill and practice (Vosniadou, 2001). For this reason, this study created and proposed a model of pedagogy for supporting further teachers efforts for nurturing student's PT and creative thinking. Here, it is important to note that the up-to-date training on PT and creative thinking in general has not only to do with policymakers but also with the teachers. Teachers for themselves can search, find and read about creativity, PT and how they can nurture it inside their classrooms. However, policy makers and educational authorities can help further the teachers by involving them into an up-to-date training.

9.5.2. Implications for practice

The study's findings regarding teachers' experiences of teaching in nurturing creativity and PT carried the potential for improving classroom practices in nurturing PT in several ways. The study provides a pedagogical model that could be used for nurturing creativity and PT which are a new area in the Cypriot curriculum. However, as was mentioned earlier, this model must be adjusted to the needs of each classroom as it may not work for all groups of students and for all teachers. This context, it was found, promotes immersed play with physical engagement, collaboration and openness as important parameters for the co-authoring of PT amongst teachers and children. This teaching model could be helpful for any teacher who attempts to promote and nurture PT in his/her classroom. However, this model should be adapted

according to the needs of each classroom taking into account the classroom realities and techniques of learning, as this study does not aim for generalisations.

Additionally, an implication for practice enriching the pedagogical model that this study suggests is the importance of small class size for nurturing student's PT. The observed eight cases of this PhD thesis were small classes with the maximum number being twenty students. It can be argued that this helped the students' PT to be nurtured as there was a greater opportunity for individual interaction between student and teacher. Teachers generally have better morale in a small class, and are less likely to feel overwhelmed by having a variety of students with different backgrounds and achievement levels (Kampylis & Argyriou, 2008). They are more likely to provide a supportive environment as smaller classes allow teachers to devote more time to instruction and less to classroom management (Kampylis & Argyriou, 2008).

Furthermore, based on recent and consistent research findings (Aljughaiman & Mowrer-Reynolds, 2005; Diakidoy & Kanari, 1999; Kampylis & Argyriou, 2008; Kampylis, Berki & Saariluoma, 2009) this study argues that teachers associated creativity and PT mainly with arts. It thus appears that primary teachers do not strive to promote students' creativity in all school subjects. Training can help teachers develop their pedagogy using the aforementioned creative, active and responsive strategies, to develop children's PT and creativity. It is recommended that it will be very helpful for the teachers to participate in programmes such as peer support and workshops, as an embedded part of the school environment. Teachers within each school or between schools could 'blend teachers' experiences aiming to facilitate the successful teaching for nurturing PT by changing teachers' understanding of the theoretical and practical aspects and to share teachers' knowledge and experiences. Through peer support and workshops, teachers' experiences could be transmitted.

The teacher participants of this study during the interviews reflected that they do not have the time and the opportunity to reflect on their teaching theories and practices with regard to PT and creativity in general. I hope that this thesis, and publications that develop from it, will offer to anyone who reads it within education the opportunity to reflect on how and why we should nurture students'

PT. The most important thing for teachers is to understand that the fostering of PT and creativity is not a new subject that must be added to a school curriculum, but something that requires a radical new approach to the way they treat and education students. Thus, the main concerns for the teachers should be to answer fundamental questions like 'What do I want my pupils to learn and what is the best way to learn it? And not just to attempt to cover creativity superficially when they are structuring and creating their lesson plans.

Very often teachers and researchers involved in primary education draw attention to the unmotivated students who display boredom and a lack of interest (Gari et al., 2000; Kim, 2008). Thus, a possible solution could be their engagement into these kind of experiential projects which links museum visits and classroom lessons with creative and meaningful activities. It must be acknowledged that, this study brought to the surface the factor of enjoyment among the affordances that the interactive museum projects offer to the teachers for nurturing PT.

Finally, teachers must find ways to link the curriculum with meaningful, real-life activities that recognise students' emotions and needs. Thus, the primary curriculum should leave room for the teachers to offer their students hands-on, spontaneous and less strict learning experiences.

9.5.3. <u>Implications for PT research</u>

The findings of the study may have a variety of significant implications for PT research which further develops our understanding in the area of PT features as well as pedagogical features for nurturing PT in the age group of 9-10 year-old students. My thesis is that PT can be nurtured through alternative resources of learning and that it should be seriously taken into account that each age group of students have different needs, act and learn differently. Thus, theories in practice should be adopted and adapted according to the age group and the needs of the students.

My study draws on the empirical theorisation of the concept of PT (Burnard et al., 2006; Chappell et al., 2008; Craft et al., 2008, 2012a, 2012b; Cremin et al., 2006; Lin, 2010) and involves an attempt to investigate and potentially expand

the established understanding about the features and pedagogy of PT, investigating children aged 9-10 in Cyprus. This framework led this study to research in detail each one of the PT features identified from the above studies. There appears to be a degree of agreement in the views of some of the PT features with the earlier studies; however, there were also refinement and enrichments of some of the features. This in-depth investigation of each feature individually, provide a deeper understanding of the characteristics of each feature as well as how they can be developed in the researched age group of students. This PhD study identified the core features of PT, as including: being imaginative, play, innovation, question-posing/responding. These remained as core components after the analysis of the findings. Self-determination and immersion were refined and described slightly differently in this study.

Furthermore, this study comes to solve the problem of the absence of the feature of risk-taking which was observed from earlier studies on PT. More specifically, the absence of risk taking raised the question of whether it is actually necessary to PT. This study revealed that this PT can be identified and nurtured without the existence of the feature of risk-taking. This happened because of the identification of a new feature which was named as self-confidence. As a result, the students were observed to have self-confidence during their work and consequently there was not any degree of the feature of the risk-taking. Nevertheless, the absence of risk-taking reflected the strong teachers' control over the learning process and the nurturing of PT.

The above statement reflects one of the implications that this study offers to the PT research. More specifically, this study argues that the teachers by framing and controlling the learning do not affect the nurturing of students' PT. This argument comes in contrast with earlier studies on PT giving us a fresh new perspective on how PT features can be nurtured. However, it must be acknowledged that this study also argues that all the findings must be adjusted to the needs of each age group of students and does not set generalised models.

This study supplements the earlier focus on PT characteristics and pedagogy (Burnard et al., 2006; Chappell et al., 2008; Craft et al., 2008, 2012a, 2012b; Cremin et al., 2006) and substantially expands the understanding about the

dynamic of narrative in relation to all the PT features. In terms of the pedagogical features identified this work differed from previous investigations of PT as it was identified to expand further the concepts of time and space. Practitioners in this setting supported strongly that the constrained time learning activities is one of the most important pedagogical features for nurturing PT as it was not identified to limit the possibilities for innovative results. It was also revealed by the data of this study that the notion of space is much more complex and includes several factors that were not mentioned in the past.

Overall, it is clear that research into PT is both ongoing and useful for documenting PT in early years and primary education, in relation to both teaching and learning.

9.6. <u>Possibilities for further research</u>

In the light of the study findings, I hope that this study will encourage and lead other researchers to pursue points raised here to extend their scope and depth. The process of reading the relevant literature for this study enabled me to identify some gaps in the literature, to which I sought to respond, but in undertaking my own empirical work framed around the three questions I have found that there remain multiple possibilities for further research. For example, future work could focus on the same research questions in different contexts (alternative resources of learning) and in different age groups. A challenging question that would be valuable to investigate is if risk taking and self-esteem can be documented in different age groups of students. Regarding the teachers' role it would be interesting to examine it further in a variety of student age groups. Another aspect which also needs closer examination is if the affordances that the teachers perceive from the visits for nurturing students' PT can be identified in other contexts or in different age groups of students. Additionally another possible area for future research can be focused on children's perception of PT exploring different age group of students.

Overall, my study offers some insights for further understanding PT in primary education and contributes to addressing some of the gaps in the PT empirical literature, concerning for example the documentation of imaginativeness in a

playful activity, the documentation and the role of self-determination and intentional action in PT, the nature of collaboration that fosters PT, the role of risk-taking in PT, and the relation of PT to everyday creativity as a phenomenon useful for solving everyday problems and change in everyday life. Further exploration and closer examination of these concepts is needed in the future.

9.7. <u>Final Comments</u>

My background as a Cypriot primary teacher certainly affected my perceptions, interest and foci during the research process: what I chose finally to investigate, the methods I used, the analysis conducted, the findings I highlighted and the conclusions I formulated. This current study has addressed issues related to the nurturing of PT in children aged 9-10 years by using alternative resources of learning associated with museum visits. The study yielded several findings about PT. This PhD thesis explored further what had been already known in the field of PT. On the ground work of the present study, I would argue that primary teachers possess valuable situated knowledge and experiences that should be taken into account in any attempt to foster students' PT.

Several significant outcomes are highlighted about what PT features were nurtured, what pedagogical features were used and what affordances teachers perceived from the museum projects in order to nurture children's PT. This work differed from previous investigations of PT in several stages. However, there is an obvious need to further research not only teachers' pedagogical features and PT features but also different types of learning resources that could help the students to nurture their PT. I believe that the findings and the conclusion of this study are useful to multiple audiences including policy makers, teachers, educational researchers and academics.

Appendix 1: Ministry of education and Culture in Cyprus research approval form for pilot study

ΚΥΠΡΙΑΚΗ ΔΗΜΟΚΡΑΤΙΑ

ΥΠΟΥΡΓΕΙΟ
ΠΑΙΔΕΙΑΣ ΚΑΙ ΠΟΛΙΤΙΣΜΟΥ

Αρ. Φακ.: 7.19.46.6/31
Αρ. Τηλ. : 22800661
Αρ. Φαξ : 22428277
E-mail : dde@moec.gov.cy

ΔΙΕΥΘΥΝΣΗ
ΔΗΜΟΤΙΚΗΣ ΕΚΠΑΙΔΕΥΣΗΣ

9 Νοεμβρίου, 2011

Κυρία
Μαρία Γρηγορίου
Θηβών 3
6042 Λάρνακα

<u>Θέμα</u>: Άδεια για διεξαγωγή έρευνας με εκπαιδευτικό και μαθητές ενός δημοτικού σχολείου

Αγαπητή κυρία Γρηγορίου,

Έχω οδηγίες να αναφερθώ στη σχετική με το πιο πάνω θέμα αίτησή σας προς το Κέντρο Εκπαιδευτικής Έρευνας και Αξιολόγησης, που υποβλήθηκε στις 30 Οκτωβρίου 2011, και να σας πληροφορήσω ότι εγκρίνεται το αίτημά σας για διεξαγωγή έρευνας με εκπαιδευτικό και μαθητές ενός δημοτικού σχολείου που εσείς θα επιλέξετε, με θέμα *«Παιδαγωγικές μέθοδοι που χρησιμοποιεί ο δάσκαλος για αύξηση της δημιουργικότητας των μαθητών δημοτικής εκπαίδευσης χρησιμοποιώντας εναλλακτικές μορφές μάθησης, όπως είναι οι επισκέψεις σε μουσεία»*, την παρούσα σχολική χρονιά 2011-2012. Η απάντηση του Κέντρου Εκπαιδευτικής Έρευνας και Αξιολόγησης σας αποστέλλεται συνημμένα για δική σας ενημέρωση.

2. Νοείται, βέβαια, ότι πρέπει να εξασφαλιστεί η άδεια του διευθυντή/ διευθύντριας του σχολείου, εκ των προτέρων, ώστε να ληφθούν όλα τα απαραίτητα μέτρα για να μην επηρεαστεί η ομαλή λειτουργία του. Επίσης, θα πρέπει να έχετε τη συγκατάθεση του/ης εκπαιδευτικού, στην τάξη του/ης οποίου/ας θα μπείτε για παρατήρηση. Η έρευνα θα πρέπει να διεξαχθεί με ιδιαίτερα προσεγμένο τρόπο, ώστε να μη θίγεται το έργο των εκπαιδευτικών, το σχολικό περιβάλλον ή οι οικογένειες των μαθητών και όλες οι δραστηριότητες που θα αναπτυχθούν πρέπει να εμπίπτουν μέσα στο πλαίσιο που καθορίζεται από το Αναλυτικό Πρόγραμμα. Ο εκπαιδευτικός πρέπει να λάβει μέρος στην έρευνα στο μη διδακτικό του χρόνο. Η έρευνα θα διεξαχθεί νοουμένου ότι η απώλεια του διδακτικού χρόνου των μαθητών θα περιοριστεί στον ελάχιστο δυνατό βαθμό, ενώ για τη συμμετοχή τους χρειάζεται η **γραπτή** συγκατάθεση των γονιών τους. Οι γονείς πρέπει να γνωρίζουν όλες τις σχετικές λεπτομέρειες για τη διεξαγωγή της έρευνας, καθώς και τα στάδια μέσα από τα οποία θα εξελιχθεί. Σημειώνεται, επίσης, ότι τα πορίσματά σας κρίνεται απαραίτητο να είναι ανώνυμα και οι πληροφορίες που θα συλλέξετε να τηρηθούν απόλυτα εμπιστευτικές και αποκλειστικά και μόνο για το σκοπό της έρευνας.

Υπουργείο Παιδείας και Πολιτισμού, 1434 Λευκωσία
Τηλ.: 22800600 Φαξ: 22428277 Ιστοσελίδα: http://www.moec.gov.cy

3. Η παρούσα έγκριση παραχωρείται με την προϋπόθεση ότι τα πορίσματα της εργασίας, θα κοινοποιηθούν μόλις αυτή ολοκληρωθεί, στη Διεύθυνση Δημοτικής Εκπαίδευσης για σχετική μελέτη και κατάλληλη αξιοποίηση.

Με εκτίμηση,

(Ελπιδοφόρος Νεοκλέους)
για Γενική Διευθύντρια

Κοιν.: Π.Λ.Ε.
Επαρχιακά Γραφεία Παιδείας

AT/AT EREVNES

Appendix 2

Parents' consent form for Pilot study

January, 2012

Dear parents,

My name is Maria Gregoriou and I am a primary teacher and candidate for the Doctorate in Education at University of Exeter, UK. In order to conduct my research study, I have obtained approval by the Cypriot Ministry of Education and Culture in order to carry out a qualitative research in the school where your children study. I would like to ask your approval for your children to be observed and video-recorded during the classroom lesson and the museum visit. The snapshots and transcripts from the videotaping will have a confidential character and will be used only for the aims of the research. The anonymity of the participants will be ensured using pseudonyms.

I would like to thank you in advance for the collaboration and to ensure that the particular research study aims for the qualitative upgrade of education.

Research leader: Professor Anna Craft, OU and Exeter A.R.Craft@exeter.ac.uk

Regards

Maria Gregoriou

e-mail: mg304@exeter.ac.uk

Mobile: 99360484

Appendix 3

Observation Table for Pilot study

Lesson:		**Time:**	**Date:**
Place:		**Teacher:**	

LOOKING	**THINKING**
Who:	**Pedagogy:**
	Ethos:
	Environment:

Appendix 4

Interview schedule

Background:

- How many years have you been teaching in primary school?

- What age groups have you taught?

- What relationship do museum visits have to your classroom teaching?

    o How often do you make visits?

    o Why?

    o How are these planned, formed and delivered?

- What is your experience in how museum visits enable learning and teaching?

- How do you feel about fostering children's creativity?

- What opportunities does the museum visit offer you in fostering children' creativity?

Views towards creativity:

- Could you tell me what creativity means for you?
- Could you give me an example from the children that you could call it creative? Why?
- What kind of teaching activity do you see as promoting children's creativity? Why? Could you give me an example?
- Can you give me an example of your students' work that you think is creative?
- For you what is the biggest challenge if any of nurturing children's creativity?
- How do you think the learning environment can help foster children's creativity?
- How do you think teachers can help children to develop their creativity?
- How do you think the museum educator during the museum visit can help children to develop their creativity?

Routines in the classroom

- Tell me what usually happens in this class? Lessons Routines
- Can you describe me a typical classroom lesson?
- How are pupils working during typical lessons and what is your role while the pupils are working?

About the project:

- What are you aiming to teach during this project? What is your main goal? What do you want children to achieve?
- What is the most important issue according to you to be taught to pupils in/from this lesson? Why is this important?
- What are your expectations from this project as far as the creativity is concerned?
- How do you plan to enable museum visits into your classroom teaching?
- What opportunities do these museum visits offer you in fostering children's creativity?

After the museum visit (question to the teacher)

- What is your perspective about the approaches used by the museum educator during the visit?
- Which activities helped the children foster their creativity?
- What opportunities did this visit give you for the next lessons?

Last Interview Questions

- Could you give me an example from the children that you could call it creative from this project? Why?
- What kind of teaching activities have you undertaken in this project that promoted creativity? Why? Could you give me an example?
- Can you give me an example of your students' work from this project which makes visible the development of their creativity?

- For you what was the biggest challenge of nurturing creativity (if there was any)?
- How do you think the school environment helped the children become creative?
- How do you think the museum environment helped the children become creative?
- How did you enable the museum visit into your classroom teaching?
- What opportunities did this museum visit offer you in fostering children's creativity?
- Did your expectations from this project succeed as far as the creativity is concerned?

Appendix 5

Observation Table for the main study

Lesson:		Time:	Date:

Place: **Teacher:**

LOOKING	THINKING
Who:	**Pedagogy:**

Ethos:

Environment:

Appendix 6

Teacher's reflections (Audio recordings diary)

Questions:

- How did you plan today's lesson?
- What happened? Did it turn out as you expected?
- Why do you think the lesson was like this? Explain.
- What opportunities did this museum visit offer you in fostering children's creativity?

Points to have in mind while answering the above questions:

- Reflect on the opportunities that they had in nurturing children's PT as far as the pedagogy is concerned in each lesson
- Reflect on what activities worked in terms of nurturing children's PT and why. Also, present examples of children's PT
- Reflect on what activities did not work in terms of nurturing children's PT and why
- Reflect on the opportunities that the museum visit offered on nurturing children's PT.

Appendix 7

UNIVERSITY OF
E**X**ETER

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: Maria Gregoriou

Your student no: 590050130

Return address for this certificate: Lafrowda Flats, Studio T324, St. German's Road, Exeter, EX46TJ

Degree/Programme of Study: PhD

Project Supervisor(s): Anna Craft, Kerry Chappell

Your email address: mg304@exeter.ac.uk

Tel: 07856973590

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:......M.Gregoriou..date:..16/10/2011........

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
DISSERTATION/THESIS

Your student no: 590050130

Title of your project: Exploring the potential for museum based education in nurturing creative engagement in upper primary aged pupils in Cyprus.

Brief description of your research project:

Cyprus, which constitutes the cultural context of my future research, started to develop creativity and partnership projects with museums only in the last few years. Thus, the available research from the national perspective is limited. Research in the UK is more plentiful, and according to most of the relevant papers partnerships with museums can have a significant contribution in developing the curriculum and teaching methods of creativity. The benefits for children suggested in the literature provide motivation for my research. I believe it is important for the Cypriot educational system to study how the pedagogical practices of primary teachers in Cyprus may foster children's creativity through museum visits. My PhD study focuses on 'little c' creativity and possibility thinking and seeks to consider how teachers' pedagogical practices foster this central aspect of creativity through partnership projects with museums. A descriptive case study approach will describe and examine the pedagogical approach of the teachers in nurturing children's creativity and possibility thinking through museum visits. The proposed case study will be divided into two phases: of research; documenting and analysis. In phase one the pedagogies that are utilised by the teachers in each school will be documented in depth along with student's engagement. In the second phase of the project, analysis of the pedagogies and student engagement will be undertaken with a focus on the enablement of the pupils' creativity.

Give details of the participants in this research (giving ages of any children and/or young people involved):

The sample strategy I will adopt is a non-probability sample, also known as purposive sample. More specifically, I aim to include in my sample four primary teachers who teach children aged 9-10. I chose four cases in order to make a compromise between the difficulties of multi-case and the limitations of a single case study. These four cases will help me to collect numerous and different perspectives on the raised issues during the process of facilitating possibility thinking through creative

pedagogy in partnership projects with museums, and therefore to give a more a holistic understanding of the research problem. Here, it is important to clarify that because of the fact that museum education and creativity are new practices in my country the four teachers that are going to participate in my research must have as their primary target to promote their pupil's creativity (possibility thinking). Also, another important premise is that they must have attended before educational programmes that are currently offered by local museums to this age-group of children. The reason for these premises rests on the fact that a random sample may be largely 'ill-informed' of particular issues and unable to comment on matters of my interest as a researcher.

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 crucial element in ethical procedure is the process of informed consent for all participants. I will take all necessary steps needed to ensure that the head teachers of the primary schools, the four teachers, parents and children understand the whole process as well as the necessity of their participation, how the findings will be used and how and to whom it will be reported. Consent will be sought from adults and children in distinctive ways. For adults, this will be sought through a consent form; for the students this will be sought verbally.

Adults: The consent form will be given to adult participants (teachers, parents) for signature. It is important to clarify that the consent form attached here will be translated to Greek language. According to BERA (2011), the consent form makes participants aware that participation is voluntary and they can withdraw from the research at any point in the study for any and no reason. Therefore the teachers and parents of the children in the four classrooms will complete consent forms to show that they understand what the research is about and that they want their children to participate.

Children: The children will be asked verbally for their permission. I will talk with the children and explain them in an accessible way the purpose of my research and how I will be involved in their daily school life. Here, it is very important to clarify that, teachers, parents and children's consent will be done in parallel. As far as the children's consent for the study, after I talked to them and after I clarify any questions that may have as far as my research is concerned I will ask them to tick one box or the other on a permission paper and then I will collect this in an envelope so not be visible to everyone else.

Additionally, and as with the adults involved, I will recognise the right of children to withdraw from the research for any and no reason and I will inform them of this right. Thus, no data concerning a participant (adult or child) who withdraws will be analysed or published in the study, or saved but it will be destroyed. According to BERA (2011), these issues are very important for ensuring the integrity and validity of the research procedure.

Finally, I will need to obtain the necessary permission from the Ministry of Education and Culture in Cyprus in order to carry out my research in four primary schools in Cyprus. Thus, after I have the ethical consent form approved from the University of Exeter I will fill another approval form for the Ministry of Education and Culture of Cyprus. More specifically, in this form I will explain in detail my research (aim, purpose, sample, research question, research plan, method and methodology and the time table of my research). Also, I will have to attach the approval ethical form of the University of Exeter.

b) anonymity and confidentiality

As far as the privacy is concerned I will treat participants' data with confidentiality and anonymity to cover their right for privacy. Data (names of people, schools) will be anonymised.

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:
Based on the methods associated with interpretive paradigms I intend to use one-to-one interviews with the teachers, observations, longitudinal diaries and document analysis for gathering qualitative data. The data collection methods will be designed to enable the collection of personal experience and reflection over time. This can be achieved with the interviews and diaries. As part of these methods, teachers will be specifically asked to refer to descriptions of the lessons, particularly lessons related to museum visits, difficulties they may experience during the lessons, development of creativity during the lessons and additional comments. Qualitative analysis of the observational data and document analysis will give the researcher the opportunity to 'experience' the teachers' environments and access practice that might not be expressed by participants and to become immersed in the children's experiences also.

In order to interpret the qualitative data, gained from the interviews, observations and document analysis, I will use as a starting point, the three stages of analysis suggested by Miles and Huberman

(1994): preparing for the data analysis, exploration and reduction and classification. This process generally involves noting themes, patterns and regularities and also the comparing or the contrasting units of data. It is important to clarify that a check on my interpretations from participants will be carried out immediately after the data collection sessions. The initial coding will be shared with the participants and their suggestions and feedback will be taken into consideration. In such cases alternative explanations will be investigated.

Give details of any other ethical issues which may arise from this project (e.g. secure storage of videos/recorded interviews/photos/completed questionnaires or special arrangements made for participants with special needs etc.):
I will inform all my participants how and why their personal data will be stored, how I will use it and to whom it might be available. Furthermore, I will inform them that I will keep the data only for personal use and no other person will have access. Also, I will make sure I have the permission to share images as might in later years want to include these in publications and some of these may end up on the web. All the data will be securely stored in a locked cabinet in a secure building. Moreover, all the electronic information will also be stored on a secure system and will only be accessed by the researcher with their username and password.

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):
Concerning further or unforeseen ethical issues arising during the data analysis procedures I will seek to minimise all possible harm to participants. In terms of drawing conclusions from the study I will share with the participants my final interpretations and introduce any 'justified' additions, modifications or reductions toward the end of the thesis-writing process. This is important in establishing rigour and trustworthiness in qualitative research providing the participants with the chance to express their agreement or disagreement with the specific interpretations thus triangulating the research findings.

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*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

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Chair of the School's Ethics Committee
updated: April 2011

This project has been approved for the period: Oct 2011   until: Oct 2014

By (above mentioned supervisor's signature): ....date:...17/10/2011.........

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:............D/11/12/4...............

Signed:...date:....18/10/2011
Chair of the School's Ethics Committee

This form is available from   http://education.exeter.ac.uk/students/

Chair of the School's Ethics Committee
updated: April 2011

Appendix 8

Ministry of Education and Culture in Cyprus research approval form for main study

ΚΥΠΡΙΑΚΗ ΔΗΜΟΚΡΑΤΙΑ

ΥΠΟΥΡΓΕΙΟ
ΠΑΙΔΕΙΑΣ ΚΑΙ ΠΟΛΙΤΙΣΜΟΥ

Αρ. Φακ.: 7.19.46.6/32
Αρ. Τηλ. : 22800665
Αρ. Φαξ : 22809513
E-mail : dde@moec.gov.cy

ΔΙΕΥΘΥΝΣΗ
ΔΗΜΟΤΙΚΗΣ ΕΚΠΑΙΔΕΥΣΗΣ

6 Ιουνίου, 2012

Κυρία
Μαρία Γρηγορίου
Θηβών 3
6042 Λάρνακα

Θέμα: Άδεια για διεξαγωγή έρευνας με εκπαιδευτικούς δημοτικών σχολείων

Αγαπητή κυρία Γρηγορίου,

Έχω οδηγίες να αναφερθώ στη σχετική με το πιο πάνω θέμα αίτησή σας προς το Κέντρο Εκπαιδευτικής Έρευνας και Αξιολόγησης, που υποβλήθηκε στις 17 Μαΐου 2012, και να σας πληροφορήσω ότι εγκρίνεται το αίτημά σας για διεξαγωγή έρευνας με εκπαιδευτικούς δημοτικών σχολείων που εσείς θα επιλέξετε, με θέμα «Παιδαγωγικές μέθοδοι που χρησιμοποιεί ο δάσκαλος για αύξηση της δημιουργικότητας των μαθητών δημοτικής εκπαίδευσης χρησιμοποιώντας εναλλακτικές μορφές μάθησης όπως είναι οι επισκέψεις σε μουσεία», την παρούσα σχολική χρονιά 2011-2012, νοουμένου ότι θα ληφθούν υπόψη οι παρατηρήσεις του Κέντρου Εκπαιδευτικής Έρευνας και Αξιολόγησης, οι οποίες σας αποστέλλονται συνημμένα για δική σας ενημέρωση.

2. Νοείται, βέβαια, ότι πρέπει να εξασφαλιστεί η άδεια των διευθυντών/διευθυντριών των σχολείων που θα επισκεφθείτε, εκ των προτέρων, ώστε να ληφθούν όλα τα απαραίτητα μέτρα για να μην επηρεαστεί η ομαλή λειτουργία τους. Η έρευνα θα πρέπει να διεξαχθεί με ιδιαίτερα προσεγμένο τρόπο, ώστε να μη θίγεται το έργο των εκπαιδευτικών, το σχολικό περιβάλλον ή οι οικογένειες των μαθητών και όλες οι δραστηριότητες που θα αναπτυχθούν πρέπει να εμπίπτουν μέσα στο πλαίσιο που καθορίζεται από το Αναλυτικό Πρόγραμμα. Οι εκπαιδευτικοί πρέπει να λάβουν μέρος στην έρευνα στο μη διδακτικό τους χρόνο. Σημειώνεται, επίσης, ότι τα πορίσματα κρίνεται απαραίτητο να είναι ανώνυμα και οι πληροφορίες που θα συλλεγούν να τηρηθούν απόλυτα εμπιστευτικές και αποκλειστικά και μόνο για το σκοπό της έρευνας.

3. Η παρούσα έγκριση παραχωρείται με την προϋπόθεση ότι τα πορίσματα της εργασίας, θα κοινοποιηθούν μόλις αυτή ολοκληρωθεί, στη Διεύθυνση Δημοτικής Εκπαίδευσης για σχετική μελέτη και κατάλληλη αξιοποίηση.

Με εκτίμηση,

(Ελπιδοφόρος Νεοκλέους)
για Γενική Διευθύντρια

Κοιν.: Π.Λ.Ε.
Επαρχιακά Γραφεία Παιδείας

ΑΤ/ΑΤ EREVNES

Υπουργείο Παιδείας και Πολιτισμού, 1434 Λευκωσία
Τηλ.: 22800600 Φαξ: 22428277 Ιστοσελίδα: http://www.moec.gov.cy

Appendix 9

Parents consent form for main study

September, 2012

Dear parents,

My name is Maria Gregoriou and I am a primary teacher and candidate for the Doctorate in Education at University of Exeter, UK. In order to conduct my research study, I have obtained approval by the Cypriot Ministry of Education and Culture in order to carry out a qualitative research in the school where your children study. I would like to ask your approval for your children to be observed and video-recorded during the classroom lesson and the museum visit. The snapshots and transcripts from the videotaping will have a confidential character and will be used only for the aims of the research. The anonymity of the participants will be ensured using pseudonyms.

I would like to thank you in advance for the collaboration and to ensure that the particular research study aims for the qualitative upgrade of education.

Research leader: Professor Anna Craft, OU and Exeter A.R.Craft@exeter.ac.uk

Regards

Maria Gregoriou

e-mail: mg304@exeter.ac.uk

Mobile: 99360484

Appendix 10: Examples of the analysed data

Case 1

PRIMARY SCHOOL1 – LESSON 1 – EPISODE 1			
Title of the episode: The sack problem			
DESCRIPTION OF THE EPISODE	**FIRST THOUGHTS**	**CODES**	**WHAT ELSE**
T: Do you think it was a good idea to tell them not to open the sack without telling them first what the sack had inside? Think about it for couple of minutes and discuss it with the child sitting next to you. *The teacher was the one who chose which student is going to talk. After couple of seconds chose M to talk.* M: We believe that Odysseus did the right thing. He was the captain of the ship. The sailors should trust and obey him. *(teacher waits couple so seconds before he chose G to talk)* G: Yes, yes Odysseus did the right thing. If I was in his place I was going to do the same thing. The sailors were not necessary to know what was inside the sack. *(teacher waits couple so seconds before he talked)* T: Hm… (he touch with his one hand his mouth and looks skeptical) *(teacher waits couple so seconds before he chose C to talk)*What do you think C? C: No, I strongly disagree *(a boy interrupt the girl)*. This was	He want for the children to judge this action by posing a question to them Verbal Teacher QP: Possibility moderate (Yes, No; Why), Restricted time (2-3 minutes) to think and discuss it with the child next to them Discussion in pairs at first and then classroom discussion Children Verbal QR: Accepting and Completing Verbal Children QR: Rejecting	Collaboratively narrative within wider communal teacher initiated narrative Teacher initiated attempt to fantasy and historical narrative with focus on plot <u>Features from all the above answers for the students:</u> (QR, IM, P, IMM, IN) (*QP*) Being imaginative Intentionality (powerful intentional participation to the conversation) Child initiated attempt at what if and as if	Teacher Verbal question posing- Leading question- Possibility moderate – creating a problem to solve (plenary QP) Constrained children's self-determination Short wait-time 1 Short wait-time 2 Teacher Verbal question posing- Follow through question- Possibility moderate

really dangerous for their lives. This was not the right time to test their loyalty of his sailors. No no defiantly not. Also, we must not forget the fact that they were trying to go to Ithaca for so long. This was a wrong decision from the Odysseus. *(teacher waits couple so seconds before he chose K to talk)*	Verbal Children QR: Accepting	narrative explanation with focus on 'plot'	Children question responding – narrative focus on plot and characters
K: I think that C is right. All these winds that came out form the sack could kill them all. This was really dangerous. *(teacher waits couple so seconds before he chose A to talk)*	Verbal Children QR: Accepting	Child entering historical narrative, as if thinking	Children's intellectual risk taking
A: I also agree with them sir because of the sailors knew about the winds they would never open the sack. (E interrupt A)		Teacher initiated attempt the children to what if and as if	Dialectic teaching through maieutic questioning
E: But what about the fact that Aiolos made Odysseus promise that sailors must not be informed about what the sack had inside. Odysseus is a man and the 'men always keep their words' that's what my grandfather says. He should be more careful with the sack. *(teacher waits couple so seconds before he talked)*	Not sure. Thinks also this alternative	narrative exploration	Creating a story/plot Teacher's active role Teacher's active participation
T: Ah … I see. You have different opinions about this issue. It depends how you see things. There are different angles and perspectives. But if you were the sailors what you were going to do? If I came in our ship this morning and told you *'Do not open my sack because Aiolos had put inside all the bad winds that prevent us for going back home, back to Ithaca'*	Sum up the thoughts. Verbal Children QP: Creation of a scenario Verbal Teacher question posing follow though question possibility		Verbal Teacher's Question posing – Leading question posing- Possibility moderate which promote the as if

(Narrative talk). What were you going to do then? *(Teacher wait –time before he chose who is going to talk next)* C: Definitely I was going to open it. T: Why? *(teacher waits couple so seconds before he chose C to talk)* C: Because I was going to be really curious about what really the sack had inside. *(teacher waits couple so seconds before he chose K to talk)* K: I was going to open it too, because I would think that you were lying to us. I would imagine that you keep a treasure in the sack that you want it for yourself. *(teacher waits couple so seconds before he chose A to talk)* A: Yes, I agree too. We are all together in this trip. We share everything. So we will share the treasure if there is any. Ok you are the captain you will take the biggest part of the treasure but we also want a part from it too. *(E interrupted A)* E: No no no I was not going to open it. I would believe, trust and obey you, you are my captain. C: That's because you are a 'chicken' (The child started	narrow All the children put their selves in the place of the sailors use of the 'I'		thinking. The teacher tried to make the children see things form the point of view of the sailors. Follow through TQP Teacher's Question posing: *(points also from my reflective journal)* provide an opportunity for pupils to share their opinions and seek responses from their peers critical thinking (he asked them to judge an action) maintain the flow of the learning within the lesson foster hypothesis and

			idea/opinion forming
making the voice of a chicken, the other children start laughing , the teacher stop them by increasing his voice)			create a sense of shared learning by the classroom discussion
The conversation continues until the bell rang for break. All the children expressed their opinion.			challenge the level of thinking by placing the children into someone else shoes building on the responses of students

PRIMARY SCHOOL 1– LESSON 1 – EPISODE 1

Title of the episode: The sack problem

Teacher's Reflection's and Interpretation about the lesson: (Teacher's Interview, 9/10/2012)	FIRST THOUGHTS	CODES	WHAT ELSE
1. As I've said in the interview I think creativity is very important for the children and as teachers we must foster it to them. The only way to achieve and promote creativity and possibility thinking in this classroom is through classroom discussion (children come from different countries and they do not speak Greek really well). Otherwise, if for example I let the children to work in large groups not all of them will have active participation in the group. Most of the times the weak children do not participate at all. They are standing back and let the other children to do the job for them.	Teacher's Verbal Question Posing technique	Teacher Verbal Question Posing Teacher Stimulus children's historical narrative Features for the	Children's Verbal Question Responding – Children: • Adding • Rejecting • Accepting ideas

So, usually I do not use a variety of activities. I pose questions which can foster the children to think alternatives, to thinks possibilities, to see thinks from a different angle and to give a solution to problem by placing themselves in the place of another person. I pose questions and let the children couple of minutes to think about it[17]. Then I choose who is going to talk. With this way I give equal opportunities to all the children to talk and express their thoughts and ideas. More specifically in today's lesson I raised two questions that fostered their imagination and gave really interesting answers. Some of the answers impressed me because I did not expect from them to split into two groups and strongly defending their opinion. The questions were: the first one was about to judge if Odysseus did the right think not to tell to his sailors about the sack and the other one was to put their selves in the point of view of the sailors- what were going to do if they were in their place. 2. The first example of children's thinking was when I asked them to judge If Odysseus did the right thing and then to place their selves in the point of view of the sailors. Each child expressed a different idea. They gave me really interesting ideas (*perspectives that he did not imagine that the children were going to express*	Children as if thinking Verbal Teacher's Question posing: *(points also form*	students: • Being imaginative • Playing with different possibilities • Self-determination about the expression of their thoughts (independence in decision making and confidence to express them) • Intentionality (powerful intentional participation to the conversation) • Child entering historical narrative, as if thinking	Teacher short Wait-Time 1 Teacher short Wait-Time 2

[17] This is really important. The children need to have time to think it by their selves, to construct and build their ideas and thoughts before sharing them with their classmates. Thus, by giving time to think not only after I posed the question by also after they expressed their ideas, they have the opportunity to be in the question and rethink their answer, thoughts and ideas. I think that this is really helpful for the children in order to foster their creative thinking. (Teacher's Reflective Journal, Lesson 1, 10/10/2012)

– the children were rejecting and accepting each other's ideas by placing themselves into other's shoes) with a justification. They really put their selves in the place of Odysseus at first and the sailors next. 3. During the lesson I asked them questions in order to check their understanding and to maintain the flow of the lesson. I used different type of questions. However, these questions may not have foster possibility thinking but are also necessary inside the classroom because I have to be sure that all the children have understood what the myth is talking about. We must not forget that more than the half children of this classroom are not from Cyprus. However, here I would like to say that there are different kinds of questions. I strongly believe that some kinds of questions (the questions that I referred to earlier - see my answers in question 2) can foster children's possibility thinking. Also, I would like to say that any lesson with the appropriate questions can foster children's possibility thinking without the teacher necessary to do extraordinary activities. 4. The theme of the museum that we are going to visit in general. It is really interesting and challenging for the children. More specifically, for this lesson I focused on some of the myths that the children are going to use through their experiential learning in the museum. The biggest challenge is to manage to involve the children into the myth in order to judge the actions of Odysseus and his sailors. To learn the myths as story is the less knowledge and skill that I could teach them. The challenge is to make them be critical thinkers, place	*my reflective journals)* maintain the flow of the learning within the lesson engage students with the learning assess what has been learned check that what has been learnt is understood and can be used provide an opportunity for pupils to share their opinions and seek responses from their peers encourage imaginative or innovative thinking foster hypothesis and idea/opinion forming create a sense of shared learning challenge the level of thinking building on the responses of students Importance of an interesting theme for the lesson – inspires

themselves into somebody else shoes and manage to see things differently.	children's participation		

Case 2

<table>
<tr>
<td colspan="4">PRIMARY SCHOOL 1- CASE 2 – LESSON 1 – EPISODE 1</td>
</tr>
<tr>
<td colspan="4">Title of the episode: Venus arrives at Olympus</td>
</tr>
<tr>
<td>DESCRIPTION OF THE EPISODE</td>
<td>FIRST THOUGHTS</td>
<td>CODES</td>
<td>WHAT ELSE</td>
</tr>
<tr>
<td>They had a classroom discussion about Botticelli's painting 'The birth of Venus'.

The teacher posed them a task: 'Imagine that you are one of the twelve Gods of Olympus. Suddenly god Venus arrived. You are looking at her right now. The task is to write down a dialogue between you and any other from Olympus you want when you saw got Venus arriving. Firstly, think about it for couples of minutes then discuss it with the child sitting next to you and then you can start writing your dialogues'.

<u>Some examples from the dialogues:</u>

1st example:

Mars: Hey beautiful goddess. What is your name?</td>
<td>Narrative talk

Creation of a scenario- As if they were on Olympus and saw god Venus arriving – What happened then

The task was to take Botticelli's painting a step further – what is going after the scene that Botticelli presents to his painting

Time to think by their selves + Time to discuss it with the child sitting next to them + Time to write down their dialogues

Previous Knowledge</td>
<td>Teacher initiated attempt to push the children to what if and as if narrative exploration with focus on plot, sequence, significance and characters

Teacher tries to enter the children to fantasy and historical narrative, as if thinking

Little individual with a collaborative narrative

<u>Features from all the above answers for the students:</u></td>
<td>Limited time

Narrative improvisations

Constrained self-determination about the expression of their thoughts (independence in decision making and confidence to express them, personal route finding)

Teacher's verbal Question posing: Leading question- Possibility moderate

Children's narrative question responding with focus on plot,</td>
</tr>
</table>

		Being imaginative	sequence, significance and characters
Venus: My name is Venus.			
Mars: Ah… The name Venus is as beautiful as the woman who got it.	The children were confident to write down their own scenario	Innovative ideas for them and for their teacher	Narrator Facilitator
Venus: Ah… Thank you. You are so kind. What is your name? I have just arrived at Olympus and I do not know anyone.		Intentionality (powerful intentional participation to the conversation/ task)	
Mars: My name is Mars the famous god of war.	Previous knowledge		
Venus: Nice to meet you Mars.		Playing with different ideas and possibilities (What happened when god Venus arrived at Olympus)	
Mars: Come Venus, do not be afraid. I will introduce you to the other gods.	They created a character for Venus – she was afraid-feelings		
Mars introduced Venus to the other gods of Olympus.	Imagination, innovation, playing with ideas		
Venus: Nice to meet you all. Now I have to go back to the mortals.		Child initiated attempt at what if and as if narrative explanation with focus on plot, sequence and characters	
Mars: Are you leaving? So soon? Why?			
Venus: Yes. I have to. I would like to make people get in love. I will come back soon.	Previous knowledge	Child entering fantasy and historical narrative, as if thinking	
God Venus flied from Olympus	Imagination, innovation, playing with ideas		
All the gods shout 'Good luck Venus. We are waiting for you.'			

2ⁿᵈ example: - Who is that woman that is coming towards to us? - I do not know … but she is really beautiful. Venus: Hi - Hi beautiful god. What is your name? - My name is Venus - And you are the god of? - The god of love and beauty. - How did you come up here? - I was born from the foaming sea in Paphos. The wind Zephyrus with a gentile murmur pushed me up on the white waves. Then the god Hours dressed me, made my hair so beautiful and brought me here. - You must be tired from your journey. Would you like something to drink? - Yes please, a glass of nectar. - Would you like something else? - No no I am fine. Just to meet my father Zeus and my mother Dioni. - Come I will take you to your father. - Thank you - (in front of Zeus - the god who will introduce Venus to Zeus is down on his knees) - Father Zeus your daughter Venus has just arrived. Zeus: Venus? Venus: Father… (Venus hug Zeus) Zeus: Welcome home. How was your trip? We will have a	Previous knowledge Previous knowledge Knowledge gained form this lesson Human characteristics for the goddess Previous knowledge Knowledge gained form this lesson Information, bigger picture of what is happening		

welcome party for you tonight. So go to your room, get rest and dressed for tonight. Venus: Ok father. Thank you. Venus is going to her room. ***3rd example:*** - Who is she? - Ah… I do not know… but she is so beautiful. - I have to introduce myself to her. I haven't seen more beautiful god for ages. - Yeas that is true. - I will marry this woman definitely - (the god start laughing) How do you know that? - Well, she is the most beautiful god on Olympus and I am the most handsome god here. I will ask her for a date and then… I will marry her. - Ok Mars… couple seconds ago you told me that you was in love with a mortal and now (Mars interrupt him) - Sh… I will go to her… leave me alone.	Human characteristics Human habit for the gods Imagination, innovation, playing with ideas Previous knowledge Human habits		

4ᵗʰ example:			
-Who is she? She is so beautiful. -What are you talking about? No one is more beautiful than me. I am Hera Zeus wife. Do you remember that? Go and ask her who is she (she said angrily to god Artemis) -Ok god Hera I will go (Artemis approaching Venus) Hi goddess. What is your name? Who are your parents? -My name is Venus. My father is Zeus and mother is Dioni. Hera listened that Venus is Zeus daughter. Then she started screaming -No no no no … not another child of Zeus with another woman… (and she throw her glass to the floor) One of the stories must be outside of Olympus, for example in earth	Previous knowledge Previous knowledge Human characteristic Knowledge from today's lesson Human characteristic Imagination, innovation, playing with ideas		

PRIMARY SCHOOL1-CASE 2 – LESSON1 – EPISODE 1			
Title of the episode: Venus arrives at Olympus			
Teacher's Reflection's and Interpretation about the lesson: (Teacher's Reflective Journal, Lesson 1, 16/10/2012)	**FIRST THOUGHTS**	**CODES**	**WHAT ELSE**
1. We had a discussion about Botticelli's painting which	Creation of a scenario- As	Teacher initiated attempt to push the	Written narrative

inspired their imagination. I posed them a question that I 'could not figure out the answer' 'Why the painter presents Venus on a shell?' Later, I tried to challenge their imagination and their innovative ideas. Thus, I asked them 'How you could present Venus?'. At the end of this interesting discussion I had a written activity for the children. I invited them to write a dialogue (what happened when god Venus arrived at Olympus). The target of this activity was the children to travel with their imagination into Botticelli's painting and write down a step further of what the painting show us. Thus, they develop their imagination placing themselves into the point of view of the painter and then of the goddess Venus or in the place of any other god they wanted. I invited them to act as some others, not as students of the fourth grade. 2. Concerning Botticelli's painting I found two of the answers creative (I did not think about them as possibilities). These were the chariot and the dolphin. For the written essay I have photocopy the examples that I think creative. I put them first. Through these dialogues the children were really	if they were Botticelli what they were going to do The task was to take Botticelli's painting a step further – what is going after the scene that Botticelli presents to his painting As if thinking What if acting Let the children write any plot they had imagined	children to what if and as if narrative exploration with focus on 'plot' Teacher tries to enter the children to historical narrative, as if thinking Teacher's verbal question posing <u>Features from all the above answers for the students:</u> Being imaginative Playing with different possibilities (What could happen if god Venus arrived at Olympus) Self-determination about the expression of their thoughts (independence in	Simulations Clear instructions

imaginative and wrote down really innovative and impressive plots. They created scenarios that I did not think about it. Also, some of them included in their dialogues previous knowledge about the gods and also some of the information they have learnt from today's lesson. I really like the combination of the knowledge, imagination, fantasy and innovation. 3. The comprehension questions but they are necessary. Anyway these kinds of questions did not had as their target the inspiration of creativity from the beginning. They have gnosiological goal from the beginning. I have also to cover the curriculum. All in moderation. 4. The subject of the whole project and more specifically for this lesson the myth of about the birth of goddess Venus. This myth is part of the museum programme. According to legend goddess Venus was born from the foam of the sea in Paphos.		decision making and confidence to express them, personal route finding) Intentionality (powerful intentional participation to the conversation) Child initiated attempt at what if and as if narrative explanation with focus on plot, sequence and characters Child entering historical narrative, as if thinking	

Case 3

PRIMARY SCHOOL 2-CASE 3 – LESSON 2 – EPISODE 2			
Title of the episode: *Arion and the dolphin*			
DESCRIPTION OF THE EPISODE	**FIRST THOUGHTS**	**CODES**	**WHAT ELSE**
They talked and discuss the myth of Arion and the dolphin. The teacher posed them a problem/task/ question. The question was: 'What would happen if we take the story a step further?' The children had to present what happened after the dolphins rescued Arion. The children had time to think about it alone for couple of minutes, then to discuss it in their groups and present the scene. One of the groups produced this improvisation: Roles: Arion, King, two dolphins Dolphin1: Here Arion you will be saved and secured. Doplhin2: Run run Arion and go straight to the king. He will	Teacher's verbal question posing: Leading question – Possibility broad Individual thinking time Group discussion time Time to cooperate Improvisations Supporting environment – supportive teacher Confidence from the children to present and participate (mix abilities	Teacher's initiated attempt to enter the children in a what if and as if narrative exploration with focus on plot characters, sequence and significance Teacher tries to enter the children to fantasy and historical narrative, as if thinking Collaboratively narrative within wider communal teacher initiated narrative Features for the children:	Limited time (ten minutes mini role-playing activity) Teacher's Verbal QP: Leading question – Possibility moderate Engagement (as a upper category of PT features) Narrative Facilitator: Feeding with the new knowledge and appropriate information Constrained Self-determination (independence in decision making,

help you.	group – different levels of knowledge and skills)	Being imaginative	confidence)
Arion: Thank you my dolphins. I will always remember you. (Arion greets the dolphins and start running, Then Arion goes in front of the King and curtsy)		Narrative (as if thinking, what are we going to do as the characters of the story)	Enjoyment Verbal children's Narrative QR with focus on plot, characters, sequence and significance
Arion: My king. I want your help. Please save me.		Innovative ideas for them and for the teacher	
King: What happened? Tell to your king what the problem is. I will help you Arion. Tell me.		Intentionality (powerful intentional actions)	Narrative Improvisation
Arion: As you know I participated into a song contest. I won the competition and they gave the first price. Then I took the boat to come back home but the sailors wanted to rob me. They thought that the prize that I have won were money. But when I told them that the prize was a statue they did not believed me and they throw me to the sea. Two dolphins saved me.		Immersion (concentration into the task)	
The king was looking skeptical and was touching his mouth. Then he turned to his left side (there was no one) and start	Imagination Innovation		

shouting. King: Guards guards go straight to the harbor. Arrest the sailors who tried to kill Arion, take all their gold and bring them in front of me on their knees. (Then he turned to Arion) They will apologies to you and then we will through them to the sea. They will not hurt you again. Arion: Thank you my King.	Playing with ideas and clothes Intentionality Immersion Self-determination		

<table>
<tr><td colspan="4" align="center">PRIMARY SCHOOL 2-CASE 3 – LESSON 2 – EPISODE 2&3</td></tr>
<tr><td colspan="4" align="center">Title of the episode: Arion and the dolphin & The symbligads stones</td></tr>
<tr>
<td>Teacher's Reflection's and Interpretation about the lesson:
(Teacher's Interview, 1/11/2012)</td>
<td>FIRST THOUGHTS</td>
<td>CODES</td>
<td>WHAT ELSE</td>
</tr>
<tr>
<td>1. The role play was the activity that helped the children in today's lesson to develop their creativity and their possibility thinking. Today's lesson had two differentiations of a role-playing. The first was to convey the story of Arion and the dolphin one step beyond. The target of the activity</td>
<td>They decide all together about the scene, the roles and the costumes that they were to need

Group discussion</td>
<td>Teacher's initiated attempt to enter the children in a what if and as if narrative exploration with focus</td>
<td>Mini role – playing

Simulations (attempt to</td>
</tr>
</table>

was the children to enter into the position of heroes and act like them. So through their eyes we saw how the legend evolved. The second differentiation of the theatrical play was when the children had to represent another myth without words. They had to resent the myth like a dumb movie. Thus, the children using the imagination and creativity formed with their bodies a boat. The captain was placed in the front of their ship in order to lead them and to show them the way to their destination. They even create sails for their boat, using materials that we had at that time in the classroom. This was fantastic and I did not expect this to happen. They took the initiative and they created the sails. The girls on the other stood in two parallel lines and found which time were going to close together in order the boat to manage to pass through them. The setup of this whole scene was through a discussion and cross-fertilizing ideas. 2. This classroom discussion ideas I find it to be really helpful inside a classroom of mix abilities children in order to foster their creativity. Each child adds to the ideas of the others and as a result even the low abilities children have active participation. Thus, we create a safe environment for all the children to share their ideas and for the development of their creativity and when this is combined with the role-playing activity the results are amazing. Also, the group work activity for the creation of the scene of the myth	Classroom work-discussion Improvisations Supporting environment – supportive teacher Confidence from the children to present and participate (mix abilities group – different levels of knowledge and skills)	on plot Teacher tries to enter the children to historical narrative, as if thinking Features for the children: Being imaginative Narrative (as if thinking, what are we going to do as the characters of the story) Innovative ideas for them and for the teacher Play with different ideas and alternatives about their costumes, movements and expressions Self-determination (independence in	put students in the position of a person in a particular time and space) Cross-fertilizing ideas

Arion and the dolphin 3. All the other activities. The understanding of the myth. However, this part was necessary in order the children to get the necessary knowledge about the myth in order to participate in the mini-role playing activity. 4. The subject themselves myths are very interesting stories that inspire and foster children's imagination.		decision making, confidence) Intentionality (powerful intentional actions) Immersion (concentration into the task)	

Case 4

PRIMARY SCHOOL 2-CASE 4 – LESSON1 – EPISODE 7			
Title of the episode: **Home economics lesson**[18]			
DESCRIPTION OF THE EPISODE	**FIRST THOUGHTS**	**CODES**	**WHAT ELSE**
The teacher at the beginning of the lesson started a classroom discussion about the Mediterranean diet (what includes, how healthy it is) and in a later stage he asked from the children to compare it with every day diet that most of the people in our days adopt (the children had learnt about the Mediterranean diet in previous lessons). Later, they talk about what of the sailors of 'Kyrenia I' were eating. In order to do that they remembered what they had learnt during their museum visit about the findings concerning the food diet of the sailors that the archeologists discovered. He wrote to the board in a list the findings which were: pits olives and figs, almonds, sinkers for fishing and oil containers. Then, he posed them the task. The children had to discuss first into their groups and to write	Classroom discussion Group work Clear instructions. Feedback to the children He let them the choice to think and choose their recipe and their components.	Time to think, work, discuss and cooperate Standing back Collaboratively narrative <u>Features for the children:</u> Being imaginative Narrative (as if thinking, what are we going to do as chefs) Innovative ideas for them and for the	experiential activities Engagement (as a super category of PT features) Constrained Self-determination (independence in decision making, confidence) Cross-curricular Teacher's Verbal QP: Leading question-Possibility moderate

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[18] This is a lesson where the children start learning about healthy eating and also start to have a firsthand experience on cooking. This lesson takes place in a big classroom that looks like a house kitchen. Also, it includes big round tables for group work activities.

		teacher	Narrative improvisation
down a recipe inspired from the engridience that are written on the board. Then (in the next lesson) they had to cook their recipe and present it to their classmates. During their work they were accepting, adding and rejecting concepts. Three of the recipes that according to the teacher were really interest and inspiring were: octopus with pasta, octopus salad with black-eyed beans and fish pie roll. **<u>Octopus with pasta</u>**: First of all we have to say that the children took the octopus clean (the hood and remove the interior and also the mouth from the center was removed). However, they think proper to wash the octopus in order to be sure that it was cleaned and then they cut it into chunks. Then they cut the onions. They put the onions into a pan with olive oil and let the onions wilted slightly. Then add the octopus and sauté for a few minutes until they change color and blush slightly. Then they sprinkle with the spices. Later they add the tomato paste. Here one of the children of the team suggested rubbing also fresh	Accepting, Adding and rejecting ideas and concepts	Intentionality (powerful intentional actions) Immersion (concentration into the task)	Experiential activities Creating a story/plot Teacher's active role

tomatoes in order their food to be tastier. However, they figure out that their food needs more liquids in order to be well cooked. Thus, they put enough water in order to cover their materials. They let the food to simmer until octopus was cooked well. Then, they realized that their food had lot of liquids. This was a problem. The first plan was to cook the pasta in a different pan and at the end to put the pasta with the octopus. However, now they rejected this idea and they decided accept the idea of one of the member of their group. They add the pasta in the pan with the octopus and if was needed they were going to put extra water (to boil the pasta). They simmer over low heat for 10-12, stirring frequently until the pasta was ready. They wanted the food to be completely dry. Also, they add some olives and pepper towards the end of cooking. **Octopus salad with black-eyed beans:** This group wanted to create a recipe which they imagined that maybe the sailors of 'Kyrenia I' were cooking.	Problem solving with liquids As if they were chefs What if acting As if and what if thinking		

In a small saucepan they simmer the cleaned octopus with olive oil and pepper until it was smooth well. At the same time in another pan they were cooking the black-eye beans. After couple of minutes when the octopus and the beans were cooked they placed all of them in a serving dish adding also chopped lettuce, onion rings, parsley and sliced cucumbers. At the end they decided to add also the liquid in which the octopus was boiled.

Fish pie roll:

This group wanted to created the most impressive and innovative recipe from the other groups. They wanted to include into their recipe fish and crust leaves. They liked these two components but they did not know if combining them together are going to be tasty.

Firstly, they sauté the onions into a pan with olive oil and later they add the fish fillet. They continue sautéing for a few

minutes until they change color. Finally, they removed it from the heat smashed the fish filet into small pieces and they add salt, pepper and oregano. Then they tried to make rolls with the crust leaves but the stuffing was running from the rolls. Thus they let it cool completely. They put little olive between their leaves and put stuffing along. They roll the crust leaves and they created the fish pie roll. At the first place they wanted to fry the rolls. However, this idea later was rejected by the members of the group because this was going to be an unhealthy recipe. Thus, they decided to bake the rolls into the oven. Later all the groups presented their recipes to the others and shared their experiences. The other recipes were more simple than the above three (they included fish with potatoes)	Problem solving Rejection of the first thought		

PRIMARY SCHOOL 2-CASE 4 – LESSON1 – EPISODE 7

Title of the episode: Home economics lesson

Teacher's Reflection's and Interpretation about the lesson: (Teacher's Reflective Journal, Lesson 1, 08/11/2012)	FIRST THOUGHTS	CODES	WHAT ELSE
I strongly believe that the most valuable lessons are those that will take place after the museum visit. Also, I strongly believe to the importance of the cross-curricular activities. That is what I am trying to do generally in my teaching and also during this project. These two lessons included cooking and the children manage to place themselves to the point of view of chef or to the sailors. Generally encouraging **children cooking** is great for creating a **healthy eating habit** while **improving self confidence** and **self esteem**. Also, it encourages creativity, responsibility and involvement. It requires hands on use of maths concepts, planning, thinking, and time management. Cooking offers children opportunities to use the senses of sight, hearing, smell, touch and taste. Working with food lets a child focus on his senses individually as well as collectively.	Cross-curricular activities Importance of the lessons after the museum visit. As if thinking What if thinking Creativity Problem solving Imagination Self-esteem Sensory experiences Creative thinking	Time Features for the children: Being imaginative Narrative (as if thinking, what are we going to do as chefs) Innovative ideas for them and for the teacher Play with different ideas and alternatives Self-determination (independence in decision making,	Simulations Co-operating teacher - studnets Cross-curricular activities Supportive environment Engagement Cross-Cultivating ideas

Cooking teaches a child how to use his eyes, ears, nose, skin and tongue to observe the things. **Cooking encourages creativity.** Allow children to make decisions, add extra features, and do as much of the work as possible. Praise children for experimenting and making something different. For example, this activity which the children had the opportunity to create their own recipe gives them the opportunity to be creative and unique. Therefore, creative thinking was involved with the creation or generation of ideas, processes, experiences or objects. Cooking encourage children to use their imagination to express their self in the kitchen. This gives them the chance to experiment and improve their problem solving skills. Let them mix together recipes and substitute different ingredients. That is what three of the groups did during this activity. Recipes that list optional ingredients are another way to experiment. Even though things can get a bit messy when little hands pitch in, it's worth it to see a proud, confident child show off her/his culinary achievements.		confidence) Intentionality (powerful intentional actions) Immersion (concentration into the task)	

Case 5

PRIMARY SCHOOL 3-CASE 5 – LESSON1 – EPISODE1

Title of the episode: Kings and trade

DESCRIPTION OF THE EPISODE	FIRST THOUGHTS	CODES	WHAT ELSE
This lesson was about the trade between Cyprus and the neighboring countries. The teacher created a scenario and gave roles to the children. More specifically, each child was transformed to a king of one of the twelve kingdoms that were in Cyprus in the ancient years (the children chose by their selves which kingdom they wanted after they saw the map with the kingdoms the children gave a justification for their choice). Later she gave to each child a geomorphologic map of Cyprus (map 2) and the children had to find out which products could exchange and export from their kingdoms. Here, it is important to say that each child except from the map needed to do a survey around his kingdom in order to learn more information about it. In a later stage she gave them another map, the Mediterranean map, which were included the neighbor countries and also the products that the countries	Improvisations

Teacher's active participation

Supporting environment – supportive teacher

Confidence from the children to present and participate (mix abilities group – different levels of knowledge and skills)

Knowledge with imagination

As if
What if | Teacher's initiated attempt to enter the children in a what if and as if narrative exploration with focus on plot, characters, sequence and significance

Teacher tries to enter the children to fantasy and historical narrative, as if thinking

Individual narrative within wider communal teacher initiated narrative

Features for the children: | Narrative Improvisations (attempt to put students in the position of a person in a particular time and space)

Limited time for the role-playing

Engagement (as a super category of PT features): exploring and playing with different ideas and possibilities

Narrative Facilitator: Feeding with the new knowledge and appropriate |

	Mini role – playing	Being imaginative	information
were exporting. Then each of the kings had to say with which countries wanted to exchange products and why. Then she presented them the next task: 'You are the kings of the Cypriot kingdoms. You will meet in conference and you have to discuss with each other about your trade and your plans about it'. The children were enthusiastic about it. They were their robes and the teacher told them to stand out of the classroom door for five minutes. During this time she prepared the classroom. She created the meeting room for the kings with a big round table. Then she asked from the children to come in and take place. She was also participating into this role-playing activity. They all sit down. Then the teacher raised up her imaginary glass full of wine and told them: Teacher: Let us make a toast for today's meeting. I hope that we will have a good year with lot of profit. -Cheers (said all together and trying to clink their glasses). Teacher: For a long time now I wanted to organize this party in order to talk to each other my friends. We have to create plan a plan for our trade. We must agree the countries that each of the kingdom will have trade with in order all of us to		Narrative (as if thinking, what are we going to do as the characters of the story) Innovative ideas for them and for the teacher Play with different ideas and alternatives about their body movements and expressions Intentionality (powerful intentional actions) Immersion (concentration into the task)	Active Participant: The teacher gets involved in the role-playing activity. Constrained Self-determination (independence in decision making, confidence) Teacher's QP: Leading question-Possibility moderate Children's Narrative QR with focus on plot, characters, sequence and significance

have profits and not to have any disagreement. Do you agree?			
-Yes… yes we agree (said all together).			
Teacher: Ok let us start our conversation. What are your plans King of Kition?			
The children were presenting their products, to which countries will export and why and also to what kingdoms of Cyprus want to exchange products. However, suddenly there was a disagreement between two of the kings.			
King of Tamasos: I am intended to cooperate with the King of Kition if the kings want. I was thinking to export my cooper to some of the Greek islands like Crete and Milos (the king showed to the other kings the two islands into the map). What do you think King of Kition? Are you interested? I will give you 20% of the profits.	Plot not expected to be happening		
King of Idalion: (the king of Kition was going to talk but the King of Idalion interrupted him) Ah… just a minute. This was my plan also. I will do it. Not you. My kingdom is full of cooper. What I am going to do it. Forget it. (said angrily)	Innovative idea		
King of Tamassos: What are you talking about? I said it first it was my idea.			

King of Idalion: Yeah … right. I will give you 25% of the profits King of Kition. King of Kition: Well… (King of Tamasos interrupted King of Kition) King of Tamasos: I will give you 30%. King of Idalion: I will give you 35%. King of Kition: My friends we will find a solution. Here in Kition we have lot of ships why not both of you use the ships and share with me your profits? This will be a good solution for all of us. (the King was rubbing his hands) Then the other kings presented their kingdoms and their plans for the trade.			

PRIMARY SCHOOL 3-CASE 5 – LESSON1 – EPISODE1

Title of the episode: Kings and trade

Teacher's Reflection's and Interpretation about the lesson: (Teacher's Reflective Journal, Lesson 1, 12/11/2012)	**FIRST THOUGHTS**	**CODES**	**WHAT ELSE**
I strongly believe that the use of the role-playing activity is very important inside the classroom. Role-playing	Critical thinking Problem-solving	Teacher's initiated attempt to enter the children in a what if	Mini role – playing Simulations (attempt to

encourages the use of critical thinking because it involves analyzing and problem solving. The role-playing activity attempt to put students in the position of a person in a particular time and space and as a result this foster their imagination and their creative thinking. Also, I was taking part to the role-playing activity. The children love it very much.

Today's lesson was a combination of ideas and activities. I gave them roles from the beginning and the children were acting in their role during the whole lesson. However, by pretending to be kings they learnt all the appropriate information about their kingdoms in order to have a plan to present to the other kings about the trade of his/her kingdom.

However, during the last activity there was an argue between two of the kings. This was something that I did not expect to happen and I was pleasantly surprised. This argues made me realize that the children were acting as | Position of a person in a particular time and space

The children by their selves found all the necessary information

Improvisations

Teacher Participant: The teacher gets involved in the role-playing activity.

Supporting environment – supportive teacher

Confidence from the children to present and participate (mix abilities group – different levels of knowledge and skills)

Knowledge with imagination

As if
What if | and as if narrative exploration with focus on plot

Teacher tries to enter the children to historical narrative, as if thinking

Features for the children:

Being imaginative

Narrative (as if thinking, what are we going to do as the characters of the story)

Innovative ideas for them and for the teacher

Play with different ideas and alternatives about their costumes, movements and expressions | put students in the position of a person in a particular time and space)

Verbal Narrative

Engagement: exploring and playing with different ideas and possibilities |

kings and were looking for the best profit of their kingdoms.		Self-determination (independence in decision making, confidence)	
As far as the museum visit I will try to give a variety of experiences to the children before the visit. I will try to take advantage of the general idea and period that the objects of the museum visit are from in order to educate the children. I strongly believe that the best way for a meaningful museum visit is not when the children know very well all the necessary knowledge. Then, if the children know everything I think that the magic of the visit will be lost. The children will not have much to discover then.	Not all the information/knowledge for the visit Period Historical period of the objects of the museum	Intentionality (powerful intentional actions) Immersion (concentration into the task)	

Case 6

PRIMARY SCHOOL 3-CASE 6– LESSON2 – EPISODE 7&8

Title of the episode: Museum objects get alive

DESCRIPTION OF THE EPISODE	FIRST THOUGHTS	CODES	WHAT ELSE
During this lesson the teacher referred to something that the museum educator told to the children at the end of their visit and the children were excited '*at the evenings magical things happens in the museum… all the objects are alive…*'. Then she gave to each group a worksheet paper and one pencil. This paper had the ending of the story. The groups had to create a story which was going to have the following end: '*Already begun to dawn and everything magically dissolved by the first light. Aspasia and Zenon smiling wrap the skein of their own history because the guard of the museum will be arrived to open the museum for the tourists. The children were falling asleep. But before falling asleep they wink at each other and whisper… Until tomorrow night … You promise?'* The teacher gave clear instructions. All the members of the group have to write a part of the story. That is why she gave	Creation of a scenario- As if the museum objects were alive As if thinking What if acting Let the children write any plot they had imagined	Teacher initiated attempt to push the children to what if and as if narrative exploration with focus on plot, sequence, significance and characters Teacher tries to enter the children to fantasy and historical narrative, as if thinking Collaboratively narrative Features from all the above answers for the students:	Narrative improvisations Constrained self-determination about the expression of their thoughts (independence in decision making and confidence to express them, personal route finding) Teacher's verbal Question posing: Leading question-Possibility moderate Children's narrative question responding with focus on plot, sequence, significance and characters

		Being imaginative	Narrator Facilitator
them one pencil and one piece of paper in each group. However, there were different outcomes: one of the groups created a comic and another group wrote an interesting story. **1st group:** The children of this group decided to write their story by adding to one's another's ideas. Thus, a child took the A4 paper and the pen and started the story. Then, she gave the paper to her classmate next to her who continued the story. Then the boy passed the paper to the boy sitting in front of him. This way of working continued until they finished their story. The below drawing shows how the children of this group worked. 		Innovative ideas for them and for their teacher Intentionality (powerful intentional participation to the conversation/ task) Playing with different ideas and possibilities (What happened when god Venus arrived at Olympus) Child initiated attempt at what if and as if narrative explanation with focus on plot, sequence and characters Child entering fantasy and historical narrative, as if thinking	

The teacher used this technique in previous lesson. However, the children of this group decided to work with this way in today's lesson. It was not obligatory from the teacher to work in this way. They chose to. The story they wrote was the following: The lights switched off and the door is now locked. Aspasia: Zenon Zenon weak up… the museum keeper is now gone… weak up (Aspasia whispered to Zenon) Zenon: Are you sure that he is gone? Aspasia: Yes of course. It is midnight. Look at the clock. Zenon: Yes you are right. Aspasia: Why do you look sad Zenon? Zenon: I do not know. I feel bored here. Yesterday the children from Aradipou primary school came. Aspasia: Yes wasn't it great. Zenon: Yes of course it was great but… Aspasia: But what? Zenon: Well I was thinking how lucky these children are. Aspasia: Lucky? What do you mean? They won the lottery?			

Zenon: No no no… These children are lucky because they go to school every day and they learn how to write, read, they learn lot of things… We did not have this chance… and we will not have it. We are stuck in this museum doing nothing. Aspasia: Yes I thought about it lot of times and some days I feel also very sad. Zenon sigh Aspasia: Ok maybe we will never have the chance to be educated during our eternity but our job is really important for all these children. Through us and through our eyes they can learn things and be educated. Zenon: What do you mean? Aspasia: Well yesterday we make a tour to the children back to time in our house. They learnt lot of things from us. Anchor: Aspasia is right. You are like teachers… The children learn from you. From all of us. All the museum objects agreed. Zenon: Yes you are all right. We are important. We all do an important job not only for the children but for all the people. Vase: Yes that is right.			

Aspasia: Yes Zenon… We are important. Let clean the objects and prepared the museum for the tomorrow visitors. Zenon: Yes let us do it. The two children were cleaning and preparing the museum all night by singing and dancing. However, the time passes so quickly. Already begun to dawn and everything magically dissolved by first light. Aspasia and Zeno smiling wrap the skein of their own history because the guard of the museum will be arrived to open the museum for the tourists. The children were falling asleep. But before falling asleep they wink at each other and whisper… Zenon: Until tomorrow night … Aspasia: You promise?			

2nd group: Comic

This group wanted to present their story through a comic. Generally the story of this comic was that some of the objects of the museum wanted to escape. Zenon and Aspasia told them that they will help them with the alert but they will not escape with them. They will stay in the museum because this is their home. Further analysis of the comic will be found at the end of this table.

PRIMARY SCHOOL 3-CASE 6– LESSON 2 – EPISODE 7&8

Title of the episode: Museum objects get alive

Teacher's Reflection's and Interpretation about the lesson: (Teacher's Interview, Museum visit, 30/11/2012)	FIRST THOUGHTS	CODES	WHAT ELSE
During this lesson I wanted to let the children write their own story about what they have learned and experienced during our visit. Writing is something that the children learn in the school. However, if the teacher let the children to write also stories based on their imagination can stimulate children's imagination and thinking. Here, I would like to say that the children and I have talked about how to write a story and as a result they have some specific points/structure that they take into consideration during their writing. These points are: the story must have a beginning, middle and an ending; characters; location; dilemma; conflict; resolution and imagination. There are many rules that they can follow to help them write, but the most important bit is using their unique imagination. The advices that I have given to them in previous lessons worth nothing without sprinkling it with their own invention and	Creation of a scenario- As if they were war correspondence travelled in past what they were going to do

What they were going to as war correspondence

As if thinking

What if acting

Let the children write any plot they had imagined

Importance of children's writing stories based on their imagination | Teacher's initiated attempt at what if and as if narrative with focus on plot and sequence

Teacher's initiated attempt to historical narrative and fantasy narrative

Children's features for both groups:
Being imaginative (creating an 'as if world')

Self-determine (great involvement, independence in decision-making, confidence, personal route finding) | Adding, accepting and rejecting concepts

Simulations

Engagement

Written Narrative

Cross-Cultivating ideas into groups |

creativity. Writing a story I would like to believe that is quite a challenge for them. Through writing stories the children can develop their imagination by introducing to the reader new ideas– ideas about fantastical worlds, other planets, different points in time and invented characters. It will encourage the children to realise that they can, and should, imagine anything they want. Creative writing helps children learn to think outside of the box and leads to the development of problem-solving skills. Also, I would like to add the fact that I did not let the children write their story individually but they write down their ideas into their groups. This fact helped them to discuss, share thoughts and ideas, think alternative and possibilities that alone maybe not think about and increased their imagination by adding to one another's ideas and thoughts.	Benefits from writing stories	Intentionality (powerful intentional actions) Play (playing with ideas and news ways to present their scene and solving problem about their role-play roles) Innovative for their classmates Immersion (concentration in a supporting and positive environment) Children initiated attempt at what if and as if narrative with focus on plot, characters, sequence	

Case 7			
PRIMARY SCHOOL 4-CASE 7– MUSEUM VISIT – EPISODE 4			
Title of the episode: Participation to an ancient symposium			
DESCRIPTION OF THE EPISODE	**FIRST THOUGHTS**	**CODES**	**WHAT ELSE**
Role-playing activity the participation to an ancient symposium (movements, dialogues). The children discovered the place where the symposium will take place. Then they were their tunics and chose the object that they would like to hold. By choosing the object automatically they were chose their character into this role-playing activity. Thus, they had to act as if they were the character and the person who hold their object. The target of this activity was to act into their role but when the music stops they had to stay static as they were drawings into an ancient vase. Thus, they had to think about their body movement very well because through this the person who is observing the vase had to understand what they were doing. **Episode:** A group of girls hold Aspasia in their hands. They are talking	Clear instructions Group work The children chose their role by choosing the objects that wanted to hold As if thinking and what if acting Acting movement (hands, walking towards their classmates) Improvisation Strong connection-making between ideas, words and actions They chose their role	Space Collaborative and little individual narrative Teacher initiated at the beginning and then children continued alone to fantasy and historical narrative with focus on plot, characters, sequence and significance *Children's features for both groups:* Being imaginative (creating an 'as if world') Intentionality (powerful intentional actions)	Clear instructions Limited time Support children's ideas Narrative Improvisation through mini-role playing activities Constrained Self-determine (great involvement, independence in decision-making, confidence, personal route finding) Children narrative question responding with focus on plot,

to each other but they also include into their conversation Aspasia. One of the girls took Aspasia into their hands and start moving the puppet's head giving the sense that Aspasia was participating into the conversation.	As if and what if acting and thinking	Play (playing with ideas and news ways to present their scene and solving problem about their role-play roles) Innovative for their classmates Immersion (concentration in a supporting and positive environment) Children initiated attempt at what if and as if narrative with focus on plot, characters, sequence and significance	characters, sequence and significance
After couple of seconds while the girl had two roles (herself and Aspasia) she decided to talk and participate into the conversation as Aspasia. Aspasia: How are you girls? Are you having fun?		Children entering fantasy and historical narrative, as if thinking narrative, as if thinking	

	FIRST THOUGHTS	CODES	WHAT ELSE
G.A: Yes Aspasia we are fine. We are having great time.			
G1: Yes thank you Aspasia for organizing this symposium for us. You and your brother are so kind.			
Aspasia: You are our friends. Zenon and I are so happy for having you here. Do you need more wine to call the servant?			
G2: No thank you we are fine.			
Aspasia: Any food?			
G2: No no thank you.			
Aspasia: Are you sure. I would like from you to feel like you are at your house.			
G1: Yes Aspasia Thank you very much for your hospitality. We will never forget you.			

PRIMARY SCHOOL 4-CASE 7– MUSEUM VISIT

Teacher's Reflection's and Interpretation about the lesson:	FIRST THOUGHTS	CODES	WHAT ELSE

(Teacher's Reflective Journal, Museum visit, 30/11/2012)			
The museum visit was really nice. Children get into roles, observe and were active participants in their learning. They have created an interesting scenario for the children which last from the beginning up to the end of the visit. The best activities for inspiring their creative thinking I think that were those which the children discover the objects in the museum showcases, the discussion that they have about the objects they found and their participation into the symposium. I think that throughout the visit you can see that children's creative thinking and creativity in general was inspired like the ideas they had expressed about their objects and also the active participation of Aspasia into the symposium which was idea of the children who were participating into the symposium. Especially at that time you can realize that the children were acting as if they were participating into a symposium and as if Aspasia was a human being. They leave the story. They actually participated into the symposium of the ancient times.	Interesting scenario for the children Activities that inspired children's creativity Activities that inspired children	Museum educators' initiated attempt at what if and as if narrative with focus on plot and sequence Museum educators' attempt to historical narrative and fantasy narrative *Children's features for both groups:* Being imaginative (creating an 'as if world') Self-determine (great involvement, independence in decision-making, confidence, personal route finding) Intentionality (powerful intentional actions) Play (playing with ideas	Mini-role playing Improvisations Simulations Engagement Real objects inspires discussion Cross-Cultivating ideas (alone & into groups)

As far as the following lessons are concerned I will use the photos of the children that I took during the museum visit. These photos include the children doing different kind of activities during the visit. I do not know yet how exactly I will include them in the lessons and that is the reason why I cannot tell you lot of details about it right now. Also, we will do some activities and discussions about some of the objects that impressed them like the anchor. I would like also to add the additional visit that we had next to the museum to the ancient port. We went there for couple minutes and I asked from the children just to observe. Well, was better to take place in another day separately from the museum visit but we could not financially do it. So I decided to do it the same day. I will use also this alternative visit in the following lessons.	Following lessons Photos from the visit will be included in the following lesson Alternative visit	and news ways to present their scene and solving problem about their role-play roles) Innovative for their classmates Immersion (concentration in a supporting and positive environment) Children initiated attempt at what if and as if narrative with focus on plot, characters, sequence and significance Children entering fantasy and historical narrative, as if thinking	
Case 8			

PRIMARY SCHOOL 4-CASE 8– LESSON 2 – EPISODE 7&8

Title of the episode: Jobs from the past- Greek lesson

DESCRIPTION OF THE EPISODE	FIRST THOUGHTS	CODES	WHAT ELSE
In the Greek lesson they had a chapter concerning the importance of the sea and the water in general, in the everyday life of the people. Thus, after they had learned and discussed about the water cycle they start talking about the jobs from the past until now that were linked with the water or the sea (a list was created in the board with some jobs after the classroom discussion). In their Greek book there is a description of a job that is linked with the water that does no longer exist. The children read about the water man (=man who was transferring water to the all the houses of the village or town). Then the children discovered that were lots of other jobs which do no longer exist. The teacher gave them a list with this kind of jobs. The list included the following jobs: the ice seller, the itinerant photographer, the shoemaker, the coachman, the midwife, miller, mule drivers, the rural constable, the man who was shouting the news to a town or village, the laundress, the nanny, carver, the man who was creating woolen tailor fabrics, the	Cross Curriculum

Link with the Greek lesson | Teacher initiated attempt to push the children to what if and as if narrative exploration with focus on plot, sequence, significance and characters

Teacher tries to enter the children to fantasy and historical narrative, as if thinking

Collaboratively narrative

Features from all the above answers for the students: | Narrative improvisations

Constrained self-determination about the expression of their thoughts (independence in decision making and confidence to express them, personal route finding)

Teacher's verbal Question posing: Leading question-Possibility moderate

Children's narrative question responding with focus on plot, sequence, significance and characters

Narrator Facilitator |

man who made mattresses, the saddler, the tinker, the newsboy, the man who was selling ice creams in the neighborhoods, the milkman and bootblack (the shoes shiner). The children first of all they had to pick (into their groups) one of these jobs and to find all the appropriate information about the job of their interest. In a later stage they had to put their selves as they were doing the job that they had picked and to write a journal (giving information about their everyday routine, writing about their emotions, about the good and bad days of their job). **Episode 7:** **Ice seller** My dear journal, Another difficult day has passed. I am really tired but I would like to share with you how my day was. I found a job as an ice-seller. Mr Peter employed me a week ago. Ok is a permanent job, until October but it will give me the chance to gain some money. Also, I can have ice in a very low price for my family. Well today was my first day at job. It was really difficult because I have to be really quick. The temperature in Cyprus this time period is really high and as a result the ice melts really quickly.	What if and as if thinking Interesting scenario Give information among with the creation of an imaginary scenario	Being imaginative Innovative ideas for them and for their teacher Intentionality (powerful intentional participation to the conversation/ task) Playing with different ideas and possibilities (What happened when god Venus arrived at Olympus) Child initiated attempt at what if and as if narrative explanation with focus on plot, sequence and characters Child entering fantasy and historical narrative, as if thinking	

Oh my god and the ice cubed are so heavy. I could not transfer them so easily and my boss was really angry about it. I hope not to dismiss me from the job. I will try to do my best. I need the money to feed my children. Now I will have to go to bed. I have to rest and weak up really early in the morning to sell the ice cubes. Good night my friend.			
Episode 8: Midwife My dear journal, Terrible thinks happened today in my small village. I woke really early in the morning as I usually do in order to knead bread for my family but around ten o clock Leontis the son of Christos came to my house and told me to go quickly to Micheal house because his wife was going to give birth to his first child. Oh my god. This should not be happening. Petra had to give birth to her child in one month. I was panic. I went there quickly. She was screaming from the pain. I realized that we are going to have a long night and maybe the child was not going to make it. The night passed and	Creation of a plot- Scenario As if thinking What if thinking		

Petra gave birth to her child really early in the morning. The boy was dead. I did not tell her anything. It was the third child that Petra lost. I took the body of the dead child and give it to her husband. Petra was unconscious. She did not realize what was happening. She did not realize that her child was dead. Her husband took the dead body of the child and left from the house. But an hour later came with another newborn child in his arms. Petra woke up. He gave her the child and he told her that this was their son. But I knew… this was not their child. But where was the dead boy? Where he found this boy? Who is the woman that now is crying for the lost of her baby? I was so confused and worried and scarred. I took him outside in the kitchen to ask him where he found this newborn child. He did not give me any answer to my questions. He told me to forget what I saw today. He could not tell Petra that her child was dead. He begged me to not tell her anything. I agreed. I swear to God that no one will even know that this child was not their son. But I keep asking myself who is the mother of this child. Is she looking for him? I hope someday to find the truth.	Interesting & Innovative scenario for a journal As if thinking What if thinking PT features		

PRIMARY SCHOOL 4-CASE 8– LESSON2 – EPISODES 7&8			
Title of the episode: *Jobs from the past – Greek lesson*			
Teacher's Reflection's and Interpretation about the lesson: (Teacher's Reflective Journal, Lesson 2, 05/12/2012)	**FIRST THOUGHTS**	**CODES**	**WHAT ELSE**
Today's lesson was really inspiring for the children. They learned about jobs that do not exist anymore and were really impressed because they did not think that these kind of jobs existed in the past. Later, when I asked from them to choose one of these jobs, to put themselves into this profession and write a journal with their daily routine they were really inspired. They were foul of ideas and thoughts about their job and how their daily life was going to be. Here, I have to say that it is part of our daily routine inside the classroom to write a journal every day. Well at a specific time of the Greek lesson I give to the children ten minutes to write their journal. However, once a week most probable every Friday I give the opportunity to the children to write the journal of any of the characters (of the unit that we are working on) they want. Thus, we have the 'free writing day' and the children have again ten minutes to write the journal of a character of their preference. These kinds	Interesting theme The children had the freedom to chose any job they wanted Writing a journal is a routine Specific time Free writing day	Teacher's initiated attempt at what if and as if narrative with focus on plot and sequence Teacher's initiated attempt to historical narrative and fantasy narrative *Children's features for both groups:* Being imaginative (creating an 'as if world') Self-determine (great involvement, independence in decision-making, confidence, personal route finding)	Adding, accepting and rejecting concepts Simulations Engagement Written Narrative Cross-Cultivating ideas into groups

of activities have lot of benefits for the children and I am not talking only about their creative writing (especially every Friday). These benefits are: sort out experiences, solve problems and consider varying perspectives, examine relationships with others and the world, reflect on personal values, goals, and ideals, summarize ideas, experience and opinions, and every child has the opportunity to witness his/her academic and personal growth by reading past journals. They managed to put themselves into roles. It is true that writing exercises are really boring for the children but if you give them a really interesting theme to write about then the children become really exciting and creative for their writing essay. They created a whole story about their character and they offered information about a specific day. This gives us the chance to realize that they were into the role and they were thinking as their character was going to think and write the journal of his daily routine. The museum visit was really helpful for this lesson. During the museum visit children understood how important was the sea for	Writing	Intentionality (powerful intentional actions) Play (playing with ideas and thoughts) Innovative for their classmates and for their teacher. Immersion (concentration in a supporting and positive environment) Children initiated attempt at what if and as if narrative with focus on plot, characters, sequence	

the ancient citizens of Larnaca. Thus, taking advantage all this information I structured today's lesson and linked with the Greek lesson which has a chapter on the professions that do not longer exist. We talked about the water cycle and then about the jobs that are linked with the water. The children were impressed because they did not think about it before. They did not think about how many jobs are based on water. The museum visit helped me to enhance cross-curricular activities in order to foster my student's creative thinking. Well children managed to write incredible and creative journals in Greek lesson.	How the museum visit helped today's lesson Cross-curriculum activities.		

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