

# **TRANSFORMATION THROUGH LEARNING AN ETHNOGRAPHIC CASE STUDY OF PRACTICES IN A MUSIC-INFUSED SCHOOL**

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# ABSTRACT

Many countries across the globe are undergoing rapid economic and social change; and there are increasing efforts to reform, revamp and revitalise education – to equip students for the ever-changing future. Education is considered to be transformative; but the area of transformative learning has been mainly theorised in the field of adult education. Comparatively, teaching approaches designed to bring about such transformation or transformative teaching has been less explored or understood. Connecting various related literature, this study places deeper learning at the centre of transformation through learning. Aiming to fill a gap within the literature, this study explores transformation through learning in a comprehensive school setting at a K-5 School in the North East of the United States by asking the following questions, ‘What are the teachers’ and students’ lived experiences of transformation through music and arts infused creative learning as practiced at an Elementary School in Northeast of USA?’ and ‘What is the role of the arts and music in this process?’.

Located within the interpretive paradigm, this ethnographic case study included 7 – 14-year-old students (Grade 2 – Grade 5) and staff, aimed at investigating the phenomenon of ‘transformation through learning’ through a range of sources within its natural environment. Various data collection methods were used, including semi-structured interviews, observations (field notes, video-recordings, still images), conceptual drawing and learning walks. These provided rich, in-depth data, permitting triangulation which strengthened the findings and allowed for an illuminating understanding of the topic. An iteratively developed framework representing elements or behaviours relating to transformation was utilised as a lens to identify relevant critical incidents during the data collection process. Employing thematic analysis on the data collected resulted in eight themes that represent the lived experiences of transformation through learning. These thematic findings highlight that relevance, mindsets and placing arts at centre of the school culture are key to providing transformative learning experiences. The study connects two arguments, that fostering deeper learning enables students to meet new expectations and demands of the changing future; and that it is vital to provide students with a well-rounded curriculum with rich arts education to prepare them for success in the future. Thus, the findings of this study develop the understanding of ‘transformation through learning’ and offer a model framework from the practice at this research site from which others could create their own.

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# CHAPTER ONE

## 1. INTRODUCTION

### 1.1 Rationale and background for this study

Education is considered to have the power to transform an individual (UNICEF, 1999; UNESCO, 2013). The concept of *transformation through learning* and education has been theorised especially in the field of adult education (Mezirow, 2010; Dirkx, 2006; Cranton and Taylor, 2012). Comparatively, teaching approaches designed to bring about such transformation or transformative teaching have been less explored or understood (Rosebrough and Leverett, 2011; Cranton and Taylor, 2012). Slavich and Zimbardo (2012), define transformational teaching as “the expressed or unexpressed goal to increase students’ mastery of key course concepts while transforming their learning-related attitudes, values, beliefs, and skills” (p. 576). Their definition of transformative teaching comes from the interrelated aspects of these contemporary approaches, thus proposing a broader approach to classroom instruction called transformational teaching. Rosebrough and Leverett (2011) have also proposed a transformational pedagogy model based on a holistic approach towards education and define transformational teaching as “an act of teaching designed to change the learner academically, socially, and spiritually” (p. 16).

The term ‘*transformation*’ lends to many different meanings across subject areas, but I situate it within the current larger context, where many countries are undergoing rapid economic and social change; and there are increasing efforts worldwide, to reform, revamp and revitalise education – to equip students for living, working, participating and contributing in a culturally diverse and changing society. This effort with its roots in the Global Educational Reform movement (Adamson, Astrand, Darling-Hammond, 2016; Evers and Kneyber, 2016; Salhberg, 2015) has led policy-makers across the world to focus on ‘creativity’ and ‘educating children for uncertainty and intensification of change’ that characterises the 21st Century.

Focus on creativity and educating for the future includes some ever-increasing set of ambitions that practitioners working in the American public education sphere are tasked with (Mehta and Fine, 2015), such as, “creating classrooms that support critical and creative thinking; focus on

21st-century skills; cultivating authentic inquiry; teaching reflective habits of mind; and placing students at the centre of instruction” (p.1). These ambitions, though differ in many ways are still rooted in the desire to create formal learning experiences that are powerful and empowering for all students. Calls for this kind of *transformation* aimed at ‘educating for the future’ have been referred to as developing ‘21st century skills’, ‘college and career readiness’, ‘student-centred learning’, ‘deeper learning’, educating for ‘global competence’ and ‘next generation learning’. Briefly, the goals of deep learning are that, students will gain the competencies and dispositions that will prepare them to be creative, connected, and collaborative life-long problem solvers and to be healthy, holistic human beings who not only contribute to but also create the common good in today’s knowledge-based, creative, interdependent world (Fullan and Langworthy 2013; Barber, Rizvi and Donnelly 2012). Hence, as Perkins (2014) notes, it is expanding and moving beyond – basic skills, traditional disciplines, discrete disciplines, regional perspectives, mastering content and prescribed content. Thus, it is in this landscape, the subject of this study *transformation through learning*, which includes interconnected areas of transformative teaching and deeper learning becomes increasingly relevant.

### **Personal rationale**

My personal background that led me to this study stems from my interest in education which began with my journey of learning music. Coming from a family that appreciated music, where everyone learnt music in some form or the other, my interest in music began right from my childhood. Initially trained in Carnatic music (classical south Indian music), my interest piqued when I learnt digital keyboards through an accelerated course at a non-profit voluntary organisation BOSS School. During this learning experience, I witnessed students around me (including me) being transformed through the process of learning music and I began to wonder - what is happening here? Subsequently, I completed their advanced music programme and passed the Grade 8 digital keyboards examinations from Trinity College London (now Trinity Guildhall) with top scores across India. I continued to volunteer at the organisation, to understand the pedagogy, conduct research and teach. Overall, my experiences as a teacher and researcher, along with my formal education in life sciences with specific interest in neuroscience and applied psychology with specialisation in clinical psychology continued to fuel my interest in the area of *transformation through learning* from various perspectives such as, brain-based research, psychology, thinking dispositions, habits of mind, self-actualization (Maslow, 1970) & fully-functioning person (Rogers, 1969), creativity, ‘psyche’, philosophy and spirituality.



Initially, I began my PhD journey thinking about undertaking formal doctoral level research based on the practices at the music organization, where I volunteered, but as time progressed I started to realise my main core subject interest is ‘transformation’ through learning. Further, due to the sudden closure of the organisation I began to reflect and decided to continue my focus on ‘*transformation through learning*’. Reviewing literature on transformative learning, I noticed gap within the literature which has mainly focussed on adult education or disadvantaged individuals, and a lack of research that focuses on regular students in a comprehensive school setting. I also noted that, literature on transformative teaching was limited and focus on *transformation through learning* has not included inter-connected subject areas such as, deeper learning, thus, prompting the need for exploring this subject with regular student participants in a comprehensive school setting. Further, my interest in the arts (including music) has led me to frame this study with the aim to address the abovementioned gap within literature by focusing on exploring *transformation through learning* in a comprehensive school setting (a music-infused school) with the student participants representative of any public school in the similar location.

## 1.2 Overview of Study

This study is shaped by the current push towards ‘creativity’ and ‘educating students for the future’ and my interest in the areas of *transformation through learning* and the arts (especially music). It aims to address the gap within the existing literature on transformative learning and teaching, which lacks research exploring transformative teaching and learning within a general school setting, while situating *transformation* within everyday learning experiences of students.

The main objectives of this study are:

- a. To understand the characteristics of learning experiences at the site.
- b. To understand the role of the arts within this context.
- c. To explore the elements within the learning experiences that are related to transformative experiences.
- d. To develop existing research and understanding in the area of transformative teaching and learning

With the aim of exploring transformation within everyday learning experiences at a school, this doctoral study was developed as an ethnographic case study exploring transformation through

the lived experiences of individuals within a K-5 Public Charter School in the North East of USA. The participants I worked with are students aged 7 – 12-years and various staff members within the school. The methodology adopted complimented the exploratory nature of the study and at the same time, provided opportunity to explore the topic of study in-depth through ‘thick description’ (Geertz, 1973). Further, undertaking an inductive analysis of the data using thematic analysis I explored *transformation through learning* through the lived experiences of participants within the context of learning experiences at the school through its practices. Thus, the main research question for this study was -

***What are the teachers’ and students’ lived experiences of transformation through music and arts infused creative learning as practiced at an Elementary School in the Northeast of USA?***

The related sub-question investigated was –

**What is the role of the arts and music in this process?**

### **1.3 Boundaries**

This thesis is an ethnographic case study of one school in North East of USA. The study is exploratory in nature and like with all case-studies the findings need not be replicable or directly generalizable to all schools. The study was aimed at understanding key features of transformation through learning evidenced at this research site, along with making connections and contrasting with various literature. However, the elements of transformation through learning that emerged from my findings may also be used as a model framework for developing practices/approaches in other schools/sites. Thus, through ‘naturalistic generalisation’ (Stake, 1995) I propose that the findings presented here to be relevant to other schools, teachers and researchers in understanding ‘*transformation through learning*’ and offer a model framework from the practice at this research site from which others could create their own.

Further, I must note that this study is focused on one case study school and is not representative of all classroom practices or arts and music practices within schools. This is especially so, since the selected site is a charter school which allows for more freedom to select and develop their curriculum to further specific aims and goals listed in their charter as compared to a public school. I have not undertaken any specific evaluation of the practices observed at this site or looked for cause-and-effect connections. I have discussed research literature especially relevant to USA since the research site is situated in the United States, but

other relevant international research literature has been taken into consideration and have guided the overall direction of research and literature reviewed. Further, comparison of current findings to practices in other countries including England is beyond the scope of this research study. Having taken a view that 'transformation' is embedded within learning experiences, my aim was to explore this topic inductively through 'thick description' at one school site. I acknowledge that adopting an existing framework from literature might have provided insight into the specific practices adopted at the research site, but also argue that, this would have made the research findings specific and limited. Thus, the findings from this study are more generic and the aim is to take lessons for further exploration.

## 1.4 Outline of the Thesis

I have organised this thesis under seven chapters. To aid the readers to navigate this thesis, I briefly outline the format, structure and contents of these chapters.

### Chapter 1: Introduction

In this current chapter, I have provided the rationale for this study both in the context of the subject area as well as my personal journey to undertake doctoral research. I have also outlined the present study providing the overall aims, objectives, research questions and methodology adopted. Finally, I have also clarified some inherent boundaries for this study.

### Chapter 2: Literature Review

In this chapter I present a summary and critique of the literature that clarifies my focus on *transformation through learning*. I review literature on transformative learning and transformative teaching and have clarified the conceptualisation of 'transformation' adopted for this study. I then review and connect transformative teaching with deeper learning literature through literature on creative learning. Through these connections within the literature reviewed, I have provided a broad perspective of literature to explain the relevance of the subject at hand - transformation through learning. Finally, I briefly include literature on arts-integration to provide a background for this study which has been influenced by my interest in the arts and selection of a research site which integrated the arts within its curriculum.

### Chapter 3: Research Site

I introduce the research site in this chapter. I begin by clarifying the selection process that I adopted for this study along with a brief overview of the selected school and its practices. I have also reviewed additional literature related to the practices/ programmes adopted by the research site to further situate this study.

### Chapter 4: Methodology

In this chapter I elaborate on the methodology adopted for this study. I discuss my interpretive theoretical framing, case study as the overall research design and ethnography as the adopted methodology. I also detail data collection methods adopted, participant selection, researcher positioning, followed by the research timeline detailing the pilot and main phases of this study. I finally detail the ethical considerations and measures for ensuring quality of the study.

### Chapter 5: Analytic Journey

In this chapter I discuss the analytic process adopted for this study. Following the pilot phase detailed in the previous chapter, I discuss the need for and the process through which I developed a framework consisting of elements/behaviours relating to transformation. I also discuss the main analytic method adopted as thematic analysis followed by the methods adopted for data reduction and analysis for each type of data collected. Finally, I discuss the development of the thematic findings providing a glimpse of the initial memoing and emergence of connections between the categories.

### Chapter 6: Findings

In this chapter I present my findings related to my research questions. The findings for the main research question – *What are the lived experiences of transformation through creative learning?* is presented thematically (Theme 1 – 7). These are - Doing more than you think you can; Development of crew qualities; Making learning relevant; Collaborative atmosphere; Reflection; Passion and Perseverance; and Self-Discovery. Findings for the sub question – *What is the role of the arts and music in this process?* is presented through Theme 8 elaborating on the binding effect of music within the school culture. After presenting the inductively analysed findings, I subsequently present the findings in relation to the framework consisting of elements/behaviours relating to transformation adopted for this study. Finally, I present a model reflecting elements/behaviours relating to transformation through learning specific to the research site.

## Chapter 7: Discussion

This chapter is a synthesis of the discoveries made through the interpretations of the main findings and considers their significance in light of the literature. I focus on four main strands dealing with - Relevance within learning; Role of music being integral to the school culture; Importance of growth mind-set and transformability; and Methodological contribution of this study.

## Chapter 8: Conclusion

In this final chapter I begin by summarising this research study and have presented a critique highlighting the limitations of this study. I then proceed to highlight the contribution of this study, highlighting both what I have learnt and contribution to the wider subject area. I finally, conclude by looking forward at further research directions through the insights gained from this study.

## CHAPTER TWO

# 2. LITERATURE REVIEW

### 2.1 Introduction

In this chapter, I review the literature that has influenced my thinking by allowing me to distinguish my viewpoints from the broader scope of literature and has informed my research framework for this study. In the first section, I begin by reviewing literature on transformative learning and provide an overview of the wide diversity of paradigms and fields of knowledge that inform existing transformative learning frameworks within the literature by reviewing various dominant theories. Using this section I situate the view on ‘transformation’ adopted for this study in relation to a selected set of core ideas from within the transformative learning literature. I then move on to review literature about the lesser known transformative teaching which forms the basis for understanding transformation through learning for this study. Having discussed various literature in the area of transformative education, in the next section, I then proceed to clarify the conceptualisation of *transformation through learning* for this study. Briefly, I adopt ‘transformative teaching’, as an umbrella encompassing contemporary approaches to classroom teaching and instruction, for this study, and conceptualise ‘*transformation*’ to be embedded within the learning process.

I then examine the connection between literature on creative pedagogy, specifically deeper learning with transformative teaching. Since transformative teaching encompasses contemporary approaches to classroom teaching and instruction, I utilise the next sections to highlight relevant literature that connects with deeper learning and further informs the study. Finally, due to this study also being shaped by my interest in the arts, I briefly review literature on arts-integration within schools, focusing mainly on highlighting the current state of arts education within schools in USA and current literature on the role and benefits of arts education to mainly provide a background for this study. Note, literature related to programmes adopted by the research site (school) have been reviewed separately within the next chapter introducing the site. Thus, through this literature review I clarify the conceptualisation of ‘transformation’ that I adopt for this research study by weaving together several salient insights within relevant literature around the larger umbrella of *transformation through learning*.

## 2.2 Understanding ‘transformation’ through Transformative Learning

The subject of ‘transformation’ has been studied across a number of specialised fields such as, Transformative Learning, Education for Social Change, Transformative Teaching, Experiential Learning and Holistic Learning. Literature and theorization in this area is rather disconnected, which has resulted in new sets of terms which are often unique to these fields. In this section I focus on *transformative learning*, which has been a topic of research and theory building, especially in the field of adult education. Since a wide diversity of paradigms and fields of knowledge inform existing transformative learning frameworks within the literature, in this section, I first briefly highlight each of these paradigms through the classification used by Taylor (1998; 2007; 2008). I then proceed to elaborate my view of ‘transformation’ adopted for this study in relation to a selected set of core ideas from within the transformative learning literature.

### 2.2.1 Theories of Transformative Learning

Theorisation in this field began in early 1970s and the initial dominant perspectives included the work of Mezirow (1978; 1991), whose theory of transformative learning served as the chief catalyst in establishing the field (Gunnlaugson, 2005). Other prominent perspectives include Freire (1970), Daloz (1986) and Boyd (1991) followed by newer theorisations (race-centric and cultural-spiritual theorisations) influenced by their work. Within the recent two decades, a new focus has emerged whereby theorists have begun to venture into more ‘integrative’ (Illeris, 2004; Miles, 2002; etc.), ‘holistic’ (Cranton & Roy, 2003; Dirkx, 1997; etc.) and ‘integral’ (O’Sullivan, 1999; O’Sullivan, Morrell, & O’Connor, 2002; Robinson, 2004; etc.) perspectives. Hence the literature included in this section dates across four decades and I utilise the classification by Taylor (1998; 2007; 2008) to briefly elaborate on them. It is necessary to note that the need for change has grown so fast and in so many directions that, it can be argued, the term transformative learning has itself become uncertain or even confused (Illeris, 2014). More recent literature in this area has not been focused on theorisation but instead directed towards the idea of fostering transformative learning by identifying its components or characteristics. I argue that this shift shows the movement of research towards understanding *transformation through learning* in various settings. I have included this and any other relevant transformative

learning literature towards the end of this section, when I situate 'transformation' within core ideas from the transformative learning literature.

***Transformation as critical reflection (psycho-critical view).*** This prominent view was first introduced by Mezirow (1978, 1991) through his theory that is uniquely adult, abstract, idealised and grounded in the nature of human communication. The theory is partly developmental and cognitive, where "learning is understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience in order to guide future action" (Mezirow 1996, p. 162). As Graboov (1997, pp. 90-91) points out, this theory describes a learning process that is primarily rational, analytical, and cognitive with an inherent logic. Within this view, transformative learning is defined as a is the process of effecting change in a frame of reference (acquired coherent body of experience—associations, concepts, values, feelings, conditioned responses), where learners move toward a frame of reference that is more inclusive, discriminating, self-reflective, and integrative of experience (Mezirow, 1996; Cranton, 1996). Thus, transformative learning involves perspective transformation, a paradigm shift, whereby we critically examine our prior interpretations and assumptions to form new meaning: it is the revision of a frame of reference in concert with reflection on experience that is addressed by the theory of perspective transformation.

Though Mezirow's theory (a psychocritical view) is perhaps well known and accepted, there have been some aspects that the theory fails to address. Especially, as Taylor (1997) points out, extra-rational, emotional and spiritual dimensions have not been considered as aspects of transformative learning, and have not been readily accounted for by Mezirow. Further, due to too much importance given to critical reflection in the process of perspective transformation, critiques note that "the process is too rationally driven" (Taylor, 1998, pp. 33-34). Thus, transformative learning as an intuitive, creative, emotional process has emerged in the literature through the various other perspectives, especially those grounded in analytical depth psychology. Subsequently, Mezirow himself has modified his theory (1991; 1995; 1998; 2000) to expand, include and clarify terminologies, which has perhaps led to what Kitchenham (2008) refers to as changes that provides a tighter description of the theory. Though the abovementioned critiques of this theory continue to be true, I note that the major shift in theory development seen within newer work of Mezirow, is due to the adoption of constructivist assumption which he outlines as "a conviction that meaning exists within ourselves rather than in external forms such as books and that personal meanings that we attribute to our experience



are acquired and validated through human interaction and communication” (1991, p. xiv). I agree with Kitchenham’s (2008) argument that this view is reminiscent of influences of Kuhn (1962), Freire (1970), as well as of the constructivists (Kelly, 1970; Knowles, 1975; Kolb, 1984; Piaget, 1972) and social constructivists (e.g., Vygotsky, 1978). Thus, primarily Mezirow’s work elaborated above foregrounds the psycho-critical view of transformative learning.

***Transformation as consciousness-raising (social-emancipatory view).*** Paulo Freire (1970, 2014) articulated a theory of transformative learning which he referred to as *conscientização* or conscientization or consciousness-raising based on his work with literacy education of the poor in Brazil and liberation efforts in Latin America and Africa. This involves the process where: oppressed populations learn to realize the socio-political and economic contradictions in their world and take action against its oppressive elements. For Freire, adult education aims at fostering critical consciousness among individuals and groups while also teaching them how to read (Spring, 1994). His work is guided by a desire for political liberation and freedom from oppression. Freire wanted people to develop an ‘ontological vocation’ (2014); a theory of existence, which views people as subjects, not objects, who are constantly reflecting and acting on the transformation of their world so it can become a more equitable place for all to live. This transformation, or unveiling of reality, is an ongoing, never ending, and dynamic process. Thus, unlike Mezirow’s personal transformation, Freire is much more concerned about a social transformation via “the unveiling or demythologizing of reality by the oppressed through the awakening of their critical consciousness” (1970, p.19). Briefly, critical consciousness refers to a process in which learners develop the ability to analyse, pose questions, and take action on the social, political, cultural, and economic contexts that influence and shape their lives. Through dialogue and problem-posing, learners develop awareness of structures within their society that may be contributing to inequality and oppression (Dirkx, 1998; Kincheloe, 2008; Darder, 2015). In this social-emancipatory view, Freire sees critical reflection as central to transformation in context to problem-posing and dialogue with other learners. However, in contrast to Mezirow, Freire sees its purpose based on a rediscovery of power such that the more critically aware learners become the more they are able to transform society and subsequently their own reality.

Three broad concepts, that reflect the basic beliefs and practices of Freire about fostering an emancipatory transformation are: - (1) The domesticating effect of traditional education by teachers in their narrative “bank deposit” approach to teaching (1970, p. 58). He thus, proposes a liberating education couched in “acts of cognition not in the transferal of information” (p. 67), a

“problem-posing” (p. 70), and dialogical methodology. (2) The problem-posing approach of education is that of praxis, i.e. the moving back and forth in a critical way between reflecting and acting on the world. He suggests praxis to be always framed within the context of dialogue as social process with the objective of “dismantling oppressive structures and mechanisms prevalent both in education and society” (Freire and Macedo 1995, p. 383). (3) Freire’s (1970) horizontal student-teacher relationship, where the teacher is working on an equal footing with the student seems couched in the Rogerian ideology (1969), whereby the student- teacher dialogue is built upon a foundation of “love, humility, and faith...of which mutual trust between the dialoguers is the logical consequence” (pp. 79-80); thus, offering an educational atmosphere that facilitates an emancipatory transformation. Thus, for Freire, transformative learning is emancipatory and liberating at both a personal and social level. It provides an individual with a voice, with the ability to name the world and, in so doing, construct for ourselves the meaning of the world. Furthermore, it is through the practice of critical reflection, problem-posing, and dialogue that transformative learning is fostered— accomplishing its primary objective of democratising our social world.

***Transformation as development (psycho-developmental view).*** Larry Daloiz (1986) provides a central or organising framework for understanding transformative learning as growth, though the developmental perspective is also implicit in Mezirow's view of transformative learning. Here, development is more concerned with adults and adult education. He examines the interplay between education and development and realises that students often are in a developmental transition and that they look to education to “help them make sense of lives whose fabric of meaning has gone frayed” (1999, p. 4). He positions the transformational learning process within this above mentioned developmental movement of our lives also known as the psychodevelopmental view, to be intuitive, holistic, and contextually based: “It is a mythical procedure during which a mentor guides students in a learning journey affected by the student’s social environment, including family dynamics and social class” (Baumgartner, 2001, p. 17). The narrative approach adopted by Daloiz sharing how students negotiate developmental transitions, struggles and are changed by the process, humanises the transformational learning process. It is clearly grounded in the developmental movement that he argues characterises adult lives, but it is also influenced by the socio-cultural context of their educational experience.

In comparison to Mezirow and Freire, Daloiz' theory of transformative learning relies on constructivist views of knowledge and learning. However, his explanation of transformative

learning depends less on rational, reflective acts and more on holistic and even intuitive processes. It is even more oriented towards personal change than Mezirow's theory and less concerned with altering the social structures of inequality and injustice, which is central to Freire's view. Thus, Daloz has elaborated the understanding of transformative learning from a distinctly developmental perspective, rather than it being implicitly embedded like the other scholars.

***Transformation as individuation (psycho-analytical view).*** Robert Boyd's (Boyd 1991; Boyd and Myers 1988) model of transformation is grounded in work of Carl Jung within the context of small group behaviour using analytical (depth) psychology. It is an inner journey of individuation - that lifelong process of coming to understand through reflecting on the psychic structures (ego, shadow, persona, collective unconscious, etc.) that make up one's identity. Individuation involves the discovery of new talents, a sense of empowerment and confidence, a deeper understanding of one's inner self, and greater sense of self responsibility (Boyd 1991). He defines transformation as "a fundamental change in one's personality involving conjointly the resolution of a personal dilemma and the expansion of consciousness resulting in greater personality integration" (Boyd 1989, p. 459). Boyd connects the purpose of transformation to self-actualization, as Taylor (1998) notes, "the central purpose of a perspective transformation is to free the individual from his or her unconscious content and reified cultural norms and patterns that constrain the potential for self-actualization" (p.13). For Boyd, transformative learning incorporates the realm of interior experience, one constituent being the rational expressed through insights, judgments, and decision; the other being the extra-rational expressed through symbols, images, and feelings (Boyd and Myers, 1988, p. 275).

Like Freire, Boyd also emphasises the importance of consciousness in adult learning, though it holds different meanings for Boyd due to his influence of the work of Carl Jung. His concern is primarily with the expressive or emotional-spiritual dimensions of learning and integrating these dimensions more holistically and consciously within our daily experience of life. Further, Boyd's transformation is much more about coming to terms with the first half of one's life and a meaningful integration with the second half. In contrast to Mezirow, who focuses on cognitive conflicts experienced by the individual's relationship with culture, Boyd is much more focused on conflicts within the individual's psyche and the resolution among these entities that leads to transformation. In contrast, to Mezirow's view of the ego as the central role in the process of one's perspective transformation, Boyd and Myers (1988) recognise the role of the whole

person, the Self as the total personality, inclusive of the ego as well as the collective unconscious in the transformative process. They offer a framework for exploring a perspective transformation beyond an ego-centered definition and the narrow confines of acquiring a greater sense of reason and logic to a more social-psychic definition. But as Dirkx (1998) points out, this perspective lacks a distinct and clearly articulated pedagogical framework thus limiting its application.

***Neurobiological Transformation.*** This comparatively new theory is “brain-based”, linking research using brain imaging techniques to learning. Proposed and furthered by work of Janik (2005, 2007), its roots are in the idea of traumatic learning (Gould, 1978) where submerged life events hold trauma which continue to affect one’s thinking and behaviour during learning. His study (Janik, 2007) points to a change in the way the nervous system and the endocrine system (hormonal system) in an individual learner behave/work during transformative learning. In simple terms, Janik furthers the idea that the structure of the brain actually changes during the learning process challenging traditional models of learning (behaviourism, cognitivism, and constructivism) and instead offering a distinctive neurobiological, physically-based pathway to transformative learning. From this perspective, learning is seen as “volitional, curiosity-based, discovery-driven, and mentor-assisted” and most effective at higher cognitive levels (Janik, 2005, p. 144). Further he elaborates that this approach suggests that transformative learning (1) requires discomfort prior to discovery; (2) is rooted in students’ experiences, needs, and interests; (3) is strengthened by emotive, sensory, and kinaesthetic experiences; (4) appreciates differences in learning between males and females, and (5) demands that educators acquire an understanding of a unique discourse and knowledge base of neurobiological systems. (Taylor, 2008).

***Cultural-spiritual view of Transformation.*** This focus is concerned with the “connections between individuals and social structures . . . and notions of intersecting positionalities” (Tisdell, 2005, p. 256). This perspective focuses on how learners construct knowledge (narratives) as part of the transformative learning experience. It appreciates a culturally relevant and spiritually grounded approach to transformative pedagogy. Brooks (2000) highlights four different cultural stories of transformational learning, each of which is consistent with differing worldviews. These were, a) *Rationalist worldview* of the critical and cognitivist culture and the story of emancipation related to the works of Freire (1970) and Kegan (1994); b) *Traditionalist worldview* situated within Buddhist culture where transformation is considered as an increasing awareness (Macy,

1991); and c) *Multicultural tradition* within feminist culture situating transformation as storytelling (Harris and Johnson, 1999 as quoted by Brooks, 2000). She, summarises that both the critical theory and cognitive learning theory dominates mainstream academia, claiming to be universal and value-free. Whereas, Buddhist practitioners with increased insight into the nature of reality results in an understanding of the interconnection of all living beings and a decrease in human suffering, situating transformation as a disciplined and formalised practice of meditation. She notes that though Buddhist values are a part of mainstream institutional culture in many Asian countries, it is considered as an alternative in the West. Finally, she furthers the multicultural worldview situated within narratives that are marginally situated in relation to the mainstream culture. Thus, within the cultural-spiritual view of transformation, the goal is to foster a narrative transformation—engaging storytelling on a personal and social level through group inquiry. The teacher’s role is that of a collaborator with a relational emphasis on group inquiry and narrative reasoning, which assist the learner in sharing stories of experience and revising new stories in the process.

Tisdell (2003) notes the importance of cross-cultural relationships, developing spiritual and cultural awareness and creating an environment grounded in authenticity. Tisdell further lists elements of spiritually grounded and culturally relevant pedagogy for higher education classrooms (p. 212):

- i) An emphasis on authenticity (both spiritual and cultural)
- ii) An environment that allows for the exploration of:
  - The cognitive (through readings and discussion of ideas)
  - The affective and relational (through connection with other people and connection of ideas to life experience)
  - The symbolic (through art forms such as poetry, visual art, music, drama)
- iii) Readings that reflect the cultures of the members of the class, and the cultural pluralism of the geographical area relevant to the course content
- iv) Exploration of individual and communal dimensions of cultural and other dimensions of identity
- v) Collaborative work that envisions and presents manifestations of multiple dimensions of learning and strategies for change
- vi) Celebration of learning and provision for closure to the course
- vii) Recognition of the limitations of the higher education classroom, and that transformation is an ongoing process that takes time.

Thus, a cultural-spiritual view of transformation is highlighted to be necessary and more appropriate in a multicultural environment, but I note that, many contemporary classroom practices including group work aims to incorporate some, if not all aspects of the elements mentioned above. This view clearly situates transformation within the narrative experiences of individuals encouraged by group inquiry. At the same time, it is important to acknowledge certain challenges that come with employing such an integrated cultural-spiritual view of transformative learning. Tisdell (2003) also acknowledges some of the challenges such as - Connection and confusion with religion; Fear of the vulnerability within the classroom; and Creation of cultural mentoring communities to be a challenge.

***Race-centric view of Transformation.*** This puts people of African descent, most often black women, at the centre, where they are the subjects of the transformative experience. As a non-Eurocentric orientation of transformative learning (Williams, 2003), it is in the early stages of theoretical development where race is the predominant unit of analysis with an emphasis on the social-political dimensions of learning. Like Freire's emancipatory perspective, the vocabulary associated with transformative learning is often not used –

“Traditionally, African people have had systems of education that were transformative. Rites of passage and rituals are among the many forms Africans have created to nurture the consciousness of every member of society into a greater connection with the Self, the Community, and the Universe” (p. 463).

It is a conception of transformative learning that is culturally bounded, oppositional, and non-individualistic. Essential to this view is engaging the polyrhythmic realities— “the students' lived experience within a sociocultural, political, and historical context” (Sheared, 1994, p. 36). In addition, there are three key concepts in fostering transformative learning: promoting inclusion (giving voice to the historically silenced), promoting empowerment (not self-actualization but belongingness and equity as a cultural member), and learning to negotiate effectively between and across cultures. Fostering transformative learning is seen as a deliberate and conscious strategy in employing a political framework (consciousness raising, activism, fostering a safe learning environment) with the expectation that it “may be necessary for one to undergo some form of self-reflection and transformation in order to teach transformation” (Johnson Bailey and Alfred, 2006, p. 55). This conception of transformative learning has the potential to address some of the concerns raised by Brookfield (2003) by foregrounding the interest of black students, instead of as the “other” or as an alternative view. This view positions the political and

social-cultural context at the forefront of transformative learning experiences, thus making it more specific rather than universal in nature.

***Planetary view of Transformation.*** This view takes in the totality of life's context beyond the individual and addresses fundamental issues in the field of education as a whole (O'Sullivan, 1999). The goal of transformative education from this perspective is reorganisation of the whole system (political, social, educational). It is creating a new story from one that is dysfunctional and rooted in technical-industrial values of Western Eurocentric culture, which gives little appreciation to the natural, or to an integral worldview. This view recognizes the interconnectedness among universe, planet, natural environment, human community, and personal world. Most significant is recognising the individual not just from a social-political dimension but also from an ecological and planetary one. Transformation is not only about how we view our human counterparts; it explores how we, as humans, relate with the physical world. The cultural-spiritual view of transformation elaborated in section 2.2.2.6, associates its roots to O'Sullivan's (1999) views that notes the need to address the topic of spirituality within transformative education. The educational vision of O'Sullivan (1999) embedded within this planetary view is designed to initiate a deep planetary consciousness. This planetary consciousness attempts to embrace a very different view of the earth than the current view of the planet as a global marketplace, challenging the cultural addictions in the present moment and limited appreciation of our place in the wider universe. Education for integral development within this view taken by O'Sullivan, shows a focus on social transformation will result in personal transformations rather than the opposite position articulated by other authors such as Cranton, 2006, Mezirow 1991, Miller (2001 [1988]; 2005) and Hart 2001. At the same time, it is important to note that most of these authors understand the process to be dialectical and cyclical but each focuses on more one side of the dilemma. Thus, this view of transformation though expanded and theorised, is relatively limited in its pedagogical framework and application.

## **2.2.2 Core ideas that situate 'transformation' for this study**

From the above categorisations, which include initial theories of transformative learning to its latter theorisations and applications, a growing number of perspectives can be seen. But overall, there are some key differences among the various views of transformative learning which often define the perspective or paradigm of the theory. Taylor (2008) has highlighted these using

three main points: Firstly, *the goal of transformation* can be personal or emancipatory. This ranges from self-actualization to planetary consciousness across the various views of transformation listed above. Secondly, the *focus on individual or social change*. The psychocritical, psychoanalytic, psychodevelopmental, neurobiological views of transformative learning are rooted in the individual, whereas the emancipatory, race-centric, cultural-spiritual views see individual and society as one and the same and transformative learning is as much about social change as individual transformation. Finally, *the role of culture* differentiates various theories. The psychologically centred models (psychoanalytic, psycho-developmental, psycho-critical and neurobiological) tend to reflect a more universal view of learning with little appreciation of social or cultural differences. Whereas other views that recognize difference (social emancipatory, culturally relevant narrative, race-centric and planetary) place much greater emphasis on positionality (relative to race, class, gender etc.) and its relationship to both the process and practice of transformative learning. The above discussed theories being the predominant literature on transformative learning, I find it necessary to clarify my view on *'transformation'* using core ideas from the above literature which I have below. To provide signposts I have used headings below to highlight the key ideas.

**i) *Transformative learning is not limited to adults***

The area of transformative learning has been focused on adult learning with its earliest theory developed based on adults or adult learning. Though I find arguments within literature that make certain theorisations uniquely adult-oriented (e.g. Mezirow's perspective transformation), I do not find this as a limitation. The idea that revising one's experience or perspective might be possible only when they have been previously formed is one argument that supports an adult learning perspective. On the other hand, situating transformation within the everyday learning experiences and the developmental view supports the idea that transformative learning is not limited to adults. Informed by the various views of transformation listed previously, as well as my personal perspective that has been shaped by the literature, I find that even younger students in a school setting can experience transformation through learning. This has led me to frame this current research study focusing on students aged 7 – 12 years old in a school setting.

**ii) *Identified a gap within literature***

Further, a variety of subject areas have contributed towards the development of transformative learning theories and research (e.g., nursing, adult-continuing education, higher education, life-event related, professional and leadership development). Many of these research studies



(Baumgartner 2002; Kilgore and Bloom 2002; King 2003; Mallory 2003; Franz 2003; Dubouloz et.al. 2004) have often focused on specific types of participants with some difficulties (physical or mental or situational) or disadvantaged in some way. Further, research which focused on education or learning has been undertaken within higher education classrooms or workshop settings (Taylor 2000; Sinclair and Diduck 2001; Cragg et.al. 2001; Cohen 2004; Feinstein 2004; Garvett, 2004; Lange 2004). This has revealed a gap within the literature with a lack of research that focuses on regular students in a comprehensive school setting (e.g. K 1 – K12). Thus, this study aims to address this gap within the literature.

### **iii) *Understanding ‘transformation’ through Taylor’s (2008) classification***

Utilizing Taylor’s (2008) three differentiating aspects within the literature, I now clarify my position and conceptualisation of transformation using core ideas within transformative learning literature. In this study, I focus on the individual, situating the goal of transformation within the personal realm. At the same time, I find it equally important to acknowledge the social ramification arising out of the inter-personal and collaborative work within a school (which forms the larger group), where the individual’s (student) learning experiences are situated. Thus, I appreciate the social and cultural aspects but do not situate transformation to be aimed at social change as the primary goal but rather an ancillary one. Further, I plan to not delve on social or cultural differences between the individuals/participants, thus taking a more universal view of learning.

### **iv) *Shift in focus to fostering transformative learning***

In the past decade, focus has shifted to the idea of fostering transformative learning with focus on various aspects or components such as characteristics of relationships and critical reflection (Taylor, 2007). The essentiality of reflection as a component has been well addressed by prior research (Taylor, 1998). Now, several studies shed light on the nature of reflection (e.g. levels, developmental), influencing factors (e.g. relevancy, experience) and indicators of reflection in relationship to transformative learning (Liimatainen et al. 2001, Cranton and Carusetta 2004, Kreber 2004). Reviewing literature relating to fostering transformative learning, Taylor (2007) notes that “the importance of providing direct and active learning experiences (e.g. service learning, hospice care), the availability of varied medium for fostering transformative learning, the importance of ‘pedagogical entry points’ (Lange 2004, p.129) and the nature and importance of support when fostering transformative learning” were highlighted within the studies (p.182). In related research, Taylor (2009) describes six core elements of transformative learning common

to most transformative learning experiences. These include – experience; critical reflection; dialogue; awareness of context; a holistic orientation; and authentic practice.

Context as a component of transformative learning has been historically overlooked within the literature, but many shared transformational characteristics that transcend context have been identified, such as greater self-directedness, assertiveness, self-confidence and self-esteem, which support the emphasis of autonomy found in Mezirow's (2000) interpretation of transformative learning. The role of context both at a personal and social level is revealed in the research by Scott (2003). She developed a social constructivist view of transformative learning through the exploration of social action within the medium of story-telling, demonstrating the essential interplay between the personal and the social in making meaning of transformative learning. Scott sees the transformation of an individual's perspective (rational worldview) as change in surface structures of the psyche, while the "social construction of transformation co-emerges in the learner and the setting, that is, the personal and the social in dialectical relationship transform" (Scott 2003, p. 283). Thus, in this present study I continue in this social constructivist stance within the area of fostering transformative learning while taking note of all the components identified above. This also supports the previous point where I focus on the individual but take into account the social aspect within transformation through learning.

Dirks et al. (2006) state that much learning takes place outside of conscious awareness and may include modes of learning that are "emotional, intuitive, symbolic, imaginistic, and/or contemplative" (p. 124). Also, Boyd sees the purpose of transformative education as helping students come to recognize their "spirit"— "that abiding within the person is a truth, a knowledge, which is not separate from socio-economic, political, and other cultural influences, but transcends them" (Boyd and Myers 1988, p. 282). As Dirks (1997) puts it, "our interest in learning through soul is not to "teach" soul or to "facilitate" soul work. To nurture soul is to recognize what is already inherent within our relationships and experiences, to acknowledge its presence within the teaching and learning environment, to respect its sacred message, to give it space and consideration, and to provide it a voice through which to be heard" (p.83). More importantly, the challenge is to awaken soul in teaching and learning, to stir it to life (Dirks, 1997), both inside ourselves and in the learning settings in which we work. Thus, learning through soul aims at transformation of the heart, at character and wisdom (Moore, 1992, 1996). Further this involves a deep interconnectedness of the socio-emotional dimension of learning with the world of ideas and intellectual tasks, and requires a caring environment and space; for

the physical space is as important to nurturing soul within a learning group as our physical bodies are to nurturing soul within our individual lives. Thus, my personal understanding comprises of a more holistic, integral and multi-dimensional approach informed by Boyd (1988; 1991), Dirkx (2000; 2001a; 2001b; 2006), Cranton (2003; 2006); Miller (2002), Hart (2001).

The shift in the research on the area of transformative learning, moving away from theorisation to identifying characteristics and elements that foster transformative learning, connects with the literature on transformative teaching discussed in the next section. But, I note that research and conceptualisations in these areas have been approached from different fields and focus. For example, transformative learning has focused more on adult or higher education and on individuals with some difficulties (physical or mental or situational) or disadvantaged in some way; whereas transformative teaching literature begins from a leadership education and teacher education background. Thus, through this section, I have discussed the various differentiating aspects within the transformative learning literature and have briefly highlighted my position in relation to them. I now discuss transformative teaching in the next section (2.3)

## **2.3 Transformative Teaching**

As noted previously, there is a shift towards researching and understanding ways of fostering transformative learning by identifying its various aspects/components and characteristics (Taylor, 2007) in the last decade. Moving from the traditional theorisation and disciplines that have developed understanding within this area, Slavich and Zimbardo (2012) inspired by literature on transformative leadership, position 'transformation' through interrelated contemporary approaches to learning and classroom instruction by highlighting that instructors can serve as motivational leaders in this process.

Transformative teaching or 'transformational teaching' used interchangeably, is thus, a relatively new term that was perhaps first used by Slavich (2005, 2006) to describe a broader approach to classroom instruction which has its roots in the belief that instructors can promote meaningful change in students' lives if they view courses as stages upon which life-changing experiences can occur. Reviewing contemporary advancements in approaches to learning and classroom instruction, Slavich and Zimbardo (2012) note that many of these strategies (For example, active learning, collaborative learning and experiential learning) differ in slight ways in terms of their intention, scope, and emphasis, but suggest that these theoretical perspectives and

methods share several fundamental characteristics and that they can thus be viewed as part of a broader approach to classroom instruction called transformational teaching.

Rosebrough and Leverett (2011) defined transformational teaching as “an act of teaching designed to change the learner academically, socially, and spiritually” (p. 16). They argue that education should be more about inspiration than information, and encourage instructors to consider the importance of equipping students with both the skills and attitudes that are necessary for overcoming challenges. Further, they note that “transformative pedagogy integrated teaching the whole learner, rather than attending separately to academic, social, and spiritual goals” (p.19). A more holistic ethic is also the foundation of holistic education and links to the idea of transformation through learning.

Authors such as Miller (2005) and Hart (2001) have specifically focused on delineating stages or levels of learning and describe the highest level as transformative. For Miller (2001, 2005) this ranges from transmission to transactional to transformation. Briefly, transmission learning focuses on the student’s reception and accumulation of skills and knowledge. Skills and knowledge flow one way, into the student, and there is little opportunity for analysis or reflection. Transactional learning is more interactive where knowledge is mutable and can be manipulated. Thus, the learner is a problem-solver or self-directed inquirer in conversation with the teacher and the curriculum in an experience that stresses thinking more than feeling and analysis more than synthesis. Transformational learning, acknowledges the wholeness of the student. This includes authentic learning involving a transformation of the self, a development of the whole person, not just the acquisition of intellectual knowledge or the altering of a cerebral position. Thus, learning becomes meaningful to the student on social and personal levels and connections might be established through strategies such as creative problem solving, cooperative learning and arts enhanced methodologies (Dobson, 2007).

Hart (2001) provided a further differentiated perspective distinguishing six levels of learning: information, knowledge, intelligence, understanding, wisdom and transformation. Hart describes the movement through the levels as a movement toward depth which is “the impulse of transformation”.

When education taps the current of transformation it takes us beyond the ‘facts’ and categories of our lives, the limits of social structure, the pull of cultural conditioning, and the box of self-structure. In this way, we gain the capacity not only to gather the facts of our life

but also to transcend and to transform them; this is where the deepest moments in education lead . . . (Hart, 2001, p.12)

He positions transformation as a movement towards increasing wholeness where realisation includes both diversity and uniqueness as well as unity and communion. This I find highlights the individual and social aspect within learning experiences as well as supports the self-actualization goal of education - “we actualize our ever-expanding potential by transcending current self-structure” (Hart, 2001 p.50). Further, this connects the individual with the social or group aspect that arises when exploring transformation through learning in a school setting. Overall, these levels of learning elaborated in the previous paragraph provide another link within the literature and form part of the theoretical background which helps situate the concept of transformation through learning that I adopt for this study.

Now looking at transformation from an educator’s perspective, I argue that transformative educators do not necessarily teach content that is remarkably different from more instrumentally-oriented educators. However, they teach the content with a different end in view, often using quite different instructional strategies, and are guided by different assumptions about the aim and processes of learning (Dirkx, 1998). Rosebrough and Leverett (2011) while elaborating on transformative teaching describe relevant concepts - Inspire your students; Embrace your role as a whole teacher; Teach the whole student; and Place the students in the centre. Also, they list relevant overarching strategies that inform how transformative teaching takes place – Teach for learning; Know how students learn; Teach students how to learn; and Teach by asking questions. These signposts guide the aim and processes of learning. Rosebrough and Leverett’s (2011) point of view has been from a teacher education standpoint, I now focus on the work of Slavich and Zimbardo (2012) who have used the term transformational teaching as a larger umbrella to characterise interrelated aspects contemporary approaches to learning and classroom instruction.

Approaches to classroom instruction have evolved considerably over the past few decades spurred by the development of several learning principles and methods of instruction. Slavich and Zimbardo (2012) argue that many contemporary learning and classroom approaches such as active learning, student-centred learning, collaborative learning, experiential learning and problem-based learning have more similarities than differences but this has been generally under-researched. They note three main reasons for this disconnect: Firstly, they constitute largely separate literature (elementary, secondary, vs adult education). Secondly, they largely

focus on different aspects of teaching and learning process (for example, engaging students in active or experiential activities vs. group based problem solving). Thirdly, they differ in conceptual scope e.g. values or principles of learning (active learning, student-centered learning) vs. methods of teaching through specific instructional formats (collaborative learning, experiential learning and problem-based learning). At the same time, they note that these approaches share similar theoretical roots, theories of constructivism and social constructivism (Slavich and Zimbardo, 2012).

They define transformational teaching as “the expressed or unexpressed goal to increase students’ mastery of key course concepts while transforming their learning-related attitudes, values, beliefs, and skills” (Slavich and Zimbardo, 2012, p. 576). Their definition of transformative teaching comes from the interrelated aspects of these contemporary approaches, thus proposing a broader approach to classroom instruction called transformational teaching. It “involves creating dynamic relationships between teachers, students, and a shared body of knowledge to promote student learning and personal growth” (p.569)

In **Appendix - 1**, I have briefly described the various approaches such as active learning; student-centred learning; collaborative learning; experiential learning and; problem-based learning that Slavich and Zimbardo (2012) have included to describe transformational teaching. The theoretical underpinnings of transformational teaching include, Constructivism, Social-Constructivism, Social Cognitive Theory, Transformative Learning Theory, Intentional Change theory and Transformational Leadership. The following table provides an overview of these theories.

| THEORY                       | KEY FEATURES   | SELECT REFERENCES  |
|------------------------------|--|--|
| <b>Constructivism</b>        | Knowledge is generated via experiences that challenge current understanding and beliefs (i.e., “learn by doing”) Learning activities and exercises must involve reflection and discourse Instructors involve students in the discovery process to engage higher-order cognitive skills (e.g., analysis, synthesis, evaluation) | Piaget 1926; Vygotsky 1978, 1986; Lord 1997                                |
| <b>Social Constructivism</b> | Social contexts and interactions are critical for learning because they – (1) provide information about important symbol systems (e.g., logic, language) and (2) expose students to more knowledgeable peers Instructors provide guided opportunities for interaction and discourse,   | Vygotsky 1978, 1986; Bruner & Haste 2010; Keaton and Bodie 2011; Pritchard |

|  |   |   |
|--|---|---|
|  | and focus on students' individual needs   | and Woollard 2010   |
| <b><i>Social Cognitive Theory</i></b>        | <p>Individuals exert intentional control over their functioning and life through their actions</p> <p>Actions are determined by efficacy beliefs (i.e., judgments regarding likely success), which are self-generated but also influenced by others</p> <p>High self-efficacy is associated with several desirable outcomes (e.g., more positive attitudes, and greater persistence and academic success)</p>   | <p>Bandura 1986, 1993, 1997, 2012a, 2012b; Schunk and Mullen 2012; Schunk and Pajares 2009</p>                            |
| <b><i>Transformative Learning Theory</i></b> | <p>Students learn by revising their habits of mind (i.e., ways of thinking, acting, etc.) and points of view (i.e., attitudes, values, beliefs, etc.)</p> <p>Change occurs when students solve and discuss problems while reflecting on their interpretations, habits of mind, and points of view</p> <p>Instructors serve as facilitators who engage students in interdependent discovery involving problem-solving, discourse, and critical reflection</p>  | <p>Cranton 2006; Dirkx 1998; Erickson 2007; Burns 1978; Mezirow 1991, 2000; Taylor 2007</p>                               |
| <b><i>Intentional Change Theory</i></b>      | <p>Sustainable change in behaviour, thoughts, feelings, and perceptions involves five steps:</p> <ol style="list-style-type: none"> <li>(1) identify ideal self and vision for future;</li> <li>(2) identify real self and compare to ideal self;</li> <li>(3) devise development plan with personalized standards;</li> <li>(4) experiment and practice with new behaviors, thoughts, and perceptions; and</li> <li>(5) develop helpful personal relationships</li> </ol> <p>Instructors can promote attitudinal and behavioral change by guiding students through these five steps or "discoveries"</p> | <p>Boyatzis 2006a, b, c, 2009; Boyatzis and Akrivou 2006</p>  |
| <b><i>Transformational Leadership</i></b>    | <p>Leaders empower, inspire, and challenge individuals to transcend their own self-interests in order to exceed traditional expectations, and realize a shared vision of personal and collective excellence</p> <p>Instructors accomplish this by employing the four components of transformational leadership, which include: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration</p>  | <p>Avolio &amp; Bass 1995; Bass 1985; Bass &amp; Bass 2008; Bass &amp; Riggio 2006, 2010; Rafferty &amp; Griffin 2004</p> |

**Table 2.1:** Theoretical underpinnings of transformational teaching (Adapted from Slavich and Zimbardo, 2012)

Noting that the theoretical perspectives that underlie transformational teaching not only overlap but are interrelated in many ways, among each other, as well as, with contemporary approaches

to classroom learning and instruction, Slavich and Zimbardo (2012) further distil these theoretical perspectives into techniques that instructors can use to achieve transformational teaching goals. These are:

- “(1) Facilitate students’ acquisition and mastery of key course concepts
- (2) Enhance students’ strategies and skills for learning and discovery
- (3) Promote positive learning-related attitudes, values, and beliefs in students” (p. 581)

They describe how these above three principles and the theoretical perspectives (table 2.1) translate into strategies that can be employed within classrooms by listing six core methods of transformational teaching. These are:

- “(1) Establishing a shared vision for a course
- (2) Providing modelling and mastery experiences
- (3) Intellectually challenging and encouraging students
- (4) Personalizing attention and feedback
- (5) Creating experiential lessons that transcend the boundaries of the classroom
- (6) Promoting ample opportunities for prefection and reflection “(p. 585)

I connect these transformative teaching to the core elements of transformative learning common to most transformative learning experiences described by Taylor (2009); These include – experience; critical reflection; dialogue; awareness of context; a holistic orientation; and authentic practice. I notice similarities in the basic elemental level, such as, need for experience and authenticity within learning perhaps through experiential lessons; importance of reflection and need for dialogue. Thus, though both Rosebrough and Leverett (2011) as well as Slavich and Zimbardo (2012) have situated transformation within the classroom learning process and have provided principles and methods that characterise transformational teaching, I also notice connections with elements that foster transformative learning. Overall the focus on classroom approaches, pedagogy, learning and instruction provides the context for the concept of transformation that I follow for this research study.

## **2.4 Conceptualising ‘Transformation through Learning’**

From the various literature discussed above it is clear that, the term transformation has been used in multiple ways to describe learning and teaching. Further, the subject of ‘transformation’ has been studied across several specialised fields resulting in research and theorisation that have varied perspectives, paradigms and fields of knowledge. In this section I clarify and



reiterate my position and conceptualisation of 'transformation' that I adopt for this research study.

Before I proceed with the literature previously discussed, I begin by addressing the term 'transformation'. The verb 'transform' is defined as "to change the form of something/somebody" or "to completely change the appearance or character of something" (Oxford Advanced Learners Dictionary, 2012) and 'transformation' is an act, process or instance of transforming or being transformed. (Merriam-Webster, 2013). Thus, to simplify I associate transformation to the verb change. But, implicitly many other aspects are associated by individuals to the term 'transformation'. These are often preconceptions such as - change that is drastic or dramatic; a permanent change; an instantaneous/sudden change or alternatively something that evolves or is continuous in nature; a visible change; an emancipatory change; it is beyond what is normal and that transformation is positive.

For this study, I situate transformation within the learning process. Thus, appreciating the complexities, I take the position that transformation is varied, often invisible, embedded within a process thus allowing for instances within and the whole process to be transformative. The idea that transformation is or can be permanent is beyond the scope of this study. Now proceeding beyond the term to the various theorizations and literature related to transformation I adopt the following position: -

I see transformation to be embedded within the learning process and as a developmental process within the constructivist notion. It is grounded within the argument that education should be more about inspiration than information, along with the area of transformational teaching (Slavich and Zimbardo, 2012; Rosebrough and Leverett, 2011) which arises from the interrelated aspects of the contemporary approaches to teaching, learning and classroom instruction. Further, I have previously clarified my position on 'transformation' through transformative learning theories (sec 2.2.2), which includes, focus on the individual (personal) which in turn could/may have social ramifications. At the same time, I acknowledge and appreciate the social and cultural aspects but restrict myself from specific focus on social or cultural differences, thus taking a more universal view of learning. Finally, my roots in humanistic psychology (human potential) and the belief in the self-discovery aim of education, encompasses, the emotional, intuitive, and spiritual/ inner aspects of learning.

Adopting the abovementioned conceptualisation of 'transformation' I noticed connections with the larger area of creative pedagogy and creative learning, especially deeper learning. This connection was identified during the pilot phase of the research and led me to revisit and review literature in this area. Thus, I utilize the subsequent brief section on creative pedagogy, where I focus on creative learning literature as a bridge to the literature on deeper learning which further helps situate the focus on *transformation through learning* for his study.

## **2.5 Connecting Creative Pedagogy to Transformation through Learning**

Calls for educating students for the future involves developing 21<sup>st</sup> century skills such as innovation, creativity and creative problem solving, can also be calls for deeper learning, where students gain certain competencies and dispositions to prepare for the future (Fullan and Langworthy, 2013), while becoming capable of transferring what is learned from one situation to another (Pellagrino & Hilton, 2012). Having clarified my position on *transformation through learning*, as situated within transformational teaching literature which encompasses interrelated aspects of the contemporary approaches to teaching, learning and classroom instruction, I find connection with the literature on creative pedagogy especially deeper learning. Thus, I connect my conceptualisation of *transformation through learning* with deeper learning through creative pedagogy. Hence, in the subsequent paragraphs I briefly discuss literature on creative learning and then proceed to literature on deeper learning in the following section.

Briefly, creative teaching is characterised by "using imaginative approaches to make learning more interesting and effective" (NACCCE 1999, p. 89), it is also interpreted as being focused towards 'effective teaching' (Jeffery and Craft, 2001). Teaching for creativity is focused on the learner to encompass forms of teaching intended to develop young people's own creativity thinking and behaviour (NACCCE 1999), Thus, the focus here is more on 'learner empowerment' rather than on 'effective teaching' (Jeffery and Craft, 2001). Craft (2005) discusses and notes that "creativity and learning in education are not distinguishable if we take a constructivist approach to learning... unless we take a harder line on what counts as 'original' and 'of value'" (p.53). Alternatively, when taking another approach to learning such as behaviourism then "we may be able to see learning (which we would see as occurring through conditioning) and creativity (which is concerned with breaking out of conditioned responses) as

quite opposite to one another” (Craft, 2005, p.53). Policy, practice and research discourse in early twenty-first century has expanded to include creative learning as a ‘middle ground’ and has been proposed as a lens for understanding the middle ground between ‘creative teaching’ and ‘teaching for creativity’ (Jeffrey and Craft 2004a).

Another point to note is that creative learning implies within it ‘something’ about the way in which learning occurs (Craft 2005). Jeffrey (2004a), suggests that creative learning involves learners in - using their imagination and experience to develop learning; strategically collaborating over tasks; contributing to the classroom pedagogy and to the curriculum and; critically evaluating their own learning practices and teachers’ performance. Subsequent research has focused on identifying processes of creative learning and associated pedagogical strategies, including starting from the child; making home and school links; allowing children to revisit activities and thus develop their conceptual skills, ‘teaching in the margins’; spontaneous reaction (‘going with the flow’); making emotional connections; creating atmosphere and tone; stimulating imagination; developing empathy; and devising ‘critical events’ (Jeffrey & Woods, 2009). Similarly, Craft (2005; 2003) while discussing creativity and creative learning has listed findings from a range of sources that suggest learning opportunities that foster children’s creativity do some or all the following –

- a. they develop children’s motivation to be creative
- b. they encourage purposeful outcomes across the curriculum
- c. they test in-depth knowledge of disciplines
- d. they use language both to stimulate and assess imaginativeness
- e. they offer a clear curriculum/ time structure, they involve children in creating new routines when appropriate, reflecting on genuine alternatives
- f. they encourage children to go beyond what is expected and reward this
- g. they help children to find personal relevance in learning activities
- h. they model the existence of alternatives in the way information is discovered, explored and imparted, whilst also helping children to learn about and understand existing conventions
- i. they encourage children to explore alternative ways of being and doing, celebrating where appropriate their courage to be different
- j. they give children enough time to incubate their ideas
- k. they encourage the adaption of different perspectives

Thus, these identified processes and strategies within the learning process, I find connects creative learning and creative pedagogy to the larger umbrella of transformative teaching principles and methods identified by Slavich and Zimbardo (2012) discussed previously (Sec 2.3). These interconnected contemporary approaches to teaching and learning identified above can be categorised within the principles of transformative teaching namely, facilitating students' acquisition and mastery of key course concepts; enhancing their strategies and skills for learning and discovery; and promoting positive learning-related attitudes, values and beliefs. Now, using the above discussed literature connecting transformative teaching with creative pedagogy as a bridge, I proceed to focus on another term 'deeper learning' that has further shaped the conceptualisation of *transformation through learning* for this study.

## 2.6 Deeper Learning

The term 'deep learning' or 'deeper learning' (used interchangeably) has been often used in a myriad of ways including '21<sup>st</sup> century skills', 'college and career readiness', 'student-centred learning' and 'next generation learning' including use of technology in classrooms within the larger umbrella of creative pedagogy. I acknowledge that there are many research studies and reports in the past decade that attempt to define 21<sup>st</sup> century skills or deeper learning skills. As Mehta & Fine (2015) note, there is no consensus on exactly how to define deeper learning, but I highlight the prominent definitions within this section. At the same time, I situate the area of deep learning more broadly in association with the idea of *transformation through learning* adopted for this study.

The goals of deep learning are aimed at students gaining the competencies and dispositions that will prepare them to be creative, connected, and collaborative life-long problem solvers and to be healthy, holistic human beings who not only contribute to but also create the common good in today's knowledge-based, creative, interdependent world (Fullan and Langworthy 2013; Barber, Rizvi and Donnelly 2012). The Deeper Learning Report by the National Research Council of the National Academies of Science, Washington (Pellegrino & Hilton, 2012) defined deeper learning as "the process through which an individual becomes capable of taking what was learned in one situation and applying it to new situations (i.e., transfer)" (p.5). They further deconstruct the definition by listing three associated domains of competences – Cognitive (reasoning and problem solving); Intrapersonal (self-management, self-directedness, and conscientiousness) and; Interpersonal (expressing ideas and communicating and working with

others) (p.21). In essence, focus on deeper learning in the classroom includes an environment where the students are motivated and challenged, able to apply their knowledge from one subject area to newly encountered situations in another and can see how their classwork relates to real life.

Deeper learning framework according to the Hewlett Foundation includes a set of competencies that the students must master in order to develop a keen understanding of academic content and apply their knowledge to problems in the classroom and on the job. These are often associated with gaining a set of knowledge, skills and beliefs that include – Mastery of core academic content; Critical thinking and problem solving; Collaboration; Effective communication; Self-directed learning and; An academic mindset (which includes strong belief in themselves, trust in their own abilities, hard work and persistence, peer support and relevance of their schoolwork to the real world and their own future success) (Hewlett Foundation, 2015).

A range of elements have informed the understanding of the concept of ‘deep learning’. Tagg (2003) notes that, it is a process of discovery and construction of new knowledge in light of prior cognitive structures and experiences, which can be applied to new problems and in different situations. Deep learning entails a “sustained, substantial, and positive influence on the way students act, think, or feel” (Bain, 2004, p. 24). Research by Marton and Säljö (1976) led to the notions of surface and deep approaches to learning. This forms the basis of the understanding that teaching and learning may be merely superficial or may be transformational in the lives of students. Bain and Zimmerman (2009) notes that deep learning produces learning that lasts a lifetime, in contrast, surface learning involves a dispassionate approach to learning. The surface learner is not concerned with understanding. Information acquired is usually lost after examinations; there is no profound transformation or knowledge construction.

Deeper learning is also represented within the modified Bloom’s taxonomy by Norman Webb classifying Depth of Knowledge (DOK) criteria into the following four levels (Herman & Linn, 2013) showing movement from surface to deep learning.

DOK 1 – Recall of a fact, term, concept, or procedure – basic comprehension

DOK 2 – Application of concepts or procedures involving some mental processing

DOK 3 – Applications requiring abstract thinking, reasoning, or more complex inferences

DOK 4 – Extended analysis or investigation that requires synthesis and analysis across multiple contexts and non-routine applications

Hermida (2014) in his book focusing on deep learning discusses that this is not a new idea and has been adopted many names, albeit with some different implications. He highlights main contemporary conceptions of transformational knowledge represented in the following table.

|  | <i>CONCEPT OF PROFOUND/TRANSFORMATIONAL LEARNING</i>  | <i>SELECT REFERENCES</i>                 |
|--|---|--|
| <b><i>Deep Learning</i></b>                        | A profound understanding of the underlying meaning of a text and the integration of the different facts mentioned in a text   | Ference Marton and Roger Säljö(1976)     |
| <b><i>Meaningful Learning</i></b>                  | A process of attributing meaning to new knowledge by making nonarbitrary and substantive connections between new and prior knowledge that produces conceptual change in the learner’s cognitive structure   | David Ausubel (1963; 1978)               |
| <b><i>Transfer of Principles and Attitudes</i></b> | The learning of a general idea instead of a basic skill and the recognition of problems, situations, and examples as specific cases of the general idea.  | Jerome Bruner (1966; 1977)               |
| <b><i>Teaching for Understanding</i></b>           | The possibility of doing a variety of thought-provoking tasks with a topic, such as generalizing, explaining, finding evidence, applying to new situations, and solving problems.   | David Perkins (2009), Tyna Blythe (1998) |
| <b><i>Learning that Lasts</i></b>                  | An ongoing process that contributes to the development of the person. This idea of learning is conceived as an integration of learning, development, and performance.   | Marcia Mentkowski (2000)                 |
| <b><i>Transformative Learning</i></b>              | The process of producing change in a frame of reference by incorporating new information to the existing frame of reference. This process involves thoughts, feelings, and dispositions.  | Mezirow (1997)                           |
| <b><i>Effective Learning</i></b>                   | A constructive, cumulative, self-regulated, intentional, situated, and collaborative process of knowledge and meaning building. Effective learning enables learners to acquire adaptive expertise or competence.  | De Corte (2010)                          |
| <b><i>Autonomous Learning</i></b>                  | A process of learning and developing competences that generates an agency capacity, that is, a feeling of empowerment and autonomy. This enables learners to apply and transfer knowledge to a wide array of diverse personal, professional, and social experiences | Joan Rué (2009)                          |

**Table 2.2:** Main contemporary conceptions of transformational knowledge (Adapted from Hermida, 2014)

Hermida (2014) further discusses the main elements and related requirements in the deep learning process, which I summarise here. The process begins with a problem, question, or situation, which must be interesting for the learner and creates a cognitive conflict derived from social interaction that motivates the learner. Within this process the learner makes non-arbitrary and substantive connections between new knowledge arising from the problem or question and the learner's existing cognitive structure. This requires that the new knowledge must be within the learner's 'zone of proximal development' (term as defined by Vygotsky, 1978). While making these connections higher-order cognitive and metacognitive competences, skills and processes (such as - critical analysis, synthesis, problem solving, extrapolation, theorisation, comparison, contrast, and application to new situations; competencies defined by taxonomy such as Bloom, 1984 and Biggs and Tang, 2007) are accessed. Both individual and group work allows for these competencies to develop through abstract thinking and collective negotiation of meanings. At the same time, he notes that there must be adequate intrinsic motivation to solve the cognitive conflict while the learner is in a safe and non-threatening environment. This includes, adequate workload, enjoyable atmosphere and no negative factors, e.g., stereotyping and discrimination. This he notes, allows for conceptual change to take place as a result of modification of the cognitive structure to solve the problem or to answer the question. Piaget (1969) has explained this process of conceptual change by means of the assimilation and accommodation principles. Importantly, I note the conceptual change is not simple or immediate and can involve many intermediate phases during which changes do not yet constitute the learner's final conceptual change. Like Carretero (2009) stated, the process of change is very important for learning and not just its product or result.

At the social level, this process of conceptual change within the deep learning process includes changes in or across communities of knowledge. Drawing on the work of Bruffee (1999), it could involve the renegotiation of meanings within the knowledgeable community the learner comes from and the negotiation of meanings in the new community. It could also involve a move from the periphery of a knowledge community to its centre, where the learner achieves full participation by performing the roles and functions that experts display in the community (Lave and Wenger, 1991). Overall it is evident that social interaction and negotiations are essential for deep learning. At the same time, Hermida (2014) notes that the process is not complete without evaluation and metacognitive reflection. This includes initial, simultaneous, and retrospective evaluation of the deep learning process and the resulting conceptual change. Thus, from the elements identified by Hermida (2014) here, I note the same three kinds of integrations

identified by Mehta & Fine (2015) that are important for understanding deeper learning: the cognitive and the affective, the short-term and the long-term, and the individual and the social.

I also note that built in within deeper learning is the idea of cognitive rigor. Hess et.al (2009) note that although related through their natural ties to the complexity of thought, Bloom's Taxonomy and Webb's depth-of-knowledge differ in scope and application. Bloom's Taxonomy categorises the cognitive skills required of the brain to perform a task, describing the "type of thinking processes" necessary to answer a question. Depth of knowledge, on the other hand, relates more closely to the depth of content understanding and scope of a learning activity, which manifests in the skills required to complete the task from inception to finale (e.g., planning, researching, drawing conclusions). Both the thinking processes and the depth of content knowledge have direct implications in curricular design, lesson delivery, and assessment development and use. Hess (2006) has thus proposed a cognitive rigor matrix that connects both these conceptual models in order, for educators to better understand, categorise and examine their lessons. I have included this cognitive rigor matrix in **Appendix – 1**. This further provides a way to understand deeper learning experience in practice.

Continuing to situate transformation within the learning process, I note that Hermida (2014), similar to Slavich and Zimbardo (2012) includes various contemporary classroom approaches as ways to approach deep learning goals. I have included these within the same **Appendix - 1**. Thus, I consider both transformational teaching and deep learning to be referring to the same larger goal which involves transformation through the process of learning.

During an ongoing ethnographic study of 30 high schools by Harvard Professor Jal Mehta, '*In search for deeper learning*', he recognized that students weren't often being given rigorous, challenging, and meaningful work – often referred to by educators as "deeper learning". During this project, they have developed the following definition of deeper learning.

"Deeper learning emerges when the following three elements come together--*identity* (it matters to me), *mastery* (I've developed significant knowledge and skill in the domain), and *creativity* (I'm not only receiving but creating knowledge). Identity provides the motivation which fuels the commitment to the subject, building mastery is what differentiates learning that is fun from learning that reflects real understanding, and creativity is what separates remembering others' ideas from developing your own" (Mehta, 2014).



This above definition again highlights the elements of deeper learning which have been discussed within this section, with connections to transformative teaching goals of mastery of knowledge, enhancing learning related values i.e. actively creating knowledge and making meaningful connections.

It can be argued that the education system in the United States, based on evidence from past studies (Tyack 1974) points to a rote activity, focused more on teaching children the “three R’s” and on socializing them to be productive citizens than on cultivating creativity or independent thought. As Mehta (2013) argues, even in the early twentieth century practices such as age-graded classrooms, the division of the curriculum into discrete academic subjects, and teacher-centered pedagogy, which requires students to master knowledge and skills in lockstep (Tyack 1974; Graham 2007), were used to streamline the process of providing a full 12 years of education to the country’s youth. Profound influence of Dewey and his reform-minded contemporaries such as Maria Montessori resulted in some extraordinary small private progressive schools. But as Mehta & Fine (2015) note, in the larger sphere of public schools, “a bastardized vision of progressive education emerged, as vocational and life adjustment education sacrificed academic content in their search for relevance” (p.7). They argue that history underscores that the lack of deep learning within American schools is perhaps due to limited public demand for it. The qualities associated with deep learning—critical thinking, grappling with nuance and complexity, questioning authority, and embracing intellectual questions—are not ones that are widely embraced by the American people (Hofstadter 1963). In this landscape, a seismic shift is needed for being able to expand on providing deeper learning for all. Thus, aiming to contribute towards educating students for the future, this study exploring *transformation through learning* connecting transformative teaching with deeper learning, highlights interrelated aspects of the contemporary approaches to teaching, learning and classroom instruction that are important towards achieving these goals.

Through this section, I have connected the act of going deeper during the learning process (deeper learning) to the idea of *transformation through learning* as conceptualised for this study. This I accomplish by connecting the overall definitions, goals and elements of deeper learning to the principles and goals of transformative teaching that forms the foundation for this study.

## 2.7 Connecting deeper learning across related Literature

This section includes various other literature that has illuminated my understanding of the area of *transformation through learning*. It includes new research related to learning along with classroom approaches, models, and strategies that are aimed at transforming learning experiences. I broadly cover three interlinked aspects of learning: Thinking, Understanding and Culture. Within these following sections, I discuss and summarise various research projects that have continued to develop the idea of deep learning and creative pedagogy which in turn situates the concept of 'transformation through learning' in relation to newer learning approaches and practices. Briefly, I focus here on research that connects mindsets, the idea of learning to learn, culture and character within learning experiences. The need to review the following related literature was highlighted after my pilot study when the embedded nature of transformation within learning, led me to focus on contemporary approaches to learning and the idea of deeper learning became the core concept within *transformation through learning* (discussed later in sec 4.8.1 and Chapter 4).

### 2.7.1 Habits of Mind and Thinking Dispositions

In this section I include related literatures that develop the understanding of 'thinking dispositions' (Tishman, et.al., 1993), 'habits of mind' (Costa and Kallick, 2000) and 'frames of mind' (Gardner, 2006; 2011). A disposition is a habit, preparation, state of readiness, or tendency to act in a specified way. The term thinking dispositions can be broadly defined as tendencies toward particular patterns of intellectual behaviour. Several scholars and educators in an effort to identify the nature of these patterns of thinking have tried various definitions. Most of these definitions follow the everyday usage of the term disposition, which contrasts with the notion of ability, for example, an individual may have the ability to do something - but not be disposed to do so. In a departure from this everyday usage, David Perkins, Eileen Jay and Shari Tishman have proposed what they call a "triadic conception of thinking dispositions," which includes the concept of ability. To explain the basic psychology of thinking dispositions, they propose there are three psychological components which logically must be present in order to spark dispositional behaviour. These three elements are: (1) *sensitivity* - the perception of the appropriateness of a particular behaviour; (2) *inclination* - the felt impetus toward a behaviour; and (3) *ability* - the basic capacity to follow through with the behaviour (Perkins, Jay & Tishman,

1993). At the same time, Ritchhart (2002), helps us understand that dispositions are under our control and we can consciously, intentionally choose to employ them rather than being mindlessly on autopilot.

Many researchers have proposed several types of thinking dispositions ranging from critical thinking dispositions listed by Ennis (1994); Perkins, Jay & Tishman (1993) propose seven dispositions building them from their triadic conception of disposition and Costa (1991) uses the term "passions of mind". These have shaped my understanding of this area. There are various lists and classifications of dispositions identified by researchers which I include in **Appendix – 2.**

Not merely focussing on critical thinking Costa (1991) uses the term "passions of mind" and identifies 5 key passions that characterise the good thinker – Efficacy; Flexibility; Craftsmanship; Consciousness; and Interdependence. Whereas, Perkins, Jay & Tishman (1993) build on their triadic conception of disposition and propose the following seven dispositions –

- 1) The disposition to be broad and adventurous
- 2) The disposition toward wondering, problem finding, and investigating
- 3) The disposition to build explanations and understandings
- 4) The disposition to make plans and be strategic
- 5) The disposition to be intellectually careful
- 6) The disposition to seek and evaluate reasons
- 7) The disposition to be metacognitive

Ennis (1996) argues that these seven dispositions provide an overview of the categories within which there are many more sub-dispositions (listed in **Appendix – 2**) and this adds to the complexity and confusion, for example, the three inclinations, "to be open-minded, to probe assumptions and [to] examine alternative points of view," appear under the first major disposition, "to be broad and adventurous" (p. 7), although these three inclinations do not appear to fit within the first disposition in the standard sense of these terms. Thus, there is still differing views on how to classify and synthesise them.

A related understanding by Costa and Kallick (2000) is 'Habits of Mind'. They have defined the 'Habits of Mind' as the dispositions skilfully and mindfully displayed by characteristically intelligent people when confronted with problems the solutions to which are not immediately apparent. "A Habit of Mind is a composite of many skills, attitudes, cues, past experiences, and

proclivities” (Costa and Kallick, 2008, p.17). They are not thinking tools, rather they are dispositions that inclines one to adopt thinking tools and strategies. They have identified set of 16 problem solving, life related skills that they consider ‘Habits of Mind’, necessary to effectively operate in society and promote strategic reasoning, insightfulness, perseverance, creativity and craftsmanship (Costa, A. L. and Kallick, B., 2009). Drawing on their continued work on habits of mind, they consider the same 16 problem solving habits of mind to be dispositions of deeper learning (Costa and Kallick, 2015). These are – (1) Persisting; (2) Managing Impulsivity; (3) Listen with Understanding and Empathy; (4) Thinking Flexibly; (5) Thinking about our Thinking (Metacognition); (6) Striving for Accuracy and Precision; (7) Questioning and Posing Problems; (8) Applying Past Knowledge to New Situations; (9) Thinking and Communicating with Clarity and Precision; (10) Gathering Data through All Senses; (11) Creating, Imagining and Innovating; (12) Responding with Wonderment and Awe; (13) Taking Responsible Risks; (14) Finding Humour; (15) Thinking Interdependently; and (16) Remaining Open to Continuous Learning. According to Tishman, Perkins and Jay (1994) thinking dispositions are at the heart of ‘good thinking’ and the dispositions put good thinking into practice. “They help us aware of our own thinking patterns, give us a better understanding of what good thinking is, and help us cultivate habits that lead to good thinking” (p.42-43). Thus, whether thinking helps form habits or habit when put into practice shapes thinking, form two sides of the same idea. Thus, I note that both these ideas, ‘thinking dispositions’ and ‘habits of mind’ essentially point to the same - a habit, a preparation, a state of readiness, or a tendency to act in a specified way.

Another way of categorising thinking dispositions or habits of mind can be through the work done by Howard Gardner (1983; 2006; 2011). His theory of multiple intelligences lists the following nine types of intelligences or intellectual abilities - Musical-rhythmic and Harmonic; Visual-spatial; Verbal-linguistic; Logical-mathematical; Bodily – kinaesthetic; Interpersonal; Intrapersonal; Naturalistic; Existential/ Moral. These represent different types of intellectual abilities and should not be confused with learning styles which are ways in which an individual approaches a range of tasks. A more recent work of Gardner (2006) outlines specific cognitive abilities that will be sought and cultivated by leaders in the years ahead. These include –

- 1) The Disciplinary Mind: the mastery of major schools of thought, including science, mathematics, and history, and of at least one professional craft.
- 2) The Synthesizing Mind: the ability to integrate ideas from different disciplines or spheres into a coherent whole and to communicate that integration to others.

- 3) The Creating Mind: the capacity to uncover and clarify new problems, questions, and phenomena.
- 4) The Respectful Mind: awareness of and appreciation for differences among human beings and human groups.
- 5) The Ethical Mind: fulfilment of one's responsibilities as a worker and as a citizen.

All these above classifications of dispositions, habits of mind or attitudes highlight a set of important skills/ attitudes that are characteristics of deep learning (sec 2.6) and other related literature within this present section (2.7). Dispositions inherently become part of the learning process and finding ways to cultivate them during the learning experience further develops the understanding of *transformation through learning* for this study.

## 2.7.2 Making Thinking Visible

Many related research studies undertaken by Harvard Project Zero associates about thinking have led to the development of the work 'making thinking visible' by Ritchhart, Church and Morrison (2011) which I discuss within this section. Some of these research projects include, Visible Thinking (Ritchhart, 2006; Tishman et.al., 1995, 2005), Teaching for Understanding (Perkins, 1993; Blythe, 1998; Wiske, 1997) and Cultures of Thinking project (Ritchhart, 2007, 2009, 2014). David Perkins (1992) makes a case for the importance of developing opportunities for thinking:

"learning is a consequence of thinking. Retention, understanding and the active use of knowledge can be brought about only by learning experiences in which learners think about and think with what they are learning . . . Far from thinking coming after knowledge, knowledge comes in the coattails of thinking. As we think about and with the content that we are learning, we truly learn it" (p.8).

Researchers and authors of the book making thinking visible (Ritchhart, Church and Morrison, 2011) put thinking at the centre of the educational enterprise by providing practical strategies for promoting engagement, understanding and independence for all learners. At the core rests the idea that it is important to nurture thinking in the daily lives of learners and to make it visible so that a culture of thinking can be built and a strong learning community established in organisations, in schools and in classrooms. Thus, they discuss the need to move beyond Bloom's taxonomy to identifying different kinds of thinking that are essential in aiding our

understanding. These are – Observing closely and describing what’s there; Building explanations and interpretations; Reasoning with evidence; Making connections; Considering different viewpoints and perspectives; Capturing the heart and forming conclusions; Wondering and asking questions and; Uncovering complexity and going below the surface of things.

Making students’ thinking visible serves a broader educational goal as well. When we demystify the thinking and learning process, we provide models for students of what it means to engage with ideas, to think and to learn (Ritchhart, Church and Morrison, 2011, p.28). These researchers present various tools such as Questioning; Listening; Documenting and; using Thinking routines and Protocols to make thinking visible. I briefly elaborate them here -

*Questioning* involves asking good questions, which has always been a focus in education but this implies moving beyond the obvious and pushing questions to go beyond the knowledge level. Researchers propose a more flexible way of approaching questioning would be to think about how teachers can ask questions that (1) Model interest in ideas (e.g. by asking authentic questions to which teacher does not know answers or that there are no pre-determined answers; generative in nature) (2) Constructing understanding (e.g. questions that ask students to connect ideas, to make interpretations, to focus on big ideas and central concepts and to extend ideas; constructive questions) and (3) Facilitating and clarifying thinking (e.g. what makes you say that?; questions with a reflective toss (Zee & Minstrell, 1997); review-type questions). At the same time, they note, “It’s one thing to ask good questions, but one also has to listen to answers” (p.36). Drawing from the practices of Reggio Emilia preschools of Italy, where they espouse the idea of a pedagogy of listening, Ritchhart, Church and Morrison (2011) state *listening* as one of the tools to make thinking visible as it conveys a sense of respect for and an interest in the learner’s contributions. *Documenting* is another tool to help make thinking visible. Examples are, recording the students’ investigation on the whiteboard, photographs, audiotapes of discussion, notes of student’s ideas and contributions, papers, drawing. Documentation is “the practice of observing, recording, interpreting, and sharing, through a variety of media, the processes and products of teaching and learning in order to deepen learning” (Given et.al., 2010, p.38). Thus, it is more than just capturing learning but is aimed at advancing it. Through their work, they promote ‘*thinking routines*’ as a way to make thinking visible. Routines can be considered as any procedure, process, or pattern of action that is used repeatedly to manage and facilitate the accomplishment of specific goals. Thinking routines operate as tools for promoting thinking or as structures crafted to support and structure

students' thinking or even as patterns of behaviours. They classify thinking routines into three main categories each focusing on Introducing and exploring ideas (e.g. See-Think-Wonder); Synthesizing and organizing ideas (e.g. Connect-Extend-Challenge) and; Digging deeper into ideas (e.g. Claim-Support-Question). **Appendix - 2** includes the thinking routine matrix table describing these routines. These above four tools for making thinking visible focus on the importance of thinking within the learning process. I argue that deep learning requires deep thinking, and these tools can play a key role within the pedagogy to promote deep learning by allowing the students to engage, reflect and act on their thinking process.

### **2.7.3 Building Learning Power**

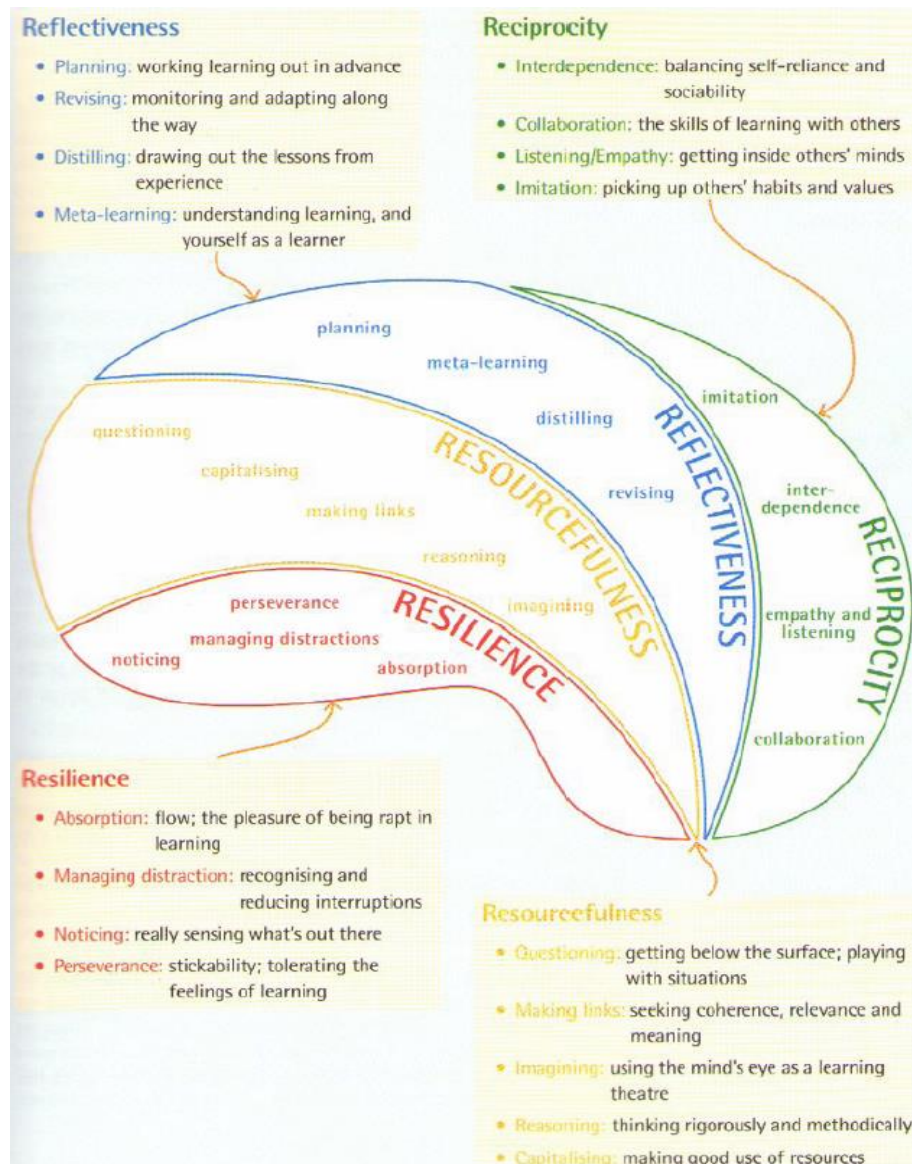
Based on the work of cognitive scientist, Guy Claxton, 'Building learning power' (Claxton, 2002; Claxton, G. et.al. 2011) (referred to as BLP hereafter) is essentially an approach to helping young people to become better learners by creating a culture within the classrooms and the school that "systematically cultivates habits and attitudes that enable young people to face difficulty and uncertainty calmly, confidently and creatively" (Claxton et.al. 2011, p.2). The following three core beliefs have provided the foundation for this study –

- 1) The core purpose of education is to prepare young people for life after school; helping them to build up the mental, emotional, social and strategic resources to enjoy challenge and cope well with uncertainty and complexity
- 2) This purpose for education is valuable for all young people and involves helping them to discover the things that they would really love to be great at, and strengthening their will and skill to pursue them.
- 3) This confidence, capability and passion can be developed since real-world intelligence is something that people can be helped to build up.

BLP is acknowledged to be the 'cousin' of Habits of Mind, previously discussed in section 2.7.1 above. Various habits, capacities and attitudes highlighted by this study shows how this study has been influenced by many other research studies and researchers such as the work of Carol Dweck (The Growth Mindset; 2006), Howard Gardner (Multiple Intelligences; 1983), John Hattie (Visible Learning; 2009), Ellen Langer (Power of Language and Mindfulness; 1997), Lave and Wenger (Communities of Practice; 1991), David Perkins (Learnable Intelligence; 1995, Making Learning Whole; 2009) and Mihaly Csikszentmihalyi (Flow; 1996). Thus, BLP links related

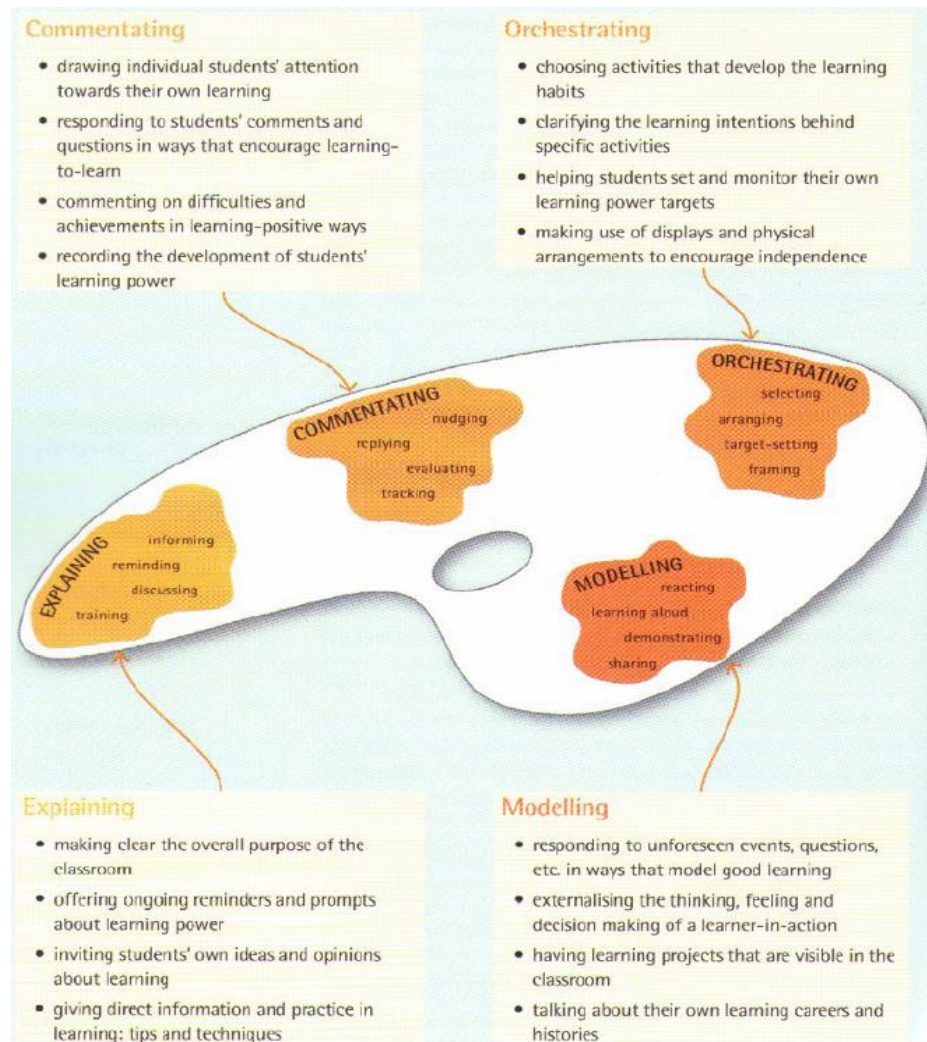
literature previously mentioned in this chapter and provides another viewpoint into deep learning and transformational teaching.

This project led to the development of two frameworks which can be adopted by teachers and schools. Framework 1 (The Supple Learning Mind) shows a coherent picture of what the powerful learner is like – a working language for talking about young people as learners (depicted in figure 2.1 below). Framework 2 (The Teachers' Palette) is a route map of how regular schools can build the constituent dispositions of the powerful learner (depicted in figure 2.2 below). Both these frameworks include a set of interwoven capacities that in the first instance are ingredients of learning power and in the second are school culture that cultivates learning power.





**Figure 2.1:** BLP Framework 1 – The Supple Mind (Adapted from Claxton, G. et.al., 2011, p. 41)



**Figure 2.2:** BLP Framework 2 – The Teachers' Palette (Adapted from Claxton, G. et.al., 2011, p. 44)

Through the first framework (left figure 2.1 above), Claxton, et.al (2011) identify seventeen thinking dispositions based within the 4Rs – Resilience, Resourcefulness, Reflectiveness and Reciprocity. These add to the various dispositions and habits of mind previously discussed in sec 2.7.1 above. Overall, these frameworks diagrammatically represented above highlight the various elements within the core idea of building learning power, both from a learner's perspective and teacher's perspective and pedagogy. They provide another strong connection to the learning and teaching approach within the larger umbrella of literature relating to deep

learning, where the focus is on helping students develop specific skills, capacities or attitudes that equip them to learn and transfer these learning skills or 'power' to other situations.

## 2.7.4 Visible Learners

The foundation for this work titled 'Visible Learners' (Krechevsky, M., Mardell, B., Rivard, M. and Wilson, D.G., 2013) lay in the research undertaken in collaboration with Project Zero at the Harvard Graduate School of Education titled 'Making Learning Visible'. This led to the development of a framework for understanding, documenting and supporting individual and group learning through their work alongside Reggio Emilia Schools and teachers. Briefly, Reggio Emilia approach originated from villages around Reggio Emilia in Italy from the efforts of parents in local communities to rebuild their schools after the devastation of World War II. Following a constructivist approach, their theoretical underpinning can be associated with the work of Dewey, Piaget, Vygotsky and Bruner among others. The Reggio approach is based on what educators there call a pedagogy of listening and relationships. The Reggio educators hold an image of the child as capable and powerful as opposed to unskilled and passive. Their key principles include – All children have potential; Children are connected (to their family, community, society, objects, symbols); The reciprocity of children (meaning that they not only want to receive but to give); Children are communicators; Educators are partners, nurturers and guides; Educators are researchers; Documentation is important for communication; Parents are partners; and Education is about asking questions.

The researchers have identified five core (and often overlapping) principles of learning in classrooms that suggest powerful learning is – Purposeful; Social; Emotional; Empowering; and Representational. This idea of powerful learning, I argue is related to deep learning and can perhaps provide opportunity for transformation through learning. They further detail two practices that build on these principles; Firstly, *learning in groups*, which has its theoretical underpinnings in Vygotsky's socio-cultural perspective (1978) which considers learning to be inherently social and that internalisation of interactions transforms ways of thinking. The researchers have distilled five general strategies that help make learning visible – (1) Nurturing children's capacities to learn together; (2) Designing engaging tasks that benefit from a group perspective; (3) Facilitating conversations that deepen learning; (4) Forming groups intentionally; and (5) Choreographing individual, small-group, and whole-class learning. Secondly, *documentation*, which is defined as "the practice of observing, recording, interpreting,

and sharing through a variety of media the processes and products of learning in order to deepen and extend learning” (p.74). It is important to note that documentation serves several purposes both during and after the learning experience and should not be merely considered as beautiful end products. The researchers highlight four key practices of documentation – (1) Observing (stepping back and observing with a sense of curiosity; focusing attention through intentional Inquiry); (2) Recording: capturing the processes and products of learning (collecting tangible artefacts; serving as ‘memory of the group’); (3) Interpreting: supporting reflection that informs instruction (grounding individual reflection and interpretation in documentation; interpreting documentation with colleagues (teachers); interpreting documentation with learners; and (4) Sharing: building connections and making teaching and learning public (building collective knowledge within and across classrooms; engaging families through documentation; creating public exhibitions and products for a wider audience).

This research focuses and highlights the ‘social’ aspect of learning. Thus, furthering the socio-cultural perspective of learning, Krechevsky, et.al (2013) put the practice of ‘learning in groups’ to be vital for powerful learning. This I note, firstly, highlights the importance of learning environments and its potential for transforming learning experiences of students. Secondly, the practice of documentation as elaborated by the researchers, guides the learning experience making powerful connections with the students. Overall, I argue that these learning principles and practices are often incorporated within contemporary classroom instruction approaches in some manner and is geared towards providing deep learning experiences that can be transformative.

### **2.7.5 Character Compass**

Character development has been a goal of the American education system since its inception (McCellan, 1999); but the formation of good character receives little attention apart from the mission statements, be it the behavioural, ethical and moral facets (Seider, 2012). The overarching goal of Seider’s work is understanding contemporary efforts in the United States to inculcate positive character traits, and to this end has focused on three low-income urban schools in Boston, Massachusetts that reflect ‘homegrown or grassroots character education’ highlighted by highlighted by Berkowitz and Bier (2005).

Seider (2012) notes that, in recent years due to the intense pressure from high-stakes testing ushered in by the No Child Left Behind Act 2001, character development slowly started to be viewed as a tool for facilitating pathways to and through college rather than a goal distinct from student achievement. This interest in character education has focused on mainly 'performance character' which can be defined as the qualities necessary to achieve one's potential in endeavours ranging from art to academics to athletics (Lickona and Davidson, 2005) and commonly includes character strengths such as perseverance, ingenuity and optimism. He notes that this focus on performance character development has been influenced and supported by recent research by Duckworth, A.L. and Seligman, M.E.P. (2005) that found self-discipline to be stronger predictors of IQ of middle school students' academic grades, school attendance, hours spent doing homework and acceptance into highly competitive high schools. Similarly, character strength such as "grit" defined by (Duckworth, A.L. et.al., 2007) as one's perseverance and passion for long-term goals also was found to be a predictor for better scores/grades and perseverance.

But the main argument made by Seider (2012) is that it would be a mistake to consider performance character as the sole 'character foundation' upon which students' success can be built but instead points out efforts in development of all the three - moral character, performance character and civic character by the schools he focused in his mixed methods research. Drawing on work undertaken by Berkowitz, M.W. (2011), Lickona, T. and Davidson, M. (2005) and Shields, D.L. (2011), Seider (2012) summarises these three different character types which form his conceptual model.

*Performance character* consists of "the qualities such as effort, diligence, perseverance, a strong work ethic, a positive attitude, ingenuity, and self-discipline needed to realise one's potential for excellence in academics, co-curricular activities, the workplace, or any other area of endeavor" (Lickona, T. and Davidson, M 2005, p.18). Here it is important to note that all these researchers note that performance character is not synonymous with performance, thus performance character consists of "the skills that allow individuals to optimally regulate their thoughts and actions. . . . [to] achieve levels of personal excellence in their conduct" (Sokol, B. W., Hammond, S.I., and Berkowitz, M.W., 2010, p.108).

*Moral character* can be conceptualised as relational orientation and "consists of the qualities such as integrity, justice, caring, and respect – needed for successful interpersonal relationships

and ethical behaviour” ((Lickona, T. and Davidson, M 2005, p.18). It can be differentiated from performance character strengths which can be neither good nor bad and thus are a “derivative of the ends towards which they are applied” (Berkowitz, M.W. and Puka, W., 2009, p.108).

*Civic character* can be defined as “the knowledge, skills, virtues, and commitments necessary for engaged and responsible citizenship” (Shields, D.L., 2006, p.31). Civic character strengths include “civic and political knowledge an ethic of participation and service, and the numerous social skills necessary to work productively with others for the common good” (p.52). Thus, in comparison to moral character which is situated in an individual’s relationships and interactions with others to civic character which is situated in an individual’s role within local, national and global communities.

Seider (2012) provides a portrait of each of these three different types of character development focus within the three different schools which at first glance might seem similar. Thus, one can argue that transformation through learning (the focus of this study) is not only influenced by learning approaches and goals but can also be situated within the social and cultural elements of the school environment. Thus, this literature focusing on development of character has further influenced my understanding of transformation through learning.

### **2.7.6 Creating Cultures of Thinking**

Ritchhart (2015) in his current work positions creating culture as a way to transform schools and classrooms. This continues in his research about fostering thinking, understanding, and creativity in all settings of learning and has focused on identifying and creating ‘cultures of thinking’ through the ‘Worldwide Cultures of Thinking Project’. His new vision of ‘what a quality education is?’, emerges from various research studies which provides a rich portrait of “the student as an engaged and active thinker able to communicate, innovate, collaborate, and problem solve” (Ritchhart, R. 2015, p.19). More importantly the focus is not on the development of discrete collection of knowledge but rather a set of broad characteristics that motivate learning and lead to the generation of usable knowledge. This also resonates with other research such as the profile of a twenty-first-century learner (Trilling and Fadel, 2009) or, a well-rounded citizen (Arnstine, 1995; Meier, 2003), or as part of global competency (Boix-Mansilla and Jackson, 2011). The six key principles of the cultures of thinking project has been included in **Appendix – 2.**

Exploring the idea of culture within a classroom he notes that qualities such as reflective, imaginative, curious and creative are classified as dispositions. Dispositions have been previously discussed in section 2.7.1. Ritchhart (2015) argues that “dispositions must be enculturated – that is learned through immersion in a culture” (p.20). He identifies and discusses eight cultural forces that represent tools or levers for transforming schools and classroom culture namely - Expectations; Language; Time; Modelling; Opportunities; Routines; Interactions and; Environment. I briefly discuss these below.

Setting an agenda of understanding and conveying clear *expectations* forms the first cultural lever. The focus on the value of thinking and learning as outcomes as opposed to mere completion of ‘work’, Ritchhart (2015) notes, is key to transforming the culture of thinking. At the same time, it is important to acknowledge the power of *language* and its role in developing a culture of thinking. Ritchhart (2015) lists various different languages of the classroom that shapes the learning experiences of the students through the culture of thinking, such as language for - community, identity, initiative, mindfulness, feedback and praise; and listening. Each of these languages incorporate specific types of vocabulary that allows for enculturation of dispositions. The third cultural force *time*, is always considered a scarcity in a classroom. Ritchhart (2015) calls on teachers to recognise time as a statement of their values. This he notes is defined by how as teachers, we “break through the contradiction between what we would like to be doing and what we are in fact doing” (p.98). This takes us back to the values (focus on curriculum, tests, behaviour etc.), while pushing us a step further to identify priorities. Some key principles that need to be given time in every classroom to build a culture of thinking are – Learning is a consequence of thinking; Coaching and providing feedback propel learning and create momentum; We learn when we are being challenged, stretched, and pushed in novel ways and performing just beyond what we are able to do already on our own (Ritchhart, 2015, p.101).

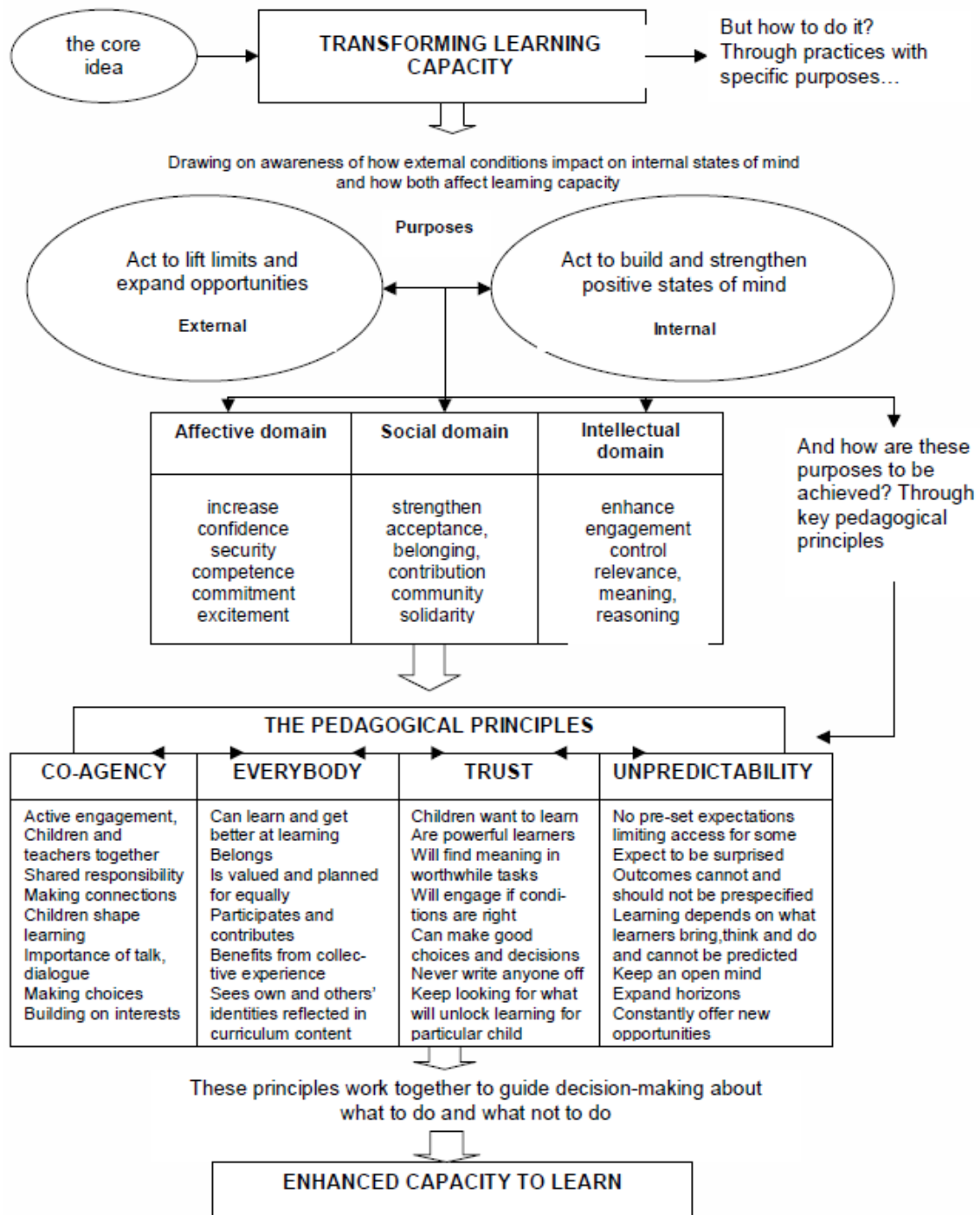
*Modelling* is the fourth tool to develop cultures of thinking. This involves being a role model for the students not as perfect exemplars but by being authentic while providing opportunity for the students to learn traits, characteristics, and values of a mature and dedicated learner and thinker. This involves making our thinking visible for the students to imbibe, reflect and learn from. At the same time, one must strive to provide the students with other types of modelling experiences, such as, modelling for independence or interactive modelling (how to do it modelling). Providing purposeful activities or *opportunities* that require students to engage in

thinking and the development of understanding as part of their ongoing experience of the classroom and scaffolding students' thinking in the moment as well as providing tools and patterns of thinking or *routines* (discussed previously in section 2.7.2) form the next two levers to instil culture of thinking.

The final two levers for transforming schools and classroom culture, are *interaction* and *environment*. Showing a respect for and valuing of one another's contributions of ideas and thinking in a spirit of ongoing collaborative inquiry empowers the learners and is at the core of *interaction*. Creating an *environment* that enhances learning and builds culture, forms the final force within a classroom. This includes ensuring the following - Visibility (making thinking visible by displaying the process of thinking and development of ideas); Flexibility (arranging the space to facilitate thoughtful interactions); Comfort (physical and environmental, for example, light and temperature) and; Invitational quality (making the classroom special, personal and welcoming). I argue that, this abovementioned list of forces that must be mastered to transform schools and classroom culture, link both the ideas of thinking and culture and provide valuable inputs and pathways when trying to understand transformation through learning.

### **2.7.7 Learning Without Limits**

In this section I discuss the 'Learning Without Limits', research project (Hart, S. et.al. 2004; Swann, M. et.al. 2012) undertaken by researchers at the School of Education, University of Cambridge together with teacher researchers across UK. The overall aim of this project was to develop approaches to teaching and learning that do not rely on determinist beliefs about ability. The researchers clarify this as "learning that is free from the needless constraints imposed by ability-focused practices, free from the indignity of being labelled top, middle or bottom, fast or slow, free from the wounding consciousness of being treated as someone who can aspire at best to only limited achievements" (Hart, S. et al. 2004, p.3). Arguing against fixed-ability thinking that can limit learning and profoundly affect identity of the students, the university researchers worked with teacher researchers who have rejected the idea of fixed-ability to study their practice in order to identify distinctive features which later led to the development of 'pedagogy of transformability'.



**Figure 2.3:** Transforming Learning Capacity: an alternative approach to pedagogy  
 (Adapted from Hart, S. et.al., 2004, p. 179 and  
<http://learningwithoutlimits.educ.cam.ac.uk/about/key.html>)



The above figure 2.3 provides a visual representation of this research project which provides an alternative approach to pedagogy. Essentially the core idea of transformability is based on the belief on the potential for transforming learning capacity – “*A firm and unswerving conviction that there is the potential for change in current patterns of achievement and response, that things can change and be changed for the better, sometimes even dramatically, as a result of what people do in the present*” (Hart, S. et.al., 2004, p.166). This resonates with the overall theme across the literature discussed previously, i.e. transforming one’s potential through learning. The core purposes of teaching for transformability and its impact on learning capacity has been highlighted within the three domains – affective, social and intellectual, including the whole individual. Briefly the findings of this study identified the key pedagogical principles for applying the core idea of transformability.

- 1) *The principle of co-agency* – Teachers’ awareness that they must harness their power to young people’s power as a joint enterprise to make a difference to the future development. This includes a particular pedagogical thinking and style which involves making connections, ensuring diversity through co-agency and enabling young people to take shared responsibility
- 2) *The principle of ‘everybody’* – This articulates teachers’ fundamental responsibility and commitment to acting in the interests of everybody. This includes practices such as teachers provide in the same terms for everybody, valuing contributions from everybody and developing solidarity among the students.
- 3) *The principle of trusting the learner* – This presupposes a trusting relationship between teacher and learner.
- 4) *The principle of unpredictability* – This fourth principle was identified subsequent to the original study through the contribution of additional researchers. Guided by the three preceding principles, the researchers understood that outcomes cannot be specified in advance because learning depends upon what learners bring, think and do when engaging in classroom activities and this cannot be predicted. The teachers *trusted* and *expected* young people to surprise them; they always kept an open mind, were constantly striving to offer new experiences and to expand learners’ horizons, and were consciously working to create conditions in which surprises were more likely to happen.

I connect with the pedagogy of transformability for this study, as it has within it, the belief of ‘transformation’ of abilities through learning which furthers the premise and concept of transformation through learning which this study seeks to explore.

## 2.8 Summary of deeper learning related literature

The above sections (sec 2.7.1 to 2.7.7) have highlighted various literature that develop the idea of deep learning and creative pedagogy and has further helped to situate the concept of 'transformation through learning' for this study in relation to newer learning approaches and practices. As noted previously, the goals of deeper learning are aimed at students gaining the competencies and dispositions that will prepare them to be creative, connected, and collaborative life-long problem solvers (Fullan and Langworthy 2013; Barber, Rizvi and Donnelly 2012). This goal highlights that a deeper learning experience involves implicitly, developing certain mindsets, attitudes, dispositions and character through the learning experience. I note that the ideas within the discussed literature (sections 2.7.1 to 2.7.7), highlight the importance of mindsets, the notion of learning to learn, culture and character within learning experiences.

Deeper learning at the first instance involves developing a certain set of attitudes that can be related to overlapping areas of learning – Thinking, Understanding and Culture. Briefly elaborating, in section 2.7.1, I have discussed habits of mind and thinking dispositions in general highlighting and categorising them as being heart of 'good thinking' (Tishman, Perkins and Jay, 1994), problem solving and life related skills (Costa, A. L. and Kallick, B., 2009). Whereas, in section 2.7.2 the work of Ritchhart, Church and Morrison (2011) among others such as Blythe (1998), Tishman et.al (1995) and Perkins (1992) focus on dispositions specifically geared towards providing strategies that will allow students to understand their understanding, thinking and thus their learning process. This moves from listing the dispositions to providing practical strategies and models that can be implemented within classrooms allowing the students to engage, reflect and act on their thinking process and thus promoting deeper learning.

The work of Claxton et al. (2002, 2011) discussed in section 2.7.3 combines both attitudes and habits of mind for learners as well as a route map for teachers in the two proposed frameworks that are a set of interwoven capacities that in the first instance are ingredients of learning power and in the second are school culture that cultivates learning power. The framework of a supple mind lists characteristics such as resilience, resourcefulness, reflectiveness and reciprocity that overlap with deeper learning dispositions listed by Costa and Kallick (2015) such as persisting, thinking flexibly, listen with understanding and empathy, thinking and communicating with clarity and precision, gathering data through all senses, creating, imagining and innovating to name a

few. On the other hand, in sections 2.7.5, 2.7.6 and 2.7.7, I have discussed literature that focusses on the role of school culture in developing certain attitudes, mindsets and dispositions. Further, the BLP framework 2 (teacher's palette) (Claxton, G. et.al., 2011, p. 44) within section 2.7.3 provides the ingredients of a school culture that cultivates learning power again providing insight into developing an overall school culture that helps deeper learning. Ritchhart (2015) argues that dispositions must be encultured or learned through immersion in a culture. Following this argument involves acknowledging the importance of developing a school culture that supports, motivates and empowers students to develop attitudes, habits of mind and dispositions allowing deeper learning. To this end, Ritchhart (2015) identifies eight cultural forces that represents tools/levers for transforming school and classroom culture, again providing strategies that are practical for implementation, by school administrators and teachers to transform their school culture. At the same time, it is important to acknowledge the danger of relying on determinist beliefs about ability and its influence on teaching and learning. The 'Learning Without Limits', research project (Hart, S. et.al. 2004; Swann, M. et.al. 2012) aimed to develop approaches to teaching and learning that rejected the idea of fixed-ability in order to identify distinctive features to the development of 'pedagogy of transformability'. This research project provided an approach to the understanding of 'transformation through learning' for this study that was fundamental in its belief of transforming learning capacity thus providing a foundation of a possible model school culture.

Seider (2012) on the other hand focuses his research on understanding school culture that develops good character. He identifies three different types of character – performance character, moral character and civic character and argues that it would be a mistake to consider performance character as the sole 'character foundation' upon which students' success can be built but instead points out efforts in development of all the three. Providing a portrait of a school of each of these three different types of character, Seider (2012) made me think about the attitudes related to the development of moral and civic character which is often forgotten in the quest to develop learning related transferable skills for the 21<sup>st</sup> century. Thus, the literature discussed within section 2.7 provides insight into dispositions and competencies from various entry points providing a basic palette for deeper learning. I note that though the highlighted literature can perhaps connect with the area of creativity including creative teaching and creative learning, my focus and development of understanding of 'transformation through learning' for this study led me to situate this study more closely to the concept of deeper learning.

## 2.9 Arts-integration within schools

The literature reviewed in this section aims to provide a background of current state of arts within education in USA, especially since the research site is a music-infused school. Further, there is special focus on music by the research site (as a music-infused school), but other art forms such as visual arts and drama are also part of the learning experiences at the site. I discuss this further, in the next chapter when I introduce the site. Hence, note that I use the term 'Arts' in this study to include all types of art forms such as visual arts, music, dance and drama. I begin here, by providing a brief overview of the current state of arts within schools and related research reports about its role and benefits. In the subsequent sections, I discuss the various ways arts are integrated within schools, and proceed to situate arts within this study.

### **Current state of arts education in USA**

Since the research site for this study is in the United States, I mainly focus on the state of Art education in USA. At the same time, I find that many challenges and tensions that are highlighted here have significance to many other countries across the world. Currently, there is widespread recognition across countries worldwide that the creative arts industries play an important role within the economy and that 'creativity' is a vital component that needs to be fostered through education. Art education in the USA has been in a constant state of flux, often impacted by economic and political policy interests. The current policy puts demands on standardised testing, with test scores in turn determining funding. Several researchers in the US blame the 2001 law, No Child Left Behind (NCLB) (Donahue & Stuart, 2008; Hetland, Winner, Veenema, & Sheridan, 2013; Sabol, 2010; Schönau, 2012). But, it was this same law (NCLB) which for the first time in the history of American education recognized the importance and stated that arts education should be included as a "core academic subject" in all American Schools (U.S. Department of Education, 2002). However as mentioned previously, in reality and in practice this does not appear to have happened.

Still, there have been efforts across the past few decades to incorporate arts within the curriculum leading to large scale projects. Discipline Based Art Education (DBAE) in the 1980s (Dobbs, 1998) focused on developing a comprehensive art-integrated curriculum and programs that provide systematic, sequential teaching which includes the four disciplines: arts production, art history and culture, criticism and aesthetics (Clark, G. A. et.al., 1987). Teaching Artistic Behaviour (TAB) in the 2000s, aims to provide choice-based art education which regards

students as artists and offers students real choice for responding to their own ideas and interests through art making ([www.teachingforartisticbehaviour.org](http://www.teachingforartisticbehaviour.org)). A more recent 'Turnaround Arts' initiative aimed at lowest performing schools with the premise that "used strategically, arts education offerings can provide school leadership with powerful levers to support the turnaround process through improving school climate and culture, deepening instruction and in creating student and parent engagement as a pathway to improved academic achievement" (Turnaround Arts Phase 1 Report, 2015). Now Every Child Succeeds Act (ESSA) has replaced NCLB and is very clear that students should have a "well-rounded education" that includes a broad curriculum and includes the arts alongside math and language arts in its definition of a "well-rounded education". It additionally ensures that arts education programs and teachers are eligible to receive federal funds. Additionally, the new law offers funding specifically for integrating arts into STEM (science, technology, engineering, and math). These steps within this new law have been welcomed by art education advocates but since the law gives flexibility to the states for allocating federal funds, art advocates will now need to turn to states to ensure that federal funds make their way to eligible arts programs. Thus, the challenges relating to the economic imperative, educational policy and politics, pressures due to standardised testing and funding currently continue to impact art education in the United States.

### **2.9.1 Discussing the Role of Arts within Schools**

Having provided an overview of the current state of Art Education in the United States, I now discuss relevant literature (mainly from USA) highlighting the role and benefits of Arts that has influenced policy and current advocacy efforts. This is followed by reviewing various ways arts-integration has been implemented within schools.

Due to the increasingly weakened position of the arts in Schools, arts advocates find the need to justify the value of arts education and this has led to the focus on establishing links between learning in the arts and other disciplines (Sabol, 2010). The argument made is that arts are important because they improve students' performance in traditional academic subjects that 'really count' such as reading and mathematics rather than its inherent value (Heatland et. al., 2013). Many studies have suggested positive relationship between students' learning and participation in the visual arts and performances on high stakes tests (Buchbinder, 2003; Burton, 2001; Catterall, 1998; Deasy, 2002; Diket, 2001; Diket, Sabol, & Burton, 2001; Dorn, 1999; Eisner, 1998; Fiske, 1999; Jensen, 2001; Sabol, 2001). A recent compilation of studies

about the benefits of arts education highlighted in the report *Reinvesting in Arts Education* by the President's Committee on the Arts and the Humanities (2011) is included in **Appendix – 3**.

Essentially the outcomes or benefits derived from high quality arts education is often categorised in one or more of the following categories (PCAH, 2011):

- a) Student achievement, typically as represented by reading and mathematics performance on high stakes tests, including transfer of skills learning from the arts to learning in other academic areas—for example, the spatial-temporal reasoning skills developed by music instruction;
- b) Student motivation and engagement, including improved attendance, persistence, focused attention, heightened educational aspirations, and intellectual risk taking;
- c) Development of habits of mind including problem solving, critical and creative thinking, dealing with ambiguity and complexity, integration of multiple skill sets, and working with others; and
- d) Development of social competencies, including collaboration and team work skills, social tolerance, and self-confidence.

Researchers have argued that arts when taught well “*provide young people with authentic learning experiences that engage their minds, hearts, and bodies*” (Fiske, 1999). The learning experiences are real and meaningful and nurtures the development of cognitive, social and personal competencies. The Champions of Change report resulting from seven teams of researchers who examined a variety of arts education programs found a remarkable consensus among their findings included in **Appendix – 3** highlighting that; arts reach students who are not otherwise being reached, in ways that allows them to connect with themselves, with real world work, challenge students and provide learning opportunities for the adults in the lives of young people.

Moving away from the argument that arts education help students perform better in tests (also known as instrumental arguments), Winner and Hetland (2008) argue that though students involved in arts do better in school and on their SATs (college admission examinations) than those not involved, however, correlation isn't causation. They argue that justifying the arts only on instrumental grounds will in the end fail; and at the same time, they do not state that arts does not transfer to academic settings, hence, the importance of acknowledging the aesthetic value of arts education. Arguing that the arts are central to the idea of education being about

inculcating a love of learning, of acquiring knowledge, many art educators and researchers (Dorn, 1999; Eisner, 2002; Efland, 2002; Jensen, 2001) have suggested that higher order thinking, creative thinking, problem solving skills and other habits of mind utilised in other disciplines are introduced, used, developed and refined in the study of the visual arts and in the creation of works of art. Harland et.al. (2005, p. 25) posited eleven broad outcomes from arts education interfaces – Affective outcomes; Artform knowledge, appreciation and skills; Social and cultural knowledge; Knowledge, skills and appreciation beyond the arts; Thinking skills; Developments in creativity; Communication and expressive skills; Personal development; Social development; Changes in attitudes towards and involvement in the art form; and Transfer beyond the art form.

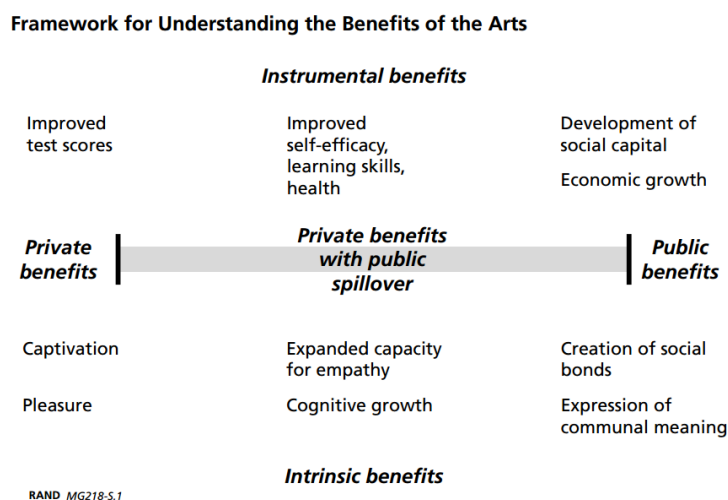
Arguing '*Arts for our sake*', Winner and Hetland (2013) note that the most glaring oversight in the studies conducted thus far on arts transfer is that researchers have failed to document the kinds of thinking that are developed through the study of the arts. Focusing on this gap, their research found that while learning art specific techniques students are also “taught a remarkable array of mental habits not emphasized elsewhere in school” (p.9). Hetland, et.al. (2007, 2013) have identified eight Studio Habits of Mind (similar to dispositions discussed previously in section 2.7.1) that are developed by learning the arts. I notice connections between these skills and attitudes and other habits of mind which are considered 21<sup>st</sup> century skills or skills necessary for deep learning (previously discussed in sec 2.6). These are -

- a) *Develop Craft*: Learning to use and care for tools (e.g., viewfinders, brushes), materials (e.g., charcoal, paint). Learning artistic conventions (e.g., perspective, colour mixing).
- b) *Engage and Persist*: Learning to embrace problems of relevance within the art world and/or of personal importance, to develop focus and other mental states conducive to working and persevering at art tasks.
- c) *Envision*: Learning to picture mentally what cannot be directly observed and imagine possible next steps in making a piece.
- d) *Express*: Learning to create works that convey an idea, a feeling, or a personal meaning.
- e) *Observe*: Learning to attend to visual contexts more closely than ordinary "looking" requires, and thereby to see things that otherwise might not be seen.
- f) *Reflect: Question & Explain* - Learning to think and talk with others about an aspect of one's work or working process. *Evaluate* - Learning to judge one's own work and working process and the work of others in relation to standards of the: field.

- g) *Stretch and Explore*: Learning to reach beyond one's capacities, to explore playfully without a preconceived plan, and to embrace the opportunity to learn from mistakes and accidents.
- h) *Understand Art World*: This includes, for example, learning about art history and current practice (Domain) and learning to interact as an artist with other artists (i.e., in classrooms, in local arts organisations, and across the art field) and within the broader society (Communities).

These dispositions also bear some similarities to those that Eisner (2002) has argued that arts teach (e.g. learning to attend to relationships, flexibility, and the ability to shift direction, expression, and imagination). In another instance, Davis (2008) asserts that arts are unique among school subjects because works of art feature the following: a tangible product, a focus on emotion, ambiguity, a process orientation, and a sense of connection and are linked to ten specific and invaluable results of arts learning – Imagination; Agency; Expression; Empathy; Interpretation; Respect; Inquiry; Reflection; Engagement; and Responsibility.

A research report by McCarthy et.al (2004), proposes a framework which acknowledges and distinguishes among the benefits of the arts along two different dimensions — type of benefit (instrumental, intrinsic) and the way in which the benefits produce private and public value placed along a continuum (picturised below).



**Figure 2.4:** Framework for Understanding the Benefits of the Arts (Adapted from McCarthy et.al 2004, p.4)



This report thus, recognises not only the instrumental value but also the intrinsic value of the arts, but I find the benefits of arts to go beyond the private and spill over benefits depicted in the figure above. I find that arts are an intrinsic part of culture and the ways humans operate in the world; even children are automatically aesthetically aware and engage in the arts early in their life. Thus, I find that the value of aesthetic benefits of arts are not necessarily only private in nature and connect across the continuum allowing children to develop the capacity to participate in social and cultural transformation. I find that the importance and benefits of arts education ranges from its aesthetic contribution; intrinsic benefits; social and emotional influence; development of multiple skills and habits; and perhaps student achievement/performance. Hence, I argue that benefits of arts education should not be merely advocated by highlighting its instrumental benefit aimed at showing impact on student achievement. Overall I agree and highlight the importance of habits of mind (listed by Winner and Hetland, 2013). This can also be applied across the art disciplines and subjects (such as science and literature) and influences a student at various levels (social, emotional and mental). Thus, the role and benefits of arts education goes beyond the instrumental argument of increasing test scores or learning skills for other subjects to more intrinsic cognitive and attitudinal benefits.

### **Art-integration Implementations within Schools**

Drawing mainly on the instrumental benefits, arts have been integrated within schools in multiple ways. Here, I provide an overview of various distinctive implementations of arts to provide a background for this study which involves a music infused school as the research site. Due to the focus of this study on regular comprehensive schools (discussed again in Ch 3, sec 3.2), note that, I have not included any out of school or after-school programs that incorporate arts, and restricted to classifying arts within classroom/school curriculum.

The term 'arts-integration' has evolved over the past decades and is often used interchangeably with others such as 'arts-infused', 'cross-disciplinary' and 'arts-based' learning. There is no consensus on the theory or practice of integration, much less a universally held definition of the term (Parsons, 2004). Terms such as arts-infused curriculum (Ingram & Reidell, 2003), learning in and through the arts (Bamford, 2006; Bloomfield & Childs, 2000), learning with the arts (Goldberg, 2006) and arts as a vehicle for learning all represent slightly different iterations familiar to readers of arts integration project and program reports. But practitioners sometimes speak of interdisciplinary studies, a multidisciplinary curriculum, and integrated learning in relatively interchangeable terms. Deasy (2003) referred to arts integration as "the effort to build

a set of relationships between learning in the arts and learning in the other skills and subjects of the curriculum” (p. 2). Similarly, Ruppert & Habel (2011) refer to arts integration as instruction that integrates content and skills from the arts with content and skills from other core subjects, toward increasing learning in both areas. Whereas, the Kennedy Center defines arts-integration as “an approach to teaching in which students construct and demonstrate understanding through an art form. Students engage in a creative process which connects an art form and another subject area and meets evolving objectives in both” (<http://www.kennedy-center.org/education/ceta>).

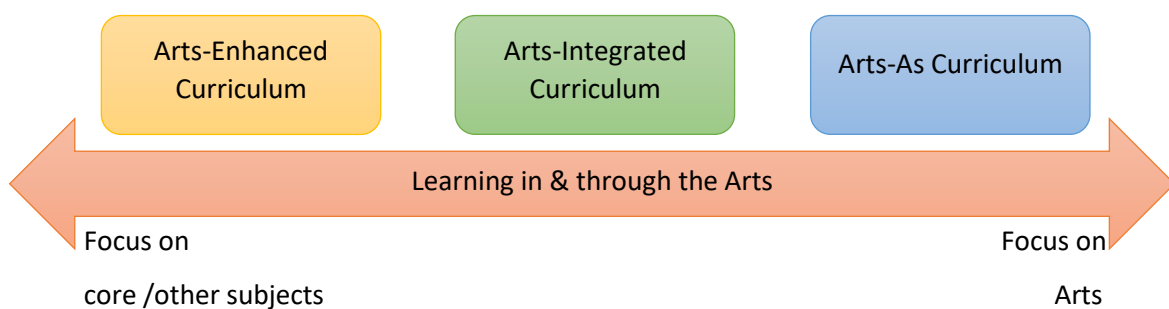
The various categorisations of arts-integration distinguish practices based on the level and type of arts integration within the curriculum. This ranges from situating arts integration as cross-curricular learning (Barnes, 2011); distinguishing learning ‘through’ and ‘with’ the arts and arts as collaborative engagement (Burnaford, et.al., 2007); and arts ‘as curriculum’ or ‘as enhancement’ or ‘as integration’ (Kennedy Centre - <https://artsedge.kennedy-center.org>). Thus, the argument made identifies the role of arts to range from; incorporating arts within the curriculum to enhance another subject or concepts to varying degree (e.g. Students singing songs to remember sequence of letters or creating a dramatization, providing an authentic context for students to learn more about the social studies content and as they delve deeper into the content, their growing understandings impact their dramatisations); learning other subject concepts/topics through arts (e.g. learning fractions through musical notes); or learning and developing techniques and skills that are unique or readily practiced through an art form (e.g. In the visual arts, students learn the content, process, and techniques for two – or three dimensional work). Thus, the various classifications of arts-integration can be said to be based on the role, importance, and level of integration of arts disciplines (e.g. music, dance, drama and visual arts) within the classroom curriculum.

### **2.9.2 Situating arts for this study**

As mentioned previously, the aim of this study is to explore *transformation through learning* within everyday learning experiences of regular students in a comprehensive school setting. The additional dimension, that I have incorporated within this study due to my interest in the arts (especially music), is the selection of a research site (school) with arts education i.e. a music-infused school (Introduced in the next chapter 3). Thus, in the above sections, I have reviewed literature on arts education and arts-integration within schools to provide an overview of the

current state of arts education in the United States as well as the various ways arts have been incorporated/integrated within schools. It is important to note that the main focus of this study is not on arts or music education or how the arts are transformative or how specifically arts education transforms students. Rather, the focus is on exploring the transformative nature of learning itself through the characteristics of the learning experiences investigated through the lived experiences of the participants. But by selecting a music-infused school as the research site, I aim to include all lived experiences of the participants at the school which includes music learning and music-integrated learning experiences. As mentioned previously, the focus remains on *transformation through learning*, which includes all the learning experiences at the site. At the same time, I have included a sub research question that investigated the role of arts within the process of *transformation through learning* (the focus of this study). Note that specific arts programme incorporated at the research site has been separately discussed in the next chapter (Ch 3).

I situate the term ‘music-infused’ for this study more broadly through the classification of ‘arts-integration’ by Kennedy Centre (within sec 2.8.1) - arts-enhanced curriculum; arts-integrated curriculum and arts-as-curriculum. Though these three categories provide distinctive objectives that shape the approaches adopted within the classroom, I consider these three to be in a continuum (fig 2.5 below). This helps understand and position various other terms, objectives and implementations of arts within the curriculum. This continuum ranges from one end where the arts is taught for its own sake with specific allotted time. At the other end of this continuum is where arts is considered a medium or a ‘hook’ with minimal to no focus on developing and learning the art in itself. Thus, within this continuum various implementations of the arts within the curriculum can be incorporated.



**Figure 2.5:** The Arts Integration Continuum

Music-infused in this study, includes music across the range of the arts-integration continuum depicted above, i.e. separate dedicated music class/sessions as well as music integrated within classrooms at varying levels. I clarify the exact implementation at the research site based on its practices in the next chapter. Thus, for this study my interest in the arts has shaped my decision to investigate the research questions in a music-infused school, but I do not aim to focus only on transformation through music learning, rather on, transformation through everyday learning experiences of the participants at the research site.

## **2.10 Chapter Summary**

This chapter has presented a summary and critique of relevant literature that has shaped my understanding, conceptualisation and focus of this study. I began by reviewing literature on transformative learning and subsequently situate 'transformation' through core ideas within the transformative learning literature. Then I review literature on transformative teaching which focuses on the intersection of learning and contemporary classroom practices which foregrounds transformation through learning for this study. Following this, I have clarified the conceptualisation of 'transformation through learning' that I adopt for this study (Section 2.4). Next, I utilise my brief review of the literature on creative learning as a bridge to focus on the area of deeper learning along-with inter-related research focusing on thinking, understanding and culture, which in turn I situate closely within the conceptualisation of 'transformation through learning' adopted for this study. Finally, I review literature highlighting the current state of arts education in USA and role of arts education and arts-integration within schools to situate the role and position on 'arts' for this study. Chapter Three introduces the research site and reviews literature relating to the selected sites' approach and practices.

# CHAPTER THREE

## 3. RESEARCH SITE

### 3.1 Introduction

In this chapter, I introduce the research site. First, I begin by clarifying the research site selection criteria for this research. This is followed by the introduction to the selected research site North East Lab Charter School (anonymised) in the North East of USA, referred to as NELCS for the duration of this thesis. Finally, I review the literature related to the school, such as, practices or programmes it follows. Background knowledge of the research site and related literature helps situate the methodology discussed in the subsequent chapter.

### 3.2 Selection of the Research site

The aim of this study is to explore transformation in an everyday setting in a comprehensive arts-integrated school. To fulfil this aim, I have chosen to seek answers to the research questions through the investigation of a specific school by adopting a case study research design, wherein the 'everyday learning experiences' (the interactions and practices) at the research site/ school is the 'case'. I have elaborated this in the next chapter on methodology (sec 4.4). Further, I have identified a gap within the transformative learning literature, which has largely focused on participants who are disadvantaged in some way and a lack of research on regular students (not disadvantaged) within elementary school settings (sec 2.2.2). Thus, the selection of the research site was guided by the aim to fulfil the gap within the literature, through a site in the country of my residence (USA) that fit the following criteria –

**i) *A Public/similar school that is representative of common urban student population.***

Since there are various types of schools in USA that are not termed public schools but are similar to them, I chose to also include Charter Schools, Magnet Schools or Alternative/ Experimental Schools in my search. I specifically avoided private schools which involved payment of fees since they cater to only a specific demography and are not representative of common urban student population. This criterion helped identify a 'regular elementary school' representative of a 'regular urban student population', not catering only to specific

students who are disadvantaged in some way or are only from a specific demography within an urban population.

ii) ***The School curriculum should incorporate the arts and/or music in their learning practices.*** This criterion allowed me to identify and narrow elementary schools that integrated arts within their school curriculum.

iii) ***The School should believe in and incorporate creative learning practices.***

The aim of this study is to explore *transformation through learning*, where ‘transformation’ is conceptualised through literature of transformative teaching and deeper learning which can be categorised as creative learning practices. Thus, this criterion helps identify schools which allows such practices.

After exploring and searching for suitable sites that fit the criteria in the USA along with accessibility, NELCS, in North East of the United States was selected. I introduce the site in the following section.

### **3.3 Introducing the school**

NELCS is a public charter school. Founded in 1999, it offers a project-based, music infused, interdisciplinary academic curriculum and incorporates internationally renowned orchestral music program – El Sistema, within the school day. Below, I briefly introduce various aspects/terms associated with NELCS mentioned above.

**Charter Schools** are independent public schools that operate under five year charters granted by the Commonwealth of Massachusetts under their Education Reform Act of 1993. (<http://www.doe.mass.edu/charter/>). They receive public funding but also obtain private funding and donations. Though they are subject to some of the same rules, regulations and statutes that apply to a traditional public school in the state, in comparison, they receive less public funding and have more flexibility (e.g. freedom to organise around a core mission, curriculum, theme, or teaching method, control its own budget and staff hiring). A charter school sets forth its Charter and is expected to produce certain results as stated therein. They are evaluated every 5 years for renewal of their charter based on - Academic program success, Organisational viability and Faithfulness to the terms of their charter.

NELCS sets itself apart as a **music-infused school**. Their mission is to help all students achieve academic, creative, and social success by providing a music-infused curriculum. Thus, music education goes hand-in-hand with academics at this school. For this, they incorporate a comprehensive Learning Through Music model featuring a three-pronged approach—Listen, Perform, Connect—to ensure that all students become active and informed listeners of music, as well as skilled musicians who regularly participate in orchestral performances, and complex thinkers who make connections between music and academic learning (NELCS annual report 2012).

The school has evolved its curriculum and practices since its inception. They have changed and modified the way they integrate music and music education apart from curriculum practices. In 2009-10 they made two major changes as they extended the school day – they implemented the Expeditionary Learning framework for their academic curriculum and incorporated the orchestral music program El Sistema within their school day.

**Expeditionary Learning** (EL) model aims to transform teaching, learning, and the culture of schools. EL is built on ten design principles that reflect the educational values and beliefs of German educator Kurt Hahn (discussed in section 3.4.1 below). These are - Primacy of Self-Discovery; Having of Wonderful Ideas; Responsibility for Learning; Empathy and Caring; Success and Failure; Collaboration and Competition; Diversity and Inclusion; Natural World; Solitude and Reflection; Service and Compassion (EL Core Practices, 2011). Overall, they are exemplified by project-based learning, where students engage in interdisciplinary, in-depth study of compelling topics, in groups and in their community including experts, with assessment coming through cumulative products, public presentations, and portfolios. Thus, learning takes place in a cross-curricular way.

**El Sistema** was founded in 1975 by José Antonio Abreu in Venezuela and aims to effect social change and nurture promising futures for underserved communities through intensive, ensemble-focused music education. Considering deprivation as a cultural-economic problem, El Sistema through its various Orchestras and Choirs uses music education as a vehicle for social action (Creech, A. et.al, 2013) (discussed in section 3.4.2 below). Since then El Sistema inspired programs have grown across the world translating its principles and practices across various contexts. Though the El Sistema has mainly been organised as an after-school program

or aimed at specific communities; in the United States, NELCS is a pioneer to incorporate the El Sistema programme within the school day providing students with 2.5 hours of daily music instruction. This includes - instrument technique, music literacy, choral and orchestral ensemble training. Students perform together as an orchestra, both inside and outside the school. They also often collaborate with other orchestras and musicians.

Thus, combining both the above models, NELCS has developed and **implemented learning through music (LTM) curriculum units** using the Expeditionary Learning framework along with rigorous music education through their El Sistema program. Thus, terming themselves as a music-infused school – wherein music and arts are infused within their expeditions, along with providing music education through the El Sistema program. The model emphasises high levels of student engagement, achievement, and character development - an opportunity to become educated music listeners, and music performers.

**School capacity:** NELCS was initially an elementary school serving from Kindergarten till Grade 5 (ages 5 to 11) i.e. a K-5 school with about 176 students. Over the past year, they have been approved by the State to increase their capacity and expand to include a middle school and thus, serving till Grade 8 (up to age 14) i.e. a K8 School and nearly triple their size to 444 students in a phased manner. Thus, during this research study, NELCS had 176 students during the academic year 2012-2013, when the pilot phase was conducted and subsequently, this number increased to 311 during the academic year 2013-2014 as the research study progressed.

**Admissions:** The school has no auditions, entrance tests for admissions and has no tuition fees of any kind. Students enter NELCS by lottery and are representative of the children at any public school in the North East of USA, with majority of the students from various parts of the city rather than only the neighbourhood of the school. But in spite its size, the student demographic indicators of NELCS seem to be representative of public schools in the same area.

**Demography:** At a glance, 82% of the students identified as non-Caucasian and almost 64% of the students qualified for free or reduced-price lunch. The majority about 66% of students at NELCS are of Hispanic and African American origin and about 64% are from low income families (NELCS annual report 2012, 2013, 2014). In comparison, the city Public Schools have



about 75% Hispanic and African American students and about 76% from low income families (North East City Public School report card 2012-13).

***School Schedule:*** The school follows an extended-day format from 8:30am till 5pm as they incorporate El Sistema. Classroom lessons normally begin from 9 am and the students get a 40-minute recess time apart from lunch and snack time every day.

NELCS was selected as the research site for this study after my first visit in March 2013 for three days. This was following my email and telephone conversation with the head of the school regarding my research study and search for an appropriate site/ school for the same. I was invited to visit the school, observe classes, El Sistema and other activities, participate in their instructional rounds – which was organised by NELCS for demonstrating and sharing teaching methods practiced at their school to other teachers across the city. By the end of this visit, I was able to identify this school to be appropriate for my research study. Not only did this school fulfil my overall selection criteria, my brief interaction with the staff and classroom observations showed potential for conducting this research study. Thus, NELCS provided a unique combination of practices with focus on the arts, especially music making it an ideal site for the present study.

### **3.4 Review of literature relating to NELCS**

The choice of the research site led to the need to address and review literature related to the curriculum or programmes that the site adopted. In the following sections, I discuss literature related the two main programmes adopted by NELCS, Expeditionary Learning and El Sistema. These two programmes define the context and culture of the learning experiences within this school. At the same time, it is important to note that this review of literature is not directed towards elaborating views on the appropriateness of these programmes at NELCS or challenging its limitations. Thus, this review aims to provide a picture of the principles and practices within each of these programmes that shape the learning experiences of participants at the research site.

I begin the first section about expeditionary learning by briefly defining its purpose and rooting the programme's philosophies in the work of Kurt Hahn. I follow this by elaborating on the educational principles that lay the foundation for the schools and programmes initiated by Kurt

Hahn (1930). Subsequently, I clarify how the educational philosophies from the Outward-Bound movement translated to the design principles of Expeditionary Learning. Finally, I highlight the current research about Expeditionary Learning programmes. I begin the next section about El Sistema by briefly introducing its origins in Venezuela followed by highlighting key features and principles of an El Sistema programme. I follow this by addressing its philosophical positioning and its various applications across the world. Finally, I review some main criticisms about El Sistema.

### **3.4.1 Expeditionary Learning**

Expeditionary learning, here after referred to as EL in this thesis, grew out of a proposal for change in the educational system. EL is a national education transformation organisation that partners with new and existing schools to provide a framework for school improvement and a comprehensive school design for Grades K-12. Essentially, EL is a project-based learning design that developed from Outward Bound, an adventure and service-based education programme and has its roots in the life and work of the German educator, Kurt Hahn.

#### *3.4.1.1 Roots within the philosophy of Kurt Hahn and the Outward Bound*

Though Kurt Hahn began his career as a politician, his contribution to the field of education, especially in the area of adventure education and experiential education is noted (Kraft and Sakofs, 1991). His approach to education was based on the ideas of Plato and placed emphasis on the use of experience in the development of the whole person, and the person's ability to serve the community. He founded two renowned schools, Salem in Germany in 1920 and Gordonstoun in Scotland in 1934. Both these schools were an attempt to create a healthy environment in which young people could learn habits that would protect them against what he saw as the deteriorating values of modern life. Kurt Hahn identified the following as the main deteriorating values; these were: fitness, skill and care, self- discipline, initiative and enterprise, memory and imagination, and compassion. (James, 1990/2000).

At the heart of Hahn's approach was activity, experience, and adventure. Hahn summarized what he thought was important educational principles also known as 'The Seven Laws of Salem' (Hahn, K. 1930; Flavin, M. 1996, p.15-17)

- i) Give the children the opportunity for self-discovery

- ii) Make the children meet with triumph and defeat
- iii) Give the children the opportunity of self-effacement in the common cause
- iv) Provide periods of silence
- v) Train the imagination
- vi) Make games (i.e. competition) important but not predominant
- vii) Free the sons of the wealthy and powerful from the enervating sense of privilege

Hahn acknowledges that his views about education were 'borrowed' from various educational theories, ideas and philosophers but his success is credited in the selection of unique combination of the principles that he decided to 'borrow'. Hahn believed that education should cultivate a passion for life and that this can be accomplished only through experience, a shared sense of moment in the journey toward an exciting goal. (Cousins, E et.al, 1998) I find that the acknowledgement of development of the whole person and realising one's potential through education to be the focus of Hahn's work. This links closely to the literature on self-actualization (Maslow, 1970) and the characteristics of a 'fully functioning man' listed by Carl Rogers (1961) discussed previously. Thus, it further shaped the groundwork for this research study that focuses on transformation through learning.

The Outward Bound School founded in 1941 grew out of the work and development of the practices at Hahn's previous two schools focusing on short term programmes that aimed to foster personal growth and social skills of participants by using challenging expeditions in the outdoors. Since then Outward Bound has evolved into an international, non-profit, independent and outdoor-education organisation with approximately 40 schools. Their mission still echoes Hahn's principles - "To help people discover and develop their potential to care for themselves, others and the world around them through challenging experiences in unfamiliar settings." (Outward Bound report, 2013). Hahn also believed that the secret of education was to teach young people the inner strength that comes from serving others. Thus, the focus on service and compassion within the outward bound adventures is evident.

Greg Farrell, the former President and CEO of Expeditionary Learning Outward Bound pointed out examples of practices used by Outward Bound instructors that EL teachers have adapted well to the classroom (Cousins, E. 2000). These are - Picking projects that seem impossible to students and then accomplishing them; Joining very high standards with the expectation that everyone is going to succeed and help others succeed; Doing a minimum of instruction with a

maximum of application; Breaking down complex tasks into small steps; Working in small groups; Modelling what you are trying to teach; Changing the context and; Gradually stepping back and letting the students take charge. I see connections between these practices and those highlighted by related literature about deeper learning (discussed within sec 2.7) especially within creating cultures of thinking project (Ritchhart, 2015) such as, setting expectations, modelling attitudes, opportunities to explore and experience and interactions through learning in a group.

#### *3.4.1.2 Specific principles and practices of EL Schools*

EL has drawn its ideas and practices from a variety of sources but many of the central practices and beliefs described above, the commitment to service, the focus on bringing out the best in people, the importance of craftsmanship, adventure and active learning have their roots in the life and work of Kurt Hahn. It is based on these ideas that the following ten design principles of EL have been framed ((EL Core Practices, 2015).

- 1) *The primacy of self-discovery*: Learning happens best with emotion, challenge, and the requisite support. People discover their abilities, values, passions, and responsibilities in situations that offer adventure and the unexpected. In EL schools, students undertake tasks that require perseverance, fitness, craftsmanship, imagination, self-discipline, and significant achievement.
- 2) *The having of wonderful ideas*: Fostering curiosity about the world by creating learning situations that provide something important to think about, time to experiment, and time to make sense of what is observed.
- 3) *The responsibility for learning*: Everyone learns both individually and as part of a group. Every aspect of an EL school encourages both children and adults to become increasingly responsible for directing their own personal and collective learning.
- 4) *Empathy and caring*: Learning is fostered best in communities where students' and teachers' ideas are respected and where there is mutual trust. Older students mentor younger ones, and students feel physically and emotionally safe.
- 5) *Success and failure*: All students need to be successful if they are to build the confidence and capacity to take risks and meet increasingly difficult challenges. But it is also important for students to learn from their failures, to persevere when things are hard, and to learn to turn disabilities into opportunities.

- 6) *Collaboration and competition*: Students are encouraged to compete, not against each other, but with their own personal best and with rigorous standards of excellence
- 7) *Diversity and Inclusivity*: Both diversity and inclusion increase the richness of ideas, creative power, problem-solving ability, and respect for others. In EL schools, students investigate and value their different histories and talents as well as those of other communities and cultures.
- 8) *The natural world*: A direct and respectful relationship with the natural world refreshes the human spirit and teaches the important ideas of recurring cycles and cause and effect. Students learn to become stewards of the earth and of future generations.
- 9) *Solitude and reflection*: Students and teachers need time alone to explore their own thoughts, make their own connections, and create their own ideas. They also need to exchange their reflections with other students and with adults.
- 10) *Service and compassion*: Students and teachers are strengthened by acts of consequential service to others, and one of an EL school's primary functions is to prepare students with the attitudes and skills to learn from and be of service.

As noted previously, EL grew out of a proposal submitted to the New American Schools Development Corporation (NASDC), an initiative founded in 1991 by a group of business and foundation leaders interested in investing in innovative designs for school transformation (Springfield, Ross and Smith, 1996). Expeditionary Learning Outward Bound was one of the final nine proposals that were funded. It was born out of a collaboration between Outward Bound USA and the Harvard Graduate School of Education. The proposal to create EL was a marriage of the philosophies of Kurt Hahn, founder of Outward Bound, and the best of the Harvard Graduate School of Education's theoretical and practical approach to teaching and learning (EL Core Practices, 2011). EL started with 10 demonstration schools (nine of which are still active partners) and currently there are over 150 EL schools in more than 25 states in USA. The ten design principles mentioned previously laid the key foundation for fundamental changes in the school culture along with providing schools with a framework for their vision and direction. This is implemented through their focus on five core practices – Learning expeditions, Active pedagogy, School culture and character, Leadership and school improvement and School structures.

Students in an EL school spend most of their day on purposeful, rigorous “learning expeditions” which are “explorations within and beyond school walls” that have intellectual, service and

physical dimensions. Lasting between six to nine weeks, these expeditions are in-depth studies of a single theme or topic with opportunities for several projects and performances. It is noted that EL places equal emphasis on intellectual and character development (Campbell et al., 1996) and the design calls for a complete reorganisation of time, space and relationships across the school, various disciplines, technology and with the community. The practices of EL incorporate the principles of active learning, challenge, and teamwork. Further, Dewey's (1938) work which places experience as 'central' in the educational process has a strong connection with EL and Hahn's ideas. Many characteristics of 'experiential learning' practice such as outdoor learning, service learning, cooperative learning, and active learning along with reflection can be seen within EL learning expeditions. I have provided a glimpse of life at NELCS detailing the routine of the participants at NELCS along with the learning expeditions that I focused on during this research study in **Appendix – 4 & 5**.

EL's vision of instruction is based on the expanded notion of what constitutes high achievement for students. Thus, they aim to reclaim the original mission of American public schools – to provide free education that would prepare students to be scholars, skilled workers, and contributing citizens. EL defines student achievement as having three dimensions (Berger et.al. 2016):

- i) Mastery of Knowledge and Skills
- ii) Character
- iii) High-quality Student Work

I note that these ideas and practices of EL resound closely with the literature on transformative teaching especially the three overarching transformational teaching principles (Slavich and Zimbardo, 2012) discussed in the previous chapter (sec 2.3): Facilitation of students' acquisition and mastery of key course concepts; Promotion of positive learning –related attitudes, values and beliefs in students; and Enhancement of students' strategies and skills for learning and discovery, respectively. Thus, both from the teaching/instructional perspective (principles of transformational teaching), as well as from the student outcome/achievement side (student achievement dimensions) these core ideas closely match. Further, in relation to deeper learning, EL curriculum framework aims at challenging, engaging and empowering students with deeper instruction. They focus on making a bedrock of literacy through deeper instruction. Both these connections provide a valuable link between theory and practice across the subject areas discussed in the reviewed literature that laid the foundation for this research study.

The success of EL as a comprehensive school reform (CSR) model is generally acknowledged but a recent report on CSR (CSRQ, 2006a; 2006 b) did not rate any studies of Expeditionary Learning as “conclusive.” Looking deeper at this research I noted many studies about EL did not fit within the selection criteria for this research report. In general, other research studies examining the effects of EL along with multiple other comprehensive school reform models showed that EL had positive effects (Borman et al. 2003; Lewis, J. L., & Bartz, M., 1999; RAND 2000, New American Schools, 1997, 1999). Other smaller studies focusing on specific EL schools have generally shown positive effects in student achievement by mainly comparing EL school results in state exams to other similar schools within a school district (Ulichny, 2000; RMSEL, 2002; CRESPAR, 2002; Tapper, 2011). The mission of EL model as a CSR includes creating and sustaining a national network of good and improving elementary, middle, and high schools in places where good and improving schools are not the norm. (CSRQ 2006). Towards this goal, the report shows very strong evidence of the link between research and the model’s design and evidence of services and support to schools to enable successful implementation of EL.

Since the focus of this research is not on the administrative, technical and other related areas of whole school reform through EL or policy and EL curriculum, I limit my literature review presented thus far, to providing an overview of the philosophical roots of EL and some general research studies relating to the success and implementation of EL. Further, I was unable to find research literature focusing on use and implementation of arts and music within EL schools. Thus, I limit my following review to EL official documents in this area.

#### *3.4.1.3 EL and the Arts*

EL locates Art as an important vehicle for learning and for representing learning through ‘products’ and providing opportunity to create, perform and respond to a variety of art forms along with connecting arts to the learning content (EL benchmarks, 2003; EL Core Practices, 2015). Art is positioned as a school culture as well as a student character builder. Art process and skills are woven into projects or learning expeditions and art teachers pursue their own curriculum while supporting the artistic integrity of projects centred in other disciplines. The overall teaching and instructional practices are similar to the other disciplines (EL Core Practices, 2015). Focus is also on integrating the arts, for example, arts and/or history of the arts are sometimes the focus of inquiry for an expedition (e.g., arts during the Harlem

Renaissance) where each in-depth investigation examines a different artistic genre (e.g. jazz, painting and poetry) providing the foundation for larger expeditions, insight about the culture and time periods and as a product of student's experiences of the learning expedition. All this is aimed at creating a culture of art within the school and includes displaying artistic products, artistic thinking and reflections, critiquing and feedback of products alongside development of goals for artistic skills, artistic thinking and character development. According to Berger et.al (2016) an "arts-infused education balances and compliments deeper instruction in "high-stakes" subjects like language arts and mathematics, while providing a powerful framework – to cultivate skills of inquiry, creativity, problem solving, collaboration, perseverance, and craftsmanship" (p.232-233). Further, situating arts within their understanding of challenging, engaging and empowering deeper instruction, Berger (2016) notes –

- i) Artistic skills and ways of thinking provide students with complex *challenges*
- ii) Teaching in and through the arts holistically *engages* students and honours their diversity as learners
- iii) Creating art is *empowering* and joyful work

Thus, positioning arts at the heart of deeper instruction is encouraged by EL.

### **3.4.2 El Sistema**

Founded in Venezuela, there are over 370,000 children and young people are involved in the Venezuelan network of nearly 200 local núcleos (music centres where the El Sistema programmes are conducted) (Creech, A. et.al, 2013). This includes over 500 orchestras and choirs in 280 music schools throughout Venezuela (Walkin, 2012). El Sistema has thus grown and now refers to a tiered network of youth orchestras at local núcleos, affiliated schools of music and training programs, a conservatory in Caracas, and has a diverse funding structure that includes the Venezuelan government, private foundations, the Inter-American Development Bank (IADB), and many more.

#### *3.4.2.1 Vision of José Abreu*

José Antonio Abreu, an economist, musician and politician in Venezuela founded El Sistema in 1975, with the core aim to effect social change through the provision of musical and intellectual opportunities for young people from poor and vulnerable communities who would not otherwise access such experiences. El Sistema is formally known as Fundación Musical Simón Bolívar



(FMSB) and commonly known through its previous name The National System of Youth and Children's Orchestras of Venezuela (FESNOJIV). Considering deprivation as a cultural-economic problem, El Sistema through its various state-funded Orchestras and Choirs uses music education as a vehicle for social action. (Creech, A. et.al, 2013). It is on this premise that El Sistema aims to provide the opportunity for the children from difficult backgrounds who are often faced with drugs, violence, and extreme criminal activities to actively choose a better life than the ones that have been presented to them in their neighbourhoods. (Palmer, 2013; Borchert, 2012). Part of FMSB's mission statement reads: "to help children and young people in achieving their full potential and acquiring values that favor their growth and have a positive impact on their lives in society" (FMSB, 2012).

#### *3.4.2.2 Summary of the features and fundamentals of El Sistema*

To better understand El Sistema and its practices, I have here reviewed and summarised literature which highlights the features and fundamentals of El Sistema (Govias, 2011; Tunstall, 2012; Creech, et.al 2013; Baker, 2014; Witkowski, 2016). All these following do have many similarities which clarify the pedagogical focus, fundamental values and principles of El Sistema.

Booth (in Witkowski, 2016, Ch2) lists a set of core values El Sistema holds which informs their ideals of practice.

- a) Every human being has the right to a life of dignity, contribution and rich personal access (to the experience of beauty).
- b) Every child can learn to experience and express music and art deeply, can receive its many benefits, and can make different critical life choices as a result of this learning.
- c) Overcoming the damages of poverty and adversity is best accomplished by first creating deep personal sense of inclusion and value, and thus strengthening the spirit, creating, as Dr. Abreu puts it: "an affluence of the spirit". This affluence is then invested as a valued asset in a community endeavour to create excellence and beauty in music. This process, over time, builds the personal strengths that allow for positive life choices.
- d) Effective education is based on love, approval, joy, and experience within a high-functioning, ambitiously aspiring, nurturing community. Every child has limitless possibilities and the ability to strive for excellence. "Trust the young" informs every aspect of the work.

- e) Learning organisations never arrive but are always becoming – striving to include: more students, deeper impact, greater musical excellence, better teaching, improved tools, more widespread community connectedness. Thus flexibility, experimentation, risk-taking, and collegial exchange are inherent aspects of every El Sistema-inspired program.

The above set of core values inform El Sistema practice and pedagogy but, I notice that the critiques of El Sistema don't challenge these values, instead, the debate and tensions are about the resulting practice and its faithfulness to these core values. I discuss these in a subsequent section.

Creech, et.al. (2013; 2016) in their literature review of El Sistema summarise the unified vision of El Sistema, starting with, the fundamental principle that social development may be achieved through music that is founded on inclusive ensemble-work and high aspirations. They also list the following set of road principles and values that characterise El Sistema - Ensemble and peer learning/teaching with a focus on the joy of making music together; Inclusiveness; Accessibility; Frequency, intensity, and consistency of contact; Aspirations for excellence; Performance embedded within the pedagogy; Family and community engagement; Responsiveness to local community needs; Holistic development; and Lifelong learning communities.

A similar but distilled version are the five fundamental principles Govias (2011, p,21) noted that El Sistema operates with – 1) *Social Change*, where the primary objective is social transformation through the pursuit of musical excellence. One happens through the other, and neither is prioritised at the expense of the other; 2) *Ensembles*, where the focus is the orchestra or choral experience; 3) *Frequency*, is ensured with the orchestra meeting multiple times every week over extended periods, allowing for increased intensity; 4) *Accessibility*, for all is aimed through ensuring the programme is free with no selective admissions; 5) *Connectivity*, is reflected through every music centre (núcleo) being linked at the urban, regional and national levels, forming a cohesive network of services and opportunities for students across the country.

NELCS positions its music programme as an El Sistema inspired programme. At the outset, the main features such as free music education, inclusion, music excellence, ensemble, intensity and performances have been incorporated. This is done with one main change, of the programme being within the school time for all students rather than an extra-curricular or after-school programme. I have provided a glimpse of life at NELCS detailing the routine of the participants at NELCS including the El Sistema time in **Appendix – 4.**

A comparatively detailed version by Booth (2013; in Witkowski, 2016, p 38-54) highlights ten fundamental guidelines from El Sistema, which he notes, is a scheme that somewhat artificially teases apart the elements that in practice function together.

- 1) *Music of Social Change (Tocar y Luchar; To Play and to Strive)*: This includes allowing every child to - experience being an asset within his or her community; feel an ownership of the music-making process, taking responsibility for both individual and group improvement.
- 2) *Access and Excellence*: Access here related to Including as many children as possible, for as long as possible, whatever their background or abilities. Excellence involves developing a sense of “true north” (p.40) (in musical excellence) with which they guide their own rapid improvement.
- 3) *The Nucleo Environment*: Nucleo is the physical location (music centres) within the neighbourhood where students live, that embodies the values and goals of El Sistema. It represents a haven of safety, fun, joy, friendship, within an ethos of positive aspiration, where all students are encouraged relentlessly to explore their potential within an atmosphere of cooptation (healthy mix of cooperative competition).
- 4) *Intensity and Performance Frequency*: Typically, students spend a large amount of time at a Venezuelan nucleo (over 4 hours a day, 6 days per week) with additional opportunities when there is collaboration with other artists and orchestras. Outside Venezuela many El Sistema inspired programs have been able to involve students only for up to 12- 15 hours per week. Intensity here is an expression of aspiration and intention more than a sense of discipline of any specific element of the curriculum aimed at nurturing powerful intrinsic motivation and group motivation through personal investment in the music. The frequency of performances also allows for musicians to challenge themselves to excel, reduce anxiety, and community connectedness of sharing accomplishments with peers, family and the larger community.
- 5) *The Use of Ensemble*: It includes group learning and practice, sectional learning, frequent performance, and consistent but strategic individualised attention within and beyond the group setting. Thus, the overall focus is on the group where orchestra acts as a model society in which an atmosphere of competition between individuals is replaced by shared aspiration and investment.
- 6) *The CATS Teacher Model: Citizen/Artist/Teacher/ Scholar*: The teachers take multiple roles in relationship to the students. They view teachers as learners, experimenters, or scholars providing them a visible embodiment of all these roles.

- 7) *The Multi-Year Continuum*: Allowing students a path to transition between choral work and ensemble and also learning other instruments (or change instruments along the way) mainly starting with strings before subsequently moving on to other instruments.
- 8) *Family and Community Inclusion*: Involvement of families and the community members is encouraged: embracing the goal of transformative experiences not only for the children of a nucleo but also for the families and communities. This inclusion ranges from, organising performances, participating in the sessions alongside young children and inclusion through participation in workshops such as “paper orchestra” where everyone is involved in making and decorating papier-mâché instruments.
- 9) *Connections and Network*: Connecting across different nucleos and organising performances, camps, collaborative festivals across the country.
- 10) *Ambition and Achievement*: Working for more than merely good for young people but instead aspiring to transform young lives - setting a healthier, fuller trajectory for stressed young lives. Distilling the crucial difference in impact between being positive and being transformative, Booth (2013) concludes that social development happens because of the ensemble music making practices described above. However, he notes that the catalyst that makes for a life transformative impact is not just the aspiration for excellence, but the degree of hunger driving the aspiration for excellence, being a part of an aligned community.

Recently, Tunstall and Booth (2017) have summarized principles for El Sistema teachers based on observations of teaching in El Sistema-inspired programs around the world. They note that, these principles amount to the creation of a distinctive learning environment – one that consistently fosters personal and social as well as musical development; both moving in tandem towards creating the right learning culture, which often takes initial priority over developing a musical pedagogy. These are, embrace radical inclusion; practice relentless positivity, be in the intrinsic motivation business, nurture peer support; radiate high energy and ambitiousness; never forget fun; connect families and the wider community; and embrace the law of 80% (what you teach is who you are). At the same time, they caution that the set of priorities they have listed as impossibly ideal and no teacher could fully embody them all, but continually aspire towards them (<http://playingfortheirlives.com/to-teachers-in-the-el-sistema-inspired-movement/>).

Following the El Sistema founder Abreu believed that the experience of orchestral performance nurtured a sense of cooperation, solidarity and collectivity among poor communities, helping them to overcome their deteriorated condition (Borchert, 2012, p.9). In the words of Abreu

himself, “*I do not just want to train better musicians—I want to form better people*” (in Majno 2012, p.62). Thus, it seeks to re-imagine music as a “catalyst for social transformation” (Hernandez-Estrada, 2012: p. 35).

Music education as an agent for social change or the transformative powers of music has been recognised even by early philosophers like Plato (republic) and Aristotle (politics) who exalt the ability of music to affect the person’s *ethos*, or character. In the same light, music was considered a form of moral indoctrination. In the words of German Baroque composer Johann Mattheson “for it is the true purpose of music to be, above all else, a moral lesson” (as quoted in Taruskin 1984, p.218). Japanese music educator Suzuki (1973) also recognized music education as “total human education” placing emphasis on creating a better person rather than a prodigious musician (p.2). Thus, the principle or philosophy on which El Sistema rests, reflects the above, that “music is the reflection of the soul of the peoples . . . it is a key element to educating and allowing people to integrate successfully into society” (FESJONIV 2009, quoted in Palmer, 2013). Benefits of El Sistema philosophy according to IADB, its major non-state funder is -

“the primary individual benefits attributed to the System (El Sistema) include improvements in academic achievement and in the psychological development of children and young people. Its social benefits include reducing the school dropout rate and the rate of youth violence . . . [I]t has transcended the artistic world to become a social development project that aspires to imbue citizens from a very early age with civic values and team work” (“Program to Support” 2007 in Baker, 2014, p.3).

Creech et.al (2013; 2016) in their El Sistema literature review, summarise and synthesise the key findings emerging from the research and evaluation studies that were included within their review. The key findings noted that El Sistema and El Sistema inspired programmes fostered some form of social, emotional and cognitive well-being and personal development amongst participants. They developed a strong and consistent sense of community engagement and Increased family involvement. The pedagogical practices were characterised by positive interpersonal teacher-student relationships, nurturing of children’s musical development, high expectations of musical excellence, high expectations of positive behaviour, safe learning environment and unified purpose and shared values. The programmes were generally inclusive and allowed for musical progression. Finally, there was opportunity for leadership, entrepreneurship, and networking through the El Sistema network. I must note here, that the

authors (Creech, et.al., 2013) have acknowledged some limitations to their above findings, mainly due to the following - Type of studies that were included within this review (For example, dissertations by sole researchers with limited resources); Lack of variety of large-scale, cross-cultural and multi-disciplinary studies by skilled research teams and language skills limitations of the literature review team. At the same time, these key findings do point towards various benefits of the El Sistema programs, even if not robust in nature but nevertheless need to be considered.

#### *3.4.2.3 Critiques of El Sistema*

The idea of El Sistema as a model social program for 'spreading harmony' beyond just Venezuela had long been nurtured by its founder. By late 2012, El Sistema inspired programmes were being held across fifty countries with more than seventy projects in North America alone (Baker, 2014). At the same time, there has been increasing critical debates about the program including its practices and implementation across the world. The critiques have more or less been about the implementation of the highlighted features and principles of El Sistema discussed previously (pg.89 above). Most recently, Baker (2014) has critiqued El Sistema in his book, through its functioning as an institution, its leaders, its approach to music education, mission of social education and impact/effectiveness of the programme. Overall the challenges and surrounding critique has been based on, 1) Lack of large scale empirical research and critical research; 2) The vision of El Sistema especially outside Venezuela resting on good PR and reliance on documents/ accounts by researchers with limited knowledge, both, of the language and the culture or ground realities in Venezuela; and 3) Impact of El Sistema inspired programmes upon the wider music education practice, curriculum and community.

Further, these critiques of El Sistema also extend to its overall principles that have been adopted by other El Sistema inspired programmes across the world. I discuss these through the following two overarching points – (1) Whether the Venezuelan model can be transplanted to other cultural contexts and; (2) Debate surrounding music education practices and standards of El Sistema within the wider music community.

##### *1) Whether the Venezuelan model can be transplanted to other cultural contexts.*

This point does not necessarily challenge the idea of 'social action through music' but more the applicability of the El Sistema model principles across the world. According to Abreu himself, 'a

translation to the specificities of each context' is required (Majno, 2012, p. 58). Flexibility and responsiveness to local contexts are key factors to success (Silberman, 2013). Some identified challenges relating to transferability include, funding, organisational structure, repertoire and local cultural traditions, teacher and leadership development, and resources.

Increasingly it has been recognised that any attempt to use music to effect social development or change must be in response to local community needs. This highlights the debate surrounding programme needs vs community needs. Silberman (2013) emphasised the role that Sistema-inspired programmes play in serving the social development goals of their local communities. Tension has been noted relating to the ethics around portraying the local community with a deficit model and complex issues relating to the distinction between community desires for itself and the programme's view of what might be best for the community (Allan et al. 2010).

Social inclusion or social action is positioned as one of the dual aims along with musical excellence. This is challenged by the characteristic 'high achievers' track within El Sistema. Striking a balance between 'quantity and quality' is raised by Majno (2012, p. 60) and Borchert (2012b) notes that there is little information forthcoming with regard to participants who, following different pathways, 'have in fact overcome poverty as result of being part of the programme' (p.56).

## *2) Debate surrounding music education practices and standards of El Sistema within the wider music community.*

Most of the debate relating to the practices of EL Sistema discussed here is due to its ensemble/orchestra format, but within the wider music community, there has been critique of the symphony orchestra (Kutschke, 2010; Sennett, 1976) which challenges the format itself, with which I begin this section. Studies of orchestras especially in the twentieth century reflects an authoritarian structure of the conductor and powerlessness of the musicians (Martin, 1995; Seifter, 2001; Channing, 2003; Cottrell, 2004). Lack of voice or opinions of musicians within an orchestra, self-expression, prioritisation of reproduction over creativity of the individual musician can be considered common not necessarily only to El Sistema orchestras but are common features of an organised orchestra. These basic power structures and format within an orchestra can directly oppose EL Sistema's claims of orchestra as "a model and school of social life" and harmonious society".

***Disciple vs Progressive structure:*** Related to the orchestral format is the stress on discipline which is often regarded as a key attribute of a good ensemble. But, identifying musician's lack of voice within an orchestra Davis (2011) explores ways to give children a "musical say". This includes "opportunities to contribute in ensemble settings and development of musical voice through ownership, agency, relevance, and personal expression (p.267). The lack of critical reflection and critical thinking within El Sistema's motto of *tocar y luchar* (to play and to struggle) is also pointed by critiques of the programme. This also resonates with numerous contemporary calls for 'critically reflective musicianship' within the larger musical community (Johnson, 2009; Woodford, 2005; Jorgensen, 2003). Morrison and Demorest (2012) recognise that "[t]he traditional autocratic model of the school conductor appears to in direct opposition to contemporary education thought" (p.827). Thus, numerous progressive educationalists argue that performance-focused, results-driven music education via large ensembles to be deficient.

***Group vs individual pedagogy:*** Related to the ensemble format of El Sistema, is the focus on the group (the collective vs the individual). One of El Sistema's fundamental principle is "the focus . . . is the orchestra or choral experience" (Govias, 2011, p. 21). This is said to be akin to being a part of a machine, where young musicians see themselves as cogs in a vast mechanism. Guerrero in Tunstall (2012, p. 167) notes that EL Sistema trains children up to be interchangeable parts, moving from one nucleo to another. But a critique of this very image is due to the positioning that the programme is not driven by progressive pedagogical principles but the sustenance of the system itself. A related aspect of group pedagogy is the idea that playing together in an orchestra fosters teamwork. Again, this idea is challenged by researchers (Criss, 2010; Wolf, 1999; Green, 2008; Burnard and Younker, 2010) since teamwork requires dialogue, open-ended and creative structure which is rarely found in an orchestral setting.

***Classical music vs alternative repertoire:*** The need for orchestras to move beyond classical music and incorporate local, traditional and popular music. This includes other musical genres such as, jazz, traditional styles (Fiddle playing in Scotland, Latin music), folk and popular music.

Thus, various critical debates relating to El Sistema continue, but has also brought heightened attention to the social aspects and impact of music education. As Baker (2015, p.24) summarises, it is accompanied by the renormalizing of conventional practices that have been critiqued extensively such as, learning that is sequential and repetitious, teacher-centered and



hierarchical; emphasis on transmission and “banking” of existing knowledge rather than creativity; is dedicated to performance rather than composing, improvising, arranging, or listening; and marginalises discussion of broader social and cultural issue.

### **3.5 Chapter Summary**

This chapter has presented the selection process and an introduction to the research site (NELCS). I have also clarified related terms and programmes associated with the site. This was followed by a review of literature relating to two main programmes adopted by the school – Expeditionary Learning and El Sistema. Since the need to review this related literature arose from the selection of the specific research site, I have chosen to include it within this chapter. It includes principles and philosophies that lay the foundation for both the programmes, its features and relevant current research debates about its practices. This review has provided a picture of the school culture and learning experiences at the research site, rather than, evaluating the programme’s appropriateness or benefits. Following, chapter four details the methodology adopted for this research study.

# CHAPTER FOUR

## 4. METHODOLOGY

### 4.1 Introduction

In this chapter, I discuss the methodology that guided the research process. To produce sound research, it is crucial to decide appropriate methods for data collection and analysis, as well as to recognize the beliefs and assumptions that are carried with the researcher when designing the entire research.

The chapter begins as I situate the study and provide the research context, followed by the research questions. Having introduced the research site in the previous chapter (Ch.3), here I focus on the methodology for this research. I start with the ontological, epistemological and the methodological assumptions underlying the research, for exploring transformation through lived experiences. The aim and justification of the research methods used in the current study are highlighted within each section. This is followed by a section on research design which includes description of the study sample, various data collection methods utilised, followed by the research timeline for this study. The data collection process is described along with the research phases (pilot and main). The next section highlights the ethical considerations guiding the research and finally I discuss the quality of research and some challenges encountered.

### 4.2 Development of Research Questions

My understanding of transformation has been clarified previously in the literature review (sec 2.4, pg. 40). Briefly, it is grounded within the conceptualisation of transformative teaching (Slavich and Zimbardo, 2012), which is defined as *“the expressed or unexpressed goal to increase students’ mastery of key course concepts while transforming their learning-related attitudes, values, beliefs, and skills”* (p.576). I believe that the goal of learning is self-actualization and that it includes social and cultural aspects of learning within this process. As noted previously, the term transformation lends to some preconceptions, such as a change that is drastic, continuous, emancipatory or visible. But the term ‘transformation’ in this study is

considered to be embedded within the learning process. It draws from the general notion that all or any education and learning can be considered to be transformative. It is complex, varied across individuals and often invisible.

The conceptualisation of transformation as embedded within learning also follows the transformative learning theory, where “learning is understood as the process of using prior interpretation to construe a new or revised interpretation of the meaning of one’s experience in order to guide future action” (Mezirow, 1996, p.162). Following the review of related literature on transformative learning and transformative teaching, it is seen that the majority of research in this area is focused on adult learning or disadvantaged individuals (sec 2.2.2). Thus, in this study I aim to address the gap in the area of transformative teaching and learning in a comprehensive school setting specifically in the context of arts-integrated creative learning. The overall aims of this research are to:

- a. Document and analyse the transformative characteristics of learning.
- b. Explore the role of arts/music within these lived experiences of learning
- c. Explore and develop the understanding of transformative teaching and learning

As indicated previously, my research questions are exploratory in nature, seeking to provide insight into the lived experiences of transformation through arts-infused learning.

**Main research question:** What are the teachers’ and students’ lived experiences of transformation through music and arts infused creative learning as practiced at an Elementary School in Northeast of USA?

**Sub-question:** What is the role of the arts and music in this process?

Thus, this research explores *transformation through learning*, through the lived experiences of the participants. Lived experience is a representation and understanding of a researcher or research subjects’ human experiences, choices, and options and how those factors influence one’s perception of knowledge (Given, 2008). It includes not only people’s experiences but also how people live through and respond to those experiences (Interactions, intentions, the meanings they attach to their actions, etc.). I concentrate on the ordinary, everyday events considering experience as a way of knowing and interpreting the world. I do not aim to find any causal relationship or explore how or to what extent the participants have been transformed. This study is thus, not a pre-post intervention research mapping out the change, instead, the

focus is on the lived experiences of learning within which ‘transformation’ (conceptualised previously) is explored.

As the research progressed, I realised the above main research question implicitly includes various questions such as - How are students learning? Towards what goals are they learning? What are the pedagogies and strategies employed? How is transformation perceived? In what ways are the approaches experienced as transformational? What characterises the learning experiences of the students? Thus, as I began analysis I focused on a simplified version which encompassed the above questions – ***What does transformation through learning at NELCS involve?***

### **4.3 Theoretical Framing**

The theoretical perspective that I take embodies a certain way of understanding. Here I discuss these foundations and this in turn informs my choice of methodology and methods.

Ontology is “the study of being” (Crotty, 1998, p.10); it defines the assumptions held of reality, the nature of existence, and the structure of reality (Crotty, 1998; Eisner & Peshkin, 1990). I agree with the relativist ontology which assumes that reality as we know it is constructed inter-subjectively through the meanings and understandings developed socially and experientially. Thus, there are multiple ‘realities’ reflecting multiple sense-makers. Epistemology is about “how we know what we know” (Crotty, 1998, p.3) or “the nature of the relationship between the knower or would-be knower and what can be known” (Guba & Lincoln, 1994, p.108). I follow that, we cannot separate ourselves from what we know. Hence, both me (researcher) and the participants of the research (researched) are linked, such that, who we are and how we understand the world is a central part of how we understand ourselves, others and the world. This falls under the constructivist view that “all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context” (Crotty, 1998, p.42).

These views essentially situate my research in the interpretive paradigm, where researchers attempt to understand phenomena by accessing the meanings participants assign to them and their interactions in a real setting. Interpretive studies assume that people create and associate

their own subjective and inter-subjective meanings as they interact with the world around them. Considering the focus of this present study, where I am not seeking to predict or to discover explanations and facts (positivist), the interpretive paradigm is appropriate to explore the experiences and perspectives of various participants. Thus, from the above I further clarify, that I am not looking to 'discover' one unitary set of meanings or objective truth, as different participants may construct meaning in different ways.

#### **4.4 Research design - Case Study**

I have undertaken a case study as it is a natural fit with my aim to seek answers to the research questions through the investigation of a specific school, NELCS. Case studies have been defined in multiple ways by many researchers: "an empirical inquiry that investigates a phenomenon within real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin, 2003 p.13); or, a generic term for the investigation of an individual, group or phenomenon (Sturman 1994). Merriam (1998) conceives qualitative case study as "an intensive, holistic description and analysis of a bounded phenomenon such as a program, an institution, a person, a process, or a social unit" (p. xiii). They are generally particular, as they focus on a special phenomenon, relationship or situation (Yin, 2003); they also generally involve "inherent multi-methods," including direct or participant observation, interview, and analysis of documents and records (Robson, 2002); which facilitate illustration of the case from different perspectives. Their flexible and adaptive nature is their strength, to cope with the complex research field and real-life situations (Corcoran, Walker, & Wals, 2004; McDonnell, Lloyd, & Read, 2000). Further, there are multiple classification/types of case studies used by researchers. Before I situate this study within these classifications, I clarify that to define a 'case' in a case study, I follow Merriam's (1998) understanding delimiting "the case as a thing, a single entity, a unit around which there are boundaries" (p. 27). In summary, case can be a person, a program, an institution, a group, a specific policy and so on. Thus, for this study I investigate my research questions through a case study research of the school (NELCS) and consider the 'everyday learning experiences' (interactions and practices) at the research site (the school - NELCS) as the 'case'. Further, as detailed in the previous chapter on the research site, the 'everyday learning experience' at NELCS (the interactions and practices) is guided by the school charter and is shaped by the two main programs adopted by the school – Expeditionary Learning and El Sistema discussed in the previous chapter 3.

Further, there are multiple types of case studies defined by researchers, I now proceed to situate this research through these classifications. Yin (2003) identifies three types of case studies in terms of their outcomes or implications: *exploratory* (as a pilot to other studies or research questions); *descriptive* (providing narrative accounts, a complete description of a phenomenon within its context); and *explanatory* (presents data bearing on cause-effect relationships). Since the aim of this study is to 'explore' *transformation through learning*, being a study researching a comparatively new area (transformative teaching) in new situations (different from existing literature), I consider it to be exploratory in nature. Further, the phenomenon of *transformation through learning* is studied within its real-life context (learning experiences within the school), I strive to portray "what it is like to be in a particular situation, to catch the close-up reality and 'thick description' (Geertz, 1973)" (Cohen, Manion and Morrison, 2011) of participants' lived experiences, thoughts and feelings for a situation. Thus, following Yin's (2003) classification, I consider this research as a descriptive and exploratory case study. Also, this research can be classified as an instrumental case study (Stake, 2000, pp. 437-438), where the case/ bounded and integrated system (such as NELCS) is examined mainly to provide insight into an issue or revise a generalization. Here in this study, I was investigating the topic *transformation through learning* within the case (NELCS) through the lived experiences of the participants who were experiencing a music-infused creative pedagogy.

Overall, at first instance, this research can be classified as a case study. Here, the school (NELCS) is the site wherein the research questions are explored and the 'everyday learning experiences' (the interactions and practices) at the site are the case. As the study progressed I also chose to focus on certain participants to help narrow my observations but they were not treated as separate cases but rather, helped focus on understanding the learning experiences at NELCS. Thus, using case study as the research design for this doctoral research I acknowledge the argument by (Hamilton & Corbett-Whittier, 2013) that case study should be seen as an approach to research or, as Elliot and Lukes (2008) argue, as a genre, that aims to capture the complexity of relationships, beliefs and attitudes within a bounded unit, using different forms of data collection and is likely to explore more than one perspective. I now proceed to elaborate on the whole range of inquiry activity which it encompasses in the following sections, starting with the main methodology of ethnography which has shaped this study into an ethnographic case study.

## 4.5 Ethnography as Methodology

Ethnography is fundamentally interpretive because it is concerned with understanding the lived experiences of humans (Siraj-Blatchford and Siraj-Blatchford, 2001). Since this study aims to investigate the interactions and practices at a music-infused school through the lived experiences of the participants within the interpretive paradigm, I adopt ethnography as the basis for this case study. As discussed in sec 4.2, my main research question includes the term 'lived experiences' of the participants. This includes not only people's experiences but also how people live through and respond to those experiences (Interactions, intentions, the meanings they attach to their actions, etc.). So, as an ethnographer, I was committed to 'getting close' to the activities and everyday experiences of other people, to explore the lived experiences of the participants and get an authentic view of the teaching and learning at the site. As Emmerson, et.al. (1995) noted, by getting close "the ethnographer seeks a deeper immersion in others' worlds in order to grasp what they experience as meaningful and important. With immersion, the researcher sees from the inside how people lead their lives, how they carry out their daily rounds of activities, what they find meaningful, and how they do so" (p.2). This deep immersion through ethnography allowed me to investigate the subtle and embedded topic of *transformation through learning*, by being present at the research site through their various learning experiences.

The participants for this study include students, class teachers, school administrators, resident artists and other facilitators within NELCS. This provided opportunity to obtain multiple perspectives in a naturalistic context, thus making ethnography an appropriate choice for this study. At the same time, it is not just a method but a research strategy. Meaningful reality is contingent upon human practices, being constructed in and out of interaction between participants and their world, which takes time and in-depth immersion to research. One feature of ethnography is to incorporate a high level of descriptive detail referred by Geertz (1973) as 'thick descriptions'. In the context of the present study, the use of 'thick description' allows a detailed account of experiences of the participants through the arts-integrated practices (teaching and learning) at the school in terms of *what* it meant and *how* it happened and understand any transformative implications rather than seeking judgments or evaluations. This is considered important because it would allow understanding to be gained by investigating the 'story' of the participant's experience of arts and music infused expeditionary framework at the site.

It was helpful to consider the modes of ethnographic practice identified by Jeffrey and Troman (2004) - Compressed time mode, Selective intermittent time mode and Recurrent mode. A compressed mode involves a short period of intense ethnographic research for up to a month, offering a snapshot in time. A recurrent research mode gains a picture by sampling the same temporal phases, such as examination periods, or where researchers sample a regular, predetermined basis irrespective of specific events. Whereas, selective intermittent time mode involves a very flexible approach to the frequency of site visits that can be over a period for example, anything from three months to two years. Normally, the length of time available for any study and the frequency with which the researcher is able to access the site(s) determines the design of any ethnographic study. Following the classification by Jeffrey and Troman (2004), I would place my study within a 'selective intermittent time mode'. Overall, the fieldwork for the present study spanned across two academic years i.e. starting during the Spring Term of the academic year 2012 – 2013 (March – May 2013) and to have a continuity, the next phase was planned as the academic year 2013-2014 began in September 2013 for 3 months. The visits to the site were undertaken selectively with flexibility to accommodate certain types of learning activities. For example, as a researcher I chose to stay on site for the full school day or for a certain specific part of the day.

Some characteristics of this mode of ethnographic research, incorporated in the present study were:

- Apart from the initial period of broad familiarisation, specific rich contexts were selected for examination and interpretation.
- Using visits intermittently, gradually selecting the particular sessions or days that were likely to be more relevant to the research, thus zooming into the relevant moments.
- Catching the serendipitous moments – this is possible due to familiarity
- Exploring the depths – working closely with the participants

The zooming into relevant moments and specific contexts were also based on identifying 'critical events' and 'critical incidents'. The process of teaching and learning is significantly influenced by both 'critical events' and 'critical incidents' (Sikes, Measor and Woods, 1985, Woods 1993). The critical events take the shape of planned occasions, such as the production of a drama or a school visit whereas critical incidents by contrast are characteristically unplanned, unanticipated and uncontrolled. "They are flash points that illuminate in an electrifying instant" (Woods, 1993, p.1.). "They both focus on highly charged moments and episodes that have enormous



consequences for personal change and development” (Sikes et.al. 1985, p.230). Also, they share a focus on learning through personal experience and through real-world events. Through both the pilot and main study, I started to observe and identify possible critical events and critical incidents related to this research study as entry-points where I explored transformation through lived experiences. I have identified these in the next chapter (Ch 5, sec 5.4.1.1) and have provided a summary of the events in **Appendix – 5.**

Thus, I take a holistic approach to ethnography, which includes all types of data sources, both primary sources (collected by me) as well as secondary sources (mainly documentary) that includes a brief history of the research site, students’ past work or performances and existing structures of interactions between the participants. Thus, naturalistic observation was focused through identifying critical events and moments keeping in mind other data collected.

At the same time, I acknowledge various historic criticisms of case study and ethnography serve as a warning to minimise dangers. Walker (1983) warned that case study can be an uncontrolled intervention in the lives of others, can give a distorted view of the world and can have a tendency to ‘embalm’ practices which are actually always changing. Also, ethnographic observations with longer time at the research site and closeness with the participants can often provide a distorted view. Further, Yin (2009) identified traditional limitations of case study to be; ‘lack of rigour’; ‘lack of scientific generalization’ and ‘being too long, difficult to conduct and producing a massive amount of documentation’. But steps taken to ensure quality of this study has been detailed in subsequent section 4.10. This includes techniques such as reflexivity (discussed again within sec 4.10) act as techniques to minimize the dangers. Briefly,

*“it means turning of the researchers [sic] lens back onto oneself to recognize and take responsibility for one’s own situatedness within the research and the effect that it may have on the setting and people being studies, questions being asked, data collected and its interpretation. As such the idea of reflexivity challenge the view of knowledge production as independent of the researcher production as independent of the researcher producing it and of knowledge as objective”* (Berger, 2015, p.220)

At the same time, this methodology within the interpretive paradigm allows my experiences as a reflexive ethnographer also to be included while exploring the lived experiences of the participants. This has been further discussed in Chapter 5 (analytic journey).

## 4.6 Participant Selection

With the focus of this study on the lived experiences of the participants at the site; as a researcher, I wanted to have some kind of understanding of the reality of the social life through the people living in this reality and hence, the list of participants included a variety of different individuals who are part of the site along-with the students. This included *Students* aged 7-12 years (Grade 2 – 5); *Classroom Teachers*; *El Sistema Resident Artists* (musicians); *Specialists* who assist the classroom teachers for planning and implementation of various learning expeditions and *School Administrators* including the Head of the School and the Principal.

Here, I discuss the different types of participants selected, but it is necessary to keep in mind that the participant selection process was not fixed from the beginning of the study, but evolved through the pilot and main phases of the research which spanned across two academic years. I selected information-rich participants to effectively help in understanding the research questions, also known as “purposeful sampling” (Patton, 1990). Thus, the specific participant details will be revisited in the later section as I detail the various phases of research but the following table provides an overview of the participants across the phases of research study.

| S. No. | Type of Participant           | Number of Participants   |   |
|--------|-------------------------------|--|---|
|        |                               | Pilot Phase (2012-13)  | Main Phase (2013-14)                                    |
| 1      | Students                      | Whole school, K1 – Gr5<br><i>Focus on: Grade 2 and Grade 4</i> | <i>Focus on: Grade 3 and Grade 5</i>                    |
| 2      | Classroom Teachers            | Whole school, K1 – Gr5<br><i>Focus on: Grade 2 and Grade 4</i> | <i>Focus on: Grade 3 and Grade 5</i>                    |
| 3      | Resident Artists (El Sistema) | All the artists (~14)  | <i>Focus on: Artists teaching the Dudamel Orchestra</i> |
| 4      | Specialists                   | Senior Editor  | Senior Editor<br>Curriculum designer                    |
| 5      | Administration                | Head of School<br>Principal                                    | Head of School<br>Principal                             |

|  |  |                   |   |
|--|--|-------------------|---|
|  |  | Support staff (2) | Director of Operations –<br>Music Programme |
|--|--|-------------------|---|

**Table 4.1:** Overview of the types of participants in this study

### 4.6.1 Students

With NELCS initially being an elementary school I chose to focus on students between the ages 7 – 12 years. Also, I decided to focus on not too young children/ early-childhood since for the present study exploring transformation where the concept is vague and complex, as a young researcher I felt comfortable working with older students. Furthermore, I found that most of the students between the selected age group have been studying in this school for between 2 and 5 years giving me an opportunity to explore their reflection on their time at the school beyond the current year. As the study progressed and I narrowed my focus to two specific grades (Grade 2 and Grade 4) – I chose to closely follow between 3 and 6 students from each grade dependent on access. This transition in focus will be discussed in a later section.

### 4.6.2 Classroom Teachers

Being a small school, there was only one class per grade and hence, one class teacher per grade. As I entered the site, I interacted with almost all the teachers from K1 to Grade 6. This was facilitated by a brief introduction by the principal about my study during a teacher’s meeting where I was able to interact with all the teachers to know about their respective classes and teaching plans. Further, as the study progressed from the pilot phase to the main phase, I conducted initial interviews with five classroom teachers (K1, Grade 2, Grade 3, Grade 4, Grade 5) and later focused on only two grades (Grade 2 – Grade 4). But I continued to interact with all the teachers when I was present in the staff lounge, during professional development sessions, performances and other events. I had developed good relationships with most teachers and felt welcomed into their community.

### **4.6.3 Specialists/Support**

The school has various specialist teachers who assist classroom teachers. These range from specialists for English language learning, Literacy, Speech Language, Special education, Subject-related, Curriculum/expedition advisors and others who focused on documentation. For this study, I mainly chose to include specialists who worked with teachers to develop and document the learning expeditions. Their designations did not include the term specialists (Senior Editor; Curriculum designer), but since they work with the classroom teachers, I was keen to include their perspectives on the learning practices at the school.

Apart from in-school specialists, other external experts often visited and worked with the students (Visual Arts experts, Herpetologists, Museum staff, External musicians); though some such sessions have been observed and included in the data collected, the focus has not been on these experts but the experiences of the other participants during such opportunities of learning.

### **4.6.4 Resident Artists (El Sistema Musicians)**

With the incorporation of the El Sistema program the school expanded their school day and spread the 2.5 hours of music education across the day to best utilise the available school resources, especially space. Thus, these resident artists had almost similar hours as the other classroom teachers at the school. I interacted and observed all the resident-artists and interviewed 9 of them – these included Orchestra Conductors, various Instrument/Section Specialists and the Program Directors. Those artists, who were part-time or were present for a smaller duration of time at the site were not specifically interviewed, however, interactions with them are part of the data collected.

### **4.6.5 School Administrators**

Within the administrative staff, I focused on the Head of the School and the two Principals (lower & middle schools). Apart from these individuals, I interacted with other administrative staff who have been with the school for many years to get their perspectives and experiences at the

school. These individuals include the Director of Marketing and Communications and others who have similar responsibilities.

## **4.7 Data Collection Methods**

Due to the embedded nature of the topic ‘transformation through learning’, the data collection was focused by zooming into relevant moments and specific contexts and identifying ‘critical events’ and ‘critical incidents’ (Sikes, Measor and Woods, 1985, Woods 1993) within them. I define and elaborate on the process that I adopted for identifying these ‘events’ and ‘incidents’ in the next section (sec 4.7.1). Further, undertaking ethnography allowed me to identify and capture the ‘critical incidents’ and critical events’ through multiple types of data collection methods. The methods used for this study were designed to provide various qualitative approaches that could provide insight into the lived experiences of the participants through multiple entry-points or mediums, in order to collect rich data. These were – observations with field notes, photos and videos, informal discussions and semi-structured interviews, documents, conceptual drawings and learning walks. In the subsequent sections below I discuss the various data collection methods and their perceived usefulness for this study.

### **4.7.1 Identifying ‘critical incidents’ and ‘critical events’**

The significance of critical incidents in people's lives has been noted by many (Strauss, 1959; Becker, 1966; Walker, 1976; Measor, 1985; Sparkes, 1988), but though the term has a long history in psychology, it has acquired several slightly different definitions as researchers have approached the issue from a variety of angles. In the field of psychology, Flanagan (1954) developed the critical incident technique, to gain understanding of the causes of airplane crashes and defined a critical incident as ‘extreme behaviour, either effective or ineffective with respect to attaining the general aims of the activity’ (p.338) thus permitting predictions to be made about the person performing the act. Other authors researching teachers’ careers see critical incidents as highly charged moments that have enormous consequences for change and development (Sikes et.al., 1985) and implications for identity (Measor, 1985). They are essentially unplanned, unanticipated and uncontrolled flash points that illuminate in an electrifying instant (Woods, 1993). On the other hand, Tripp (1993; 2012), extends the definition of critical incidents to include commonplace events that occur in the everyday life of the

classroom. He argues that most critical incidents are 'not dramatic or obvious, but they are mostly straightforward accounts of very commonplace events that occur in the routine professional practice' (p 24-25). Thus, as Angelides (2010) notes, critical incidents are not necessarily sensational events involving noticeable tensions. Rather they can be relatively minor incidents, everyday events that happen in every school and in every classroom. Further, their criticality is based on the justification, the significance, and the meaning given to them.

For this study, I follow the definition of a critical incident by Sikes et.al (1985) and Woods (1993), where an incident is a flashpoint that illuminates a highly-charged moment. But, I acknowledge Tripp's (2012) view that these highly-charged moments can be part of typical everyday events and need not be outwardly dramatic to everyone. On the other hand, critical events take the shape of planned occasions, such as the production of a drama or a school visit (Sikes et.al, 1985; Woods, 1993). Both critical incidents and critical events are similar in many ways – "they both focus on highly charged moments and episodes that have enormous consequences for personal change and development" (Sikes et.al. 1985, p.230); also, they share a focus on learning through personal experience and through real-world events. Thus, planned events at NELCS such as fieldwork, hands-on projects and performances are some examples of possible critical events. An example of a critical incident within the data collected was a routine weekly class song performance where a new shy Grade 5 student (Mia) performed for the first time and the encouraging interaction she had with the class audience (presented within findings Ch 6, sec 6.2.1.4). During my observation, I noticed this moment and highlighted it to be a significant moment for Mia and her classmates. The incident was part of a regular routine activity, but it was new to Mia and I found it to be a highly-charged moment. Subsequently, both the Grade 5 class teacher Amanda as well as Mia referred to this incident on their own during our informal discussion/interview, reaffirming its significance.

Since, there would be many possible critical events and critical incidents during the learning process at NELCS, I chose to focus on certain contexts/ activities where I looked for critical events or critical incidents. This decision was made following the pilot phase of the study, to help hone in and focus on certain learning experiences. I have clarified this in sec 4.8.1 and subsequently within sec 5.4.1.1 along with providing a description of these contexts in **Appendix – 5**. Further, as seen from the example above, these moments (both critical incidents and critical events) have been identified by me throughout my time as an ethnographer at the research site. My decision has been influenced by the developing framework that represented

the elements/ behaviours relating to transformation (discussed in Ch 5 sec 5.3.2). For example, moments that highlighted the social, emotional, cultural, autonomous, interactive, reflective or creative deeper learning experiences. At the same time, reference by other participants (teachers or students) about the same moment further highlighted its significance within the learning experiences of the participants within the data collected.

#### **4.7.2 Participant Observation with field notes**

Consistent with the tenets of interpretivism, unstructured observation was undertaken. Simply put, observation is a method utilising our daily skills of watching, listening and recording with extra concentration and specific purpose (Bassey, 1999). Rossman & Rallis (2003) state that, participant observation has the greatest potential to uncover contextualized, honest data, otherwise inaccessible, it ontologically and epistemologically underpins human quests for understanding multiple realities of life in context. Thus, like any other ethnography, this study utilizes participant observation as the primary data collection method while being embedded within the research site NELCS.

In an ethnography, the researcher is considered the main instrument (Burgess, 1984); thus, as I proceeded with the study, it was important to understand the role of the researcher within the study. Gold (1958) distinguishes between four roles of a researcher: the complete observer, observer-as-participant, participant-as-observer and the complete participant. Similarly, Burgess (1984) considered the four roles of a researcher to exist along a continuum. These roles range from:

- *complete participant*, where observation is covert
- *participant-as-observer*, where 'the researcher participates and observes by developing relationships with informants'
- *observer-as-participant*, where contact with informants is 'brief, formal and openly classified as observation'
- *complete observer*, where 'the role is identified with eavesdropping and reconnaissance in which the researcher is removed from sustained interaction with the informant' as if to become a 'fly on the wall' (pp. 80-82).

In essence, at the extremes of the observation continuum (i.e. the complete participant as insider and the complete observer as outsider), the effect of the researcher (as a complete

insider or a complete outsider) on the participants was thought to be least. Another way to distinguish the role of the researcher is the distinction between 'active-member' and 'peripheral member' roles, which centre on whether or not researchers participate in the central activities of a community (Adler and Adler, 1998).

The term 'participant observer' can mean different things in different contexts, for example, a narrow role where the researcher becomes an equal participant with those being researched as is typical in action research (Cohen and Manion, 1994); a participant observer, is "there," not behind a screen or glass, rubbing up against the children, able to hear what is being said, interacting and sharing, to some extent, in their experiences. (Grave and Walsh, 1998, p. 107). However, using Burgess's or Gold's categorisation, the role of participant-as-observer has been well documented in field research and favoured by researchers who seek to study children in contexts where interaction is required for reflective talk coupled with observation of their activity (Silverman, 1985).

During the initial weeks of the pilot I was a non-participant – more like a 'fly on the wall'. Blending with the school community, I observed various classes from K1 to Grade 6 throughout the school - in their classrooms, when they played music as groups or as a whole orchestra. I was looking at interactions between pupil and teacher and between students themselves. Thus, as I began the pilot phase of the study I initially was more or less a 'complete observer' being present at various classes, activities and events at the school. As time progressed, I started interacting with the staff and students through informal discussions and interviews familiarising, building rapport and perhaps more importantly for gaining the trust of students. Thus, at times, I felt myself to be in the position of a privileged participant-observer – a privileged observer who is known and trusted and given easy access to information (Ely et al (1991), drawing on Wolcott, 1988). As expected, there were times when I needed to move along the continuum between being a complete observer, reactive observer and at other times take the role of a participant-as-observer. Thus, I adopted a stance, as described earlier by Grave and Walsh (1998), which involved interacting and sharing 'to some extent' in the participant's experience. This range of observation across the continuum allowed me to observe, interact and experience alongside the participants throughout the duration of this study, which in turn resulted in rich data collection.



As I observed, I kept field notes providing a record of my observations, experiences and insights. As noted by Emmerson et al. (2001), I experienced deep ambivalence about whether, when, where and how to write jottings. Many researchers (Emmerson et al., 2001; Van Maanen, 1988; Chiseri-Strater and Sunstein, 1997; Wolfinger, 2002) have pointed various considerations while writing field notes, including, the list of content, type and style. For this study, my field notes took shape through mainly three parts – Jottings, Descriptive field notes and Analytic field notes. In general, my field notes, written during my presence at the site, were brief (short notes) and can be considered as jottings, which were later expanded into complete notes. I transferred my notes into the computer periodically at the earliest convenient time. I followed the general list of items to be included within field notes developed by Chiseri-Strater and Sunstein (1997).

- Date, time, and place of observation
- Specific facts, numbers, details of what happens at the site
- Sensory impressions: sights, sounds, textures, smells, taste
- Personal responses to the fact of recording field notes
- Specific words, phrases, summaries of conversations, and insider language
- Questions about people or behaviours at the site for further investigation

Thus, my jottings firstly included, factual and contextual details such as date, time, location, sample/participants, activity being undertaken, any situational context and specific facts. Secondly, other related observations such as sensory impressions, expressions of participants, specific words or phrases, summaries of any conversations, insight and critical incidents (anything that stood out for me) were also included. Thirdly, I included and referenced any other type of data that related to the same observation, such as, file number and duration/time of a video recording, if any photograph was taken and any document produced. Lastly, I also noted brief insights or questions about the experiences (my experiences and those of the participants).

These jottings provided the basis for my descriptive field notes that were written subsequently either at the end of the same day or within a few days. It was important to make the opportunity to expand the field notes to provide 'thick descriptions' (Geertz, 1973) as soon as possible, so that the events would not be forgotten or mis-remembered. These descriptive notes included expanding on the jottings, my personal impressions and reflections. The analytic field notes were mainly part of my descriptive notes or sometimes written in the margins or in different colour. Here I mainly focus on what I have learned in the setting regarding my guiding questions and any related points. These include any themes that I begin to identify, any question that I need to keep in mind or focus on during my subsequent visits and my personal reflections.

Recording first-hand events also provided me with an opportunity to reflect on what is occurring in the classroom at the moment of interaction, showing both what is happening and reflection on it. Further, it is of course impossible to observe, identify and record all events that are occurring in any one period of time, therefore it became more important for me to identify what is to be documented. The field notes inevitably reflect my background knowledge, or tacit beliefs but I have actively tried to incorporate the above-mentioned different parts of the field notes, along with other data sources, to allow for multiple interpretations. **Appendix – 6** contains an excerpt of my jottings along with its expanded field notes.

### **4.7.3 Video & Photography**

I chose to use other digital recording media such as video and photography as I undertook observation along with the field notes. Since many things go on in a classroom at the same time, there may be some subtle things which may go unnoticed or may slip away from my short-term memory, therefore, in addition to the written records, classroom lessons, orchestral rehearsal, field work and other activities both inside and outside the classroom were recorded as supportive/counter evidence of observation. This in turn provided me opportunities for additional reflection. I also took photographs to capture moments during critical events and critical incidents (as defined within sec 4.7.1 above), students' work, the décor of the school and occasions as necessary. I have tried to capture any critical event or incident through both observation with fieldnotes and video or audio recording to provide different or more complete insight into the experience. This is especially beneficial since, it is argued that, through video 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). Further, this recorded media provided me the opportunity for analysis through repeated studying (ibid).

I used two small cameras normally mounted on a small tripod for stability. I constantly, varied the placement of the cameras but finally as the study progressed I placed one camera at a location that covered most of the classroom e.g. where the student participants were seated or at a vantage point that covers maximum participants from the whole orchestra during a rehearsal. The second camera was either used for getting a second perspective of the activity or focused on a specific group of students e.g. one table or sometimes became the single

camera when alternating between batteries. I also held the camera wherever necessary e.g. when I joined the participants through their field work.

Often pointing a video camera at an individual makes them feel uncomfortable or very conscious. Thus, the choice of location for the placement of the camera was often tricky and was aimed towards minimising reactions, awkwardness and the feeling of invasion. I continued to be aware of the participants and continually took their consent during the process of observation. But as the study progressed and I developed better relationships and rapport with the participants, most students were almost unaware of the camera or perhaps were not that affected by its presence. The common limitation of video recording is its single-angle view; sometimes “a camera must be aimed at a specific area of interest, neglecting other areas” (Ely et al., 1991). Thus, even a camera cannot record everything that is happening. Thus, the video data was used as a supportive evidence of my observations and triangulation was employed. This is discussed in a later section.

It is important to note that not all the observed classes were fully video-recorded and not all the recorded data was analysed. This was due to the duration of my presence at the research site (4 months in total) and the decision to record certain types of lessons, due to the focus of the study.

#### **4.7.4 Interviews**

In ethnographic research, the interview is a ‘flexible tool’ and ‘powerful implement’ for the researcher to collect deeper information based on communication between researcher and the participants. At the most basic level, interviews are conversations. Kvale (1996) points that qualitative research interview seeks to describe and understand the meanings of central themes in the life world of the subjects. It attempts to understand the world from the subjects' point of view, to unfold the meaning of peoples' experiences, to uncover their lived world. It can cover both facts and meanings. Interviews also have certain characteristics that highlight the power dynamics therein. Kvale (2006) notes that a qualitative research interview entails a hierarchical relationship with an asymmetrical power distribution of interviewer and interviewee. It is a one-way dialogue, an instrumental and indirect conversation, where the interviewer upholds a monopoly of interpretation. However, as an ethnographer embedded at the research site, continuously interacting with the participants, gaining their trust and building rapport, I aimed to

minimize the power wielded by me as an interviewer, by allowing for reciprocity and a non-hierarchical interaction.

Thus, I used Interviews as another data collection method in my study as they allowed me to gather the story behind a participant's experiences – 'in-depth information', which cannot be only gathered from observations. To address the inherent power dynamic within an interview, I chose the interviews with students and staff to be mainly unstructured, with an occasional semi-structured approach. They were audio-recorded and subsequently transcribed for analysis. Apart from the written consent for the study which included interviews, I gained consent from the participants whenever I audio-recorded conversations. (See complete ethics section below - Sec 4.9)

Interviews were used at various times and participants across the research study. Overall the pattern followed with the school staff was an initial semi-structured interview mainly to get to know the teachers, their beliefs about teaching and learning in general and as practiced at NELCS. The aim was to build rapport with the teachers and get a glimpse of their experiences and the learning expeditions that the students in their classes undertook. A list of questions that formed part of the informal semi-structured interviews for this study is available in the **Appendix – 7**. As the study progressed I chose to not have specific semi-structured interviews but have informal conversations with the participants as and when I found opportunity (for example, when I joined a participant group during their ongoing discussions, during breaks, while setting up the classroom) or relating to the themes that were relevant during my observation. The shift to having an informal conversation than a planned interview as the study progressed was made possible after building sufficient trust and rapport with the participants. This helped manage the power asymmetry within qualitative research interviews which was highlighted by Kvale (1996).

### **4.7.5 Conceptual Drawings**

Several researchers have recognised the potential contribution of drawing as a research process that offers a representation of children's worldview (Golomb, 1992). I used conceptual drawings as a form of data collection technique during this study to provide another way to express and explore the experiences of the research participants. A conceptual map or drawing is a representation of lived experience using drawing and symbols. They can be undertaken either individually or collaboratively and they can generate 'creative learning conversations'

(Chappell and Craft, 2011) which can form part of a change process. Conceptual drawing offers a highly reflective medium and generates visual media that provides a discussion focus (Chappell et al., 2011). It provides a medium for research participants to share their reflections on key experiences. For this study, it was undertaken as part of recorded discussions (interviews) where the participants were provided with plain paper and a variety coloured pens and pencils. Since it provides an alternative medium of expression (non-verbal and creative), it was useful to explore lived experiences of participants through their own interpretation of it. It provided a starting point for topics that allowed further probing during discussion and highlighted the importance of certain learning experiences due to its representation by the participants in the drawing. The main themes explored through conceptual drawings included views of the teachers about NELCS, arts-integration, creative teaching and learning at NELCS and memories and reflection of participant's experiences at NELCS.

#### **4.7.6 Learning Walks**

In an effort to give voice to students and enable them to be actively engaged in articulating their views, I tried to implement a different way of collecting data called 'learning walks'. This involved students taking me through a tour of their classroom while reflecting on their experiences through visual cues from the surroundings. Similar methods like 'learning walkthroughs', 'learning walk' and 'classroom walkthroughs' have been used as research tools for reflective practice, evaluations and as a systematic and coordinated method of gathering data. For this study, learning walks were inspired by the Mosaic Approach (Clark and Moss 2005) which offers a creative framework for listening to young children in early childhood settings. The interaction during the learning walks allowed me to gain insight into the learning experiences of the participant as they reflected on them. The participants led the way through the classroom, giving them authority and voice as they expressed their views about their learning experiences. It allowed me to notice subtle expressions about the experience. For example, topics or activities that were 'exciting' to them; that 'fuelled their passion' for the topic; the experiences that were 'difficult' or 'memorable' due to certain reasons highlighting what can be considered 'critical incidents and 'critical events' for the participants. Thus, learning walks were not only a method to familiarise myself with the work done by the students, but also a way to gain their trust and help find ways to investigate deeper into the experiences of the students.

I undertook these learning walks in Grade 2 and Grade 4 classrooms with students. I selected these grades due to the following reasons; Firstly, I had started to build a good rapport with the class teachers and students. Secondly, since I had initially planned to work with the ages between 7 to 12 years old, these grades represented the lower and higher limits of the age groups. Lastly, by narrowing my focus I was able to manage my time better. The learning walks were undertaken two times in each classroom for about 10-15 minutes each. The students chose the location in the classroom where they began the tour and took me through a journey of their learning that had taken place over the past few months. By doing so, I recognised the students to be experts in their own learning experiences. The posters, calendars, books, learning targets and other charts on the walls of the classrooms formed the basis of our interaction. I could understand issues such as – what the students did/learn? What they liked and why? How they explored a topic and how was their overall learning experience?

I wanted to document this walk-through field notes, audio and video recordings, but found it difficult to keep notes while on the move. Thus, I audio recorded the discussion with the students during the walk along with taking photographs. The data collected through this method yields thick description of the experiences of the students through their viewpoints and can be effectively used to explore areas of interest for this research study. This method was primarily used during the pilot phase of the research and also provided a way to build rapport with the participants.

#### **4.7.7 Documents**

Apart from the above listed qualitative methods, documents were another form of data collected. The documents that were collected and analysed included those related to the school such as, annual reports, curriculum documentation and student work products including lesson related documents, school newsletters. Further, the school and its staff many times documented its practices, learning and student experiences, thus these documents, photos and videos also formed part of this data. This data provided another opportunity as supportive/counter evidence, for thick description and triangulation of data.

## 4.8 Research Timeline

In this section I detail the timeline for the research study. Being an ethnographic study, immersion into the research site along with the data collection was planned in two main phases following my initial visit to the site. (Table 4.2)

| S. No                     | Phase                  | Total Duration   |
|---------------------------|------------------------|--|
| 1                         | Initial Visit to NELCS | 3 days (11 <sup>th</sup> – 14 <sup>th</sup> March 2013)                |
| 2                         | Pilot Phase            | 4 weeks (29 <sup>th</sup> April – 24 <sup>th</sup> May 2013)           |
| 3                         | Main Phase             | 11 weeks (16 <sup>th</sup> September - 27 <sup>th</sup> November 2013) |
| Total time spent at NELCS |                        | ~ 15 weeks across two academic years                                   |

**Table 4.2:** An overview of the research phases for this study

The initial visit to NELCS was made to see if the site was suitable, get necessary permissions and plan overall dates for the pilot study. This has been discussed in a previous section about the site. Though this visit was just to check the suitability of NELCS as a research site, my presence at the school for 3 days allowed me to observe various activities. This helped me plan the research phases and data collection plans along with giving me an opportunity to get acquainted with the staff and the practices at NELCS. A brief list of activities observed/attended:

- Observed various classrooms
- El Sistema rehearsals
- Attended an Instructional round led by K2 class teacher
- Met the Head of the School and Principal
- Briefly talked to the Classroom teachers - got to know their schedule, lesson plans
- Attended a half-a-day professional development session for their staff, to which I was invited.

## 4.8.1 Pilot Phase

The pilot study was conducted at NELCS for a duration of 4 weeks between 29<sup>th</sup> April - 24<sup>th</sup> May 2013. After obtaining official permissions from the Head of School and the Principal, along with the consent of the participants, I had complete access to all classrooms and activities. The main objectives for this phase were -

- a) To gain trust in relationships at the site and develop greater contextual sensitivity
- b) Check the instruments i.e. use of conceptual drawings, interview questions, observation techniques and use of video and photos.
- c) To assist in designing the later research stages – i.e. developing the research plan for the main study, narrowing and clarifying the initial categories/themes, interview questions.

Becoming familiar with the school and the staff, I started observing various classrooms (K1 to Grade 6). During these interactions, I introduced myself as a researcher, here to observe life at NELCS and practices of creative teaching and learning. Thus, I observed all different types of activities across the school and informally interacted with the staff and students whenever possible throughout the duration of the pilot study. Normally, my day at NELCS began around 8:45am when I started my observation at one of the classrooms and went on till about 5 pm. I often shifted between 2 or 3 classrooms in a day trying to cover various activities taking place across the school. These activities included – LTME classroom lessons, field work trips, other classroom activities, El Sistema orchestra rehearsals, sectional sessions and performances.

The pilot study was my first experience of ethnographic fieldwork. I was deeply focused on gaining the trust of the participants, building relationships and getting comfortable as I immersed myself in the site. Delamont (1992) describes going into the field as a series of stages. Firstly, being aware of everything, then beginning to select and from those selections finding something of particular interest which is often ‘signalled’ finding out how to ‘look’ at what is unfolding and being aware of paradoxes. Through the pilot study I followed these stages.

Hume and Mulcock (2004) argue that there is both a tension and balance in research. It means having a both/and, and, either/or positioning; being part of and being outside; being part, in order to gain access and understanding, but being outside (or stepping outside) in order to reflect, identify and analyse. Maintaining both positions is difficult because having both means not being fully either. But, I consider that ethnographic fieldwork entails ‘being part of’ the social



interaction which involves building relationships in order to observe and record information which is of interest to the researcher. Being part of the site/school, finding my role and building these relationships as a researcher and asking questions was an initiation for me which involved a great deal of emotional understanding. Despite all the preparations that I tried to do beforehand, I conclude that this process cannot be planned for, or strategized, but has to be intuited, experienced and 'lived' by the ethnographer. But at the same time, I kept mindful of the tensions pointed above along with not getting too close to the participants. Overall, the pilot phase allowed me as a researcher to understand and experience this.

I collected data through various methods outlined earlier and constantly reflected on it to refine the process of data collection. The following table lists the data collected during this 4- week phase.

| S. No | Type of data collected during Pilot Phase | Participants  |
|-------|---|---|
| 1     | Observation with Field notes              | <ul style="list-style-type: none"> <li>- All Grades from K1 to Grade 6 classrooms</li> <li>- As pilot phase progressed I started to focus on Grades 2, 4 and 5.</li> <li>- All the three El Sistema Orchestras at this school and other music sessions</li> <li>- As pilot phase progressed I started to focus on the music sessions and rehearsals where participants from Grade 2, 4 &amp; 5 were present.</li> </ul> |
| 2     | Video Recordings                          | Various activities across the grades observed   |

|   |                            |  |
|---|----------------------------|--|
| 3 | Semi structured Interviews | <ul style="list-style-type: none"> <li>- 5 classroom teachers (K1, Grade2, Grade3, Grade4 and Grade 5) <ul style="list-style-type: none"> <li>- Head of School and Principal</li> <li>- Senior Editor (Specialist)</li> </ul> </li> <li>- El Sistema programme Director and one resident artist</li> <li>- Informal discussions with students from various Grades</li> </ul> |
| 4 | Photographs                | <ul style="list-style-type: none"> <li>- Documenting the various classrooms, School corridors, student work and activities.</li> </ul>   |
| 5 | Conceptual Drawings        | <ul style="list-style-type: none"> <li>- Three Classroom teachers</li> <li>- One El Sistema resident artist</li> <li>- One student (Grade 4)</li> </ul>  |
| 6 | Learning Walks             | <ul style="list-style-type: none"> <li>- With One Grade 2 and one Grade 4 student</li> </ul>   |
| 7 | Documentation              | <ul style="list-style-type: none"> <li>- Student work</li> <li>- School Annual Reports</li> <li>- Student collaborative learning expedition related products</li> </ul>  |

**Table 4.3:** List of data collected during Pilot Phase

As I immersed myself in the various activities and learning experiences at NELCS I started to observe and identify various contexts where I chose to focus and look for possible critical events and critical incidents as defined by Sikes, Measor and Woods, 1985 and Woods 1993. I used the framework (discussed in the next chapter) that I developed from literature as a lens to identify these contexts. Some of these contexts identified during the pilot phase are listed below:

- i) Collaborative work during the LTME lessons
- ii) Book group reflection discussions
- iii) Peer critiquing, self and peer assessments

- iv) The wide variety of experiences through the expeditions the students undertake (including fieldwork for research questions they generate and celebration of learning)
- v) Students interactions with external facilitators/ experts other collaborators
- vi) Listening Project
- vii) El Sistema peer learning and collaborative learning activities

Since the pilot phase was conducted towards the end of the school academic year 2012-2013, all the participants were generally able to reflect on the current school year. Most of the learning expeditions were in their last phase and I was able to observe collaborative student work at later stages of an expedition and project work. Further, students had learnt many new pieces of music across the year and were rehearsing for their big performances planned across the summer.

### **Challenges during pilot phase leading to alterations**

Through the pilot phase, I was able to develop trust and skills as a researcher along with identifying contexts of learning experiences through which I planned explore the research questions for this study. I discuss below some of the **challenges and difficulties that I** experienced along with ways I planned to cope with them during the main study.

- a) Gaining trust of the students.** Students at NELCS were used to seeing visitors and researchers observe their classrooms as it was a common occurrence. I felt that this was in general beneficial since it provided me a way to easily integrate. But the challenge I noticed was that although students were used to having adults and visitors it was not for prolonged periods of time. Thus, it took students a few weeks to realise and believe that I was not going to go away after a few hours or days of observation. As time progressed, they seemed more natural and open to conversations than before. Further, my presence at various activities, such as – rehearsals, fieldwork and discussions helped me gain trust and develop relationships. Overall, through my experience during the pilot phase, I was able to overcome the challenge of gaining trust of the students by experiencing the culture at NELCS closely. I was not only just overtly observing classes but I also began to know and get a peek into the participant's stories, their perspectives and lived experiences.
- b) No common language about transformation.** The school as well as its El Sistema programme aims to provide transformative experiences to the students through their varied practices. But, the term 'transformation' was not part of their common language at the

NELCS community. On the one hand this made it difficult to directly explore the concept of 'transformation' but on the other hand it made me realise and appreciate the complexity and embedded nature of the change/ transformation taking place through the teaching & learning practices at the site. I needed to be clear and aware of not being judgmental or evaluative and/or searching for 'proof' or 'evidence' of transformation or try to derive any 'cause and effect' relationship about transformation. Thus, I needed to be aware and develop appropriate methodological strategies to explore the lived experiences of the participants through which I aimed to explore the concept of transformation through arts-infused creative learning processes, while being authentic to the practices at the site. To overcome this challenge of no common language about transformation, I decided to develop a framework that I could use to explore transformation at this research site (discussed later in Sec 5.3).

- c) *Need for fine-tuning data collection approaches.*** I successfully tested various data collection techniques such as conceptual drawings and learning walks. But, I realised the need to frame my questions in a better way during my discussions with the participants in order to be able to go deeper into their experience, and explore the elements of transformation. To overcome this challenge, I decided to employ various data collection strategies such as, using a 'now' and 'then' framing during the main study simultaneously through classroom/ expedition activities.
- d) *Narrowing focus and sample.*** I found that I needed to narrow my participant pool for the main study in order to specifically answer the research questions. For the pilot study, I wanted to explore the whole school and get immersed in their practices and culture and hence, interacted with all teachers and observed many classrooms across K1 to Grades 6. This did give me a better understanding about the site and its practices along with developing rapport and trust with the staff and students. I managed to collect a lot of raw data and more importantly gained experience with handling such a process. This was beneficial, but a more focused approach for the main study was required. It was becoming difficult to follow the lived experiences of all the students and staff across the whole school. Further, the amount of data generated was increasing at an enormous rate which would perhaps have a drowning effect. Encountering this challenge, I realised the need to narrow the focus and participant pool for the main study.

## 4.8.2 Main Phase

The main study was conducted at NELCS for a duration of 11 weeks (16<sup>th</sup> September - 27<sup>th</sup> November 2013); thus, the overall the duration for the main study of study was almost three times longer than the pilot phase. The main study was conducted during the beginning of the next academic year (2013-2014) following the pilot phase. This was planned to have some sense of continuation between the pilot and main phases and be present in the site during a different term.

The new academic year had brought with it lots of changes at NELCS. The school was approved by the State for additional students and Grades i.e. increase in student numbers and Grades to include middle school. Thus, the school had almost doubled in size (172 to 320 students) which resulted in a lot of logistical changes for the school and its staff. One of the main changes was the need to find an additional location to house grades K1 to Grade 2. Thus, a new location was leased by the school administration at a walking distance of about 7 minutes from the main school. This also meant changes in the El Sistema rehearsal schedules, since the same resident artists moved across the two school sites.

As mentioned in the previous section, after the pilot phase changes were made to the participant sample to be more manageable and provide a focused environment. I chose to focus on Grade 3 and Grade 5 classrooms (ages between 7-12 years respectively). The main reasons for this choice is detailed below -

- a) I chose to follow the same students that I began to closely observe during the latter phase of the pilot study i.e. Grade 2 and Grade 4 students (aged 7-12 years). These students in the new academic year were in Grades 3 and Grade 5 respectively along with a few (2-4) new students in each grade. Thus, I was able to develop deeper rapport with the students, since they had already started to become comfortable with my presence during the pilot phase.
- b) I had also developed good relationships with both the selected classroom teachers during my pilot phase. The Grade 5 teacher was previously the Grade 4 teacher during my pilot study and the Grade 3 classroom teacher had taught Grade 5 during the previous year.
- c) With the changes at the school in the new academic year especially addition of a new location, I found it easier to stay in one of the locations rather than continuously travel between the two every day. Thus, I stayed at the main school which housed Grade 3 – Grade 7 due to convenience and visited the other site only when needed.

- d) I noticed that the new location had many new staff and there were many logistical issues they faced continually. Everyone was still settling down and the school culture and practices were evolving at the new location. Thus, I found it better to focus on the Grades at the main school site for the main phase of this research study.

The overall data collection methods were the same as pilot phase and included, observation with field notes, video and photography, semi-structured interviews/discussions, conceptual drawings and documents. As the study progressed, I chose to follow some specific students from Grade 5. This group of students were selected through purposive sampling but included a good balance of gender (3 girls and 3 boys) and the level of achievement in academics and music. Further, among these selected students, two were new to NELCS i.e. one had just joined NELCS in Grade 5 and the other had joined the previous year in Grade 4. Also, I had developed good rapport with these students and had gained their trust. Thus, during all the activities I observed, I kept note of the selected students, but this did not preclude me from interacting and observing other students. It in turn gave me an opportunity to collect focused data about one set of students.

Further, during the main study I chose to focus mainly on the Dudamel Orchestra, which is the most advanced orchestra at NELCS and consist of students from Grade 4 – Grade 6 who have been with the school at the minimum for around 2 years. Thus, most of the Grade 5 student participants belonged to this orchestra. I also followed the new students in Grade 5, who were in a new orchestra as they began learning music and a new instrument.

## **4.9 Ethical Considerations**

Throughout the research study, I have considered how every step, right from the research purposes, methods employed, data collection and analysis to the research writing/reporting abide by the ethical principles and practices. I followed the Code of Ethics and Conduct set out by the British Educational Research Association (BERA, 2011) as well as the ethics code of the American Educational Research Association (AERA, 2011) since the research site was in the United States. Both BERA and AERA have similar frameworks which were adhered to and included issues regarding respect, confidentiality, informed consent, safe guarding, conflicts of interest, and all other relevant issues were fully considered. The University's Ethics Committee

granted ethical clearance for this research project in April 2013 (Ref No. D/12/13/18) (**Appendix – 8**).

Obtaining informed consent was undertaken through the approved information sheets and consent forms (**Appendix – 8**). These were distributed to all the staff and students at the school (K1 to Grade 6) and were accompanied by a covering letter from the Head of School. Further, the school had already gained a general permission from all parents for documenting learning at the school through photographs, video recordings and any work product. For my research, I gained written consent from the parents in lieu of the students and the staff through these forms. Across the first week of pilot study (Spring Term, 2013), I received the signed consent forms from all the staff and the students. These consent forms allowed me to observe and collect data from all the grades across the school through all their various activities. The modes of data collection included, observation, photographs, video recording and access to all/any documentation or work products of the students including those collected by the school.

Records of all the data collected were stored in a secure place and electronic information could be accessed with login credentials (username and password). I have ensured that the names of the participants in all the writing was altered to maintain privacy and anonymity. Instead of using alphabets or symbols I chose to use a different name as a pseudonym for every participant.

Throughout the research study, after initial written consent was gained, process consent was gained throughout the study in order to establish the participant was happy and consenting to the data collection. (e.g. discussion or interview being recorded through audio and or video). Additionally, the students were informed that the video data was purely as a record and would not be published or open to public viewing. The participants were informed of their right to withdraw from this study without any or no reason, but this was not exercised by any participant.

#### **4.10 Quality of Research**

Like all other research, it is important to consider the quality of research especially when the study is framed in an interpretive context. Lincoln and Guba (1985) argue that for qualitative research, rather than the commonly accepted criteria of validity, reliability and objectivity - it is necessary to establish the trustworthiness of studies in the naturalistic paradigm. Trustworthiness, they assert is the extent to which the researcher can "...persuade his or her

audiences (including self) that the findings of an enquiry are worth paying attention to, worth taking account of” (p.290). Trustworthiness also meant that I needed 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). Bassey (1999: 75) puts trustworthiness as “the ethic of respect for truth” and lists four stages of the research process at which trustworthiness should be built: data collection, data analysis and interpretation, and reporting the research. I followed the criteria for trustworthiness by Lincoln and Guba (1985) which suggested that considering the study’s credibility, transferability, dependability and confirmability as one way of interpreting and subsequently addressing ‘validity’ and ‘rigour’ in qualitative research.

**Credibility** is an essential principle in ensuring quality of research. Firstly, I addressed credibility by my prolonged engagement and persistent observation (Bassey, 1999; Ely et al., 1991). The research design, use of ethnography and my prolonged presence at the site allowed for this. Flick (2007) noted that triangulation in ethnography was a way of promoting quality of research, ‘good ethnographies are characterised by flexible and hybrid use of different ways of collecting data and by prolonged engagement in the field’ (p.89). Many researchers (Patton, 1990, 2014; Denzin, 1978; Flick, 2007) have categorised different types of triangulation that offer strategies for reducing systematic bias and distortion during data analysis and thereby increasing credibility. These often have many overlaps or alternate meanings or categorisation and include, Triangulation of data (use of multiple data sources and comparing and cross checking for consistency and contrasts), Analyst or Investigator triangulation (discussion with independent peers or co-investigators to review findings), Theory or perspective triangulation (using multiple perspectives to interpret same data) and Methodological triangulation (use of multiple methods for same research problem or multiple methods of analysis).

For this study, I ensured credibility through the following ways –

- i) Use of multiple data sources of data collection to provide a more detailed account of the phenomenon being researched.
- ii) Checking for consistency of what participants say about the same thing across data sources.
- iii) Comparing, contrasting and appreciating multiple perspectives or points of views within the data.



- iv) Providing an audit trail or detailed account of the research design and procedures within the writing (thesis), so that the readers could determine for themselves the credibility of the study (Neuman, 2000).

**Transferability** refers to the extent findings from the research might be more widely applied. The issue of generalisation is considered a challenge of a case study design. Arguing against the criticisms, Yin (2003) suggests that the purpose of case study is in 'analytic generalization' and not statistical generalization. Stake (1995) also argued that with case studies researchers make "naturalistic generalizations", which develop by recognising similarities of objects and issues within a context and "by sensing the natural covariations of happenings" (Stake, 2000, p. 22). Thus, transferability in qualitative studies refers to the richness or depth of descriptions involved. Noting that interpretive researchers do not aim to present data for generalisation but acknowledging that some of their findings might have value to other contexts. Thus, in this qualitative study of one case (the school), the aim is to provide the widest range of information and perspectives on the research context and the detailed description of the phenomenon (transformation through learning) being investigated.

**Dependability** shows that the results of the study have consistency and could be repeated in other settings (Lincoln and Guba, 1985). They suggest use of an 'inquiry audit' (p.317) in which reviewers examining both the process and product of research for consistency. I address this by clearly demonstrating the thinking and rationale for decisions made throughout the research processes. This includes the research design and its implementation, operational details of data gathering and reflection.

**Confirmability** in qualitative research is comparable to objectivity (Shenton, 2004), but qualitative research in itself is subjective and relies on interpretations. Shenton (2004) further explains that steps must be taken to help ensure as far as possible that the findings of the research are the result of the ideas and experiences of the participants rather than the characteristics and preferences of the researcher. Thus, confirmability can be considered as a degree of neutrality or the extent to which the findings of a study are shaped by the participants and not researcher bias, motivation or interest. In this study, use of triangulation along with providing a transparent account (an audit trail) for scrutiny that traces the stages of analysis and interpretation of the data has been used to ensure confirmability.

Further, Miles and Huberman (1994) consider that a key criterion for confirmability is the extent to which the researcher admits his or her own predispositions. To address this, I have ensured that my beliefs underpinning decisions during the research study have been noted within the writing. Further, as a researcher who can be technically termed as an 'outsider' to NELCS, I acknowledge that through the period of my continuous interaction with the site and relationships that I made with the participants I became closer towards the insider end of the continuum. I believe that it is necessary for a researcher to integrate into the site and become more like an insider to effectively understand and be sensitive to the experiences and perspectives of the participants. At the same time, I needed to maintain a non-biased attitude and remain reflexive. Sandelowski & Barroso (2002) noted that being both reflective and reflexive is a good sign within a study as reflexivity is a hallmark of excellent qualitative research and it entails the ability and willingness of researchers to acknowledge and take account of the many ways they themselves influence research findings and thus what comes to be accepted as knowledge. Thus, being reflexive throughout the research process along with use of reflective notes helped me address confirmability.

## **4.11 Chapter Summary**

In this chapter, I stated the focus of my research on transformation through teaching and learning and the development of research questions. I have clarified my theoretical framing, situating this study within the interpretive paradigm, the overall methodological framing as a case study and the methodological approach as ethnography. I have outlined how I incorporated various data collection methods within the ethnographic approach including observation, interviews, photography, video recording, learning walks and conceptual drawings. The two major phases of my study, pilot and main were detailed along with the rationale for decisions made therein. I also have made a case for the steps taken to ensure the quality of this research along with the ethical considerations that have been built into this study. Thus, having laid the methodological foundations in this chapter, I present my analytic journey that led to the findings of this study in the next chapter.

## CHAPTER FIVE

# 5. ANALYTIC JOURNEY

### 5.1 Introduction

In this chapter, I discuss my analytic journey through this study by presenting key ideas and approaches which I link with the research question and data collection strategies. I begin this chapter by presenting the general data analytic process within an ethnographic research. Then I present the rationale for developing a framework which outlines the conceptualisation of transformation, its iterative development and its implication on the analytic process. Subsequently, I detail the two-step analytic approach undertaken for this study along with the use of thematic analysis as the main data analysis technique. Next I explain the analytic steps undertaken for each type of data collected followed by the coding and memoing process that led to the development of the themes. Thus, overall in this chapter I detail the data analysis process adopted along with clarifying my choices and steps I took within the analytic approach.

### 5.2 Analytic process

Going from raw data to the research findings and arguments involves a process of data organisation and analysis. Huberman & Miles (1998) argue that the organisation and condensation of information is inevitable in the data display stage before taking further action or drawing conclusions. In the following section, I discuss how I decided on my approach to data analysis, and look at some common features of qualitative analysis of which the characteristics can be seen in my analysis approach.

Overall, data analysis for this study has been shaped by the fact that this study is ethnographic and informed by the understanding of transformation developing throughout the study. My conceptualisation of transformation is discussed Chapter 2 previously (sec 2.4), but briefly, 'transformation' is seen to be embedded within the learning process and as a developmental process. Further, it is grounded within the argument that education should be more about inspiration than information, along with the area of transformational teaching (Slavich and

Zimbardo, 2012; Rosebrough and Leverett, 2011) which arises from the interrelated aspects of the contemporary approaches to teaching, learning and classroom instruction.

Still, transformation is an abstract term, which can be situated within various areas of literature (As discussed in section 2.1 chapter 2). I realised that as the study progressed I needed to continuously reflect and develop the understanding of what I was researching. Thus, I found the need to develop a framework representing the elements/behaviours related to transformation. This iterative development of the framework was adopted as a method that reflects the 'funnel' structure of an ethnographic research, as described by Hammersley and Atkinson (2007):

Ethnographic research should have a characteristic 'funnel' structure, being progressively focused over its course. Over time the research problem needs to be developed, and may need to be transformed; and eventually its scope must be clarified and delimited, and its internal structure explored. In this sense, it is frequently only over the course of the research that one discovers what the research is really 'about', and it is not uncommon for it to turn out to be about something quite remote from the initially foreshadowed problems (Hammersley and Atkinson, 2007, p. 160).

Thus, the developed framework (discussed in the following section 5.3), provided a lens which informed the direction/focus of the ethnographic study and the data analysis that was undertaken.

The object of an *ethnographic research* is “to put pieces together to create a puzzle picture (analysis) and then to tell the reader what [I] see (interpretation)” (Hesse-Biber & Leavy, 2006, p.263). Therefore, long-term involvement and thick description that are close to the lived experience of participants are emphasised in ethnography (Jeffrey & Troman, 2004; Merriam, 1998). Although mostly presented as a linear, step-by-step procedure, the research analysis is an iterative and reflexive process. Data analysis does not occur only when themes and codes are determined and interpretation made. As Stake argues (1995, p.71), “There is no particular moment when data analysis begins. Analysis is a matter of giving meaning to first impressions as well as to final compilations”. This holds particularly true for ethnographic research. Further, as ethnographers collect quite large amounts of data of various kinds from different sources, analysis involves seeking relationships across the whole corpus. The aim, as Hammersley and Atkinson (2007) point out, is to compare and relate what happens at various places and times in order to identify stable features (of people, groups, organisations, etc.) that transcend

immediate contexts (p. 163). Within this ongoing process continuous effort is made to discover “more layers of the setting” and to “sophisticate the beholding of [the world]” (Stake, 1995, p.43). Thus, I took a two-pronged analytic approach that reflects my journey through this ethnographic research. -

- i) Development of the framework representing elements/behaviours related to transformation
- ii) Inductive analysis of data using thematic analysis

In the following sections I detail each of these analytic processes used towards answering the main research question *what are the teachers and students lived experiences of transformation through arts infused creative learning?*

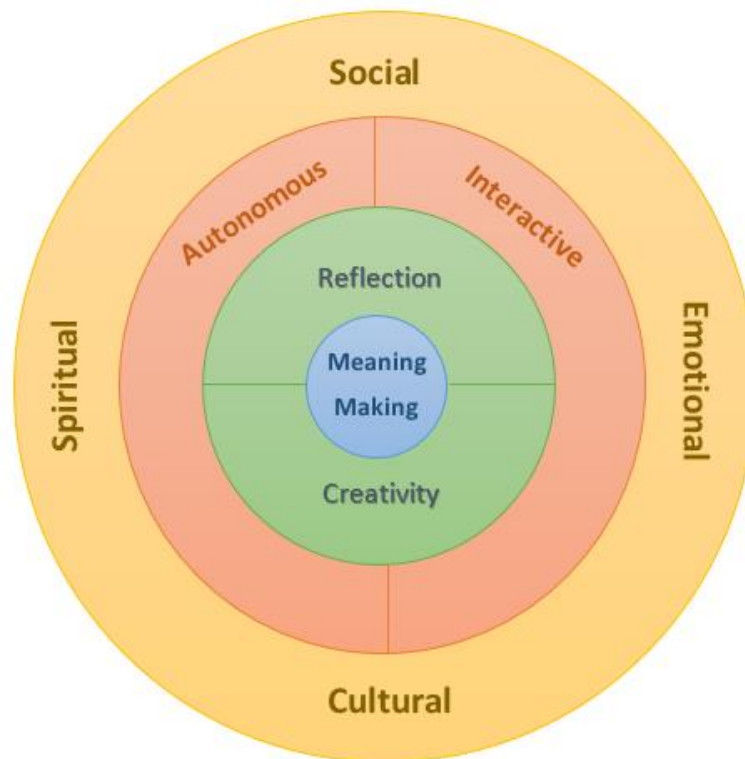
### **5.3 Development of a framework**

The development of the framework reflecting elements/behaviours related to transformation was undertaken iteratively. As mentioned previously, the literature defined the initial conceptual framework relating to transformation drawing on various areas of transformative learning, transformational teaching, transformative pedagogy and education. I kept the overall framework fluid through the initial stages of my research. But as I entered the site during the pilot phase of the research, my experiences and realisation of key issues such as, transformation not being part of their common language and the challenges relating to the embedded and complex nature of transformation within the learning experiences, prompted me to revisit the literature and has influenced the development of this framework. The continuous development of framework during my time at the research site, is what I refer to as the iteratively developed framework in this thesis. The development framework resulted in many iterations but here I discuss the two main versions that illustrate this iterative development process.

#### **5.3.1 Initial framework**

My initial framework to conceptualise transformation was influenced by the literature. Meaning-making is positioned as the central focal point within the transformative learning literature (Mezirow and Associates, 1990) and reflection as the process which allows an individual to construct and reconstruct meaning. Alternatively, literature in the area of creativity and creative learning also lends to the meaning-making process and transformation through actions such as, being open to new possibilities, to play with ideas, to experiment and to modulate their reactions

to fast-changing environments. Going further, meaning-making has two facets, Autonomous and Interactive. Here, individual/personal meaning making through critical thinking, critical reflection, and self-directed learning formed part of the *autonomous* aspect. The *interactive* includes group learning and working collaboratively. All this is situated in a variety of elements namely Social, Emotional, Cultural and Spiritual; thus, drawing from literature addressed previously section 2.2 (Freire, 1984; Dirkx, 2000; Tisdell, 2005; O’Sullivan, 1999) about transformative learning and teaching that situates the individual within and as part of a larger cultural or societal perspective and at the same time acknowledging the emotional aspect of meaning making. This includes various aspects such as, authentic relationships, being aware of one another, community and other political implications of these elements. The spiritual element is relatively new to literature and includes aspects ranging from contemplation, mindfulness, to planetary consciousness and ecological connection. Overall, transformation is viewed as being embedded within and through meaning making of learning experiences.

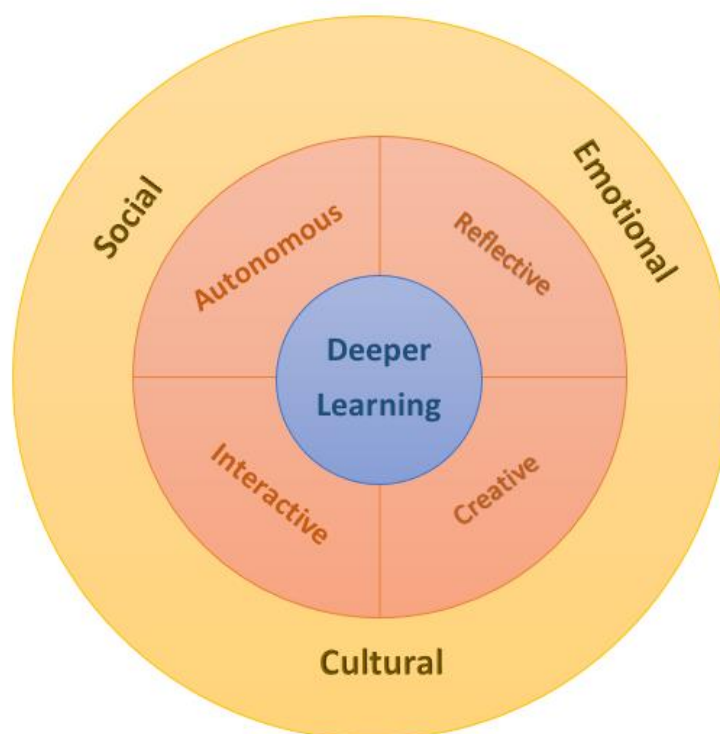


**Figure 5.1:** Initial Framework – A visual representation of elements/behaviours relating to transformation (source: author)

This initial framework is represented visually above incorporating the various elements within layers surrounding meaning-making. I have tried many such versions of visual representation of this framework throughout the study. Though the above might not be the most accurate visual representation of these elements, it reflects one version of this initial framework in a comparatively simple two-dimensional form.

### 5.3.2 Iteratively developed framework

As the study progressed, my experiences at the research site shaped the development of the framework. It made me revisit literature and my continued presence in the field during the initial research phase led me to take my observations (experiences, actions, practices etc.) relating to the school into perspective to allow for the development and understanding of transformative learning experiences. The version below represents the elements/behaviours of transformation after undergoing this iterative process.



**Figure 5.2:** Iterative Framework – A visual representation of framework representing elements/behaviours relating to transformation after the iterative process (source: author)

The embedded nature of transformation within learning experiences is evident with deeper learning being at the centre. Deeper learning has been reviewed in the literature previously (sec 2.6). Briefly, it is linked to the concept of profound transformational learning and conceptions of transformational knowledge (Hermida, 2015), such as, meaningful learning (David Ausubel, 1963,1978), transfer of principles and attitudes (Jerome Bruner, 1966, 1977), teaching for understanding (David Perkins, 2009; Tyna Blythe, 1998), learning that lasts (Mentkowski, 2000), effective learning (De Corte, 2010). The Alliance for Excellent Education defines deeper learning as the process of preparing and empowering students to master essential academic content, think critically and solve complex problems, work collaboratively, communicate effectively, have an academic mindset and be self-directed in their education (deeperlearning4all.org). The focus on deeper learning within my framework was due to my experiences at the research site, its practices and programmes (EL, LTME, SEL and EI Sistema). This led me to revisit literature relating to these programmes as well as transformative education.

The focus of expeditionary learning and learning through music expeditions undertaken by the students at NELCS allows them to connect new information with existing information to grasp meaning as a whole, allowing them to understand the material as opposed to focusing on remembering only 'fractured pieces' of information. The focus on deep learning, making connections, rather than surface learning at NELCS is the reason that I brought deeper learning to the core of transformative learning experiences in the framework.

The other elements such as Reflection, Autonomous, Interactive and Creative continued to remain within the framework and form the surrounding layer around deeper learning. The Social, Emotional and Cultural elements also continued to be part of the developing framework. But, the spiritual element though present in literature was ignored since it provides an alternative conception and viewpoint of transformative learning (as explained in literature) and comes with its own vocabulary and practices that it encompasses. Further, these conceptualisations and practices were absent in the school and thus, I chose to proceed without incorporating 'spiritual' into the final framework.

This framework was used as a lens during my ethnography fieldwork at NELCS as well as an analytic frame for data analysis. This involved, using the elements/behaviours from the above framework to identify learning contexts. These learning contexts in turn became the focus,



within which critical incidents and critical events were identified. For example, the learning context of book groups were identified using the framework. The book group included both autonomous and interactive activities (reading book by oneself and interacting with each other); it involved reflecting on the meaning of the story making connections with social, cultural and personal elements. During the analysis process, this framework provided a way to analyse, present and discuss findings in relation to these identified elements (discussed in the section 6.4 below). At the same time, it is necessary to note that I chose not to utilise this framework as a strict category for code development or analysis, so that, the objective of exploring lived experiences was not limited to any specific set of ideas and remained inductive in nature.

## 5.4 Development of thematic findings

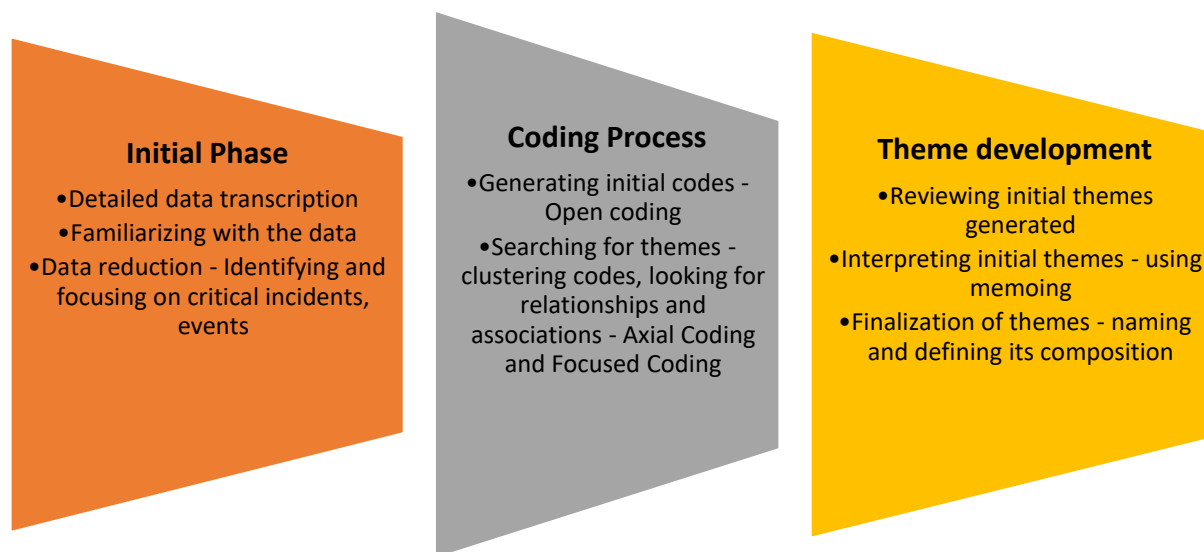
As discussed in section 5.2 above, the analysis process for this study was undertaken in two ways, firstly, through the iterative development of the framework relating to the elements/behaviours of transformation (described in section 5.3 above) and, secondly, by inductively analysing the data collected through this ethnography using thematic analysis. Here I discuss the methodology of the latter.

My main research question is: What are the teachers' and students' lived experiences of transformation through arts and music infused creative learning at North East Lab Charter School? As the study progressed, I realised that the above main research question leads to many smaller questions (discussed in section 4.2). All the questions aim to explore *transformation through learning* at NELCS through the lived experiences of the participants. For example, they focus on characteristics of their learning experience and the strategies employed. This connects with the conceptualisation of transformation through learning adopted for this study, which is grounded in the literature on transformative teaching based on interrelated aspects of contemporary approaches to teaching, learning and classroom instruction that include deeper learning. Thus, as the research questions developed I focused on a simplified version of the main question which encompasses all the smaller questions – What does transformation through learning at NELCS involve?

The analysis was undertaken using an inductive approach, where themes identified are strongly linked to the data themselves (Patton 1990). This bears some similarity to grounded theory. Though I was initially inclined to employ grounded theory (based on Charmaz, 2006) as a

method of analysis, I decided against it. This decision was not due to the incompatibility of grounded theory, but more due to the wide exploratory research question. So, due to the exploratory nature of the study researching an abstract/invisible concept of transformation embedded within learning experiences, I found the need to develop a framework (discussed above) that was utilised as a lens while conducting ethnography. I found that selective use or modified use of grounded theory would not be an appropriate mode of analysis. Further, theory-building (a primary focus of grounded theory) was not the main focus for this research. Thus, I chose thematic analysis as the main strategy for data analysis.

To elaborate further on the inductive data analysis, I have provided a diagrammatic representation (below), which is followed by an explanation of the process in the subsequent sections. I note that though the following diagram represents three distinct stages within the analytic process, it is important to note that each stage has overlaps, iterative revisions and follows a more characteristic ‘funnel’ structure of an ethnographic research (Hammersley and Atkinson, 2007) than a linear one.



**Figure 5.3:** A diagrammatic overview of the data analysis process

### 5.4.1 Initial phase

For this study this initial phase began soon after entering the research site (NELCS) and combines both organising, sorting, transcribing and familiarising with the data and data

reduction. I decided to use the qualitative software NVivo during data analysis. This was for several reasons. Firstly, NVivo is a highly adaptable platform within which data can be stored in various formats (images, text/notes, audio, video recordings etc.). Thus, it served as a central location where all the types of data (photographs, interviews, field notes and video) were catalogued and transcribed (where needed, e.g. audio and video recordings). Secondly, the coding process was undertaken simultaneously allowing the codes to be mapped across data sources. Finally, this provided a method to view the whole data corpus allowing glimpses of data from different angles enriching and strengthening the analysis process.

During this initial phase, the detailed data transcription of various types of data collected was undertaken and stored within the NVivo project file for this study. Then I began familiarising myself with the data collected. This included repeated reading and re-reading of the data collected throughout this initial phase. Throughout the initial phase (which spans across pilot study and main study), I used the developed framework (Sec. 5.3.2) to help identify and narrow the data collected also termed as data reduction discussed below.

#### *5.4.1.1 Data reduction*

Data reduction in this study arises from the characteristic 'funnel' structure of an ethnographic research, described by Hammersley and Atkinson (2007) (discussed previously in sec 5.2). My progressive focus during the course of my fieldwork was determined by the use of the framework as a lens (discussed previously in sec 5.3) and the need to reduce the participant pool to make the data collection manageable. This resulted in my decision to focus on certain learning contexts-

##### Learning Expeditions

- a. Don't Be S-s-scared: The Truth About Snakes (also referred as snakes expedition) - (Grade 2)
- b. Whose Story is It? The Wampanoag and the Pilgrims - (Grade 3)
- c. What's Up There?: The Solar System and Beyond (also referred as the solar system/universe expedition) – (Grade 4)
- d. Going North: African American Journeys (also referred as the blues expedition) – (Grade 4)
- e. Heating Up, Chilling Out: Global Climate Change (also referred as the climate change expedition) – (Grade 5)

Within each of these above-mentioned expeditions other observed contexts were included, such as – fieldwork experiences, hands-on projects, expert visits and collaborations, group work, presentations and performances.

- i) Book Group discussions and reflection – (Grade 4 – Grade 5)
- ii) Music rehearsals and performances
- iii) This included the Dudamel orchestra rehearsals, performances, collaboration with other artists/musicians and peer learning.
- iv) Reflection activities – (Grades 2, 3 and 5)

These learning contexts are described in detail in **Appendix – 5**.

The focus on these learning contexts meant that I looked for critical incidents and critical events (Sikes, Measor and Woods, 1985, Woods 1993) (sec 4.7.1) within these contexts. Though I was initially planning to focus my analysis by identifying and listing numerous individual episodes within these contexts, I found that my data collection and field notes overlapped across these events and I could not delineate episodes. Further, ethnographic research allowed me to take a holistic analytic approach (as highlighted in Chapter 4 sec 4.5) taking into consideration the lived experiences of the participants, myself as a researcher and research instrument along with all the other types of data collected.

#### *5.4.1.2 Analytic approach for each type of data collected*

Here I detail the analytic approach adopted for each type of data collected. This included the process adopted for naming, categorising and sorting the data, followed by the coding approach adopted.

##### ***i) Observations with field notes***

I spent a total of 15 weeks at the school across both the phases of research (pilot and main). As noted previously, observations were recorded through my field notes, which consisted of various components and types such as, jottings that were expanded to descriptive notes with reflection (sec 4.7.1). Each observation field note was coded/identified by the date and the Grade/Orchestra observed. For example, FN\_26.10.2013\_Gr5. All the participants (students and staff) were given pseudonyms. These were initially the first and last letters of their first name but I realised this would not be sufficient enough to ensure privacy of the participants and subsequently changed it to alternative names.

Analysis begins with the researcher/ethnographer mentally asking questions of specific pieces of field note data. Emerson et al. (2011) advise a general list of questions to consider when coding the field notes:

What are people doing? What are they trying to accomplish?

How exactly do they do this? What specific means and/or strategies do they use?

How do people/members talk about, characterize and understand what is going on?

What assumptions are they making?

What do I see going on here?

What did I learn from these notes?

Why did I include them? (p.177)

Further Saldana (2013) suggests including the question – ‘What strikes you?’ This has been expanded by Sunstein and Chiseri-Strater (2007) by suggesting that, fieldworkers during all stages of a project, ask themselves:

What surprised me? (to track your assumptions)

What intrigued me? (to track your positionality)

What disturbed me? (to track the tensions within your value, attitude, and belief systems) (p. 106)

Many of these questions have been in my mind as I wrote my reflections within the expanded field notes. Hence, I continued to ensure that I consider these throughout the analysis process including the development of codes. As a researcher undertaking ethnography these observation field-notes in its entirety (jottings to expanded form) have been considered as a primary source of data.

### ***i) Video recordings***

I had a total of 63 video files from the pilot phase and 153 files from the main study. Most of these videos were recordings of the classroom or orchestra as I observed them. Some video files were taken during students’ fieldwork visits, peer learning sessions, performances and other videos that were recorded by the school staff and shared with me. Each file was identified through its name, which included the Grade, activity and date of the recording, for example, Gr5\_LTME weather inst\_21.10.2013. These recordings were used to provide additional details as I expanded on the field notes. They were transcribed and coded similar to the observation field notes mentioned above. They were not used as the sole or primary source of analysis, but more as a supplementary data that allowed for more detailed observation and capturing nuances that might have not been noted within my jottings (field notes). They provided an

opportunity to revisit the observation recorded as needed throughout the analysis along with ability to triangulate the data across sources.

### ***ii) Semi-structured interviews***

As noted previously, semi – structured interviews were undertaken with staff initially as I built rapport, but subsequently they became more short informal chats or discussions whenever there was suitable time available. These informal chats were recorded within the field notes, the coding and analysis of which is detailed above. Here I focus only on the 22 semi-structured interviews with the staff (classroom teachers, administrators, resident artists). Each of these interviews was coded to identify them using the pseudonym of the teacher along with the date, for example, IN\_Claire\_10.05.2013. I drew from the procedures relating to interview analysis suggested by Hycner (1985) cited by Cohen et al. (2007, p.471). The analysis process employed included -

- transcription (noting not only the literal statements but also non-verbal cues and communication)
- bracketing and phenomenological reduction (setting out to understand what the interviewee is saying rather than what I expect the person to say)
- listening to the interview for a sense of the whole.
- Initial coding (open coding)
- clustering units of relevant meaning (what naturally clusters together?)
- further detailed coding (as part of thematic analysis along with comparing across data sources).

The final point here connects with the overall coding process for this study and followed the process detailed in section 5.4.3 below.

### ***iii) Learning walks***

Data from the three learning walks (previously described in sec 4.7.6) undertaken were in the form of video recordings and field notes. They were analysed following the methods outlined above for each type of data.

### ***iv) Photographs***

Photographs and visual data in this study were used to provide additional perspective, triangulating and strengthening the analysis. They were useful to document and capture experiences and work-done by the participants. I took most of the photographs but I also chose

to include some photographs which were taken by staff members and shared with me. My written descriptions of the composition of the images formed the basis for coding them. Thus, the analysis of the images was undertaken within the context of the other data collected using similar coding process along with linking the images to activities, experiences or events that have been previously identified. Near duplicate photos were excluded.

#### **v) *Conceptual Drawings***

The participants produced the drawings during informal conversations or the semi-structured interviews. This was followed by their explanation about the drawing and any discussion surrounding it or inspired by it during the interview/discussion, which was audio recorded. These recordings were transcribed and analysed alongside the drawings. These transcribed recordings were coded similarly to other data linking the images to activities, experiences or events that have been previously identified.

#### **vi) *Documents***

All the documents that were part of my data were initially separated according to type such as, work-product (drafts and final), lesson worksheets or journals, newsletters and annual reports. They were linked with other data sources such as field notes or video recordings and coded similarly.

### **5.4.2 Coding process**

In this section I detail the coding process adopted for analysing data for this study. I begin by describing the first or initial phase of the coding process followed by the subsequent levels of the coding process that eventually leads to the next step of theme development.

***Initial Coding:*** The process of analysis begins with close reading and the process of identification of themes involves “careful reading and re-reading of the data” (Rice & Ezzy, 1999, p. 258). It is a form of pattern recognition within the data, where emerging themes become the categories for analysis. The initial coding process began with open coding aimed at coding descriptively at the lowest level to reduce the amount of conformity to existing theoretical frameworks. For the coding process, I followed the principles stated by Boyatzis (1998), which is, recognising (seeing) an important moment and encoding it (seeing it as something) prior to a process of interpretation. A “good code” is one that captures the qualitative richness of the

phenomenon (p. 31). The analysis process and questions that aided in development of codes for the primary data source - observation fieldnotes have been detailed previously in sec 5.4.1.2 above. Here coding included descriptive coding (summarises the topic within data in a word or short phrase), process coding (used to detail processes of human action) as well as in-vivo coding (word or short phrase from the actual language found in the data).

Apart from the data reduction (sec 5.4.1.1) that was undertaken as a natural part of this ethnographic research, all the data (field notes, interviews, photographs, documents, transcribed audio and video recordings) was analysed ensuring I was not being selective. Then, the codes suggested by one set of data were used to re-examine other sets of data. The use of the framework was during this initial coding phase was limited to data reduction and did not inform the selection or development of open codes.

**Next level of Coding:** This came from identifying and focusing progressively through – (i) The significant events/activities/interaction (critical events and incidents); (ii) The themes that became significant due to repeated mention by multiple participants which did not necessarily include the exact same phrase but could be an overarching theme/idea seen across participants, while appreciating the different perspectives they afforded to the theme; and (iii) Some specific points raised by the staff or students during the interviews or informal chats. This level can be associated with axial coding which includes grouping the ideas of similar content and looking for relationships/associations between codes to identify overarching codes. Within this recursive coding process focused coding was also undertaken. Focused codes are more “directive, selective and conceptual than the initial codes”. They are used to “sift through” and “synthesize and explain” larger amounts of data (Charmaz, 2006, p.57). The iterative framework was also utilised within this process as prompt for emerging categories and themes, but there was no force fit or development of categories based purely on the elements listed within the framework. Using the framework as a prompt and lens in this research study has been undertaken only to frame the understanding of transformation but the elements identified within it are in essence, broad and open categories allowing for multiple interpretations.

Robson (2002) argues that some data is stronger than others. For example, greater emphasis was given to the data emerging from the direct contact with the participants such as naturalistic observations and informal discussions/interviews rather than the data emerging from indirect contact such as documents. For strengthening the analysis process and ensuring quality I have



adopted several methods including triangulation, reflexivity and clarifying decisions made during the research. Triangulation was established not just by employing multiple data sources allowing for multiple perspectives, but also within the methods and analysis (triangulation has been previously discussed in sec 4.10). This includes use of informal discussions with the participants during or after my observations to ensure that all the views were recorded. Thus, specific choices were made during the fieldwork about the use of one method of data collection to supplement the other in order to provide richer data (such as, using conceptual drawing during interviews). Also, checking for consistency across participants, comparing and contrasting views added strength to the analysis.

### **5.4.3 Theme development**

Thematic analysis is a data reduction and analysis strategy by which qualitative data are segmented, categorised, summarised, and reconstructed in a way that captures important concepts within the data set (Given, 2008 p.867). It is a systematic approach and involves identifying themes or patterns of cultural meaning; coding and classifying data according to themes; and interpreting the resulting thematic structures by seeking commonalities, relationships, overarching patterns, theoretical constructs, or explanatory principles. Thus, a theme can be defined as “a pattern in the information that at minimum describes and organises the possible observations and at maximum interprets aspects of the phenomenon” (Boyatzis, 1998, p. 161). Since a wide range of data sources may be used in a thematic analysis, I was able to include all the types of data collected such as interview transcripts, field notes, information/documents written by participants, historical or site documents (annual reports), photographs, drawings, maps, research memos, and video files.

I followed the overall method/ phases of thematic analysis as described by Braun & Clark (2006). Starting with familiarising oneself with one’s data, generating initial codes, searching for themes, reviewing themes, defining and naming themes followed by writing the report. The initial analysis phase of this process has been previously detailed in sec 5.4.1 and 5.4.2 above. It is important to note that while these steps seem to be linear, analysis is not a linear process of simply moving from one phase to the next. Instead, it is a more recursive process, where movement is back and forth as needed, throughout the phases.

Thus, the analysis involved comparing codes, categories and themes across various data sources led to clustering, grouping and regrouping of codes and categories which subsequently resulted in the initial themes. I followed the abovementioned definition of a theme by Boyatzis (1998). During this process, I noticed many overlaps across themes and some smaller themes for which the data was not sufficient to make them stand out as a theme or become part of another theme. Thus, I narrowed down to the following list of themes:

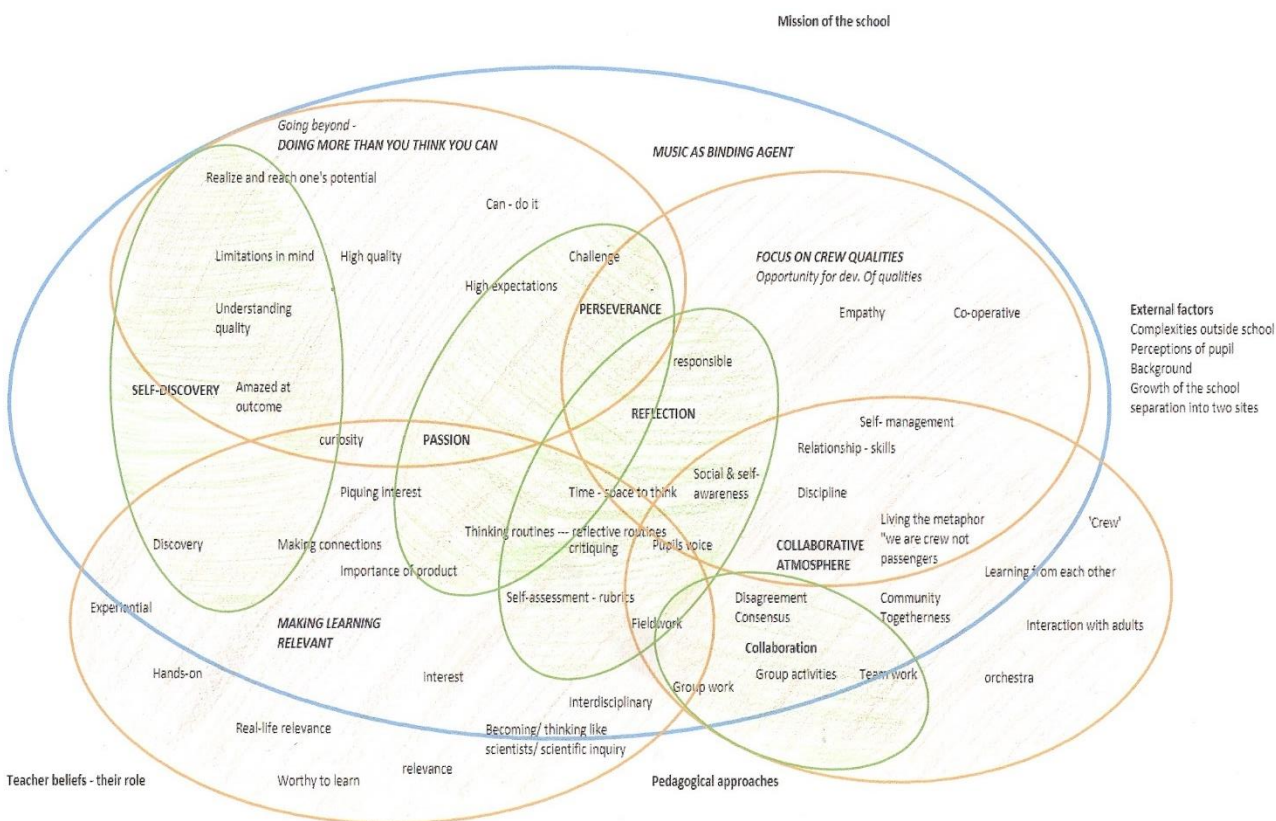
- 1) Doing more than you think you can
- 2) Focus on development of crew qualities
- 3) Making learning relevant
- 4) Collaborative atmosphere
- 5) Collaboration
- 6) Reflection
- 7) Self-discovery
- 8) Passion and Perseverance
- 9) Music as the binding aspect within NELCS culture

I noticed after the initial open coding process that being an ethnographic study, the culture of the school became a large section or category of codes. I had initially viewed themes 1-4 to be related to the culture of school and as the characteristics of the learning experiences. These themes were more complex and went beyond its name/title given to them i.e. 'doing more than you think you can' as a theme explored the lived experiences that bridge the attitude/belief 'you can do more than you think you can' to the student's realisation through their learning experiences. Thus, these themes comprise of various illustrations of lived experiences and not just statements by the participants. The themes 5-8 were more elemental in nature and can be considered as a second layer of analysis. This is due to two main reasons – (a) Themes (5-8) come from the same data as the themes 1-4; and (b) Each of these themes (5-8) can be considered to be present within each of the initial 1-4 themes. Though this layered approach to theme development was not planned, I found this to be a useful/helpful way to go deeper within the lived experiences observed in order to answer the research question which explores transformation through learning. Thus, the latter themes 5-8 are like a subset of the initial themes (1-4). The Memos and notes through my analysis process helped me realise this difference. A representative snippet of this is presented below:

Looking at the themes – I see two distinct types. Doing more than you think you can, Focus on development of crew qualities, Making learning relevant and Collaborative atmosphere all are themes that elaborate lived experiences characterising the practice at NELCS. But is it just the practice or teaching and learning at NELCS? Had I not categorised this differently elsewhere? What am I seeing here?

I realise these themes (1-4) do characterise the overall learning experiences of the participants especially when the focus of the study is based on the conceptualisation that transformation is embedded within the learning experiences, looking at it from a developmental dimension.

The second type - I have started to use the term elements/behaviours of transformation to group the latter themes – Reflection, Self-discovery, Collaboration and Passion and Perseverance. Each of these have limited, often overlapping ideas/sub-themes. The naming of these themes reflects its content directly. An early diagrammatic version of grouping (figure 5.4 below) shows the green circles to be within the larger orange ones representing the first 4 themes. Can they be called stand-alone themes themselves? (June, 2014)



**Figure 5.4:** Visual representation of early analysis showing overlapping/ layered nature of the themes

*Though I have not used the framework representing elements or behaviours of transformation for the inductive analysis by using it as categories for generating codes, I realise I am using similar terms elements/ behaviours relating to transformation through learning for the second type of themes (5-8). This is purely because I find the themes 5- 8 to be elemental in nature compared to the other themes within the overall data analysed. (June, 2014)*

From this figure 5.4 above, it can be seen that many themes overlap. The larger orange circles represent the first four themes from the list and the smaller green areas include the latter themes. As mentioned, the layered approach revealed within these themes was not planned, but I have ensured that I present all the main themes that were evident through the data analysis. It is due to these overlaps that, certain themes (or sub-points illustrating a theme) within the findings chapter might seem comparatively smaller, since it is again addressed within another theme. Nevertheless, the size of the circle/ area of the theme within the above figure is not representative of the importance of the theme but lends more to the elemental nature, depth and at times, complexity of the theme itself. Further, as it can be seen from the eight themes listed above that, there is a repetition of 'collaboration' represented once as the theme Collaborative atmosphere and second more elemental theme of Collaboration. I initially considered keeping these separate but ultimately since the theme collaborative atmosphere encompasses the act of collaboration within it I chose to merge the two themes. Hence, during my presentation of findings I aimed to represent the elemental nature of collaboration that I found within the larger theme of collaborative atmosphere.

The ninth theme 'music as the binding aspect within NELCS culture' was an initial theme, but after undertaking data analysis for the second research question 'what is the role of arts and music?' this theme developed further to become the findings for this sub-question. I have presented findings relating to this sub-question in section 6.3 below. Thus, going through memo writing and various diagrammatic representations led me to focus on final set of seven themes that were dominant, but were representative of two different layers answering the same overall question - What are the lived experiences of transformation through arts and music infused creative learning at NELCS?

## **5.5 Development of a model framework representing the findings**

After undertaking inductive data analysis detailed above in sec 5.4 to identify the main thematic findings for the research question focussing on the lived experiences of transformation at NELCS, I have chosen to represent these findings in a visual diagram or model. This visual representation of the findings (fig 6.33) is aimed at providing clarity through an alternative representation of the lived experiences of transformation through learning, highlighting their positioning, importance and connection. Further, I discuss these findings in relation to the framework representing elements or behaviours relating to transformation adopted for this doctoral study (discussed previously in sec 5.3.2). I have used compare and contrast as a key method of analysing the NELCS model in relation to the iterative framework with the aim that the final visual model representing the main findings of this study is analysed and situated within the larger idea of transformation through learning which formed the basis for this study.

## **5.6 Chapter summary**

This chapter presented an overview of the analytic approach for the present study. I have clarified my rationale for the development of a framework reflecting the elements/behaviours related to transformation. I have described how the findings have emerged inductively using thematic analysis across the data collected. I have detailed the process of analysing data obtained through various methods. I have then explained the coding and memoing that led to the development of the themes. Finally, I have identified the process of comparing and contrasting as a method for the development of a model framework representing the main findings that focus on the lived experiences of transformation through learning at NELCS. In the following chapter I present the findings of the study.

# CHAPTER SIX

## 6. FINDINGS

### 6.1 Introduction

In this chapter I present the findings of this ethnographic research study as I sought to answer the main research question - What are the teachers' and students' lived experiences of transformation through arts and music infused creative learning at North East Lab Charter School?

The conceptualisation of transformation as a process embedded within the learning experiences is central to this research. The aim here is to explore lived experiences of the participants which is informed by the use of the iteratively developed framework as the lens (discussed in section 5.3 above). To clarify, the aim here is not to find any causal relationship or explore how, to what extent the participants have been transformed by their learning experience. The focus is on the lived experiences of the participants during their learning experiences at the school. So, in the study I explore transformation through learning by, broadly answering the question - *What does transformation through learning at NELCS involve?*

For clarity of presentation of findings, I divide this findings chapter into two main sections, which follows the two-step analysis process undertaken simultaneously (detailed in section 5.2): (i) inductive analysis of the data collected adopting thematic analysis method, and (ii) the iterative development of the framework reflecting elements and behaviours relating to transformation specific to the research site NELCS.

In the first section, I begin by presenting the findings to the main research question thematically, derived inductively from the data. Findings relating to the sub-question about the role of music within the lived experiences of the participants is answered in a separate sub-section. It is necessary to note that the iteratively developed framework mentioned in section 5.3, has only been utilised initially as a lens to clarify the conceptualisation of transformation in relation to this study and any data collection choices made (discussed previously in section 5.3). As mentioned previously, it has not been utilised during the inductive analysis process (sec 5.3.2).

In the second section, I present analysis of the iteratively developed framework reflecting the elements and behaviours relating to transformation. Briefly, I revisit the framework which was initially used to conceptualise transformation and develop it further in light of the inductively arrived themes. Then I finally present the framework that is representative of elements and behaviours relating to transformation specific to the school (research site).

Overall, all the findings within both the main sections have been presented thematically for ease and clarity of presentation. The composition and process of development of the themes have been further elaborated within the introduction sections and within the theme itself.

## **6.2 Lived experiences of transformation through learning at NELCS**

Here I present the overarching thematic findings for the main research question - What are the teachers' and students' lived experiences of transformation through arts and music infused creative learning at North East Lab Charter School? As noted previously, I focused on a simplified version of the above question - What does transformation through learning at NELCS involve? (Sec 4.2) The analysis involved inductive processes utilising thematic analysis. The use of the framework reflecting elements/behaviours was limited to its use as a lens for data collection aiding in the progressive focusing adopted during the ethnography.

After undertaking the coding process and thematic analysis (detailed in section 5.4) to answer the main research question, my analysis showed that the lived learning experiences of the participants were characterised by the following main themes:

**Theme 1** – Doing more than you think you can

**Theme 2** – Development of crew Qualities

**Theme 3** – Making learning relevant

**Theme 4** – Collaborative atmosphere

**Theme 5** – Reflection

**Theme 6** – Passion and Perseverance

**Theme 7** – Self-discovery

These above thematic findings come from the analysis of the cumulative data collected which includes my observation field notes, informal interviews, documents, conceptual drawings, video and digital photographs. As noted previously, the themes have been identified using thematic

analysis which briefly involves, moving from open coding to grouping the codes together, looking for patterns and inductively developing themes, reviewing the themes followed by naming/re-naming, defining and writing them. Triangulation across data sources was utilised to ensure trustworthiness and gain alternative perspectives (sec 4.10). The following table provides an overview of the themes along with its composition, naming and meaning.

| S. No | Theme                                    | Components   | Naming  |
|-------|--|--|---|
| 1     | <i>Doing more than you think you can</i> | The ways in which the idea/belief/attitude that “you can do more than you think you can” was reflected within the pedagogy or practice and led to students’ realization that they can do more.   | Inspired by statements made by participants.  |
| 2     | <i>Development of Crew Qualities</i>     | The focus on the development of certain qualities was considered essential for any individual learner. It lends to the core culture of the school. Here I map the lived experiences of these qualities across various programmes.        | Inspired by statements made by various participants.                                      |
| 3     | <i>Making Learning Relevant</i>          | Finding meaning within the learning i.e. making learning meaningful through the act of piquing interest and positioning it to be worthy to be learnt. Here I present lived experiences relating to the ways these connections were made. | I named the theme based on the idea of meaning and relevance within learning experiences. |



|   |                                 |   |   |
|---|---------------------------------|---|---|
| 4 | <i>Collaborative Atmosphere</i> | <p>This not only includes the activity/act of collaboration but also goes beyond to the feeling of community, togetherness and the environment where collaboration was visible on a day-to-day basis. I present the lived experiences of this collaborative atmosphere.</p> | <p>Inspired by statements made by the participants.</p>                         |
| 5 | <i>Reflection</i>               | <p>I present a core element of the learning experiences related to meaning making which is embedded throughout the learning expeditions as well the El Sistema music sessions.</p>  | <p>The naming of the theme is due to the activity/action it is composed of.</p> |
| 6 | <i>Passion and Perseverance</i> | <p>This theme comprises of the two qualities that were ubiquitous within the data - passion and perseverance. I also illustrate the interplay between these two qualities within the learning experiences.</p>  | <p>The naming of the theme is due to the qualities it is composed of.</p>       |
| 7 | <i>Self-discovery</i>           | <p>Here I present various facets of self-discovery. I focus on, self-discovery through reflection, music and discovery based learning.</p>  | <p>Inspired by statements made by the participants.</p>                         |

**Table 6.1:** Overview of the thematic findings

The themes listed above are in no way equal to each other. They have not been derived or selected through content analysis. Any quantitative assessment of the data is beyond the scope of this ethnography. They represent and characterise the lived experiences of the

participants incorporating various aspects such as, their views, qualities, behaviours, emotions, actions and pedagogical approaches which are a result of the thematic data analysis process detailed previously in section 5.4. These themes have been analysed from the same data and there are certain overlaps/links between them which are explained within each theme. Acknowledging this, I have clarified my analytic journey in the previous chapter (Ch 5). Due to these overlaps, some sub sections within each theme may have repeated references to connections to other themes and are not elaborated in the same manner. Thus, if some sections within the findings seem slight than the others, it does not mean it is weak theme, but instead is representative of multiple connections across other themes and I have avoided repetition while writing the findings. The data excerpts utilised within the writing ranges from activities within the classroom, outside field work, orchestra rehearsals to performances. Due to various learning activities that lend to a theme, I have restricted my writing to include one type/example (learning expedition) to maintain an overall narrative to the theme. Further, I have ensured to include music related data within each theme to illustrate and make connections across the learning experiences.

Now, I briefly outline the structure of presentation of the themes. Each theme is introduced with the context, initial codes, groups and ideas within the data that led to the creation of the theme. Next, the theme is defined and explained, clarifying what it constitutes and which data sources have been used as exemplars. Since the themes characterise lived experiences, I use the main recurring ideas from the analysis to define and further elaborate the theme. To aid readers' understanding as I present my findings, these main illustrative points within each theme have been separated by sub-headings. I have not considered them subthemes but strands which essentially connect within each other to make the main theme. Thus, these sub-headings reflect a way to present these inter-woven points within the presentation of the theme with supporting quotes/excerpts from the data and photographs that illustrate the lived experiences being discussed. Following the seven main themes, I present the findings for the sub-question – *what is the role of music in this process?* within section 6.3 below, adhering to the same format detailed above.

## 6.2.1 THEME 1: Doing more than you think you can

The general aim of the staff at NELCS (classroom teachers and resident artists) that echoed during my interviews, as well as in various documents (e.g. newsletters to families, reports, website), is to help students realise their full potential and provide opportunities for students through their learning experiences to achieve their full potential. Revisiting the data collected I found that related to the aim above was the underlying belief or attitude of the staff that 'you can do more than you think you can' apparent across the interviews, informal discussions and field notes (statements and actions).

Giving an example of the journey undertaken by the Grade 2 students through a learning expedition about snakes culminating with the students producing products (posters, music videos, eBooks, audio book), the class teacher Carol Evans points that:

*"every second grader creates work they did not know they were capable of" ~ V\_Gr2 teacher\_EL*

Starting from statements similar to the above I found that across the data collected, specific critical incidents and events have similar or related expressions which form the main data-set (informal chats with teachers and students, observation field notes and videos of learning activities) that lend to this theme. Codes related to this included 'expectations', 'high quality', 'understanding quality', 'feedback for quality', 'modelling high quality/expectations', 'you can do it attitude', 'amazed at outcome', 'challenge' and 'pushing limits'. Keeping in mind the research question (transformation through learning) this theme encompasses the findings that bridges this belief or attitude of the staff (you can do more than you think you can), to the students' realisation of their potential through their learning as a lived experience of transformation.

The bridge from belief to practice to students' realisation through experience is illustrated and discussed through the following points.

- i) Culture of high expectations
- ii) Understanding high quality
- iii) Perseverance and hard work thorough repeated drafts/practice
- iv) Realisation through sudden intense collaborations/activities (critical events and incidents)
- v) 'Can Do' attitude

These points or strands (detailed below) are not necessarily sub-themes that individually exist without any overlap with each other. Thus, I do not represent them as sub-themes but as key groups of ideas that compose this theme. Further, this theme resulted from various types of data mentioned previously, but while presenting the findings for this theme through the above illustrative points, I mainly use the data from the snakes expedition undertaken by the Grade 2 students to maintain an overall narrative to elaborate on this theme, along with other data related to their EL Sistema music experiences. This choice has been made only for ease of presentation and to maintain one narrative while presenting this theme through one expedition which was a rich source of data. Thus, note that the choice of presenting this theme through one expedition does not mean that this theme was not visible elsewhere within the data.

### 6.2.1.1 *Culture of high expectations*

Staff at NELCS felt that at the core of realising any student 'can do more' is setting high expectations. The Head of School identifies that this is one of the characteristics of a good school culture:

*North East Lab belongs to a group of schools that are successful, in that sense they share some of the same characteristics a good school culture . . . **a clear focus in high expectations for the learning that needs to happen in the school.** . . . ~ IN\_Head of School\_22.05.2013*

This **culture of high expectations** for learning here includes - expectation of high quality work, expectation of certain personal qualities, skills and dispositions, academic achievement, musical achievement and related development/implementation of strategies for motivating certain values, practices and building a conducive environment.

Though 'high expectations' is a broad term, research has related high teacher expectations to high student performance (in Kaplan, L.S and Owings, 2013). Thus, this lends to the general understanding that students transform through high and/or increasing expectations that they set personally and/or through those set by staff/people around them. More commonly, these days, the term 'setting high expectations' has been associated with academic achievement (getting good scores in assessment) and closing the achievement gap – i.e. high academic expectation for all students. But here after data analysis, I found that, in relation to this theme, I focus on the expectation of high quality work (not academic results) which was prominent at NELCS. This concept of high quality is one of the key features of expeditionary learning.

The curriculum compels students to produce high-quality work, and the whole school supports, celebrates, and reflects on student work in order to create a culture of excellence.  
~ EL Core Practices, 2011 p. 25

Students making a product for real audiences is an essential part of every learning expedition.

“Projects are a core structure for learning important skills and content standards during the school day. They are not an enrichment opportunity provided after core learning has been completed as an add-on or supplement” ~ EL Core Practices, 2011 p. 21

This culture of high expectations, I noted, manifested within the classroom and music rehearsals, through most importantly starting with the beliefs of the staff which I noted, slowly impressed upon the students.

Gr2 teacher Carol’s passion is to help students create high quality work products and the belief that quality work can make a difference guides the way students approach learning and excellence. I notice Charm (student) quizzing herself as she thinking about how to improve her non-fiction snake story. “I think I need to make this stand out, make my snake alive for the reader. . . I think this is how I can improve. . it’s fun to do it” ~ FN\_14.05.2013\_Gr2

Here, excellence and a culture of high expectation was embedded within activities that involved students ‘creating high quality products’, a process through which students develop certain skills and character which goes beyond an academic activity to the wider academic and social area. At the same time, I found the teacher’s role in believing in the potential of every student – ‘that they can do more’ to be immensely important. Across the data collected I noted comments by the staff (class teachers and resident artists) that highlight their *firm belief that every student is capable (Gr2 teacher, Carol); challenge students to go beyond (Gr3 teacher, Shelly); believe in endless possibilities for the students (K1 teacher, Mary); you are fabulous, you do amazing things, you can do this too (Resident Artist, George)*. I continue to expand on this finding through the subsequent points.

### 6.2.1.2 Understanding high quality

The focus on high quality work through the products was emphasised by Carol Evans:

*a really important part of a learning expedition is that students craft really high quality work - and getting high quality work with students involves going through a process of critique and revision ~ V\_Gr2 teacher\_EL*




As the students undertake the process of making high quality products, they start to understand what high quality means. Through my fieldwork and the data collected, I observed a cycle, in which expectations shaped the process through which the students **understand the meaning of high quality** leading them to realise and expand on 'what they think they can do' as they undertook a learning expedition. Carol, explains this:

***I firmly believe that every student is capable of creating quality work. But quality work doesn't just happen. Students need tools to help them take charge of their learning in a supportive environment that gives them the opportunity to revise, to critique, to reflect, and to persevere through multiple drafts. . . . I have created a culture in my classroom where disciplined routines and explicit expectations are joined with joyful learning and inquiry-based projects to create an atmosphere where I and my students begin each day energized to see where our intellectual curiosity and creativity will take us. Deep learning happens when we challenge students to set goals and to reach beyond what they think they are capable of. Establishing this growth mindset and developing these work habits with students is the foundation for developing 21st-century leaders who do not back away from challenges, but embrace them. ~ IN\_Gr 2 teacher\_8.05.2013***

The importance of challenging students beyond their perceived capability is highlighted. This is done in conjunction with establishing a growth mindset and habits. In practice, expectations of high quality of work are set both by the teacher and the students through the product descriptors, rubrics, and criteria lists that they make. An example of a rubric developed is presented below.

## Snake Drawing Rubric

**Learning Target:** I can draw a scientific illustration of a snake with accurate shape, proportion, detail, and color.

| Criteria          | On Target<br>                            | Almost There<br>                                       | Getting Started<br>      |
|-------------------|---|---|--|
| <b>Shape</b>      | The shape of my whole drawing and each part of my drawing are accurate. You can tell exactly what each part is.           | The shape of some parts of my drawing are accurate. You can tell what some of the parts are.  | The shape of the parts of my drawing are not accurate. It's hard to tell what the parts are.               |
| <b>Proportion</b> | The small parts are the right size compared to the large parts. The large parts are the right size compared to the whole. | The small parts are almost the right size compared to the large parts. The large parts are almost the right size compared to the whole. | The small parts are not smaller than the large parts. The large parts are not larger than the small parts. |
| <b>Detail</b>     | My drawing shows lots of specific details about my snake.   | My drawing shows some specific details about my snake.  | My drawing does not show specific details about my snake.  |
| <b>Color</b>      | The colors look just like the colors of my snake.   | The colors almost match the colors of my snake.   | The colors do not match the color of my snake.   |

**Comments:**

**Figure 6.1:** An example of rubric developed for evaluating the snake drawings.

These rubrics/descriptors are often identified from exemplary models, so that students are clear about the concrete features that represent high quality.

*Once we (second grade students along with their class teacher) settled on making an eBook. . . a couple of things about non-fiction became really important to understand. . . the difference between informational non-fiction that was part of the initial research process of the students and narrative non-fiction ~ V\_Gr2 teacher\_EL*

During my conversations with second graders Charm and Joel, they explained, how they developed criteria list/rubrics for their narrative non-fiction stories:

We looked at the differences between the types of non-fiction by reading example books (pointing at the books). We used colour highlighting and identified the categories we were researching about (pointing at another list - physical features, predators, habitat etc.). They had the same categories, but they were . . . like written differently. . . Not just one after the other. . . (pointing at how informational non-fiction was organised by the category topics). So

then we (gesturing to represent the whole class) discussed with Ms. Evans and made the list of criteria for our narrative non-fiction stories. . We then used it to get feedback. . ~ FN.\_14.05.2013\_Gr2

So, the Grade 2 teacher Carol during our discussions situated the understanding of high quality and setting goals to be the building blocks students 'doing more' - "*when students are able to establish criteria for high quality work, they create a rubric that will guide them toward reaching their goals*" (FN.\_14.05.2013\_Gr2)

The data excerpts above show examples of how the expectations shaped the process (of developing criteria lists, rubrics or such tools) through which the students begin to understand the meaning of high quality. Thus, coming back to the idea introduced by Carol that high quality work involves a process of critique and revision.

On some occasions, I noted comments of classroom teachers during our informal discussions where focus on making repeated drafts of the product can at sometimes in itself become a detriment to the larger experience of learning. K1 teacher Mary Randolph expressed that there was a "*lot of rigour in the way projects especially the final product is produced ... and pressure for producing an outcome . . . an outcome that can be displayed*" (IN\_K1Teacher\_10.05.2013). Similar thoughts were echoed by Grade 3 teacher Doris. These comments highlight how, aiming for high quality work involved the process of working through multiple drafts through critique and revision. This process might provide a continuously improving target for the students, but there is associated pressure both for the teachers and students, which is not always easy to manage. I found that the pressure and dislike for some teachers were more due to the need for the products to be of such high quality that can printed/produced to be used/displayed to further the marketing and fundraising efforts of the charter school. But as K1 teacher Mary said, this is *the reality of being a charter school*. This feeling was not echoed by all teachers, especially since some class teachers have completely embraced and excelled in the EL framework of producing high quality work that is complex, rigorous, authentic and allows opportunity for multiple levels of learning experiences. Thus, becoming role models for not only NELCS but the whole EL school network across the United States. On the other hand, I did not find specific instances where the process of persevering through multiple drafts or the process of critique and revision was considered difficult or was disliked by the students.



El Sistema director Claire explains that her own personal experience has influenced her practice at NELCS and finds the importance of developing students' understanding of high quality and striving towards it:

*It is important to me to develop certain processes for my students that i am working with . . . that they can apply in different areas of their lives . . . and so, quality is one . . . understanding of what high quality means, that is something that was instilled in me as a very young child and I think it served really really well and I really want my kids to have that as well. Not so much that you have to be a virtuosic performer because I am not that, I didn't choose that, but I am so pleased that, I know what high quality work means for me and in that world in general and I think that that has served me well. So that understanding of quality I think is really important for bringing it to the kids. ~ IN\_Claire\_10.05.2013*

In relation to music, the bridge from the attitude to the students' realisation that 'they can do more than they think they can' was not observable through the similar cycle mentioned above in relation to the learning expeditions (i.e. Expectations shaped the process of understanding quality and through process of critique and revision through perseverance resulted in high quality work that was beyond what the students thought they could do). There were no fixed lesson plans, rubrics or way the students explored as they learnt music. The focus here was mainly rehearsals, learning new music, playing together and expression through music. Exploring and understanding the piece through other ways than rehearsals and creating their own music or trying out variations/improvisation was not witnessed. Further, the process of critique and revision was not followed in the same manner as done within the classroom mentioned above.

I notice that through the El Sistema music programme and orchestral practice the students develop the understanding of high quality in different ways. Here high quality is referred in the context of being able to play their instrument and make progress e.g. improving the quality of the sound and music produced by them through their instrument, improving quality by expressing (emoting through) music they play and being not just a student playing an instrument but a musician by developing related qualities. The following fieldnote excerpt illustrates high quality through experiences of student participants -

As I informally discussed with the students (Sophia, Thomas, Kevin and Ryan), I notice them talking and reflecting on their rehearsal experience – *"I think we had a good rehearsal, the whole orchestra we sounded one" . . . "we sounded good ..(I think!) we were way better than*

*the first time we played today . . . not distracted, waiting to express and play during our part” . . . “almost like those musicians who we saw in the view playing Lord of the Rings”.* I find that the students seem confident of somehow knowing what is high quality, though at the same time they also relate it to a feeling which is not really clearly expressable. ~ FN\_14.05.2013\_Dudamel

Thus, in comparison to the classrooms, the understanding of high quality in rehearsals is not visible through use of rubrics, set standards or use of peer-critique in similar manner. It is left to feeling, expression, emotion and expectations of appropriate behaviour. But the constant striving to do better, or the belief that it can be better is evident.

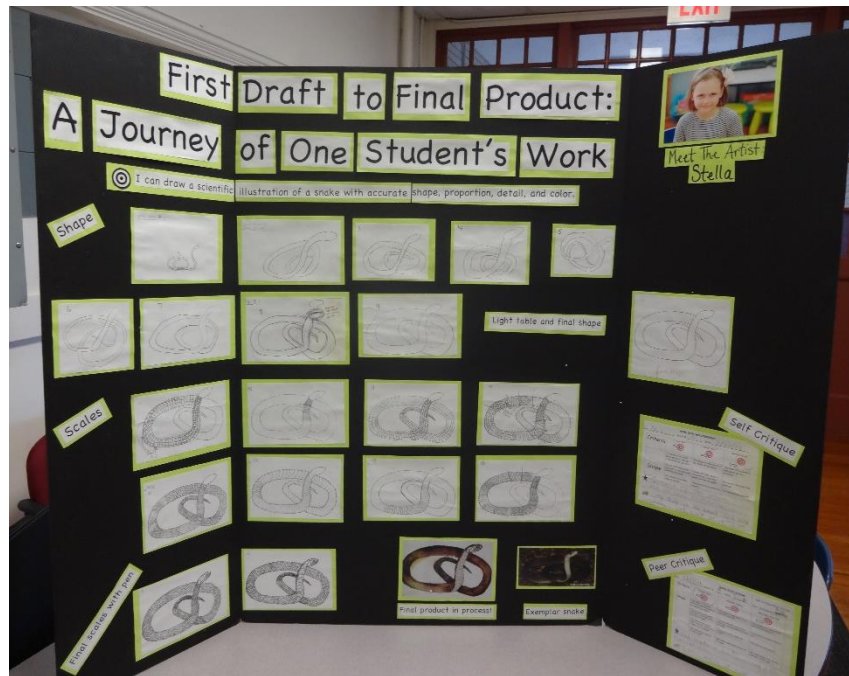
### 6.2.1.3 *Perseverance and hard work through repeated drafts/practice*

**Students persevere through multiple drafts** and critiques to develop their product or even aspects/part of their product. Learning to give and receive such targeted feedback from teachers, experts, and peers based on established criteria aids them to get a better understanding of quality.

Students began thinking about scientific accurate drawings of their snakes by looking at models done by kids from earlier years identifying its features through a process of giving complements and critiques – *“I like how he wrote the head and the tail where its supposed to be”, “the scales are really nice and makes it look real” “I think making it more curvy here (pointing at the drawing) would help”, “the thickness of the snake reduces suddenly, making it slowly reduce will make the snake nice”* – This process of critique and revision was followed by the students for their work. ~ FN\_15.05.2013\_Gr2

At the end of the learning expedition journey the students share their products and what they have learned to a wider audience (parents, adults, community etc.). I saw that producing high quality work was part of their learning experience that made them realise that they can do more than they think they can.

I look at the students and they are amazed, excited about the result of their work – they did not expect this. They produced a book!! They have made the drawings, they have written the stories, they learned to narrate their stories, they played the background music score for their eBook . . . the quietly realize they can do more than they previously imagined . . . ~ FN\_24.06.2013\_Gr2



**Figure 6.2:** A display panel showing the journey from first draft to final product of scientifically accurate snake drawings by a Grade 2 student. The focus is on shape, proportion, detail and colour. Self- critique and peer critique sheets are also displayed

Within the El Sistema programme, though there were repeated mentions of perseverance and modelling (qualities of a musician and listening to experienced musicians play the same music) across my field notes and interviews with resident artists, I did not find any standard process embedded within the pedagogy through which the students developed the understanding of high quality or the realisation that they can do more than they think they can. Instead, students' realisation of high quality was considered a deep experience and the realisation that 'they can do more than they think they can', was through the experience of critical incidents or critical events (special moments). This has been elaborated in section 6.2.1.4 below.

#### 6.2.1.4 Realisation through sudden intense collaboration or activities

Claire (resident artist and director) talked about her role as helping students experience special moments (critical events or critical incidents).

*I see my role as . . . this is really specifically for music, is helping the kids create something really special experience that they couldn't otherwise get to on their own . . . it's about*

*creating these moments and about creating musical moments and beautiful moments and . . . feel that ensemble feeling, they feel that kind of deeper musical meaning to what they are doing and they know when that happens. And when you have been working at getting something you are working, working, working and that happens and those moments. . . . the students know when they come into my class they know that they get to do something that they wouldn't be able to do on their own. . ~ IN\_Claire\_10.05.2013*

During our conversation, Claire was linking her approach of helping create special critical moments for the students, to them experiencing/achieving something they couldn't do before. Similarly, Mr. Kai refers to these moments as profound:

*the greatest joy . . . when kids naturally do this oooooooooo... (imitating students when they get something, when they discover something or understand it, realize they can do it, amazed that they could do it - the aha moment) and . . . in some ways within that second of them saying that and before, there is this period of not understanding to understanding and their lives are forever changed, it's sort of like within those few seconds they were crawling and now when they are able to stand and walk on their feet its sort of like if we were to suddenly like grow wings and fly in the air . . ~ IN\_ El Sistema Co-director\_25.10.2013*

These special moments or critical incidents took place across the school both within classrooms as well as within their 'music time'. The bridge from belief to realisation by the students that **they can do more that they think they can was within these critical moments.** The following example illustrates this –

Mia a new Grade 5 student to NELCS was beginning to play an instrument for the first time. She seemed tentative, unsure, worried if she can get any sound or make a clear sound from her clarinet. When I talked to her subsequently about how she was feeling and doing - *she mentioned, "I have never played an instrument, I don't know". She said, "I'll try" but "I don't know".* In the next two weeks many small critical incidents shaped her experiences. Here I present one of them:

Mia was standing in front of the class performing the song of the week along with her classmate. Just a few minutes back she was in the audience sitting nervously while her other classmates (mostly in pairs) performed the same song in front of the class. When it was her turn she looked nervous but with her friend next to her – they started singing the first verse. The second verse was her solo and she stopped. . . . some students encouraged her *"you can do it"* and others gestured similar expressions. . . A smile on her

face . . she began singing her verse and slowly, she seemed to enjoy it. ~  
FN\_27.09.2013\_Gr5

This incident along with similar incidents were critical moments for Mia and were transformative. During my informal chat with her class teacher Amanda Raymonds, she specifically mentioned this incident. *“you know when you see such things. . she really has found something within, realised “I can do it”, she “was amazed that she could . . it’s something I think she did not imagine or expect”*. Mia later told me *“I am shy, I’ve always been a shy person. .”*, talking about her experience she says *“I never thought I could do that . . I get nervous”* and went on to say how much she enjoyed it and was so happy to be here among new friends.

As the students strive for high quality of musicianship, the statement *‘you can do more than you think you can’* is not necessarily spoken aloud. Similar to the smaller critical incidents some opportunities/events with unusual expectations, often implicit, pushes the students, where their experiences lead them to the realisation that *‘they can do more than they think they can’*. An example was the *‘From the Top Chamber collaboration’*. From the Top (a popular radio show) provides opportunities for High Schoolers who are part of From the Top’s Centre for the Development of Art Leaders (CDAL NEcity) to visit and collaborate with other young musicians. The following vignette incorporating extracts from my expanded field notes across the programme duration (5 days) illustrates this:



**Figure: 6.3 & 6.4:** From the Top CDAL musicians working with five Dudamel orchestra musicians from NELCS and NELCS chamber ensemble performing at the end of the week of residency programme.

*Five teenaged musicians (area-based high schoolers) who were part of CDAL NEcity visited NELCS for a week long chamber music residency programme. Five NELCS students from the Dudamel orchestra were chosen by the resident artists to work with these musicians. Ryan*

*(Cellist – Grade 5 student), Dorothy (Violinist- – Grade 5 student), Serena (Violist- – Grade 6 student), Claire (Cellist – Grade 4 student) and Aliyah (Clarinetist – Grade 6 student) worked with them everyday afternoon one on one and in a small groups during their normal El Sistema music time. NELCS students have never been in a chamber ensemble, the concept that there is no conductor so everyone must lead and everyone must follow were new. They worked with these CDAL musicians on, learning new music, setting and feeling the emotion, observation skills, following each other's lead and other such new skills. With intensive collaborative work with these musicians, they modelled qualities and as El Sistema Co- Director Sierra pointed 'raised to the occasion and made great progress towards learning to play in a chamber ensemble'. Everything was new to them, a new piece of music, new rules, understanding each other at a different level, learning to rely on themselves and each other to make music together. It was intense, I saw Ryan almost struggling to learn the new song feeling the pressure, but he persevered, became sensitive to other's cues within the chamber group and grew from the experience. On the 5<sup>th</sup> day the students performed for other students and parents and in the end, all of them were thrilled by their success. The path was not easy but, everyone around them encouraged them, trusted them and put faith in them to learn from this opportunity. Ryan remarked "I realized I could do more" "it was great.. it was challenging". The attitude that 'you can do more than you think you can' was embedded throughout.*

This above vignette briefly describes the collaborative activity undertaken and experiences of the participants. This activity was a critical event for the students, it was an intensive week working with other musicians, learning a new musical piece, rehearsing and performing as a chamber orchestra. I noticed that though the students were very happy to have been selected by the resident artists to be part of this collaborative activity, they immediately realised that it wasn't going to be easy. There were high expectations, at the same time, space and support provided to help them achieve it within the short period of time. The example of Ryan described in the excerpt, shows the struggle, perseverance, focus and realisation that he can do more, through this critical event which was challenging. Here, the high expectations were not verbalised directly, it was understood that there was a chamber group performance planned at the end of the week. This involved, students learning the new piece of music, learning to play as a chamber group and all the other aspects of musicianship required for this process. The CDAL musicians (who themselves were high school musicians) supported the students, helping rehearse specific sections of the music, providing tips and tricks about technique, playing with them together as a chamber orchestra and slowing and withdrawing as these NELCS students

began to take charge. This above process within the rehearsals was evident, intensive and challenging. The success of the rehearsals and performance in itself was an eye-opening experience or realisation for the participants that “they can do more than they think they can”.

I noted that such sudden collaborative activities, though frequently conducted, had limited amount of student participation opportunities i.e. only 4 – 12 student participants per activity. I found that this was due to the size requirement of the collaborative activity, mainly due to logistical reasons/restrictions. The selection of participants for such activities are made by the resident artists and/or classroom teachers. This I noted was made based on the teacher’s assessment of the student’s ability to undertake the said activity, and all students do not get such opportunity. Gr4 student Ethan said “*I would like to participate in that group/performance (referring to a music related collaborative activity with a music composer), maybe next year when I join the Dudamel orchestra, I might get a chance*” ~ FN\_09.05.2013\_Gr4. This highlighted how students might not be given such opportunities equally and this might stay with them, making me wonder if unknowingly some student might be feeling left out of special activities or performances. But, from the data I gathered that all the students are happy that they are part of an orchestra, which values them as a musician and motivates them to learn and improve.

#### 6.2.1.5 ‘Can Do’ attitude

This ‘can do’ attitude is embedded within all the previous points above and overlaps with them. It is evident within the attitude of the staff who believe that students can do more and providing opportunities for them to realise this. This ranges from the belief of teachers that students can produce quality work (sec 6.2.2.2), to student’s experience through the learning expedition journey. This includes, persevering through multiple drafts, encountering challenges, the process of critiquing, experiencing critical events and incidents that provide opportunity for them to realise and put into practice the ‘can do’ attitude.

I notice that while working through multiple drafts/ versions of their work, students are thinking about doing better and the peer critique/ self-critique assessments help with this process. Through multiple iterations of the snake drawings students don’t give up, they make small changes, get feedback and continue. **A ‘can do it’ - an attitude is present.** ~ FN\_21.05.2013\_Gr2

During this Winds section rehearsal, they are guided by the teacher (George) to reorganise their chairs into a circle and provide feedback and discuss with each other. I notice the students slowly beginning to share their thoughts and ideas with their peers. Abigail (student) suggests *playing one particular difficult section within the music piece and then talking about it*. . . . soon Thomas is trying repeatedly to play the section smoothly, Jack chimes in ***you can do this*** (showing an example of how to play) . . this process continues. . . . I find that there is definitely a belief among everyone in the group, that they ‘can do it’, everyone ‘can do it’ . . they can play better and do more. ~ FN\_excerpt\_21.05.2013\_Dudamel Winds

From the data examples such as above, the ‘can do’ attitude was noted to be common across many experiences. Further, I noticed that this ‘can do’ attitude was closely related to the culture of perseverance (discussed in sec 6.2.2.3 and 6.2.6) and critique and feedback (discussed in sec 6.2.5.2) embedded within activities both within the classroom and during music.

## **6.2.2 THEME 2: Development of Crew Qualities**

A school’s purpose, mission and values serve as bedrock of its culture and anchors the everyday activities. (Deal, T.E and Peterson, K. D, 2009). At the core of what the NELCS considers important for the students’ is the development of certain qualities also known as ‘crew qualities’ through their time at NELCS. These reflect the shared values of the school as well as form part of character development of an individual.

Through my interviews with the participants (staff and students) and my observation field notes there were repeated mention of qualities that students develop through their learning experiences at the school. Even the classrooms and corridors listed some of these qualities in various contexts depicted through illustrative writing and/or posters. At the same time, adoption of various programmes such as Expeditionary Learning, Social Emotional Learning and El Sistema brings with it, its own set of qualities/values/behaviour associated with the development of an individual.





**Figure 6.5 & 6.6:** A collage of all the crew quality posters (on left) and a display in Grade 4 classroom

This theme arises from the various qualities that the teachers aim to foster as well as students aim to develop through their learning experiences. i.e. It includes data related to the qualities that were encouraged and expected from the students at NELCS. These qualities not only form part of the school’s identity, but also provide a focus on the students’ lived learning experiences across the school encompassing its various programmes. As discussed in the literature (chapter 2), enhancing students’ strategies and skills for learning and discovery as well as, promoting positive learning-related attitudes, values, and beliefs in students, form part of the transformational teaching principles (Slavich and Zimbardo 2012). Thus, in this theme I present findings related to qualities that are focused at NELCS which inherently form part of lived experiences of transformation within the learning experiences at the school.

The focus on ‘development’ within the title of this theme is illustrated through three main interconnected points. I address these below, followed by the five crew qualities as the sub-points.

- i) Crew qualities define the collaborative culture within the school

- ii) Connections and overlap among qualities across programmes
- iii) Crew qualities as essential everyday qualities

The core set of qualities drawn from the school's own vision and developed along with staff at NELCS are the 'crew qualities'. Crew qualities are these five qualities that everyone in this school is working towards, which are being - Reflective, Cooperative, Perseverant, Responsible and Empathetic. Their continuous learning target is – *I can model the crew qualities as a North East lab scholar.*

I found the development of crew qualities discussed here was linked **to the motto "We are crew, not passengers" and lends to a collaborative culture** which is discussed in a later theme (Sec 6.2.4). The head of school wrote about this stating:

*At its core, this short saying has the embedded meaning of cooperation, responsibility and perseverance. We all pull together, doing our best or we don't move forward. At the same time, we acknowledge and respect our fellow crew members by empathizing with how they are feeling. And perhaps, most importantly, we encourage reflection to understand the 'what' and 'why' of people and events and our role in creating the best possible outcomes.*  
~ D\_newsletter\_5.09.2014

This highlights the close connection between the idea of 'crew' which is a group mentality or collaborative environment at NELCS along with the set of qualities that are linked with being part of a crew. Thus, the act of development of these crew qualities and embodying them while being part of a crew defines the culture of the school.

**Connections and overlaps between qualities across various programmes** can be seen through the following table. It is an attempt to show the qualities grouped together into three main categories 'crew qualities', 'qualities related to being a musician' and 'qualities developed through social and emotional learning (SEL) programme'. These three categories arise from the three different programs i.e. School's overall vision/aim including Expeditionary Learning, El Sistema and SEL. There is overlap between qualities within these three categories, but nevertheless I present the findings and discuss this in the points below.

| <i>Crew Qualities</i> | <i>Music – El Sistema</i> | <i>SEL – Social Emotional Learning</i> |
|-----------------------|---------------------------|--|
| <b>Cooperative</b>    | Teamwork & collaboration  | Relationship Skills                    |
| <b>Empathetic</b>     |                           | Social Awareness                       |
| <b>Perseverance</b>   | Perseverance & Hard work  | Self-Management                        |
|                       | Discipline                |  |
| <b>Reflective</b>     | Reflection                | Self-Awareness                         |
| <b>Responsible</b>    |                           | Responsible decision making            |

**Table 6.2:** Mapping various qualities across the three categories – Crew Qualities, EL Sistema and SEL

The Head of School also referred to some of these qualities to be complementary between their main programmes – EL and El Sistema.

*It is also fortuitous the ways in which El Sistema and Expeditionary Learning complement and reinforce each other . . . . The same precepts of active learning, learning from experts, perseverance, collaborating with peers and working as a team to create work of excellence, which is shared publicly, are key to both the academic and music approaches. ~ D\_newsletter\_11.10.2013*

The approach to education that NELCS takes summarized below provides an example of how the development of these qualities are embedded within.

*To begin with, students are actively involved in what they learn. **They themselves** research and investigate to find answers to problems which are evident to them and which they feel are important. Further, **along with their** classmates, their teachers and other experts, they develop creative actionable solutions. Through this process, they come to recognize the value of **collaboration** with others. Sometimes the resolution of a problem is difficult but students learn to **persevere**, to continue **working together** and to **accomplish their goals**. ~ D\_newsletter\_11.10.2013\_Head of School*

Providing an opportunity to understand and practice these qualities within different contexts and at different levels is one of the guiding factors for the learning experience the staff aims to provide. The following writing from my expanded field notes captures the wall display in the Grade 4 classroom and presents the essence of crew qualities.

In the Grade 4 classroom a big board was titled crew qualities. It is filled with comments and compliments from students to each other on their progress towards working on a specific crew quality. “you have been doing really well and have appreciated others through empathy”, “you are persevering- carry on”. They were also ‘I CAN’ phased learning target statements - I can persevere through challenges to achieve my goals; I can cooperate in order to form positive relationships and deal effectively with conflict; I can make ethical and responsible choices (about personal and social behaviour); I can show understanding and empathy for others; I can reflect on my actions and name my strengths and limitations. This serves as reminders, Emma tells me that *“we are all working on every quality, but sometimes we choose certain specific qualities to focus on, Ms. Raymonds suggests or we feel that we need to work on it as we self-assess ourselves.”* She continues to say that ***“these are not just for behaviour like being polite and work together or only for conflicts – these are everyday qualities.”*** FN\_23.09.2013\_Gr4

The act of students taking charge of development of these crew qualities within each other, in one way can be empowering. The close link between being part of the ‘North East lab crew’ and these qualities situates these **crew qualities as everyday qualities**. Further, keeping a constant learning target - *I can model the crew qualities as a North East lab scholar*, further makes it an essential part of everyday activities.

The aspect of developing crew qualities, as seen through the above examples, was not only limited to the classroom but also connects across various practices. An example by resident artist Mr. Marcel (who also works with the students during recess) reflects this connection:

*football and orchestra go hand in hand . . .playing the role of quarterback provides an opportunity to incorporate the same crew qualities that we work on in music rehearsal, on the football field. We talk about teamwork, collaboration and perseverance ~*  
*D\_newsletter\_22.11.2013*

The connection between these qualities as illustrated through the table 6.2 above, highlights the crew qualities to have parallels across the various programmes. Further, another way the

development of qualities was encouraged involved the idea of becoming a “\_\_\_\_\_”. Here the blank is filled with different roles/types of people such as becoming a musician, becoming a scientist, becoming an artist, becoming an engineer and so on. To elaborate: I found that, as the students imagined about becoming a musician, they related this to certain expectations of behaviour or qualities.

Abigail (Grade 5 student) said, we are musicians in the orchestra. . . Being musician, means knowing how to hold your instrument and play, how to behave, to persevere, to work together, to express through music, to be aware (musically) of each other . . we are not just students . . through the orchestra we are musicians. . even our conductor Mr. K and other resident artists call us young musicians ~ FN\_20.11.2013\_Gr5

Thus, the above three main points related to the ‘development of crew qualities’ were illustrated through the collaborative crew culture, connections across programmes and positioning crew qualities as an everyday quality. Now I continue to present the findings related to this theme by illustrating and discussing these often-overlapping crew qualities as sub-points.

- i) Being Cooperative
- ii) Being Empathetic
- iii) Perseverance
- iv) Being Reflective
- v) Being Responsible

### 6.2.2.1 *Being Cooperative*

Being in an orchestra brings with it the need to be cooperative, empathetic and build relationship skills. As the resident artist, Sierra pointed, the students are not only learning to play music together, they are learning to be with each other, work with each other and appreciate each other. The following collection of excerpts from my field notes relates to this:

The orchestra room seems small for the number of students. . . staff associates it as *a reality especially being part of a growing charter school* and are looking forward to their own building *when this would not be a problem*. . . . The students adjust their seats, aware of each other’s movements, patiently wait as their fellow musicians practice a particular section, model good/appreciated behaviour related to being a musician within the orchestra.  
~ FN\_20.11.2013\_Dudamel

Thus, being cooperative is not just limited to just doing an activity together or group work, but also includes the layers of interactions (verbal and non-verbal communication) that are associated with such collaborative work. This I notice is closely related to the skills identified within the SEL programme which include, relationship skills, social-awareness and self-management.

Self-management is defined as the ability to regulate one's emotions, thoughts and behaviours effectively in different situations (CASEL, 2013). It is central to working in an orchestra or working collaboratively. I found many instances across the data collected, where students get the opportunity to realise this quality. An example of self-management is highlighted during my conversation with a staff participant -

*. . when you are doing orchestra you have to be in the room with 60 other kids/musicians you have to be sitting very very close to each other which is terrible thing for this age to speak of it . . they want their space and all that. . . it forces them to figure out how to be together how to sit together. ~ IN\_COO Music programme\_7.11.2013*

Thus, managing oneself within a group or during a group activity, lends to the skill of being cooperative. It is also closely linked to the next crew quality 'being empathetic' discussed below.

Cooperation in an orchestra rehearsals should not be taken for granted, especially during some rehearsals when one whole section of instrumentalists are not playing along, as the others are practicing and polishing their part in a particular song/piece.

Today the Dudamel orchestra is practicing a specific section from the Indiana Jones theme song where only the strings play (violins, violas and cellos). The percussion and brass sections have been waiting to just almost play one note (their part) throughout the past 30 minutes. Patience seems to be running low, Caleb and Johnson from the percussion section are busy chatting, Raine has opened a comic . . hiding behind the drums and has begun reading. Similarly some students from the Brass section are busy murmuring to each other. All this is slowly increasing the noise level, and some other student musicians seem to be giving stares trying to tell them to quieten down. With the strings repeating their part again and again, but everyone seems distracted. Repeated requests and interruptions by the conductor, today seems difficult and not much was done. ~ FN\_17.10.2013

Since the students are part of an orchestra making music together, need for cooperation also becomes a responsibility. During occasions, such as the one above (not often witnessed) were times when the orchestra was not being and behaving as a crew.

### 6.2.2.2 *Being Empathetic*

Julie, the principal specifically expressed that *“what makes this school particularly special is that this is not a neighbourhood school. . these kids do not live anywhere near each other in the city and so. . but yet, here they are and this is their friendship group and when they have birthday parties they come here - the parents bring their stuff here . . .”* (IN\_Principal\_21.05.2013). Being from different locations across the city and coming from different backgrounds as she noted provided the opportunity to develop social awareness which is defined as the “ability to take the perspective of and empathize with others from diverse backgrounds and cultures, to understand social and ethical norms for behaviour, and to recognize family, school, and community resources and supports” (CASEL, 2013, p.9). Working with students from different backgrounds as well as getting opportunity to interact with adults (experts, teachers and artists) on a regular basis, I found provided opportunity for social awareness.

Overall, the core competencies of social emotional learning such as relationship skills, social awareness and self-management overlap across the various learning experiences at NELCS and is compatible with the other qualities i.e. the crew qualities and qualities focused during the EL Sistema programme.

### 6.2.2.3 *Perseverance*

Perseverance is another crew quality that is central to a lot of learning experiences right from persevering through multiple-drafts while undertaking the LTME (discussed in previous section 6.2.1.3) to, persevering through learning to play music together in an orchestra. The Head of School emphasised that *“. . there are certain personal traits we want to make sure our students learn and use and keep for their rest of their life”* Giving an example she notes -

*. . the kind of perseverance or whether it is the value of practice. . . I mean you practice something and you get better at it and you get better at it, you know that doesn't come naturally, it has to kind of be taught very explicitly not unlike how its taught in sports when sports are taken seriously - its importance of practice and perseverance and not giving up too early . . . that is instilled across both the El Sistema programmes and the Learning Expeditions. . . ~ IN\_Head of School\_22.05.2013*

Repeated reference to perseverance as a quality by the participants across the data highlights its importance and is discussed again as a separate theme in section 6.2.6 below.

#### 6.2.2.4 *Being Reflective*

Reflection is another quality that is encouraged. This is done firstly through the SEL programme (further referenced in sec 6.2.2.5 below) where reflection is used as a method to talk about ones' feelings, emotions, thoughts and behaviours. Further, reflection is encouraged within LTME activities as part of the feedback process, self and peer assessments and within different steps of a larger project. This quality has been discussed again as a separate theme in section 6.2.5. I also noticed that, there was no specific method or steps that was used by the staff to encourage the quality being reflective, rather it is embedded within the 'everyday actions and activities'. Statements such as "*what do you think about that?*" were used by the staff to encourage students to express their opinions and then other statements such as "*why do you think so?*" allowed students the opportunity to reflect on their opinions. Thus, the act of being reflective was embedded within everyday statements and practice without undue attention towards any particular process associated with the act. As mentioned, I explore this quality in greater detail in section 6.2.5 below.

#### 6.2.2.5 *Being Responsible*

The other crew quality 'being responsible' ranges from making responsible choices about behaviour or being responsible about their actions and take responsibility for their learning. The larger focus though is on the quality of being responsible in relation to social and emotional learning. The open circle sessions form a platform where students share and reflect on their actions and feelings. Discussion topics include recognizing bullying, calming oneself, speaking up, setting positive goals, being a responsible bystander and so on. The following excerpt from my field notes about the open circle session illustrates a typical session and some example questions through which the students reflect on their feelings, actions and take responsibility.

Once or twice every week the students form a circle of chairs for an open circle discussion. An empty seat is always included to symbolise that there is always room for another person, voice or opinion. These meetings provide a safe setting for a meeting to discuss important issues in their classrooms, school, local community or the world. This platform seems to provide the students an opportunity to discuss various topics relating to social emotional learning. The teacher often starts the discussion with a question to think about and share experiences and a common ground is set for discussion. Why do some people make bad choices when nearing the end of the year?; what do we do when we are not feeling a



100%? The open circle meetings I observed are interactive, there are some small discussions, often role playing is incorporated within the activity or even reading a book which addresses the issue. ~ FN\_24.10.2013\_Gr5

As I talked with fifth grader Abigail, she tells me *that 'we talk about other things in the open circle, and try to understand different perspectives.'* . . . *'We mainly talk about certain issues about our emotions, recognizing behaviour . . . 'it is like we learn together'.* (FN\_24.10.2013\_Gr5). These sessions provide a starting point at many times to reflect on one's actions. Through my interactions with the students I found that many new students found this (open circle) to be a very nice time to share their views as they begin to voice their opinions, start reflecting and get to know each other's perspectives. I found that the challenge here for the teachers was to keep the discussions going, keep it interesting – finding the balance between introspection vs active interactive experiences through the topic and the strategies they use to discuss. But nevertheless, the opportunity to actively discuss and understand the qualities through the open circle session provided the opportunity as well as brought the importance of social emotional aspect of learning to the foreground.

Being responsible also goes beyond the SEL programme (open circle sessions), I found that students related the quality of 'being responsible' to being part of a group activity, being part of a crew, collaboration and teamwork. Second grader Cheryl, stated, *"when you are part of a crew, we have assigned responsibilities like ensuring the tables and chairs are put back in place after group work, but we are also responsible for each other . . . everyone in the crew"* (LW\_8.05.2013\_Gr2). My discussions with students revealed that 'being responsible' included being responsible for each other's work, actions and behaviour. I found that the orchestral practice provided yet another opportunity for the students to practice this quality, as each and every member of the orchestra is important when making music and is responsible for the whole. Similarly, the practice of providing peer-critiques (discussed in section 6.2.5.2) is also considered to be a responsibility and provides another way to share, reflect and help each other as students.

### 6.2.3 THEME 3: Making Learning Relevant

This theme encompasses the learning experiences of the students, pedagogy and practices employed within the classrooms at NELCS. Data relating to various learning expeditions undertaken by the students (field notes, informal chats and video recordings) when analysed included codes such as ‘hands-on’, ‘real-life relevance’, ‘experiential’, ‘making connections’, ‘interest’, ‘curiosity’, ‘practical’, ‘fieldwork’, ‘thinking like scientists’, ‘self-assessment’ and ‘inter-disciplinary’. I saw a repeated pattern within the data relating to ‘piquing interest’ and ‘curiosity’ as well as expressions of ‘finding relevance’ within the learning experiences. Thus, this theme ‘making learning relevant’ covers these lived learning experiences and is illustrated through the combination of two aspects:

- i) Piquing interest of the students
- ii) Positioning the topic/components of study in ways to show (or make students realize) that it is worthy to be looked at.

I found that the idea of relevance is expressed within the data through the above two points and named this theme ‘Making Learning Relevant’. Note, that this theme does not cover what topics of study are relevant or delve deeply into the idea of ‘what’s worth learning?’ but, it is a composite of dominant ideas listed above which comprise the lived learning experiences of the participants within the school that relates to transformation (transformative teaching and transformative learning) which forms the focus of this study.

Though the codes and the two ideas listed above have been observed across the data and triangulated, my findings along with the analysis in relation to this theme is presented together as a narrative through the example of one learning expedition ‘Heating Up, Chilling Out’ about global climate change undertaken by the Grade 5 students.

#### 6.2.3.1 *Piquing interest*

I observed that the launch of an expedition is the first step towards setting the scene for the expedition, as well as, an important time designed to pique the interest of the students. In the following excerpt from my field notes, the Grade 5 class teacher Amanda echoes this.

Ms. Amanda Raymond prepares her classroom during recess for the new expedition launch. The tables were reorganised and a set of 6 images were placed on each table group. As I assisted her in these tasks, we chat about the launch of the expedition. She points out – *“this is always the most crucial part of the expedition. It is the starting point - when they start on an inquiry that leads them to finding out what is the expedition?, it is about connecting with the students, making it exciting, interesting and slowly as the expedition progresses they make connections to other things and real-life/world”* ~ FN\_26.09.2013\_Gr5

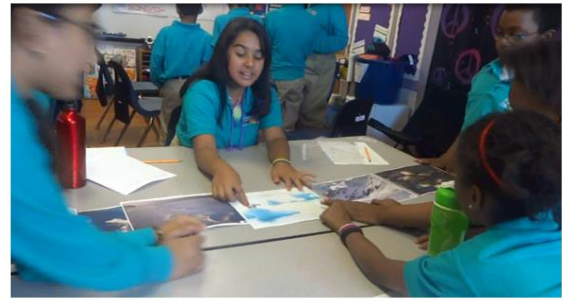
The *mystery images* activity launched the expedition. Briefly, this activity began with students choosing a table to make groups of five followed by looking at 6 images present on their table. After a brief introduction by Amanda students embark on observing and writing notes individually and start discussing within their group. Looking at the pictures, they look like random images of polar bears on ice filled landscapes, **the room is filled with questions and observations and this piques interest of the students.** Like searching for clues within the images the students start to wonder, what is the expedition about?

Students were excited and were eagerly waiting to start the new expedition. They were intrigued by the mystery images. What did they mean? What could they infer from them and what clues do they give them about the new expedition? ~ FN\_26.09.2013\_Gr5

Engaging students, keeping them guessing and allowing them to make multiple interpretations in itself, here became part of piquing interest. Here the interest is not towards a topic of study but investigating the images, discussing their observations and becoming a scientist/researcher.

As I went around the classroom observing various groups, I overhear Ethan, Thomas, Alan and Isaac wondering, *“Is the new expedition about endangered species?”* *“Wow, polar bears”*. They shared with each other observations, questions, any connections they had made and wondered *“I think. . .”, “what if . . .”*. ~ FN\_26.09.2013\_Gr5

I found that the **curiosity and imagination of the students started conversations and primed them towards exploring topics that could be interesting for them.** Creating this engagement with the topic and peers was woven within the learning expedition. Piquing interest during the launch activity was combination of allowing the students to be curious, imaginative and discuss various ideas and perspectives.



**Figure 6.7 & 6.8:** Grade 5 students discussing about the mystery images during launch of the new learning expedition

These conversations among students became the starting point for the next phase of this activity ‘Pictures tell a story’ – where students in their groups arranged their 6 images in a sequence of their choice to tell a story with a clear beginning, middle and end.

The room was buzzing with various groups discussing about possible storylines. I hear Emma, Abigail, Dorothy and Tanya talking about some possible lines of thought – “the panda looks sad” “is he searching for his family or food?” “maybe he is unable to find food”, “the landscapes seems different here . . maybe he is far away from home”, “is that an oil spill in the water?”. ~ FN\_26.09.2013\_Gr5

Students through their stories about the mystery images linked them to something relevant, related to them or the world around them – e.g. family, food, lack thereof, cold climate and so on. They naturally seem **to find relevance and personal relatedness through the stories**. These discussions continued across two days as they finalised their stories and shared with their peers following which they were informed that the expedition was about climate change. Such planned launch of expeditions, along with activities including fieldwork, hands-on -project work, reading a related book and incorporating current news stories or everyday scenarios became crucial critical events or incidents that piqued students’ interest, thus allowing opportunity for the students to find relevance within what they were learning.

On another occasion, a **hands-on project was intended for ‘*piquing interest*’** involved students making weather instruments. This hands-on project involved the use of standard predetermined steps and directions for building the weather instrument with limited time devoted towards exploring other possibilities for use of the materials provided and for envision such designs. I noted this deviated from other hands-on projects students normally undertake. The

lack of freedom to make the weather instrument was not appreciated - *we just have to follow the steps and connect these pieces . . . we don't really have to think (Dorothy\_Gr 5 Student)*

On another occasion, a hands-on project involving making a working windmill using a choice of varied materials along with testing its effectiveness provided ample opportunity for group work, collaboration, freedom to choose and experiment, critiquing design choices and incorporating core practices within science such as – Asking questions and identifying problems; Developing and using models; Collecting, analysing and interpreting data; and Planning and conducting investigations or experiments. Here, I found the students were naturally piqued by the materials provided and the mechanism of the windmill – *we need to use something that will be strong enough to hold the blades of the windmill . . . the blades will pull on the base when they rotate (Aliaya\_Gr 5 student).*

The first project mentioned above did not engage or pique the student's interest to the extent it was intended to. Rather, it became a team building exercise where groups of four students were engaged in accomplishing a series of steps to make their weather instruments. Thus, it deviated from the larger topic at hand.

The demanding expectations from the teachers can be cause for challenge or difficulties. As Grade 4 teacher Ms. Raymonds notes,

*When it comes to a work load - its a lot . . . once in a while when someone says that I don't want to be here anymore, it is not because of stuff like administration but it's like - oh my gosh!! - there is so much to do . . . But everyone wants to do the best for the students and you know you want to do it but it's just the management of time and ... the quality of things - and of course there are days when you do a lesson and you are like .. okay .. I should have just done it this way I should I have spent more time on that last night or something (laughs) but that's' the thing. . ~ Ms. Raymonds, Grade 4 teacher - IN\_Gr4teacher\_24.05.2013.*

It can be argued that, both these hands-on projects mentioned above had differing scopes and were aimed at fulfilling different objectives or engaging students in different ways during their journey through the learning expedition. But as the Gr 4 teacher notes, this variation highlights the challenge of providing/planning an activity for a period of time that piques student's interest and makes their learning relevant.

### 6.2.3.2 Positioning the topic to be worthy

Space and time to be curious as well as think about issues related to the images piqued their interest and students continued to research about the related areas of ice, snow and climate. Relevance of these topics within their lives became evident to the students and discussions ranging from weather, climate to water cycle continued. Ethan tells me, *“It is important for us to know this. Weather is all around us, when we go out in the car or travel, knowing what to expect is nice. I never knew this symbol (showing a card with a weather symbol) was for sleet!”* (FN\_8.10.2013\_Gr5) Subsequently, the Grade 5 students explored weather symbols and how various indicators and aspects of weather were measured and this became the focus for the next weeks. Here, **the students were making connections to everyday knowledge** which further positioned the topic of study to be worthy and relevant.

Basic questions about how weather changes occur? water cycle and atmospheric pressure were the next set of questions that some of the students had. Abigail said, *“I wonder like. . why they say that the pressure is different in the mountains, like in the cake mix box there are separate instructions?”* (FN\_8.10.2013\_Gr5). Similar wonderings were encouraged by the class teacher, making a board where post-it notes with questions were collected. I elaborate on this next.

A typical routine within the LTME classes included opportunity for group discussion, individual/independent reading of text, use of a version of note catcher sheet to assist the student as they write notes about the topic, questions, use observation, research and analysis skills. Integrating online videos, everyday experiments and questions I found, provided another mode for both piquing interest as well as providing meaning and relevance to the topic. The following field note provides an example -

As the students continue their learning expedition after lunch, the topic is weather events. Amanda (class teacher) provides the students with a printed sheet which is a description about different weather events (taken from a book/resource) to every student, they are asked to work in groups on their table, discuss and collect information after reading the text using a note catcher sheet provided. As I observed a group with Sophia, Aiden, Rose and Laurel, they decide to read aloud one topic each within their group first and subsequently separately as they use their note catcher sheets. After about 10 minutes, Amanda reminds the class softly to start discussing after they finish reading. Amanda circulates and listens in

on conversations. Students are not afraid to raise questions or share their emergent ideas along with pointing out evidence within the text that they write down on their note catcher sheets. Within this group of students, I found that students started talking about real-life events or situations that provided a starting point for further questions. Example - Rose begins – *I remember hurricane Katrina was huge. . soon Laurel and Sophia join in with their thoughts. Air moving so fast . . like, is it due to air pressure? But what is air pressure? Like a soda can has pressure?* Amanda ensures that she spends at least 4-5 minutes with every group, facilitating group discussion, encouraging questions and sometimes asking questions that make the students think about the text.

Following this, Amanda announces, there seem to be a lot of questions and good discussion here. We will now watch a video that shows an experiment and explains the concept of atmospheric pressure or air pressure. Students are excited and fully attentive as they eagerly watch the video on the projector screen. The 5 minute video lights up the students. . . ~ FN\_4.10.2013\_Gr5

Students' interest is piqued as they watched animated videos from the internet such as Brain POP ([www.brainpop.com](http://www.brainpop.com)) or videos from shows like how stuff works (stuff to blow your kids' mind – [shows.howstuffworks.com](http://shows.howstuffworks.com)). I noticed a kind of **continuous cycle of piquing interest, discussion, questions and research**. Engaging students in this cycle allowed for making connections and getting the opportunity to do research and working on hands-on projects were part of allowing students to find relevance within the material. The teacher's questioning was not limited to asking review or knowledge-based questions but aimed at modelling interest in the ideas being explored.

I noted that as the students found **relevance through their exploration they made connections to real-world through their fieldwork**. A visit to Blue Hills Laboratory, the oldest continuously operated weather observatory in the nation for their fieldwork, provided the students an opportunity to see the weather instruments in action. The students begin investigating how atmospheric scientists measure and track weather over time to determine whether, how, and why our climate is changing.

After a presentation about the weather instruments at the Observatory, they learned how observers record and analyse the weather. Their notes and thoughts were recorded using their study guide. They seemed eager to get to know as much details to help them prepare to make their own weather instruments. ~ FN\_18.10.2013

Thus, the relevance in relation to the topic was linked through personal, everyday life and/or their future. These provided multiple ways to engage, motivate and connect with the students.



**Figure 6.9, 6.10, 6.11:** Grade 5 students observing various weather instruments at Blue Hills Observatory

We are looking at the instruments that measure different aspects of the weather. *If we can measure then we can see what is happening . . then maybe we can change* ~ Ethan commented ~ F.N\_18Oct13

**Focus on thinking about the world with the content rather than just learn the content was a characteristic of learning.** As students made their weather instruments back in their classroom during the subsequent days I found that their understanding of the content was developed by noticing, applying and caring. Through the use of learning targets and goals the students were constantly made aware of larger purposes of what they are learning as well as the immediate goals. E.g. *I can cite scientific evidence to describe how our climate is changing and the methods scientists use to analyse and interpret changing weather patterns. I can make*



*connections between the ways that climate change is affecting different regions on earth.* Thus through the learning experiences understanding, knowledge and skills are developed and it is shaped by the passions and interests of the students and the teachers with an attempt to make learning relevant to the world beyond the classroom as they make their own connections.

Moving from weather, endangered life to other climate changes across the globe, the students were eager to contribute when the recent Super Typhoon in the Philippines led to large scale destruction and loss of lives. They related the intensity of this Super Typhoon to be much higher than the Hurricane Sandy that caused destruction here in USA and they made posters to raise money for the relief efforts. Finding opportunity to apply their knowledge to real-world issues also provided the students a way to connect with the topic deeply. Here the **opportunity to link their learning expedition to something immediate with real-world implications** provided an opportunity for the students to make meaning and find relevance.



**Figure 6.12:** Grade 5 students making a presentation and plea for donation to aid in the relief work to help people affected by the Super Typhoon in the Philippines.

Their learning expedition culminated with a Climate Change Fair where family members, other adults and students got an opportunity to learn about different regions of the world, experiencing the consequences of climate change. The topics included rising sea levels that are threatening the Maldives, melting ice in the Arctic, the growing threat of malaria in Southeast Asia, droughts in Africa and in the Midwest United States, coral bleaching in the Great Barrier Reef, and intense hurricanes in the Caribbean.

Working with a local Hip Hop artist the Grade 5 students created a rap about climate change which they recorded and performed. The lyrics written by the fifth graders along with being informative was a passionate plea.

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*Only got one planet  
Gotta learn to take care of it  
Task's kinda scary  
That's why we all sharin' it*  
~ **Chorus of the climate change rap** -  
<https://www.youtube.com/watch?v=kftx6PH7kAU>

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This, engagement with the topic, peers and larger audience (Adults/ Family/ Community) through interactions that allowed them to demonstrate and share their knowledge and rap song project that is aimed at reaching out to others further, made their learning relevant. Thus, across the various learning experiences, inquiry, hands-on activities and projects, field work were planned to help students make connections and towards making learning relevant.

#### **6.2.4 THEME 4: Collaborative Atmosphere – Community**

During my conversations with the staff at this school, I found that they deeply acknowledge and celebrate the notion or principle that 'learning is social'. The Head of School associated this as a common thread across their choice of Expeditionary learning and El Sistema orchestral model.

*I think specifically with El Sistema as well as expeditionary learning and the incorporation of the arts, is this whole notion that learning is a social activity. . you know its not something that happens in isolation .. learning is at its best when it's with other people.. you know when you .. trigger each other's learning .. also requires a kind of a precise coordination in sense of member of a team so that you can play and keep up ... the orchestra definitely has a major impact in teaching our students just how it could also be in the academic world.. you know.. i mean there is a very nice kind of a.. back and forth rhythm to what happens here with kids ~ IN\_Head of School\_22.05.2013*

Form the repeated reference within the data, I notice that this principle that 'learning is a social process' provides a theoretical link and provides the bedrock of many pedagogical approaches

or philosophies including Vygotsky (1934/1962) and Dewey (1938). I found that, the main participant teachers Amanda (Grade 5), Shelly (Grade 3) and Carol (Grade 2) had similar views to the Head of School.

*the kind of social piece in learning is really important. . i've just always made sure to find time to get to know them but also get to know each other, they actually know each other so well . . ~ IN\_Gr4 teacher\_24.05.2013*

Learning together, working together in groups, learning from each other is common within almost all learning activities ~ FN\_8.05.2013\_Gr2

During my various informal discussions and interviews with participant classroom teachers, I noted that, the idea that learning is influenced by social interactions, the importance of interpersonal communication and relationships with the students, laid the foundation for their teaching practice and the students' learning experiences.

This theme resulted from data relating to various learning expeditions and the El Sistema music-time (field notes, informal chats and video recordings) coded with 'collaboration', 'working together', 'discussion', 'learning from each other', 'team /group work', 'modelling group work', 'collaboration among teachers', 'community and togetherness' and some aspects of 'group interactions' including disagreement, consensus, differing perspectives, teamwork, argument, inspiration, and debate.

The **centrality of the social aspect of learning** highlighted by teachers and administrators led me to look at the coded data seeking patterns including similarities or differences. The predominant code of *collaboration* was common but, as I revisited the various types of data collected i.e. interviews, field notes and the video recordings across various participants, this theme while answering the question *what does transformation through learning at NELCS involve?*, went beyond the act or activity of collaboration. Thus, the focus of this theme became the collaborative atmosphere which captures **the lived experiences of the participants not just during the act of collaboration but relating ideas and experiences of social learning, ways of interacting, co-operation, togetherness and appreciating richness of perspectives**. Hence, this theme 'collaborative atmosphere' is discussed or illustrated through the findings relating to the following main points:

- i) Experiences relating to various ways of group learning interactions among students (group learning, book groups, orchestras)

- ii) An environment where teachers, resident artists and external experts collaborate regularly
- iii) Collaboration doesn't necessarily mean agreeing with each other but also appreciating richness of perspectives
- iv) Living the metaphor "we are crew not passengers" through the orchestra

#### 6.2.4.1 Group Learning

I found that group learning was embedded within almost all activities at the school. Here I list some of the types of group interactions that I observed, along with some exemplars through which I present the findings for this theme:

- Making a project/ hands-on product in groups (e.g. making a chair for the bear with Lego, making model weather instruments)
- Book group discussions (e.g. Grade 4 & Grade 5 book groups)
- Discussion during learning expeditions. (e.g. various phases of making the final product)
- Routines such as 'turn and share', 'group feedback/critiques', 'brainstorming', 'talk/discuss', 'group sharing'
- Crew responsibilities (e.g. classroom management related responsibilities assigned as a group)
- Orchestral model of music learning

Across the school, within every classroom I found the space and seating plans were organised to aid group learning. Students sat together in groups of 4 or 5 around a larger table.



**Figure 6.13 & 6.14:** Grade 4 and Grade 5 classrooms with group tables.

During my informal unstructured conversations with Amanda the Grade 5 teacher, she talks about organising and often re-organising the seating arrangements for the students.

In the beginning, I assign specific seats to the students, but this keeps changing across the year. There might be more changes during the beginning of the year but overall the groups of 4 or 5 change at least 2 – 4 times across the whole academic year. But during a day there might be times . . . during some specific activities students choose their own seats making their own groups or we use the random stick pick (a bottle with craft sticks each bearing the name of a student) and allow selected students to choose or randomly assign seats or sometimes they are divided according to some academic requirement like during book groups ESL (English as a second language) students might work with Carrie (the specialist teacher) or students work together on say.. division of fractions . . . and so on. . . . a mixture of boys and girls, getting new students to work with different classmates, a mixture of different personalities or academic abilities . . it's fluid, keeps changing. I do not stick to one particular format . . . the idea is allow them to work together in different groups. . but the key idea is in 'groups' ~ FN\_24.05.2013\_Gr5

My observations of other classrooms and conversations with other participant teachers also evidenced similar thoughts – organising seating in groups, allowing group work within all activities and changing composition of the groups to allow interaction with different peers.

The idea of working in groups in the classroom I observed, began with sitting in groups and went on to specific group work or collaborative activities. Giving an example from the Grade 5 classroom (Lego build a chair for the bear challenge) I illustrate the lived experiences of participants. Here I present a set of extracts from my field notes to elaborate this activity highlighting some aspects among two different student groups -

*Objective:* Build a chair for a bear (stuffed toy) that can withstand a drop from a height of 7 inches and remain intact with the bear.

Working in groups of 2 or 3 the students enthusiastically start building the 'chair for their bear'. I notice Joeseph & Gabriel are thrilled and Gabriel (loves drawing) starts to design/sketch the chair on paper as both brainstorm about the structure of the chair, the idea and inspiration behind it. They want it to be like a '*superhero chair*', '*chair with rockets . . . like a car*'. Slowly they begin to look at the Lego pieces themselves and continue with ideas briefly before jumping in to build it.. . . after looking at various pieces trying to make the chair tall with long legs they realize that the chair with a bear on it will be unstable and now. . . . . both suggest different

ideas and they together decide to make both quickly and try it out . . . . . but ultimately they both come together to build it together. . . Towards the end they rework their design on the spot.

Alan & Aiden & Ethan begin by talking some main ideas... *'it should be big', 'it should catch the bear.. like a baby seat'* and soon they start building sections of the chair, the legs, the base and look for different Lego pieces that could help hold the bear on the chair. All the three students were focusing on separate sections but confirming how they will come together as they begin building. Things are not always smooth . . trial and error. Then there is consensus and all their efforts come together to a common design to fit all their efforts. ~ FN\_31.10.2013\_Gr5



**Figure 6.15 & 6.16:** Grade 5 students working the 'chair for the bear challenge'

My analysis showed that group work provided opportunity for different students to interact, discuss viewpoints, working hands-on together as they appreciate different perspectives or ideas. Negotiating relationships and actions within a group, building consensus, fostering agency and opportunity for leadership were prominent issues that arose within the critical moments highlighted in the exemplar data excerpts above.

I found that working in groups on a hands-on project brought with it not only the opportunity for the students to learn to appreciate different perspectives and develop one's thinking but also specifically the opportunity for strategizing, action, planning and execution of their ideas. It was within these activities students shared their experiences -

*“we planned and worked together.. like .. we took responsibility for separate things” ~ Ethan  
(FN\_31.10.2013\_Gr5)*

This group worked together and took a planned approach giving space for everyone within the team to develop their ideas and take responsibility for certain sections/part of the ‘Chair’. Thomas from another group of students shared -

*“you don’t realize that small decisions about design when you just make, it could change it, I think both of us after initial mistakes realized that we need to question and plan as we build”  
~ FN\_31.10.2013\_Gr5*

This led to the discussion of the principles of engineering design within the classroom and from such interactions, I perceived that **understanding** emerged from the experiences and students evolved a process whereby ideas were generated by working together. Within the collected data, I found that the emphasis was on working and making a chair **together**, underscoring the importance of the word ‘together’ within this act of collaborative learning.

*“no one idea is best.. we are making it together, thinking how all of these might fit together”  
Emma (FN\_31.10.2013\_Gr5)*

*“after a while.... Somehow we just understood and saw the chair together.. like we were thinking the same design and made it happen” Dorothy (FN\_31.10.2013\_Gr5)*

Both Emma and Dorothy had emphasised on ‘together’ not on any one particular individual or idea – making the chair by bringing everyone’s ideas together and Dorothy noted how the experience of ‘together’ provided a turning point where the execution happened somewhat seamlessly almost like they knew each other’s thinking.

Another type of group activity observed were book group discussions. I noted that these book group discussions provided a space where students worked together through the book, understanding from each other’s interpretations and discussing situations within the material by engaging in a conversation. There was evidence of students engaging with each other, exploring different perspectives, making arguments, reflecting, respectfully agreeing to disagree and going through the process of understanding what is a good group discussion. Emma summarised her experiences during our conversation --

We talked about the main theme within this book and also discussed our answers to a question relating to the story we had each written. I find this a time to closely examine

different perspectives. . . . It (referring to the discussions) has sometimes made me think about things differently. ~ Emma (FN\_22.05.2013\_Gr5)

As above, read-aloud sessions where the whole classroom joins the teacher as she reads aloud a book provided similar opportunities. One of the read-aloud sessions I observed was the children's novel 'Wonder' by R.J. Palacio in which the main character is a Grade 5 student who has a facial deformity attending school after being home-schooled till Grade 4. The following excerpt from my field notes gives an example of the activity -

Students are engrossed listening to the story of August (main character). Ms. Raymonds begins a discussion exploring a situation within the book where another student in the school though being August's friend, ends up making comments about August that hurt him. . . . - different perspectives about this situation are explored by the Grade 5 students. Mia says "*he is just being mean*". . . Emma begins - "*I respectfully disagree, I don't think he did a mistake, he might not have meant it, why should you take it as if he meant to hurt August?*". . . . *but you cannot be like.. two-face*, Tanya adds . . . ~ FN\_14.10.2013\_Gr5

I found that such group discussions provided opportunity for students to listen to different perspectives and develop a richer meaning. They get to know each other's feelings, widen their imagination together as they put themselves into the shoes of different characters, authors or different situations. When I subsequently talked to Mia, she mentioned, *I would have just thought he is mean, but now I think it's not that simple . . reading the book together and talking made me think.* (Referring to the story and the discussion above). Emma said, *you don't need to always agree in a group, we are doing it together* (referring to building a model wind mill) *but it's not like we all always agree. . . it's part of working together.* (FN\_14.10.2013\_Gr5)

Any group activity has its own ebbs and flow. In the group activity 'Pictures tell a story' with the mystery images of polar bears and ice (previously introduced in sec 6.2.3.1); Sophia, Aiden, Rose and Laurel were working together as a group to think about the mystery images and to arrange the images to tell a story. In my fieldnote below, I describe the group doing the activity -

*Sophia is enthusiastic, vocal and has a strong agency. Rose being a new student is experiencing her first learning expedition and seems both tentative and mutely excited. Laurel also has a quiet nature whereas, the shy and quiet Aiden, being the only boy in the group seems cornered among the three girls! . . Sophia takes over the group leading them through her story through the mystery images, correcting herself and rearranging the images to fit her story. . . . . Rose looks happy with Sophia taking the lead (during my*



*conversation with her later, she acknowledges this saying Sophia helped me understand what was expected, it was good to know what to do or how it can be done), Laurel quietly adds a change to the story altering one image. . . . After all the girls seem happy with the story, but in their conversations, they totally ignore Aiden. . . . Later, Aiden tries to say – “I think this is another story” and begins to change the sequence of the images completely, Sophia jumps in and stops him from moving the images, saying don’t change it . . She doesn’t allow Aiden to speak and tell his story using the images. . . . This continues almost throughout the activity today. ~ FN\_26.09.2013\_Gr5*

This shows that while there are some groups within a classroom for whom the group activity flows constructively, there are others (such as the above example) for whom it does not. But learning in a group continues and students within a group slowly learn to listen and express. The same group of students seemed to interact better the next day when Rose and Laurel started to express their views and Sophia started to allow other points of views including Aiden’s. But as with any group, this need not be the case always.

#### **6.2.4.2 Collaborative staff**

This theme ‘collaborative atmosphere’ includes the surrounding experiences of the students where collaboration is evident. They witness adults (teachers, resident artists, specialists) collaborating and working together frequently. The following are some examples-

- Resident artists collaborating with the teachers and the students through their learning expeditions
- Art specialists collaborating with the staff and the students to teach, develop and give feedback on the student’s art work.
- Specialists or assistant teachers working together with the class teacher through a learning expedition or some part of a learning expedition

Resident artist Karl emphasised that collaboration was very common. Many resident artists highlighted that they get to work with the students not just in the orchestra or band but also during their expedition. Beth also pointed that *the schedule allowed us to spend one whole section of our time with the students in the classroom as they did their expeditions*. Pointing that the culture and decisions made by the administrators in regard to the scheduling of classes helped in creating a collaborative atmosphere.

*having the blended positions and allowing a handful of resident arts to be here on a fulltime basis has really encouraged a lot of that collaboration” Karl Marcel, resident artist ~ IN\_Marcel\_25.09.2013*

I found that resident artists collaborating with classroom teachers included assisting them during the LTME sessions, working with the students for any presentations or performances related to LTME as well as producing the final music related product showcasing their journey through the learning expedition.

Grade 4 student Ethan summarized their learning experience of the Great Migration learning expedition where all the students wrote blues songs and performed at the House of Blues -

We learnt and researched American history - the period of Great Migration . . . and we did that through paintings, texts and poems. . we heard a lot of blues songs. We explored the genre .. listened to blues songs, did fieldwork, read lyrics and made our own songs. In the classroom Ms. Raymonds, Ms. Marcel, Ms. Diaz, Mr. Ortiz and Mr. Robinson all worked together initially. We then worked in groups with a resident artist (Four groups with 4 or 5 students with one resident artist) to compose our blues song from stories from our own lives. Like in our group we had written a song about ‘gaming’ and we composed as a group with Mr. Marcel . . improvising and playing our solos and together we performed at the House of Blues. ~ FN\_9.05.2013\_Gr4.

Collaborating with resident artists was common during the pilot phase of my research, but changed when the school expanded into two locations as they almost doubled in student size during the next academic year. Due to schedule changes I found that resident artists had less or often no time for everyday collaboration. So, collaboration was more or less restricted to learning expedition products or presentations.

I also observed other art specialists and experts visited the school and worked alongside the class teacher and the students on specific projects like making a scientifically accurate snake drawing, making illustrations for their books or self- portraits, sharing knowledge about snakes, banking and music to name a few. Such collaborative activities where the class teacher works with other experts and artists was commonplace. Emma commented,

*we often have specialists and experts visit our classroom. . it gives us a chance to know more, we share what we know, ask questions. . other times we along with Ms. Raymonds*

*will work with them together as we research a topic or make our presentation. ~  
LW\_7.05.2013\_Gr4*

Thus, the classroom atmosphere as they undertake their learning expedition is filled with group and collaborative activities among the students, along with teachers, artists and specialists. These provided many opportunities for critical moments for the students and transformation through learning was embedded within these experiences and moments.

I found that this collaborative atmosphere supports the teachers as they undertake the task of creating learning expeditions. Supporting staff with designation title 'Senior Editor' and 'Curriculum Director' both work together with the class teachers to plan and implement the learning expeditions and often other teachers or resident artists contribute. Further, due to the extended school day the teachers had enough time to plan their learning expeditions, when the students are at their orchestra rehearsals, with both, in-house support from subject or curriculum specialists, as well as, regular professional development. I found that the staff appreciated the freedom they had:

*I think working here you really have to be flexible and able to just kind of change when you are asked to .. be creative in a way - may be other schools we might be handed something and say.. you know do this this is your math curriculum and you have to follow it - here we are really we meet with Principal and Head of school and they dont .. you know it's not that they do not know what we are doing but we are really trusted. ~ Ms Raymonds, Grade 4 teacher - IN\_Gr4teacher\_24.05.2013*

I find that the freedom, importance and trust placed on the teachers at NELCS highlights the culture. K1 teacher Ms. Williams during an informal discussion acknowledged the support she received *"I had that passion the school helped me build a fantastic curriculum unit around it"* (IN\_K1Teacher\_10.05.2013).

#### **6.2.4.3 We are crew not passengers**

Another finding that I associate with this theme is the concept **we are crew not passengers**. This is an attitude that all North East lab students aim to embody. I found that this "crew" attitude itself creates a community of learners both within a classroom and the school as a whole. Many activities, responsibilities and qualities are embedded within the idea of "crew".

Here I briefly list some of the various expressions or actions related to being in a crew as expressed by the participants –

*Being in a crew is like, we are all together ~ Cheryl, Grade 3 student (LW\_8.05.2013\_Gr2)*

*We are crew not passengers in our learning, we need to be active learners ~ Emma, Grade 4 student (LW\_7.05.2013\_Gr4)*

*We take responsibility – like responsibility within classroom . . responsibility to learn. We are a group and the together we do things or together we represent ~ Aiden, Grade 5 student (IN\_18.11.2013\_Gr5)*

I found that though this was not explicitly discussed within every activity, this attitude ‘we are crew not passengers’ is embedded as a metaphor. I saw various occasions where ‘crew’ meant being together and working together in a group. But, I witnessed the orchestra as a platform where this metaphor comes to life. The following set of excerpts from my field notes illustrates this –

Dudamel orchestra is the largest orchestra and the room just about fits the students with their instruments. . . they adjust, they wait, they encourage, they model good behaviour and rehearse together. . . encountering a particular difficult part in their music piece – the soundtrack/title song of The Lord of the Rings, the strings section, led by the conductor, rehearsed their part many times. Meanwhile some students from the percussion section look distracted, especially since it is not their turn to play along. . . I notice Emma the grade 5 student modelling behaviour and readiness expected from a musician within the orchestra . . following all the other instruments, noticing the changes and difficult sections as they rehearse. . . Two other percussion students soon stop being distracted and become involved with the rehearsal even though it is not their turn to play. . . On another occasion I find Sophia volunteering to help with one-on-one peer-learning. . . subsequently talking to me she says . . *“In the orchestra we are all together, everyone matters but also that we work together to make music. . it’s the best when we all are working together actively”*. ~ FN\_8.10.2013\_Dudamel

Here, Emma and Sophia along with many other students embody the idea of being in a ‘crew’. The orchestra in itself is a crew where everyone is working together and in this case it is literal. The vice-principal and COO music programme Anthony Rodriguez also noted this -

*. .because of El Sistema where it is not about you receiving private lessons and just getting better at music, the final goal is ensemble/ orchestra/ playing together as a group. It is not necessarily all only about you as an individual, it is about the group. The orchestra work provides the students a very interesting direct experience of what it means to be part of group, to cooperate to get along to work with others all relating to the social and emotional learning thing. To give you an example - when they are learning, all the time they talk about the 'crew' metaphor - like we are rowing in the same direction and some kids get that but the orchestra work is not a metaphor, it is the direct experience of the thing. . . ~ IN\_COO Music programme\_7.11.2013*

As Sophia in the excerpt above pointed out the togetherness in an orchestra, the collaborative/group work within the orchestra was also noted by the Head of school.

*. . it requires a kind of a precise coordination in sense of member of a team so that you can play and keep up and do many things simultaneously - a very nice kind of a.. back and forth rhythm to what happens here with kids ~ IN\_Head of School\_22.05.2013*

It is this rich atmosphere where there is opportunity for collaboration, group work and continuous exposure to different ways of working together which lend to this theme of collaborative atmosphere. It highlights an important aspect of learning experiences of the participants at NELCS.

## **6.2.5 THEME 5: Reflection**

Across all the learning activities, I found that being reflective was an active part of the learning process at NELCS. Reflection in its simplest form can be defined as thinking carefully of something. It can have many facets, for example, reflecting on work enhances its meaning, reflecting on experiences encourages insight and complex learning (Costa and Kallick, 2008).

Reflection was embedded within all activities, from the learning expeditions, orchestra rehearsals, book groups, keeping a reflective journal to being reflective as one of the five crew qualities that every NELCS student strives for. Focusing on the question 'what does transformation through learning at NELCS involve?', the repeated mention of reflection by the

participants, along with reflection being built into learning activities made this theme predominant.

Noticing its importance, I revisited the data coded with 'reflection' looking for patterns, similarities and differences. I found that the reflection within the learning process varied across the activities and the role it played within a student's learning experience varied. This mainly ranged from self-awareness to self-assessment. Illustrating this, I present my findings relating to this theme through the following main points:

- i) Self-awareness being central to reflection
- ii) Critiquing as a form of reflection
- iii) Reflection as an activity

#### 6.2.5.1 *Self-awareness is central to reflection*

**Self-awareness** has been briefly addressed in the themes *development of crew qualities* (Sec 6.2.2) as well as some aspects of *collaborative atmosphere* (Sec 6.2.4) above. My understanding of the term self-awareness was based on my academic background in psychology, and can be defined as *the capacity for introspection or attainment of insight into ones' personal attitudes, motives, reactions, defenses, strengths and weaknesses* (Corsini, 2002). At NELCS I found that they focused on the social emotional learning programme wherein the definition of self-awareness is - *the ability to accurately recognize one's emotions and thoughts and their influence on behaviour. This includes accurately assessing one's strengths and limitations and possessing a well-grounded sense of confidence and optimism* (CASEL, 2013). As it is clear from the latter definition, here the idea of being self-aware is related to social and emotional level of the individual in order to attain a positive outcome of confidence and optimism. Though the overall understanding of the term 'self-awareness' is the same but the time and space for reflection where self-awareness was central was limited to certain activities.

An example of self-awareness being central to reflection was evident through the 'Open Circle discussions'. Reflecting and sharing experiences and strategies as they talked about various topics such as - *"When you are not feeling 100%"* (Grade 5), *"Speaking up"* (Grade 5), *"Why some people make bad choices when they are nearing the end of something - example*

*vacation, camp, end of school year?” (Grade 3). The following excerpts from my field notes as I observed the Grade 3 students reflect on the last question above -*

Sitting in a circle on the carpet the students first begin by sharing what they thought was the reason why, some people make bad choices when they are nearing the end of something like the school year. AX thinks they will “*miss somebody there or miss doing something*”, other students share similar thoughts, JQ said “*it doesn’t really matter when they make bad choices because it is coming to an end like no consequences*” . . . These discussions continued across two days when they followed the pattern of sharing and then responding and reflecting on what they discussed. They subsequently shared what to do when they feel that they are going to make a bad choice. ~ FN\_16.05.2013\_Gr3



**Figure 6.17 & 6.18:** Grade 5 and Grade 3 students during open circle respectively

A questioning stance about one’s own actions and feelings along with opportunity to reflect with peers about each other’s actions and feelings was visible within the data. I found that the focus on self-awareness was mainly objective in nature i.e. arising from the comparison between the self and the behaviours, attitudes and traits of others or some perceived standards for example – the behaviours, attitudes and traits related to being a musician and teamwork. As typically expected, it varies among students. It is not always easy to reflect, during one of our informal conversations Gr5 student Dorothy said – *I don’t know what to reflect on, sometime it is hard to think about oneself . . I don’t know.* But, on another occasion when the students were reflecting on their experience during their fieldwork, she was happy to share her reflections with the class. Being reflective is considered to be a constant process that students work on and is positioned as a process of growth. Thus, the students slowly become more self-aware through various activities and this in-turn makes them more reflective.

### 6.2.5.2 *Critiquing as reflection*

I found **critiquing** to be another form of reflection observed at NELCS. **Self and peer critiques** form part of the learning and assessment cycle during their learning expeditions. Noting the link between critiquing and reflection referred by the participants within the data, I explored further and analysed the data and found critiquing to be a form of reflection at NELCS.

As students begin to explore any topic they first reflect on their existing knowledge and experiences about it. Grade 4 class teacher Amanda Raymonds refers to this during our conversation

*“... they (students) would assess themselves before doing anything” ~ FN\_21.05.2013\_Gr2*

I observed that, this ‘assessment’ was not necessarily limited to knowledge about the topic; it went beyond to one’s experiences, it forms a mode of thinking as they learn, re-visiting prior understanding, a form of exploring ideas and also becomes a starting point for discussion. Further, this process of continuous reflection continues throughout the learning process allowing for students to experience self-directed learning and evaluation. Though I observed critiquing embedded within all the expeditions, I narrate the findings related to this theme mainly through the data gathered from the Grade 2 snakes expedition. This choice has been made only for ease of presentation.

Self-and peer critiques were actively employed by each Grade 2 student through the various stages of making the scientifically accurate drawings and their non-fiction story about their chosen snake. Specific learning target rubrics (example discussed previously in section 6.2.1) were used as templates for assessment for every step/aspect of the draft followed by students reflecting on their learning and work to assign specific ‘Stars’ (compliments, good aspects) to the work and ‘Stairs’ (things that needs attention and work in the next draft). This process was undertaken in some form throughout the expeditions across all Grades. The idea of high quality work within classroom was associated by the staff with the process of critique and revision. This has been previously discussed in a previous theme (section 6.2.1). Here, in this theme, the focus is on the act of reflection through critiquing.



The concept of critiquing and reflection through learning activities is introduced to the students from Kindergarten. Within EL literature critiquing is used and positioned as a tool for improvement (EL Core practices, 2011; Berger, 2014). I noted within the data, that as students learn to reflect and critique, specific attention is given to the three aspects of critiquing – being kind, specific and helpful. This understanding develops as the students realize the value of the process.

*“we have 3 things that we always ask kids to do when we are doing critiques - be kind, be specific and be helpful, and after they practised the students go back and begin critiquing each other's work..” ~ V\_Gr2 teacher\_EL*

*“...what i find is that in the beginning kids are really great about being kind, so at the beginning we don't really see a lot of helpful and specific feedback over time as kids do this - we are talking about over several weeks, as they practise critique and their drawings improve, you can see that the kids recognise the value of that specific and helpful feedback...” ~ V\_Gr2 teacher\_EL*



**Figure 6.19 & 6.20:** Grade 2 students as they peer-critique on scientific drawings of snakes

In order to encourage and guide the students through the process of reflection through self and peer critiquing, teachers also provide individual attention to students as the expedition progresses. But the whole process is aimed at giving independence to the students, to take ownership of their learning.

The idea of building a mindset of continuous improvement through the process of critique and feedback along with instilling responsibility and ownership of learning framed the overall process of reflection through critiquing. Carol noted that this practice was very empowering for the

students and during my conversations with the students, I see that they valued it as a tool for improvement.

“..I think critiquing is saying what you should work on and what you did really well and unless we know what we should work on it won’t get any better and that’s what it is about – getting better at things” “.. it makes us think about what we are doing and our thinking” “..Its fun, more we can get the more we can work on and if we accomplish it then we feel very good” ~ In conversation with Grade 2 Students Charm & Jacob, FN\_21.05.2013\_Gr2

Thus, within especially the expeditionary learning activities, critiquing as reflection was witnessed throughout the data collected.

### 6.2.5.3 *Reflection as an activity*

Apart from the above two illustrations of reflection that encompass this theme, the third is a direct form of **reflection as an activity**. Across the data collected I found many learning activities where students reflected on their learning. Here reflection meant to ‘look back’ at their actions, behaviour, understandings, feelings and experiences to learn. These activities took different forms, for example, an open group discussion, routines such as *think share and reflect with peers or as a group* and maintaining a reflection journal.

Overall the teachers and administrators believe that students and teachers need time to explore their own thoughts, make their own connections, and create their own ideas as well as exchange their reflections with other students and with adults.

*“we encourage reflection to understand the what and why of people and events and our role in creating the best possible outcomes.” ~ D\_newsletter\_5.09.2014\_Head of School*

Staff across the school recognise and encourage the students to reflect on their actions and emotions and understand themselves. ~ FN\_5.11.2013

Further, I noticed that time for reflection was incorporated within the classroom schedules. Though not done every day in the same format, but some form of reflection in relation to at least one of the activities across the day was included within the schedule. This follows one of the design principles of EL “Solitude and Reflection” which emphasizes that students and teachers need time alone to explore their own thoughts, make their own connections, and create their

own ideas. They also need to exchange their reflections with other students and with adults (El Core practices, 2012).

Reflecting on the journey of learning both by the staff and students is thus encouraged. The Head of school through the weekly cover letter in the family notes newsletter, just before the spring break, encourages staff, students along with parents and families to reflect -

*It is a time to think of all we have done, why we have done it and to reflect on how those activities have moved us forward on our journey to be the best that we can be. How closely did we come to fulfilling all that of which we are capable? . . . . a period of time to stop and reflect, to identify what is really important to us is critical to our peace of mind and self-direction. We need to sift through what we could have done better, to know who we love and for whom we wish to show love and respect, and what we want to celebrate doing so we can gather energy during this quiet, peaceful time to continue to go forward in our quest to achieve excellence. D\_newsletter\_20.12.2013\_Head of School*

Opportunities for students to reflect on learning as well as their actions and feelings were observed across the data. Some of the main ways reflection was embedded within the learning activity that I observed include –

- a. **Reflecting on existing knowledge before beginning a topic.** This can be considered as ‘preflection’ referred by Slavich and Zimbardo (2012) as “all types of reflective actions that occur before a particular assignment or activity has begun” (p.594). I observed that these preflections were undertaken through either ‘share talk’ discuss sessions in pairs or in groups and through the use of rubrics to self-assess their existing knowledge about the topic. This self-assessment strategy was pointed by Grade 2 class teacher Claire previously (pg. 200 above) as she talked about reflection. I noted this was the beginning or starting point for the students to achieve their larger learning target for example – I can perform my narrative non-fiction snake story for an audience. I found that this provided the ability to the students to begin their learning activity knowing where they stand and what they need to learn. Following pictures show two different rubrics used for the reflection feedback cycle which begins with preflection.

| Reader's Theater Targets   |  | Name: _____<br>Date: _____ |  |  |
|--|--|----------------------------|--|--|
| Reader's Theater Targets   |  |                            |  |  |
| I can speak smoothly and with expression.                            |  |                            |  |  |
| I can use a presentation voice.                                      |  |                            |  |  |
| I can read with appropriate pacing and pay attention to punctuation. |  |                            |  |  |
| I can focus and know when it is my turn.                             |  |                            |  |  |
| I can keep my script down and still.                                 |  |                            |  |  |
| I can keep a strong body the whole time.                             |  |                            |  |  |
| Star:  |  |                            |  |  |
| Stair:   |  |                            |  |  |

| Name: _____   |  | Date: _____   |   |  |
|---|--|---|---|--|
| We have been working with place value and decimals for a couple weeks now. Take some time to self-assess how you think you are doing. |  |   |   |  |
| <b>Accomplished:</b><br><br>I am doing this very well!  |  |   |   |  |
| <b>Developing:</b><br><br>I am okay at this...but I'm still working on it.  |  |   |   |  |
| <b>Beginning:</b><br><br>I am just starting to do this.   |  |   |   |  |
| I can explain the difference between the value of digits (whole number and decimals.)   | I can multiply and divide whole numbers and decimals by powers of 10 (ex: 10 <sup>3</sup> ). | I can read and write decimals in standard form, expanded form, and word form. | I can compare (using <, >, or =) decimals to the thousandths place. | I can round decimals to the thousandths place and explain why my rounding is accurate. |
| An area I need to work on the most is _____   |  |   |   |  |

**6.21 & 6.22:** Examples of two self-assessment rubric sheet

Preflection was not limited to using rubrics for assessment or general sharing of thoughts and experiences. For example, in the Grade 3 classroom, students were undertaking a learning expedition titled 'Whose story is it?' about Massachusetts' first inhabitants the Wampanoag and the Pilgrims. After introduction about diverse geography of Massachusetts, students were fascinated by the Native American tribes. Here, they began by drawing their representation of a Native Americans in their journals. The illustrations were based on the students' prior understanding of Native Americans.

*"I drew big red feathers on the head of native America"* said Joel and *"I drew different weapons"* said Jacob. The classroom shared their illustrations with each other and this discussion led to them framing the list of items they thought would be good to know about the Native Americans. What types of clothes did they wear, what tools did they have, what food did they eat . . and so on. ~ FN\_31.10.2013\_Gr3

As they researched about the Wampanoag they started to revise their understandings about what type of food they ate, the type of homes they lived in to name a few and developed their illustrations and drawings to reflect their understanding.

- b. **Reflecting on experiences and new knowledge as they continue their learning expeditions or activities.** These reflection feedback routines continue along with the

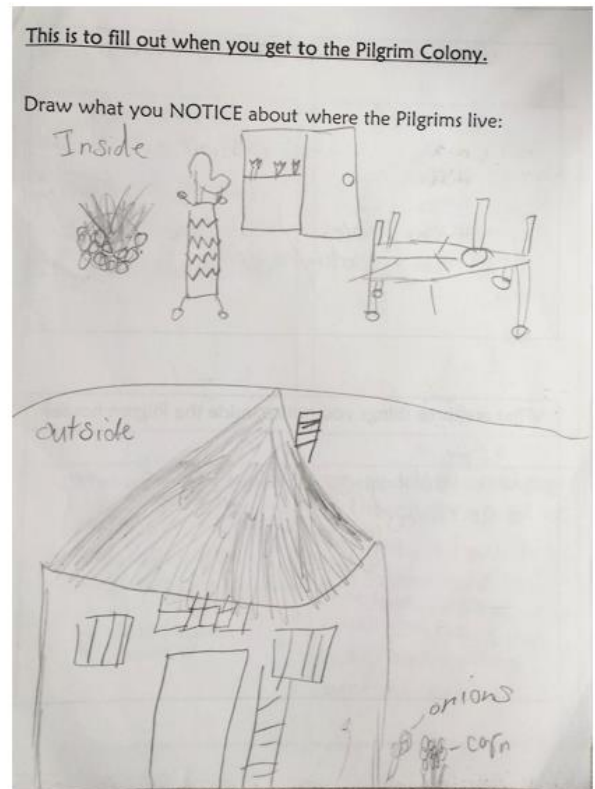
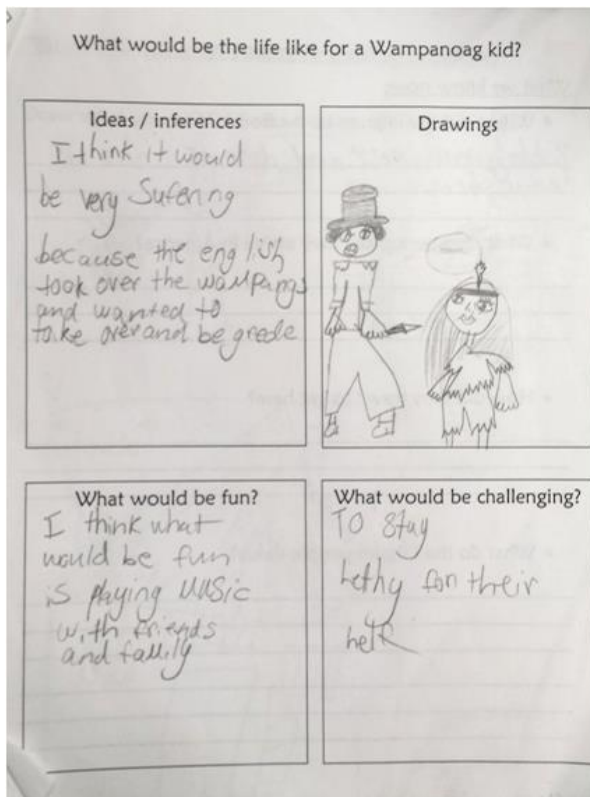
expedition. Since this has been discussed above (within sec 6.2.5.2 critiquing as reflection), here I highlight the ways reflection was embedded within the learning activities. Firstly, reflection opportunities embedded within the expeditionary learning lessons are mainly framed as assessment. This reflection feedback cycle takes place individually (self-assessment), (in pairs) peer-assessment and in a group (group feedback). Examples relating to rubrics for all the above types of reflection feedback cycle has been previously addressed in the above point.

Secondly, I noticed that reflection was key to fieldwork experiences. Sharing of one's experiences and reflecting on what they learnt through the fieldwork was encouraged.

The next school day after their fieldwork at Plymouth Plantation where the Grade 3 students saw and researched both Wampanoag and Pilgrims's way of life, the debrief and synthesis of learning took shape of a reflection activity. Excited to share what they have learnt and recorded in their fieldwork journals the students, class teacher Ms. Shelly James gets them to sit in the carpet and begin first by sharing their favourite parts of their fieldwork. Hands shoot up as they talk about the boat being made by the Wampanoag, the huts where they lived and the way the Pilgrims spoke in English. After a brief group sharing they are asked to turn and share among their tribes (a group of three or four students previously assigned for this expedition). Now the classroom is buzzing with students enthusiastically explaining what they saw and what stuck with them after their fieldwork. Cheryl exclaims, "*the natural handmade clothes were soft and nice, they really work hard*". Joel adds, "*they are very much nature loving, taking care of even the animals they do not put them in cages*". Jacob says "*the Wampanoag were very different from Pilgrims, they did everything in a simple manner, they worked hard and they lived together helping each other*". The fieldwork journal was filled with guiding questions such as – What are the similarities between Wampanoag and Pilgrims, How do you see what the Wampanoag and Pilgrims value? Students had taken notes and made drawings about various aspects of the lives of these people, such as, about their homes, materials they use, tools and food. . . ~ FN\_7.11.2013\_Gr3

As seen in my field note entry above, sharing and discussion about what they learned took the form of group discussions, keeping the fieldwork journals and drawings. Charm in her reflection form (D\_Gr3 Wampanoag reflection form\_7.11.2013) writes, "*I learnt that the Wampanoag used non-edible berries as a dye*", "*keeping enough food in the house was a*

*challenge*". Reflecting on what a life of a Wampanoag kid would have been Charm writes "I think it would be suffering because the English took over the Wampanoag and be greedy" (sic), Sharon wrote "it would be hard because they have to do everything by hand" at the same time they write about things that would be fun - making pottery, music and singing, making boats.



### 6.23 & 6.24: Plimoth Plantation Fieldwork journal examples

Thus, reflection here includes thinking about how their thinking about the topic (life of Wampanoag and Pilgrims) has changed over time. I also noted that it provided opportunity to set the direction for their next meaningful research questions.

- c. **Reflecting on action and behaviour.** Within the data collected, the idea that self-awareness was central to reflection also lends to reflection activities that specifically focus on action and behaviour. I noticed that reflection during orchestra rehearsals followed a different format. Here I found that the resident artists encouraged reflection through a short

open group discussion both at the beginning and end of the sessions. This was not undertaken always but was observable in many rehearsals.

As they finish playing the Indiana Jones theme song, Mr. K opens the floor starting with *“How was today’s rehearsal?”* Soon comments from the Dudamel orchestra members start pouring in, *“I think we were much better during the last two times we played the song, we were cohesive and sounded strong”, “I think in the middle the repetition of only the strings section was definitely good, but I think after a while the others might have found difficult to concentrate as they were just waiting” (sic), “we need more work together, we are much better than where we started”, Aiden suggested, “next time I think we should have some peer learning pull outs” ~ FN\_17.10.2013\_Dudamel*

Reflections here were not specific to individuals but to the overall action and behaviour of the participants within the orchestra. The focus here of getting better referred to both getting better at playing the song as well as being a musician in an orchestra. Dorothy subsequently said, *“I think being a musician in an orchestra, even if you are not playing at that time, you are fully concentrating with the music”* (FN\_17.10.2013\_Dudamel). These general reflection discussions help both students and teachers to set goals for future learning or rehearsals.

Apart from students assessing themselves through reflection, I found that a more open and unstructured opportunity for personal reflection was through maintaining journals.

Keeping a reflection journal Dorothy says “is like keeping a diary, but with more focused writing. Ms Raymonds asks us to write about our weekend, the recess time any experiences and our reflections. We also sometimes write our thoughts and reflections about an expedition, what we have learnt or the book we are reading. . . but generally it is more personal, anything we feel like writing, drawing, anything. . . ~ FN\_21.05.2013\_Gr4

In addition to keeping reflection journals, students also keep a communication journal which I found was more focused on interacting with peers through ones’ writing and reflecting on each other’s thoughts and opinions. These communication journals were used in multiple ways, for example, to write an essay about an article in the newspaper, some specific writing about an event, experience or general ideas.

Going through Mia's communication journal, I read her thoughts about her favourite season, remembering her childhood as well as some recent memories she explains how she enjoys summer the most. Following this her peer responds, disagreeing with her regarding her choice of summer season since she likes spring season. But recollecting her experiences about spring, she notices them to be similar. She appreciates how memories or activities made her like a particular season. Here students reflect through each other's opinions and experiences, providing an opportunity to think about alternative perspectives and deepen their own. But not all journals were filled with similar responses. ~ FN\_21.11.2013\_Gr5

Connecting with each other's experiences and making meaning through appreciating different perspectives, here deepened or enriched the process and activity of reflection. But at the same time not all the communication journals had responses that went beyond 'what I like', 'agree' or 'disagree' within every topic/essay or activity. I noticed that many journal entries improved and changed over time but this was not uniformly observable across students. The argument that much of reflection is within one's mind rather than on paper could be made.

Thus, there was ample opportunity and focus on reflection within the learning experiences observed at NELCS. Reflection has been framed objectively – as an assessment tool both for knowledge/ understanding and feelings while taking into account the social aspect of learning.

## **6.2.6 THEME 6: Passion and Perseverance**

Two overarching qualities that I found within the data was passion and perseverance. Further they were often see alongside each other. Being passionate about what students are learning is highlighted by the staff to be important, may it be music or about snakes. The head of school in the school newsletter writes that the staff aims to guide their students to have a combination of passion, commitment and perseverance.

*Humans may not be able to compete when it comes to calculation but there is no computer that will have the enthusiasm, passion and commitment to pursue an idea to fruition no matter what, that we are guiding our students to have ~ D\_newsletter\_7.02.2014*

The general definition of passion I follow here is "intense, driving, or overmastering feeling or conviction" and "a strong liking or desire for or devotion to some activity, object or concept"



(Merriam and Webster dictionary). I found that 'passion' referred within the data collected was associated with students in multiple ways, for example, being passionate about the topic (the topic of the learning expedition), being passionate about a smaller issue within the larger expedition (the specific snake that a student chooses to research), being passionate about music or playing in an orchestra, being passionate about asking questions and researching, being passionate about learning, being passionate about working together, being passionate about one's interests. Overall, passion hooked learners into making a commitment to their education every day. Further, I noted that teacher's passion was just as critical as students' passion. As classroom teacher Shelly James remarked, the resident artists are all professional musicians and their love and passion for music is witnessed and imbibed by the students. Similarly, the classroom teachers' enthusiastic passion towards the expedition topic was also visible. This involved being curious, asking questions, thinking aloud, participating in discussions and at the same time keeping their distance.

#### 6.2.6.1 *Passion fuelled by piquing interest*

Students becoming passionate about the topic they are studying was observed through various ways. **Freedom to choose and explore the topic** was one of them. As Grade 4 student Alan remarked, *"I could choose to research about Mars, I've always wondered about it"*. Opportunity for them to make a choice of research question that leads them to **choose an idea they like and become passionate about** – may it be landing on Mars, asteroid belt or the moons of Saturn. (Gr 4 solar system expedition)

*"when we embark on a learning expedition we as teachers guide the students, provide opportunity where the student's curiosity is sparked or fuelled" ~ IN\_Gr4 teacher\_24.05.2013*

This overlaps with the idea of 'piquing interest' discussed within the theme 'Making learning relevant' (sec 6.2.1). Enjoying the topic being studied and engaging with and becoming passionate about it go hand in hand.

Grade 2 student Charm remarked, *"we had to select on snake that we researched about. I have heard about the cobra snake in another book and I thought let's learn about them. More I read about them, more I am fascinated, how long they live, reproduce and thinking about what is a day like - for a snake, for the cobra" ~ FN\_14.05.2013\_Gr2*

Alongside being passionate was perseverance. Persevering through multiple drafts has been previously highlighted in theme 1, sec 6.2.1. Following the example of the snakes expedition, the passion about snakes (or their chosen snake) allowed for the students to be engaged with the topic, learning researching and adding to their knowledge about snakes. Further, with an additional objective (learning target) of writing a narrative non-fiction story about the snake, the students' passion and perseverance through multiple drafts subsequently resulted in their contribution towards the audiobook project.

The repertoire that were selected for the orchestral rehearsals also fascinated the students. For example, theme songs of popular movies such as Lord of the Rings, Batman and Indiana Jones were interspersed between other classical pieces allowing all students to appreciate and be passionate about the songs. This allowed for a continuous passion-perseverance cycle to be established. Grade 5 student Abigail, during our discussion points that *“you don't have to be the best at something to like it or love it . . . I love the flute, I have just begun playing it and I am passionate about it”* She goes on to state that, I am working hard on learning to play the flute *“I just go on with it and enjoy it”* (IN\_Abigail\_22.11.2013). Here, passion was developed due to her interest and love for the instrument along with perseverance which she refers to as 'going on with it' or persisting.

Thus, transformative learning experiences within this theme highlights 'passion' as an engine which participants experience through their 'interest being piqued', 'having own interests', 'joy of the topic' and 'being fascinated by an idea or topic'. At the same time, this engine ('passion') fuelled perseverance as they continued engaging with the topic/subject/instrument.

#### 6.2.6.2 *Passion fuelling perseverance*

Going hand-in hand with passion was the quality of perseverance. I noticed that students often expressed and associated perseverance as a way to demonstrate passion. At the same time, passion in itself was positioned as a reason for being able to persevere.

*“When I am trying those difficult sections within the piece (musical piece), I get excited, I try to put myself into it, I love it (the music) and I don't want to give up”* ~ Grade 5 student Sophia - FN\_ 21.05.2013\_Dudamel Winds

*I love the flute . . I am passionate about it . . . . I like the peer-learning sessions, where I get to learn and practice all the parts I currently find difficult. . . I love to play the flute so, just like to keep trying and persevere through it” ~ Grade 5 student - IN\_Abigail\_22.11.2013*

These remarks above, were common to conversations with other students, who also have made similar references during my many informal discussions. They considered that **their passion or strong love or liking for the topic or activity gave them reason to carry on persevering and feel the “can do it” attitude.** Perseverance was associated with hard work exhibited through the examples of repeated orchestra rehearsals and undertaking multiple drafts within their project work. The data collected showed multiple ways/avenues of perseverance, this includes –

- Students persevering through multiple drafts of their project work. (referred in sec 6.2.1.3)
- Students persevering through orchestra rehearsals.
- Students persevering through expeditionary projects which often involved finding answers to problems which are evident to them and which they feel are important.
- Students persevering through group and collaborative work.
- Students persevering through learning targets (both personal and expedition related).

The importance of passion and perseverance across both classroom expeditionary learning as well as El Sistema programme was also highlighted by staff and this is one of the features that both these programmes share, compliment and reinforce. This is especially relevant when the process of cooperation and passionate study/exploration of the learning expedition experience is considered similar to the collaborative orchestral music learning experience by passionate young musicians.

*El Sistema and Expeditionary Learning complement and reinforce each other in philosophy, approach and practice. The same precepts of active learning, learning from experts, **perseverance**, collaborating with peers and working as a team to create a work of excellence, which is shared publicly, are key to both the academic and music approaches. ~ D\_newsletter\_11.10.2013\_Head of School*

## 6.2.7 THEME 7: Self-discovery

Another common thread across many learning experiences was ‘discovering oneself’ or ‘self-discovery’. Merriam-Webster dictionary defines self-discovery as ‘the act or process of gaining knowledge or understanding of your abilities, character, and feelings’. Within EL practices primacy of self-discovery is one of the ten design principles. The EL core practices handbook (2015) elaborates this -

Learning happens best with emotion, challenge, and the requisite support. People discover their abilities, values, passions, and responsibilities in situations that offer adventure and the unexpected. In Expeditionary Learning schools, students undertake tasks that require perseverance, fitness, craftsmanship, imagination, self-discipline, and significant achievement. A teacher’s primary task is to help students overcome their fears and discover they can do more than they think they can. (p. 2)

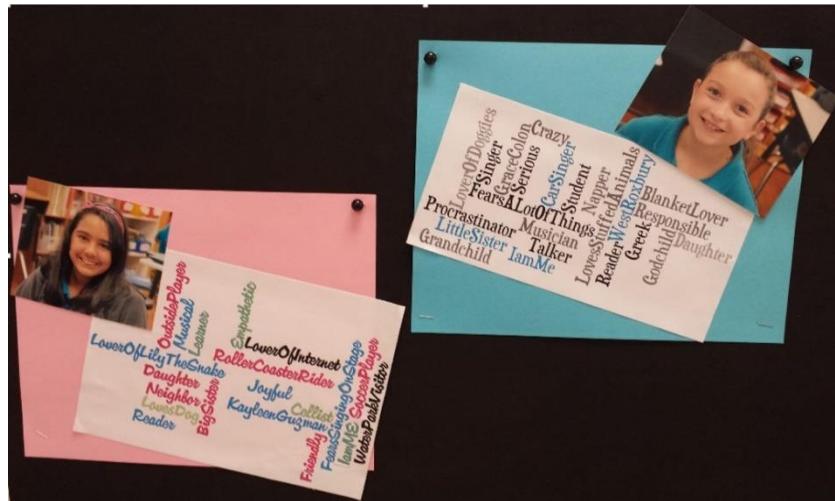
Though this theme overlaps with other themes such as doing more than you think you can and reflection, I found that this theme to be an elemental part of the learning experiences and thus important towards answering the main research question of this study. The codes that lend to this theme include, ‘discovery’, self-discovery’, ‘realizing potential/ability’, ‘sense of identity’ and ‘learning as discovery’. Analysing the data collected, I found the following main ways self-discovery was witnessed and highlighted.

- i) Self-discovery through reflection
- ii) Self-discovery through music
- iii) Self-discovery through discovery based learning

### 6.2.7.1 *Self-discovery through reflection*

*Self-discovery through reflection* has been briefly covered within the theme reflection (sec 6.2.5). Here, I focus not on reflection but on the ‘self-discovery’ aspect. An example of a series of activities that incorporated self-discovery and reflection involved students reading the book ‘Looking Like Me’ by Walter Dean Myers and brainstorming who they were – their family, relationships, personality, interests etc. as they got to know each other better during the beginning of the new academic year. The students then made a ‘Wordle’ project about

themselves. As the students listened and sang to a new song of the week – a pop song “I am me” – sung by Willow Smith, they reflected about their identity as well as others.



**Figure 6.25:** Example of ‘Wordle Projects’ of Grade 5 students

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*I’m me, I’m me, and that’s all I can be ..  
Days pass, I’m tryna find who I really am (I’ve been lookin’) ...  
Create yourself, redo yourself, renew yourself ... Be you, do what you do*

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- From the song ‘I am Me’ by Willow Smith (2012)

This activity provided the students **multiple ways to reflect, an interesting way to familiarise with each other and discover themselves.**

Connecting with their reflections as a mode to dig deeper and define their identity. They find common ground to relate with each other (liking pets, being a younger sister or a brother, enjoying painting etc.) To discover what they (students) considered important and identified with. ~ FN\_23.09.2013\_Gr5

Though the ‘Wordle’ activity the students were expressing themselves and discovering, who they were? and what words they associate with their identity? On another occasion, the poem ‘If I were me’ was central to a reflection activity.

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*When I was young, as young as you  
I did not know, what I could do  
I did not know, what I would see  
I did not know, what I could be  
I did not know, what made me Me*

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- **From poem 'If I were me' by Mark C. Bird**

The activity included trying to understand the meaning of the poem, but as the students read they also began to explore their thoughts, putting themselves in the author's shoes and **discovering themselves through the act of reflection.**

I noticed students individually thinking and writing about the meaning of the poem and subsequently discussing in groups and sharing with the class. *"I think this poem tells us to just stop and think"* says Emma and Abigail add saying *"yes I think the author felt that he took things for granted and is looking back at times he has missed"*. This discussion slowly moves to the personal realm, *"I think I don't reflect often, its like there is no time, but now thinking of it I think we should appreciate what we have"*. *"I know he is thinking like ohhh if missed doing this and doing that like last weekend I though I missed reading the book. He is thinking about this many years later"*. The conversation continues . . . ~ FN\_23.09.2013\_Gr5

During an informal chat Emma says *"we don't realize many things, it's like only if you stand back and reflect I might think ahh . . . I think when we reflect we realize new things about ourselves and others."* (FN\_23.09.2013\_Gr5). Here thinking about their experiences or relating to others in turn provided a lens into oneself, realizing what he/she thought or felt and this along with the collaborative aspect of some activities allowed students to contrast between perspectives, which in turn allowed for self-discovery.

### 6.2.7.2 *Self-discovery through music*

Music being an active part of these students' learning life at the school, provided **a medium and space to discover themselves – their abilities and their feelings.** Apart from the early years i.e. Kindergarten grades, all other students begin working together in an orchestral setting. An atmosphere of music is visible in the school, students playing instruments in various room even sometimes in the halls, humming tunes with posters for the upcoming concert and photographs

at various walls. The attitude is *“know you can do more than, what you think you can”* (IN\_EI Sistema Co-Director Claire\_10.05.2013). This overlaps with the first theme ‘doing more than you think you can’ previously discussed in sec 6.2.7. This inherent belief helps both the teachers and students go beyond ones perceived/imagined limitations, but here I focus on the ‘self-discovery’ aspect through this attitude.

Students start playing their chosen instruments (initially string instruments – violin, viola, cello and double bass) by the end of Kindergarden together as an orchestra. Initially grouped together into three different orchestras roughly consisting of students from Grade 1 – Grade 3 in Abreu Orchestra, Grade 3 – Grade 4 in the Abbado Orchestra and Grade 5 – 6/ 7 in the Dudamel Orchestra. ~ FN\_7.05.2013

I noted that the students start playing classical music along with some popular music from an early age, and the attitude that ‘you can do more than what you think you can’ is constantly projected and believed by the resident artists as well as the class teachers. Thus here, students are listening, playing and performing music constantly. This working together in an orchestra - ‘making music together’ brings students to a common platform and provide an opportunity for students to discover various facets of themselves through it. Some illustrative examples include –

**a. Being able to play an instrument together as one**

*When we are playing in an orchestra, It’s not only about playing, you are your instrument or your part, we have to play and make music together, it has to be all as one ~ Grade 5 student Abigail - IN\_Abigail\_22.11.2013*

Here Abigail refers to the need for going beyond only ones’ own music section/part but realising that they (all the other students) as an orchestra need to play and make music together, where ‘together’ highlighted previously in section 6.2.4 becomes important and central. Further, discovering this ability through music, I found provided an opportunity for the students to experience self-discovery through everyday music rehearsal activities.

**b. Feeling relating to being part of a whole**

The orchestra is everyone, everyone is important, everyone contributes, it’s not just you but the whole orchestra.. . I feel happy to be in the Dudamel orchestra ~ Grade 5 student Issac - FN\_ 21.05.2013\_Dudamel Winds

The importance of the 'whole' within the orchestra is repeatedly mentioned by the students. This I find might be not only due to their lived experiences, but due to the influence of the resident artists. The feeling of being part of the orchestra was considered by many students to be very important for them. They related it to their identity as well as a way they considered they discovered themselves. This includes discovering elements previously discussed in other themes such as, 'ones' abilities', 'crew qualities' and 'handling emotions and social interaction'.

**c. Knowing and valuing each other**

Across the data, I notice that music also provided a way to communicate, get to know, understand and value each other. It provided/or became a unifying theme through which students discovered themselves. This ranged from, impromptu singing of their musical pieces mimicking each other's instruments (music as a language), talking about other areas of study through terms they used during orchestral practice, respecting each other during collaborative activities and building confidence and other crew qualities through the practice of music.

**d. 'Realizing that your fingers can move' – 'I can sound like that' – 'I can play for an audience'**

*This was amazing, we sounded great . . . I have been practicing the fast section over the last week and today it just came together my 'fingers actually could play that fast' – exclaimed Grade 5 student Abigail - IN\_Abigail\_22.11.2013*

From comments similar to above within the data I note that music provided an opportunity for students to discover their abilities and practice crew qualities.

**e. Reflecting on their thinking, feeling and experiences through their role in the orchestra.**

Other avenues of discovery through music was through the act of reflection. Here following the theme 'reflection' discussed in section 6.2.5 previously, I note that the students become aware of themselves and others within the orchestra. This awareness includes being responsive and discovering both their and other's feeling, emotions and thinking through their respective roles within the orchestra.



Aiden, a shy, quiet Grade 5 student and viola player, I find becomes a model orchestra member during rehearsals. This includes, model behaviour, being aware of one another within the orchestra and reflecting on ones' experiences. *"I think we as an orchestra can do better, we can be there for each other, with the music when it's not even our turn to play within the (musical) piece"* – Aiden remarked reflecting on their rehearsal. ~ FN\_17.10.2013\_Dudamel

The key part within this is the fact that this experience of self-discovery is made possible through the activity of music making.

### 6.2.7.3 *Self-discovery through discovery-based learning*

The data supported the assertion that the learning expeditions are also planned in a way where students gain knowledge through discovery – through reading, fieldwork, interacting with experts, questioning and researching. Students individually or in groups dive into the theme by actively researching about it and sharing. Further, the expeditionary learning practice is aimed at promoting self-discovery.

Learning happens best with emotion, challenge, and the requisite support. People discover their abilities, values, passions, and responsibilities in situations that offer adventure and the unexpected.... Students undertake tasks that require perseverance, craftsmanship, imagination, self-discipline, and significant achievement. A teacher's primary task is to help students overcome their fears and discover they can do more than they think they can. ~ El Core Practices (2015, p.2)

Discovering one's abilities, likes, passion and character qualities through the learning expeditions was evident within the data collected. The myriad of learning experiences that the students encountered during an expedition provided the base for self-discovery. Activities, that involved making something new, making a functioning object, undertaking fieldwork, achieving a goal, overcoming a challenge (emotional, social or practical) and finding a solution to a question or problem are examples from within the data during which self-discovery was prominent.

*"I loved learning to make a kite - to really make something by hand and it flies . . we could make get measurements like the weather balloon or weather kite. . I enjoyed the experience of making it, that's something new and interesting for me"* ~ Grade 5 student Emma – FN\_18.10.2013\_Gr5

K1 teacher Ms. Williams, noted that the **discovery based learning experiences provided multiple opportunities for students to realise their ‘love for learning’**. Her conceptual drawing (Fig 6.22 below) depicting the creative learning experiences at NELCS highlights various learning experiences within the school which lead to opportunity for the students to experience and discover – joy, curiosity, self-awareness, connectedness, new ideas, responsibility, creativity and empathy.



**Figure 6.26:** Conceptual drawing by K1 teacher Ms. Williams depicting creative learning experiences at NELCS

Similarly, the theme of self-discovery through learning was highlighted by another teacher, as she noted the focus on connected and inter-disciplinary nature of learning experiences.

*“.. everything is in like a continuum - music, reading, math, technology, hands-on projects – it is a complete journey where students explore and discover themselves and learn various things ..”*

*~ Ms. James, Grade 5 teacher explaining the conceptual drawing – IN\_K1Teacher\_10.05.2013*



**Figure 6.27:** Grade 5 class teacher conceptual drawing expressing learning at NELCS

I noticed that, the discovery-based LTME topics undertaken by the students, do follow the discovery cycle which in essence replicates the process of a scientific inquiry. Various lesson structures and protocols (some examples in **Appendix – 2**) such as, “Five Es”, “Think See Wonder” and “Real-world fieldwork experiences” are utilised to provide opportunities for students to discovery the topic at hand and themselves through the learning process.

### 6.3 Role of music within transformation through learning

Here I address the main thematic findings that emerged from the qualitative data analysis in relation to my second research question/ sub-question: ‘What is the role of the arts and music in this process?’, while answering the main question about transformation through learning. As explained previously, the research site (NELCS) is a music-infused school where they incorporate about 2.5 hours of orchestral music learning every day for all students within the school. Further, music and visual arts are incorporated within learning expeditions. The data analysis took into account this research question and allowed insight into the findings from the observation field notes, semi-structured interviews, photographs, video recording, conceptual drawing and learning walks. I included all the data collected as I sought to answer this research question but I did focus on the data relating to music related activities. I present the findings to this research question through one main theme within which I include various sub-themes that

emerged during data analysis. I follow the same format of presentation as the previous themes i.e. incorporating the main ideas/sub-themes within the narrative of the theme exemplified by data excerpts and photographs. I also noted that the term 'arts' and 'music' was used interchangeably by the participants and I have clarified this wherever needed.

### 6.3.1 THEME 8: Music as the binding aspect within the school

This overarching theme 'music as the binding aspect' encompasses the findings to the research question elaborated as - 'What is the role of arts and music within the process of transformation through learning at NELCS?' This theme arises from data coded with various codes such as 'role of music', 'benefits of music', 'situating El Sistema within NELCS', 'being musicians', 'making musical connections', 'music as language' and 'music as community'. The data analysis resulted in the following main findings which encompasses the theme:

- i) Music defines the culture of the school
- ii) Making connections through music
- iii) Orchestral model brings the school community closer
- iv) Fostering qualities and skills through being a musician

#### 6.3.1.1 *Music defines the school culture*

As a charter school, NELCS defines itself through music. They **embrace the belief that 'all pupils can benefit from musical instruction, from learning other subjects in conjunction with musical studies, and from a school culture which uses the process of musical growth as a model of learning in all subjects** (D\_ Charter application 1998).

I hear music playing in the background as the Grade 4 students continue to complete their drafts for their solar system true or false book. Chatting with the class teacher, Ms. Raymonds says, *'I always play music in the classroom, all the teachers here do this. . . especially when there is no group discussion involved, whether they are doing math or science or writing or doing research. I normally play instrumental music, calming music and of course we have the song of the week and other listening project related songs that we listen to'*. FN\_22.05.2013\_Gr4

Across all the documents and discussions, the importance, position and value of music is equal to all the other subjects, but at the same time there is emphasis on music through the EL Sistema music programme. During my discussions, the Head of school summarized her views on the role of music/ arts -

*“I think the arts are key to a holistic education. It is not a frill not an extra it is just part getting a good education. I think the arts should be taught in school just for their own worth, but because of budgets, people think of that we should always emphasise that the arts help with academics. I think it probably does, I am not suggesting that it doesn't but even if it didn't, I think it will be worthwhile to do”. ~ IN\_Head of School\_22.05.2013*

Over the decade since the school was established, music learning within the school has taken many forms (practices or programmes). This ranged from Kodaly model, Suzuki violin and Orff instruments to El Sistema as music programmes and music co-ordinators or resident artists who worked with the classroom teachers to incorporate music within other learning activities. But, in general I noticed that arts/music defined the school's identity due to it being the focus on their school charter.

*“(Arts/music) kind of addresses who you are, it addresses the personal traits that we want to make sure our students learn and use and keep for the rest of their life - whether it is kind of perseverance or whether it is the value of practice. It is importance of practice and perseverance and not giving up too early and you know.. that kind of thing. .” ~ IN\_Head of School\_22.05.2013*

Across my discussions, the classroom teachers and the resident artists shared this above general position and further related the role of music within NELCS to be 'engagement' and 'enrichment'.

*“the fact that music is fully integrated within the school day . . really making a subject come to life and making it exiting and interesting for a child. . something that they will hopefully retain the information, beyond that there is certain empowerment that comes with doing something really unique that is really celebrative”. ~ IN\_ resident artist Marcel\_25\_09.2013*

The two-fold role of music (engagement and enrichment) was seen across the data in multiple ways. This ranged from **using music as a provocation for reflection** (the listening project), **music as an expression of their learning** (snake music videos), **music as a way to connect**

**with the topic** (Native American music when undertaking the learning expedition - Whose story is it?).

*“the arts allows very individualized pathways to success . . . it also promotes a very intensive creativity, it allows children multiple entry points to learning and so in that way it really does a good job squeezing kids in a way that prepares them for the future - i mean the future is a real big question mark . . . so the arts really promotes a kind of thinking that prepares them to meet the inevitable unknown” ~ IN\_Principal\_21.05.2013*

Perseverance and passion relating to the orchestra and music learning extends to the classroom and vice versa. This has been previously addressed in the theme above (Sec 6.2.6). I noted various expressions across the data highlighting that music provides the opportunity for striving, persevering, learning to face obstacles, continue through it without giving up and then feel a sense of accomplishment and pride. El Sistema Co-Director Sierra remarked that there is a need to be creative to succeed in the world and how aspects of music learning such as perseverance, plays a role towards this goal -

*“. . . you need to have a lot of belief in your own ideas and in your ability propagate your ideas. It is what we are trying kids to develop, we are helping them develop that feeling of independence if you are doing something that is expressive and beautiful it is really going to help you to do that in any aspect of your life . . . you decide you want to be an entrepreneur of some kind, how do you make that happen? how do you not only make it happen if it fails then how do you get up and try again you know, that process of trying and failing and trying again, that is something you go through every day, that’s why you practice, ...its why you work really hard . . . knowing how to manipulate your own creativity, knowing how to guide yourself and have faith in yourself and help you improvise” ~ IN\_Co-director El Sistema Sierra\_5.11.2013*

I found that music forms the essence of the many experiences the students have at this school. While having one of many informal conversations with my some of my Grade 5 participants (Abigail, Ethan, Dorothy, Tanya) we talk about what they like most in this school, memories they have about this school. They echo that music is what they love –

*‘I love the time I spend in the orchestra; the time I play my flute’ ~ IN\_Abigail\_22.11.2013*

*I enjoy recess but I can see myself grow with my instrument’ ~ IN\_Dorothy\_22.11.2013*

*'I like being a musician – I am not just a student' – (new Grade 5 student) ~  
IN\_Tanya\_18.11.2013*

Their conceptual drawings depicting life at NELCS and their experiences includes music and in many cases only music. Music is a binding aspect and associated with the student's identities.



**Figure 6.28, 6.29 & 6.30:** Conceptual drawings by Grade 5 students Ethan, Tanya and Abigail about their experiences at NELCS

In the above three drawings, Ethan depicts a violin, his instrument of choice along with the school logo colours. Tanya a new student cherishes her time playing alongside the percussion ensemble and the orchestra.

Talking about her experiences as a new student at NELCS, Tanya looks excited. I noticed her being shy during the initial few days, but soon she had friends and seemed to enjoy her time at school. *"I love to learn and play with my percussion ensemble. I am learning so much, I know how much I have become better at this. Orchestra and ensemble is new for me, I've learnt to work with others, work together to make music and learn"* . . . in her drawing she depicts her first performance with the percussion ensemble in front of an audience, highlighting the performance experience which she is excited about. ~ FN\_19.11.2013\_Gr5

Like Tanya, Abigail also depicted herself with her flute. She **closely related her time at school, her identity and that of the school to be closely related to music**. For her, music defines her day, the culture and her time at the school. Thus, the data analysis shows the importance of music within the school culture - it defines it and binds it.

### 6.3.1.2 Making connections through music

My observations during the Grade 4 field work trip to Woods Hole, MA especially during the bus journey stood out for me. As any exiting trip, the students enjoy their bus journey, playing games, singing songs and chatting all the way. The following excerpt was a moment that captures the **essence of music as a language within the school**.



**Figure 6.31 & 6.32:** Grade 4 students travelling by bus for their fieldwork visits.

Jeremy, Sophia, Tanya, Ethan and Alan chatting 'let's sing'. Heads turn as many other students also are thinking about singing a song and are trying to decide which song to sing. Softly Jeremy starts humming *paaan paan paa paa paaaaaan* (mimicking a trumpet sound) and soon Thomas joins and others too. I am curious as I am trying to identify the song they were singing or humming? Everyone chimes in some mimicking a trumpet, percussion sounds and others humming and the soft beginning of the song from one student now is echoing across the bus. Students are excited and are singing with enthusiasm. It takes me a few seconds to realize that I've heard this song, it is the theme song from the movie Lord of the Rings, the new song the Dudamel orchestra has been learning since last week. Students were singing/humming their instrument parts like an orchestra. Jeremy and Sophia take turns to be the conductor... this goes on, as they hum song after song . . . enjoying ~  
FN\_20.05.2013\_Gr4

Music is a common language not just within school but also at home. I chatted informally with Mrs. Gonzalez parent of two NELCS students Sophia and Michael in Grade 6 and Grade 2 respectively during one of her chaperone trips along with the winds ensemble during the weekend.



She was happy about learning and experiences her children had at NELCS. Talking to me about her daughter Sophia – “she is just excited and enjoying all the new music and performances both as part of the Dudamel orchestra and the wind ensemble performances”. Praising the impact, inspiration and the can do it attitude that the new Dudamel conductor Mr. K had made from last year in her kids, she found that younger Michael and Sophia now have **a new language between the brother and sister – Music**. They are singing songs, humming tunes and talking about music. ~ FN\_5.10.2013

These qualities that repeatedly came across the data relating to the role of music included making creative connections, to think creatively and be able to improvise, approaching problems with can do attitude, not giving up, being flexible, and being able to have the feeling of constantly seeking for something better. During our conversation, resident artist George associated the creativity within music and the EL practices to endless possibilities.

*“ . the opportunity to be creative and let their creativity be seen known and experiment and trying new things so - I think it's great, I mean its expansive... limitless being open-minded:.  
~ IN\_resident artist\_George\_22.11.2013*

Connecting learning through music is what the school believes in and continuously strives to achieve -

*“We believe in the power of music to teach, to connect, to inspire – we are not a music school but we are a school that teaches music that takes its place as an equal among the other subjects and harmonizes with them – making each one resonate more clearly, connect more closely – quarter notes become fractions; symphonies and literature both explore complex themes and students work in unison and find their rhythm as often with their violins as their writing. We believe music makes stronger students, we believe it nurtures creative thinking, we believe it shows the power of honest practice and demonstrates that anything can be mastered if it is given the proper focus and dedication. We are not a music school – but we are a school that teaches music - And our hallways are filled with the sounds of flutes, cellos and drums and with scholarship, laughter and exploration – because we believe in the power of music” ~ V\_NELCS website*

Grade 3 student Charm remarked, “*whenever we learn a new topic we learn everything about it including music. . like now when we are learning about the Wampanoag we learn about the music they played and how music was part of their community*”. (FN\_30.10.2013\_Gr3) Across

the learning expeditions being undertaken by the students, music was incorporated in multiple ways such as –

- A musical product of their learning expedition. For example, snake music video and climate change rap.
- Understanding facets of a topic through the music associated with it. For example, listening and learning blues when undertaking expedition about the Great Migration and orchestral music *The Planets Suite* by Gustav Holst when researching about planets within the solar system.
- Songs as a way to learn or remember topics; for example, songs about rivers, multiplication and atmosphere.
- Connecting through the listening project where students listen to a piece of music and reflect. Connections made through this activity ranges from their feeling and emotions to a topic being learnt such as “*I felt like weightless like in space during the beginning of the song*” remarked Ethan after listening to one of the pieces from the orchestral music suite *The Planets Suite*. (FN\_7.05.2013\_Gr4)

It is important to note that the El Sistema music programme leaves less scope for creativity within music learning. I noticed that there was little or no space for some qualities in an orchestral setting such as, creativity, freedom, exploration and play. Whereas, I found that music when infused within the EL framework through learning expeditions evidenced ample opportunity for fostering creativity (see climate change rap (sec 6.2.3.2); snake music video (**Appendix – 5**) etc. This I noted to be especially due to a teacher or conductor oriented format within an orchestral practice, limited freedom to choose and explore music both individually as well as in groups, limited opportunity for improvisation and expression of creativity through composition and focus on performances. The following excerpt notes the repetitive practice of the musical piece during the El Sistema Dudamel orchestra rehearsals.

The focus of these rehearsals have only been perfecting the song/ musical piece and their attitudes . . getting it ‘right’ with ‘expression’ is what students are aiming for ~  
FN\_21.05.2013\_Dudamel

On some comparatively rarer occasions there were instances where students had opportunity to express creativity and explore music, even if not observed always during the everyday orchestral rehearsals. The following excerpt from my field notes highlights one such rehearsal:

Today's sectional rehearsal, students are rehearsing the theme song from the television show - 'I dream of Jeannie'. Not many students seem to have seen this show but, the title track is catchy. They had also seen the video of this song during a previous rehearsal. This time, Dudamel winds and percussion sections are playing together - exploring the song and improvising. . . and they seem to be having fun! Emma on the bongo is smiling away, Anthony and other Grade 6 students are communicating with each other through their eyes, as they try different accents and improvisational elements as they play their instruments. . . The resident artists encourage them to feel free and explore by themselves while they helped keep a steady beat in the background. I notice that this is not a common to all the rehearsals (i.e. improvisation and what could be called 'freaking out' or exploring the song freely through ones' instrument) . . . . I find, this rehearsal more open in relation to allowing students' musical voice and creativity to be explored. ~ FN\_16.10.2013\_Dudamel

The focus on making connections through music is a high priority for the school and has been evidenced within the learning experiences of the participants. Here, I note that some connections made between the learning expeditions and music provided an alternative form of expression, opportunity for creativity, motivation about the subject at hand, thus allowing the opportunity to imbibe, understand and express their understanding about the topic, making deeper and meaningful connections. At the same time, the connections made through music during the El Sistema programme even if it lacks possibility of creative expression at most times, I note, allow for deeper connections by developing skills and attitudes that are developed by the practice of the arts/music and at the same time, are skills necessary for deeper learning. These include, engaging and persisting; working on envisioning and developing their music; working together and being flexible; and learning to express music in multiple ways. Thus, I find that making connections through music includes connecting with other subjects/topics as well as connecting with attitudes and skills that empower them to make connections through the practice of music.

### *6.3.1.3 Orchestral model brings the school community closer*

Another role music played at NELCS, I found was building and bringing the school community closer. The resident artists also note the students come closer to each other through the music programme and their involvement in the orchestra. Resident artist Claire notes – “*It is a small school but still, a 3<sup>rd</sup> grader is seated next to a 6<sup>th</sup> grader in the same orchestra, they get to*

*know each other. The common language now is music . . . community comes together”* (IN\_Claire\_10.05.2013). Echoing a common sentiment within El Sistema programmes *The orchestra is a group of people who come together for the sole purpose of agreeing.*

**Closer bonds between pupils across grades** is possible through the music programme. A sense of pride, camaraderie, friendship and togetherness are some of the main feelings expressed by the participants.

5<sup>th</sup> Grade student Thomas, a trumpet player is thrilled to go to play music in the afternoon with his friends in the brass section. He is part of the Dudamel and is accompanied by students/peers from fourth and sixth grades. He exclaims “*this is the best part of the day for me*”. ~ FN\_10.11.2013\_Dudamel

The **togetherness experienced through the orchestra** is highlighted by many participants.

. . . just in general just being in an orchestra together creates wonderful camaraderie and that in the orchestra the thing that’s great about what an orchestra can do that a sports team can’t do is that it is much less obvious ~ FN\_14.11.2013

The idea of togetherness through the orchestral model is instilled from a very young age. The K2 (kindergarten) musicians after undertaking the paper orchestra project which involves constructing and rehearsing with musical instruments made out of cardboard and papier-mâché together with family and teachers to graduate to real instruments by the end of the academic year.

Through the paper orchestra project, the students begin understanding, practicing and experiencing the togetherness of being part of an orchestra.

*The Paper Orchestra has been practicing important skills, including Rest and Playing positions, making beautiful bow-holds, moving their bows together as an orchestra, and learning how to take care of their instruments. Above all, they have been learning that "an Orchestra works together" and by working together makes big, beautiful sound. . . . Each instrument section has also been working on their individual skills and unity and camaraderie within their section. Part of being in an orchestra means paying close attention to the movements and sounds of those around you.* ~ D\_newsletter\_18.04.2014

Not only does the music programme bring the students together, it provides opportunity for the students to build close relationships with the resident artists. While talking to resident artists Karl and Sierra, they mention their position as a resident artist gives them an opportunity to be closer to the students, *we are teachers but with our students we get the opportunity to be musicians together, understanding the students as we work together*. I find Mr. K chatting with Thomas after rehearsal – *how was your weekend? What did you do? . .* (FN\_21.05.2013) This relationship between students and resident artists seem different than those they share with their class teachers, perhaps a level of equality and respect along with an overall friendly casual attitude.

Resident artists spend equal amount of time in the school like the class teachers. Many have blended positions where they also take on other roles within the school either within the administrative office or other student management opportunities. Resident artist Karl also accompanies the students to play football during recess and resident artists regularly are inside classrooms working with the teachers, collaborating on expeditions. ~ FN\_2.10.2013

Thus, I noticed that though an orchestra brings with it a set of rules and expectations, there is opportunity for making connections across the student community and resident artists played a key role in building the school culture where music became the connecting thread.

#### *6.3.1.4 Fostering qualities and skills through being a musician*

As noted previously, the orchestra at NELCS binds the school community and defines the school culture. I note that the crew qualities, skills or mindsets within the classroom discussed previously in sec 6.2.2 continues across the music programme. Further, the staff and resident artists work together to maintain the same language in relation to behaviour, classroom management and setting expectations. The common practices across both the programmes EL and El Sistema was highlighted by the Head of School -

*It is also fortuitous the ways in which El Sistema and Expeditionary Learning complement and reinforce each other . . . . The same precepts of active learning, learning from experts, **perseverance, collaborating** with peers and **working as a team** to create work of excellence, which is shared publicly, are key to both the academic and music approaches. ~ D\_newsletter\_11.10.2013*

I noted that the focus on development of common skills and qualities by being a musician in an orchestra was considered important by the staff. Qualities such as perseverance, hardwork, discipline, self and social awareness, empathy, cooperation and teamwork readily translate to an orchestral setting. Apart from these skills, other related experiences such as listening, being aware of each other, mutual respect, reflection, feeling of togetherness and oneness were also identified as qualities or values that related to being a musician in an orchestra. This has been previously illustrated in sec 6.2.2 and 6.2.7.2.

Peer-learning and peer-teaching is another feature of El Sistema that was observed at the school. Getting an opportunity to learn from your peers was considered by many students to be a very good and beneficial experience.

*“I like to learn from my peers. . It’s very different from teachers - we can be very casual/easy . . and sometimes I think I can understand better, I can see how Ryan (Grade 4 student) got it” exclaimed, Grade 2 student Joel ~ FN\_14.05.2013*

Peer teaching fostered certain other skills, qualities and connections across the school student community. This included, being patient, being empathetic, being kind and respectful, being reflective, developing trust and making close bonds with peers, opportunity to not be bound by hierarchy, becoming an accessible role model and making fresh connections with the music learning experience. At the same time, there were no specific formal guideline given to these peer teachers defining how to approach peer teaching as resident artist Mr. Ortiz noted, *we identify students who might be good peer teachers, or those who might express interest and give them the opportunity, . we then reflect on the experience together with the students to help guide them.* (FN\_14.05.2013).

I noticed that the development of crew qualities and character are central to the orchestral model. Throughout my field notes and other data collected I see repeated mention of ‘orchestral power’ and ‘discipline’ which included – children playing with great energy, enthusiasm and dedication with huge and impressive sound. Further, the feeling of achievement through multiple orchestral performances across the year was also considered to be important for fostering qualities.

*Public achievement of goals met . gives joy to themselves, their families, their peers and their community. This intense involvement in learning produces trust, respect and*

*responsibility which permeates into other parts of our student's lives. ~  
D\_newsletter\_11.10.2013\_Head of School*

Confidence and feeling of achievement or excellence that the students experience through regular performances provides an opportunity for students to experience a sense of efficacy and ownership which can be empowering. Thus, the El Sistema program at NELCS focuses on fostering a set of skills that are associated with being a musician which also translates and permeates to other qualities that the school and staff aim to inculcate through their learning experiences at the school.

## 6.4 Framework representing transformation through learning at NELCS

Within the detailed presentation of the thematic findings in sections 6.2 and 6.3, I have highlighted overlaps and connections among the themes. This is based on the overlaps seen during data analysis previously represented visually in fig 5.4 (pg. 147). I have visually represented these thematic findings presented previously in sections 6.2 and 6.3 in figure 6.33 below. It is representative of all the key themes that encompasses all the findings across this research study. Overall my choice of the way of representing the themes within this illustration below is aimed at highlighting the importance, positioning and connection between various themes discussed within the findings. It is an attempt to represent the key findings in an alternative format providing a visual model representing transformation through learning through this case study at NELCS.





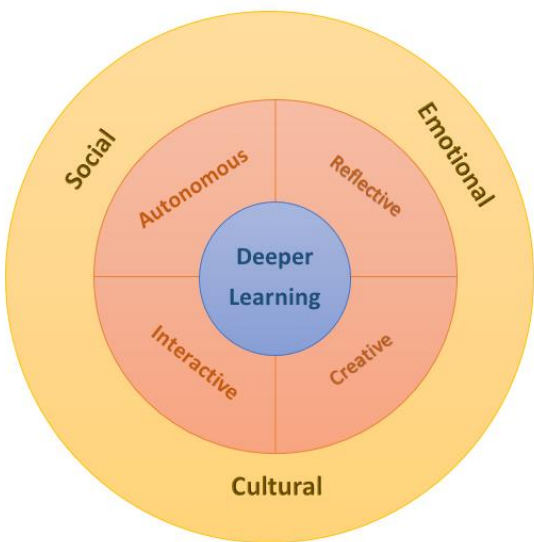
**Figure 6.33:** Visual framework representing transformation through learning at NELCS

Lived experiences of transformation through creative learning at NELCS was found to manifest through the belief, attitude and growth mindset “doing more than you think you can” which formed the foundation (depicted as a bedrock in brown). I have represented this theme as rocks to highlight its position and importance as the foundation for all the themes within the findings. The next lived experience of learning is the theme “making learning relevant”, depicted as a diamond in the centre with its multiple facets highlighting the opportunity for multiple connections to find relevance within learning. These two themes form the key findings for this study, nevertheless, the other themes contribute by connecting and providing an atmosphere where these key lived experiences of transformation through learning is supported and flourish. The focus on “development of crew qualities” (depicted using arrows) connects across the above two key themes. This theme represents various highlighted qualities, skills and character development within the findings. I have illustrated this together since the lived experiences observed focused on the ‘development’ aspect of these qualities. Thus, it includes themes within sections 6.2.2, 6.2.5, 6.2.6 and 6.2.7. The blue cloud which encompasses the illustration represents the collaborative atmosphere at NELCS and envelops the above themes. Finally, the theme “music as the binding aspect” holds together all the other themes representing lived experiences of transformation through creative learning at NELCS. To illustrate the binding nature of this theme, I have depicted it using red musical bow binding the whole model which lends to the cultural environment at the school.

This model is *not meant* to be indicative that every student at the school had the same experiences or was transformed through the learning experiences in the same manner. Rather, it provides a framework representing the idea of transformation through arts and music-infused creative learning manifested through the findings of this research study. Further, not depicted within this diagram are the main points within each themes, their relationships and influences across the various qualities. I have chosen not to include this, only to simplify the visual framework and to keep the focus on the main themes which lend to the elements of transformation through learning adopted for this doctoral study (sec 5.3.2).

I now proceed to situate the above findings in relation to the framework adopted for this study. I undertake this by comparing and contrasting the iteratively developed framework (fig 5.2 below) with the themes from inductive data analysis (Fig 6.33 below). As discussed in chapter 5 (sec 5.4) analysis to reflect findings in relation to the framework was undertaken subsequent to the

thematic analysis resulting in the above mentioned inductively derived themes. Findings within this section highlights links to between the overall framework adopted for this research and the actual findings. Below I present and discuss findings by taking each of the elements within the framework (fig 2) in a separate section respectively.



**Fig 5.2 - Iterative Framework**



**Fig 6.33 - Visual framework representing transformation through learning at NELCS**

### 6.4.1 Element 1: Deeper Learning

The core idea within the themes reflecting transformation through learning was ‘Making Learning Relevant’. This resonates with the element deeper learning within the framework. As discussed previously ‘making learning relevant’ highlights the experiences of learning where relevance and meaning-making in relation to piquing interest and positioning the topic to be worthy of learning. Here, I find similarities to the element deeper learning through the idea of finding relevance, meaningful learning and making deeper connections with the topic at hand. The aspects of developing skills that help make such connections though situated within this element is highlighted not though the core theme but the theme ‘developing crew qualities’. At the same time, I find that the belief that ‘you can do more than you think you can’ (highlighted within theme 1) to be important while providing deeper transformative learning experiences.

Thus, similar to the framework itself which is surrounded by other elements, other overlapping themes highlight the belief (theme 1), skills or qualities that were focused (theme 2) and the learning atmosphere (theme 4) respectively. In contrast, not all the core skills, dispositions, competencies or aspects highlighted within the idea of deep learning has been directly reflected within the themes. For example, critical thinking, academic mindset and being creative have not been directly associated with the themes. I must acknowledge that this does not mean that the lived experiences observed were devoid of these aspects of deep learning mentioned here, but I just note that these were not consistently present or highlighted within the themes directly but can be considered to have indirectly influenced the theme. For example, critical thinking was seen embedded within peer review experiences, reflection and group discussions, but was not highlighted within other transformative learning experiences.

### **6.4.2 Element 2 & 3: Autonomous and Interactive**

I discuss both the elements 'autonomous' and 'interactive' which can be considered to have opposite qualities with the thematic findings below.

The element 'Autonomous' highlights the individual aspect within the transformative experience. The codes which constituted some of the thematic findings such as, self-management, self-reflection, self-discovery, independent study/activity, self-critique/assessment, alone-time, responsibility and student-guided activity I find relate to this element 'autonomous'. Within the findings there is an overwhelming amount of lived experiences that highlight collaborative work rather than individual work. The 'autonomous' actions and experiences were limited and have not come to the fore directly in the themes identified. I did find that opportunity to reflect alone and critically self-evaluate to be important especially in relation to the theme 'development of crew qualities' and 'self-discovery'. At the same time, these opportunities were not too common and the collaborative experiences have been highlighted within many more themes.

Following the previous element, I continue that collaborative experiences which involves opportunities such as discussion, opportunity to listen, understand and reflect on multiple perspectives, group work and cooperation firmly situate the 'interactive' aspect of transformative experiences. The theme 'collaborative atmosphere' overlaps with many themes (fig 5.4 pg.147) and defined the overall culture of the school. From the findings, I notice that the interactive element within transformative learning experiences has been very important. For example, the

group interaction during orchestra rehearsals, critical events such as participation in the chamber orchestra, group discussions during learning expeditions, critical reflection through book groups and other group activities and the developing perseverance as crew quality i.e. the students are crew and not passengers and thus need to work together.

### **6.4.3 Element 4: Reflective**

Reflection is both an element and also a theme within the findings. Being reflective has also been identified as one of the crew qualities which students strive to develop. The importance of introspection, thinking about one's action and thoughts, self-awareness and critiquing has been highlighted within the findings of this theme. At the same time, it is important to acknowledge that unlike the initial framework where meaning-making through reflection was positioned as the core of transformative learning, the final iterative framework adopted does not position it at its core. Thus, reflection is one of the qualities that forms part of transformative experiences but the thematic findings show that it is not always in the thinking but in the doing and experiencing that transformation through learning was situated at this site.

### **6.4.4 Element 5: Creative**

This element 'creative' covers various codes such as, thinking of possibilities, openness to experience, curiosity, being imaginative, play, immersion and innovation. The themes 'making learning relevant', 'self-discovery' and 'collaborative atmosphere' highlight the creative and imaginative aspects of learning experiences especially within learning expeditions. In relation to musical activities, this element was observed through the listening project reflective drawings, group music work, composition and other specific critical events such as, chamber orchestra groups, composing songs and lyrics for their learning expeditions. The findings overall highlight openness to experience, self-discovery and immersion within the learning experiences. Again, this element is not necessarily visible at the core of every experience but reflection and discussions with participants highlight this element.

### **6.4.5 Element 6, 7 & 8: Social, Emotional & Cultural**

In this section I discuss the outer circle of elements within the framework relating to transformation adopted for this study. These elements 'social', 'emotional' and 'cultural' can be considered inter-related and are thus discussed within the same section.

All these three elements are strongly present within the thematic findings. The 'social' element is at the core of the themes 'collaborative atmosphere' as well as 'development of crew qualities'. The focus on group work both within the classroom as well as during the orchestra rehearsals addresses the importance of the social aspect within the learning experiences of the students. The 'emotional' aspect is more embedded within the experiences itself. For example, the realization the students have across activities that they can do more than they think they can, being passionate and discovering oneself through reflection. Addressing emotions has also been the focus through the open circle sessions where students discuss openly about various issues related to handling their emotions and social behaviour. Then the 'cultural' element encompasses the overall school culture within the findings. The themes overwhelmingly highlight the strong focus on developing school culture. This includes, a culture where music binds all the other learning experiences, development of crew qualities, collaborative atmosphere, specific qualities like reflection, passion and perseverance, also the curiosity driven learning expeditions defines the cultural thinking within the school. I must acknowledge that the wider cultural element beyond the school such as the neighbourhood, society, personal background of the students, has not been sufficiently captured within this study and are beyond the scope of this study.

## **6.5 Findings Chapter Summary**

This chapter focused on the main thematic findings that emerged from the qualitative data analysis in relation to the main research question which was about the participants' lived experiences of transformation through music and arts infused creative learning as practiced at the school. This was followed by the findings for the sub-question where I looked at the role of arts and music in the above process.

The main findings detailed firstly, the underlying belief, attitude and growth mindset of *doing more than you think you can*, experienced through a culture of high expectations, understanding high quality, perseverance and hardwork, critical events and a permeating 'can do' attitude across learning activities. Secondly, the *focus on development of qualities* or skills also identified as crew qualities. These crew qualities include being cooperative, being empathetic, perseverance, being reflective and being responsible. Further, some of these qualities due to its significance within the lived experiences of the participants stood out as separate themes within the findings, such as reflection, self-discovery, passion and perseverance. Thirdly, the importance of relevance within learning was highlighted through the theme *making learning relevant* which consisted of piquing the students' interest and positioning the topic to be worthy, played a crucial role within the learning experiences. Finally, the *collaborative atmosphere* at the school provided an environment and culture within the school that facilitated communication, interaction, relationships and learning experiences highlighted through the other themes. The second research question or sub-question contained within the main question analysed the *role of music* within the lived experiences of transformation through learning at the site. The analysis showed the *binding effect of music* to be the central finding defined the culture of the school, providing opportunities to make connections through music, building community through the orchestral model and fostering qualities and skills through being a musician.

This chapter culminates with the presentation of the analytical findings in relation to the framework of elements relating to transformation through learning adopted for this doctoral study and based on the findings of this study presents a new visual framework representing elements relating to transformation through music and arts-infused creative learning at NELCS. In the following Chapter Seven, I present a discussion where I pull together these findings and examine closely the connections or gaps as a reflective researcher. The key issues from the findings will be discussed and situated within the larger literature of transformative teaching and learning, among others.

## CHAPTER SEVEN

# 7. DISCUSSION

### 7.1 Introduction

This thesis gives a glimpse into the real-life context of transformation through creative learning at a K-5 School in the North East of the United States through asking the following questions, 'What are the teachers' and students' lived experiences of transformation through music and arts infused creative learning as practiced at a School in the North East of USA?' and 'What is the role of the arts and music in this process?'. It also provides a map of my methodological and analytical journey while exploring a complex and subtle process of transformation embedded within everyday learning.

In my findings chapter I have highlighted themes that characterise the lived experiences of transformation through learning. These overlapping themes address various elements of transformation which were identified through the framework that was developed to conceptualise 'transformation' for this study. This ranges from the social, emotional and cultural aspects encompassing themes such as 'Development of crew qualities', 'Collaborative atmosphere' and 'Doing more than you think you can'. At the core, the theme making learning relevant situates transformative experiences with deeper learning within the framework. The role of music within this exploration of transformation through learning was found to be binding in nature. i.e. something that held and defined the culture of the school as well as the identified themes highlighting transformative learning experiences for the participants. Briefly, the findings are illustrated through the figure below:



**Figure 6.33:** What are the lived experiences of transformation through learning at NELCS?

As my journey through the research study progressed, it moved beyond the realms of my initial literature review. The pilot study guided the need for the development of a framework relating to transformation through learning, which in turn iteratively evolved through my experiences at the research site and revisiting related literature. I have thus reviewed all the relevant literature and included them in my literature review (Chapter 2). In this chapter I discuss where my findings are supported by the literature, and where they are not, and discuss how my findings make a contribution to the developing understanding of transformation through learning in a comprehensive school environment. I also connect to how it contributes to the current understanding and practice.

Through this discussion chapter, I highlight the two key findings relating to the themes *doing more than you think you can* and *making learning relevant*. The former positions the learning experience through a growth mindset and latter highlights the importance of ‘relevance’ within



the learning experiences and its relation to deep learning, 'Teaching for Understanding' and transformative teaching literature. Thus, arguing that the lived experiences of transformation through learning at NELCS involves developing a foundation within the school culture of the attitude 'you can do more than you think you can' and making deep connections through the process of 'making learning relevant'. In addition to this, within this chapter I also discuss other relevant findings that situate the role of music within this process. While discussing my methodological contribution, I highlight the strengths and weaknesses of my project and my ethical dilemmas in their application.

## **7.2 Importance of the attitude 'you can do more than you think you can'**

The theme *doing more than you think you can*, furthers the idea that a student can do more than what he/she thinks they can. This in turn is rooted in the concept of actualising one's full potential. This is an important theme which forms the bedrock of lived experiences of transformation through learning at NELCS (illustrated in fig 6.33 above). I notice connections between this theme 'you can do more than you think you can' with literature on transformative teaching and deeper learning. I highlight connections with the work of Carol Dweck (2006) on 'growth mindset'; the term 'transformability' from the Learning Without Limits project (Hart et.al, 2004); 'Cultures of thinking' (Ritchhart, 2015); and have used the following sub-points as signposts to organize this discussion –

- a. Basic principle of Transformative teaching (Slavich and Zimbardo, 2012)
- b. This attitude as a 'mindset' (Dweck, 2006; Farrington, 2013)
- c. 'Transformability' within the culture at NELCS
- d. Challenge for teachers

### **7.2.1 Basic principle of transformative teaching**

As seen from the findings (Sec 6.2.1) this theme 'doing more than you think you can' is both an attitude and belief among participants at NELCS. As reviewed previously, Slavich and Zimbardo (2012) have identified the three basic principles of transformative teaching. These are "(1) Facilitate students' acquisition and mastery of key course concepts; (2) Enhance students' strategies and skills for learning and discovery; and (3) Promote positive learning-related

attitudes, values, and beliefs in students” (p. 581). This theme highlights an important attitude, value and belief that *‘you can do more than you think you can’*. It is rooted in the belief in self-actualization i.e. “to become everything one is capable of becoming” (Maslow, 1970, p.46). In other words, movement towards fulfilling themselves and doing the best they (students) are capable of doing. This striving towards what is possible is reflected through this thematic finding *‘doing more than you think you can’*. This I argue translates to what is implicit within this formulation of transformative teaching.

Rosebrough and Leverett (2011) while discussing transformational teaching identify the need to encourage instructors to consider the importance of equipping students with both skills and attitudes that are necessary for overcoming challenges. This thematic finding highlights an attitude and belief at NELCS that addresses the ‘attitude’ beneficial for transformation through learning. Transformational teaching involves conceptualising teachers as change agents who lead students in the process of collaborating with one another and with their instructor to develop as learners and as people (Slavich and Zimbardo, 2012). In a more general sense, this entails broadening teaching objectives so they include enhancing students’ attitudes toward learning, and their beliefs regarding their capability to acquire, synthesise, analyse, and use knowledge in a manner that is relevant and meaningful for their lives.

Slavich and Zimbardo (2012) connect this principle to the transformative leadership inspired principle that individuals are capable of transcending self-interests and traditional expectations in order to achieve higher personal and collective goals (Avolio and Bass, 1995; Bass, 1985; Bass and Riggio 2010). The findings show that, teachers encouraged the students to experience the striving towards high goals or “high expectations” as highlighted within this thematic finding. It is through the process or experience of working through a challenge or multiple drafts that the students utilise their capabilities and persist. This in turn is supported by the attitude and belief that *‘you can do more than you think you can’*. I notice the connection with transformative teaching literature, which highlights the role of teacher in managing several sets of expectations, including students’ own beliefs regarding their likelihood of success; the beliefs that others (e.g., peers, parents, and principals) harbour regarding students’ potential for success; and the instructor’s own beliefs regarding both students’ likelihood of success and their own likelihood of success. The findings show a school-wide belief in this attitude that *‘you can do more than you think you can’* which is manifested through a culture of high expectations rooted in this same belief and implemented through various activities that allowed the students

to realise their capabilities. Thus, I argue that this theme connects to the transformation teaching basic principle of promoting positive learning-related attitudes, values, and beliefs in students.

### **7.2.2 This attitude as a ‘mindset’**

Dweck (2006) differentiates two kinds of mindsets. Having a *fixed mindset* means, people believe their basic qualities, like their intelligence or talent, are simply fixed traits carved in stone and focus on documenting them instead of developing them. Whereas, a *growth mindset* is based on the belief that your basic qualities are things that can be cultivated through efforts, dedication and hard work - brains and talent are just the starting point. I consider the belief that ‘you can do more than you think you can’ involves having a growth mindset. The lived experiences within this theme was highlighted through a culture of high expectations, understanding high quality, ‘can do’ attitude, critical events and qualities such as perseverance and hard work which enabled the students to realise this attitude. This was presented in findings section 6.2.1 in Chapter 6. I found that the nature of learning experiences was transformative especially when students came to the realisation or experienced themselves that they can do more than what they think they can. The concept of ‘culture of high expectations’ or ‘culture of excellence’ at NELCS was based firstly, on the attitude of the staff, which allows them to think of each and every student to be capable of doing more, and secondly, by students focusing on creating high quality work/products. Ritchhart (2015) states that ‘expectations’ as a culture shaper, operate as ‘belief sets’ or ‘action theories’ that influence our own effort in relation to the achievement of desired goals and outcomes (p.37). This lends to the finding that a culture of high expectations to be connected with the overall theme of doing more than you think you can. I note that in addition of Ritchhart’s view of expectations as culture shapers, the more common meaning of expectations when used by teachers, i.e. relating to standards of, academic achievements or explicit behaviour is also reflected within the twin aspects within the finding of ‘high expectations’ which not only includes ‘belief sets’ of doing more than you think you can but also practical achievement of creating high quality work/products.

At the roots the attitude or growth mindset of the staff is due to the trust placed on students - trusting in their un-tapped abilities with the ‘can do’ attitude. The importance of teacher to committing effort and a belief in students’ abilities has also been noted by Rosebrough and Leverett (2011). One of the strands identified within this thematic finding was building a culture

of high expectations within the school. This is accomplished through the attitude/ mindset of the staff and also involves building a community. At NELCS, community includes the group of learners, staff, parents, families and neighbourhood. Within the classroom, the community is the classroom crew, for example the fifth grade crew which includes all the grade 5 students. The next level is the elementary school crew or middle school crew which includes all the students in the elementary or middle schools respectively. Further, every student is a North East Lab Scholar which provides another layer of connections that help create the notion of community. Finally, the community at NELCS is strengthened by its music programme which provides a common thread across all students and staff, along with, performance audiences that include other adults. This results in a community of musicians within each orchestra and section/ensembles (for example, wind or strings instrument musicians). As Senge (1990) suggests, a culture is people thinking together. As individuals share meaning, they negotiate and build a culture. I find that all the levels of community within NELCS, they share meaning and build a culture that reinforces habits of mind. Hence, building a community allows for the staff, resident artists and 'expert others' to convey this embedded attitude 'you can do more than you think you can' through the medium of language and scaffolding.

The focus on creating high quality work also contributes to this mindset. Some characteristics of high-quality work that the findings pointed towards include - Engaging with a challenging topic/project that is complex and rigorous, thus positioning it to be a worthy task; Involves authentic experiences through genuine research, real world experiences and original thinking and; Crafted with precision and care as they persevere through multiple drafts. Price (2006) highlights the influence of the teacher in setting the culture with a positive belief in students' abilities, "Classroom social systems are organic structures and processes rooted and grounded in an 'invisible/unspoken' sphere of influence and personal power initiated by the classroom teacher" (p. 127). Thus, classrooms are social systems where teachers have enormous personal influence upon students' levels of confidence. The belief and attitude of the staff that each and every student is capable of creating high quality work is hence crucial. This in practice involved providing supportive environment where students feel empowered by taking charge of their learning through a cycle of self-assessment, critique and feedback along with time to reflect and persevere through multiple drafts. Thus, through the medium of language which includes disciplined routines (for example, the critique feedback cycle) and explicit expectations (for example, learning targets and goals) and scaffolding provided by the staff, this growth mindset permeates into the classroom and school community. Further, creating these high-

quality work products that are showcased (for example, Grade 2 non-fiction audio book about snakes, Grade 5 climate change fair and orchestral performances) seems to provide opportunity for the self-esteem of the students to grow which I find supports this growth mindset.

At the same time, I find that the mindset within the NELCS community is not limited to the growth aspect of ones' abilities but goes beyond to an inherent belief that encourages the students to go beyond their perceived limitations. So, the attitude *you can do more than you think you can*, includes, firstly, having a growth mindset – a belief that your basic qualities can be cultivated and secondly, that at any given time an individual can go beyond what is perceived or believed as their abilities, pushing their imaginary limits. Thus, the thematic finding doing more than you think you can goes beyond just having a growth mindset to the continuous realisation of ones' potential which goes beyond limitations.

On the other hand, including growth mindset (Dweck, 2006) within it, Berger et.al (2016) note that academic mindsets are another set of motivational components that influence the student's engagement in his or her learning. Based on the work of Farrington (2013), academic mindsets are “the energy source that fuels students' engagement in deeper learning activities” (p.3) and “students with positive academic mindsets work harder, engage in more productive academic behaviours [(E.g., class participation, homework)], and persevere to overcome obstacles to success” (p.4). The four academic mindsets identified are:

- i) I belong in this learning community.
- ii) I can succeed at this.
- iii) My ability and competence will grow with my effort.
- iv) This work has value for me. (Berger, et.al 2016, p. 10-11)

I note that, these academic mindsets incorporate growth mindsets along with motivational mindsets that aid in developing learning community which has been previously highlighted as an aspect within the strand 'building a culture of high expectations' supporting this theme. Furthermore, finding 'relevance' through the above academic mindset “this work has value for me” (Berger, et.al 2016, p. 10-11) highlights the importance and connection between the two key findings of this study – the *attitude doing more than you think you can* and *making learning relevant*. I discuss the theme *making learning relevant* in the subsequent section (Sec. 7.3).

I find that all these above mindsets closely resound with many themes that have been identified within this study, namely community feeling within the theme collaborative atmosphere, music

as the binding aspect (orchestral model) and a culture of high expectations; “I can do it” attitude and growth mindset through the theme doing more than you think you can, and; the mindset finding value resounds with the theme making learning relevant and self-discovery. Overall, opportunities and environment that allow for such growth, in this case, a culture of high expectations along with developing and understanding of high quality work through hard work and perseverance, I find, helps shape and sustain this mindset which in turn supports and allows deep learning to happen. Furthermore, this growth mindset supports the development of other qualities that were highlighted within the findings. These include the themes *development of crew qualities, reflection, passion and perseverance*. This attitude *doing more than you think you can*, thus forms the foundation for the culture at NELCS.

### **7.2.3 ‘Transformability’ within the culture at NELCS**

I find that this theme *doing more than you think you can*, also resonates closely with the idea of ‘transformability’ which is based on the belief on the potential for transforming learning capacity. Briefly, it is “learning that is free from the needless constraints imposed by ability-focused practices, free from the indignity of being labelled top, middle or bottom, fast or slow, free from the wounding consciousness of being treated as someone who can aspire at best to only limited achievements” (Hart, S. et al. 2004, p.3). The pedagogical approach suggested within the learning without limits project involves both, acts to build and strengthen positive states of mind (Internal) and acts to lift limits and expand opportunities (External). I note that the internal aspects mentioned here are similar to the transformative teaching technique of “promoting positive learning-related attitudes, values, and beliefs in students” as mentioned by Slavich and Zimbardo (2012). On the other hand, the external aspect involves all the other individuals in the lives of the student especially the teacher to have firstly a growth mindset, belief that students can do more and expand their existing learning capacity. This also includes, providing opportunities where students are able to discover their inner capacity and expand their belief in themselves by removing any external limitations that are imposed on them. Further, the pedagogical principles highlighted within the learning without limits project (Hart, S. et al. 2004, 2012) that work together to guide enhanced capacity to learn involves, co-agency, everybody, trust and unpredictability. These principles I notice resonate with many thematic findings of this study such as making learning relevant, collaborative atmosphere and doing more than you think you can.

At the same time, the terms such as 'high expectations' and 'high quality work' within the findings of this study can easily become a double-edged sword in relation to 'transformability'. To elaborate, the pressure associated with the need to produce high quality products as a culmination to the learning expeditions both for the students and teachers could lead unnecessary or often invisible limitations challenging the overall belief in transformability within a straight-jacketed view associated with what could be considered as a product and test based process. Thus, I find that the focus on the social, emotional and cultural elements of transformation through learning to be crucial to ensure the importance of developing a suitable mindset and what Claxton et.al (2011) highlight as the four Rs which constitute a working language for powerful learners – Resilience, Resourcefulness, Reflectiveness and Reciprocity (fig 2.1, Sec 2.7.3 pg. 56). The resonance of these Rs within the thematic findings of this study can be readily seen. For example, the 'collaborative atmosphere' lends to the development of 'Reciprocity', the theme 'reflection' and 'passion and perseverance' highlights the lived experiences of transformation through the development of 'Reflectiveness' and 'Resilience' respectively and the importance of 'relevance' within learning lends to the idea of 'Resourcefulness'.

Similarly, looking through the work of Ritchhart (2015) who has focused on identifying and creating 'cultures of thinking' positions creating culture as a way to transform classrooms and schools (Sec. 2.7.6), highlights similar cultural, social and emotional elements relating to transformation through learning. Thus, I find that transformation through learning is primarily situated within the idea of 'creating a culture' within a classroom or school as whole.

. . . a greater focus on becoming than on being, places more value on the imaginative than on the factual, assigns greater priority to valuing than to measuring, and regards the quality of the journey as more educationally significant than the speed at which the destination is reached. I am talking about a new vision of what education might become and what schools are for. (Eisner, 2004, p.10)

Here, I find that the 'culture' involves a greater focus on 'becoming', 'imaginative', 'valuing' and 'quality' of the learning experience as suggested by Eisner. To highlight from the findings, the various learning expeditions and the music programme focuses on 'becoming' a musician, historian, herpetologist, engineer or a scientist during their learning experience or journey. Opportunity to be imaginative is also provided as the students embark on creating high-quality products which involves, grappling with a big or complex topic, undertaking genuine research,

gathering evidence, practicing inquiry, allowing for reflection and different perspectives. The aim here, I noticed was to make certain skills specific to being a ‘historian’, ‘scientist’ or a ‘musician’ to become *‘habits of mind’*. This prepares students to grapple with new questions and transfer these skills to other situations which is a key component of deep learning allowing the students to apply these skills, mindsets and habits of mind long after the ‘content’ of the particular course is forgotten. Thus, pushing away from the “banking model” of education described by Freire (1970) where teachers take the role of ‘depositing’ knowledge/information into the students’ empty heads. Rather, valuing the ‘becoming’, ‘imaginative’, and ‘quality’ of the learning experience as suggested by Eisner (2004). Overall, I notice the importance of developing mindsets, dispositions or habits of minds that go across and beyond individual tasks to becoming more guiding principles that shape the learning experiences of the students within the school.

#### **7.2.4 Challenge for teachers**

Revisiting the challenges noted within the findings, I note that transformative teaching does place a lot of work, pressure and expectations on the teachers. The implications of ensuring deep learning experiences, a growth mindset and ‘transformability’ largely lies on the teachers and the larger school community. Thus, I find ‘creating a culture’ within the school, as discussed previously, to be essential to developing, ensuring and sustaining these goals. This I note definitely begins with acknowledging the importance of teachers and the profession of teaching and ushering in changes to accommodate relevant professional support, training and time / work schedule that allows teachers to plan, prepare, reflect, research and collaborate. At NELCS, I noted that the majority of the staff included young teachers who are enthusiastic about the profession and keen to learn and apply new teaching strategies and curriculum. At the same time, I found that there was tension surrounding teacher expectations and responsibilities which, needs to be acknowledged to allow for teachers to strike a balance. Briefly, the findings highlighted the support and collaborative atmosphere at NELCS that helps teachers plan the learning expeditions and more importantly the freedom and trust placed in them as they design their learning expeditions. But, the challenges of working in a ‘lab school’ and ‘charter school’ involve the ability to be flexible, to change and adapt as the situation warrants. The pressure and expectations include producing a product that should be in itself a witness of the creative ways this music-infused charter school provides deep and transformative learning experiences for its students. I identify the need to be careful in this dual purpose of being able to promote the



school through the work of its work of its students, to avoid taking away essence from the learning experience in itself. The comments relating to these challenges within the findings highlight some aspects from both the sides of the debate surrounding teacher responsibilities and expectations when focusing on transformative teaching and deep learning. Thus, I note the need for the following - Building teacher's capacity through professional development and within school specialist staff support; Allowing appropriate time within the schedule for planning, reflection and collaboration; and Providing support to deepen their practice such as encouraging teachers to create complex learning topics that have authentic purposes and audiences for the products showcasing student learning, building partnerships and collaborating for fieldwork, visits from experts and disseminating student research work products.

### **7.3 Why making learning relevant matters**

Transformation through learning experienced by the participants at NELCS resulted in the five themes discussed in the previous chapter. At the core of these often overlapping and embedded themes is 'making learning relevant'. To further recap/revisit the finding, the theme *making learning relevant* covered two main aspects of the learning experience, 'piquing interest of the students' and 'positioning the topic of study in ways to show that it is worthy to be looked at'. Various other themes that were highlighted through the analysis are also embedded within this central idea. These include the themes: collaborative atmosphere, development of qualities, self-discovery, reflection, passion and perseverance. Further, as noted previously, there was engagement between various overlapping codes within the learning approaches observed, such as real-world experience, project-based focus and making connections, but the core idea of ensuring 'relevance' through learning was highlighted while exploring lived experiences of transformation through learning. This theme is directly related to one of the five principles of powerful learning identified by Krechevsky, et.al. (2013) namely – *learning is purposeful*, but also encompasses within it the other principles such as learning is social, emotional, empowering and representational. This can be seen through the classroom approaches and activities that allowed for the learning experiences to 'pique interest' and 'position the topic as worthy of study', which are the twin strands within this theme.

In my literature review, I have covered topics such as transformative teaching and deep learning along with significant projects that form the understanding of transformation through learning for this study. This developing literature review which formed the basis of my understanding was

undertaken across the initial phase of the study and was modified when I found the need to develop a framework identifying elements relating to transformation after the pilot study. I now discuss various connections with the literature to this theme ‘making learning relevant’ and refer to the examples from the data relating to the climate change expedition. [Note: An overview of this expedition is available in **Appendix - 5** and findings within the theme making learning relevant have been previously highlighted in Findings Chapter sec 6.2.3]. I have used the following sub-points as signposts to organise this discussion about the theme *making learning relevant* to provide clarity –

- a) Learning approaches in relation to ‘Deeper Learning’
- b) Relevance and ‘Transformative Teaching’ (Slavich and Zimbardo, 2012)
- c) Relevance and Dewey’s ‘Theory of Experience’ (1916)
- d) Relevance and ‘Teaching for Understanding’ (Blythe, T., 1998; Wiske, 1998).
- e) Creative teaching and learning involves making learning relevant
- f) Related pitfalls and challenges

### **7.3.1 Learning approaches in relation to ‘deeper learning’**

As discussed in Chapter 2 sec 2.6 deep learning involves the process through which students become capable of transferring learning and understanding across topics, subjects and situations. The learning approaches observed at the site and following analysis generated codes that highlighted aspects of deep learning. I find the following common ideas within the theme ‘making learning relevant’ that embody the various concepts of profound and transformational learning in relation to Hermida’s (2014) larger umbrella of deep learning previously detailed previously in table 2.2 in Chapter 2 (pg. 45-46).

- i) *Teaching for understanding* - Where the focus is on understanding the underlying meaning of a text and integration through doing a variety of thought-provoking tasks. For example, my findings highlight the exploration of the subject matter and the student’s development of understanding through the use of pictures (initially) and the teacher’s use of tasks that are thought-provoking in relation to the topic. This brings out deeper learning features such as, generalising, explaining, finding evidence, applying to new situations, and solving problems.
- ii) *Transfer of principles and attitudes* - Learning of a general idea involving an ongoing process that contributes to the development of the person. For example, the hands-on

projects such as making weather instruments and collaborative discussions have focused on developing principles and attitudes (habits of mind) related to being a 'scientist' such as – questioning, conducting research, finding evidence, analysing, designing, critiquing and revising, creating models, generalising and problem-solving. I also found the transfer of general attitudes such as generating an agency capacity, critical thinking, effective communication and persistence through the participant's experiences through the learning approach.

- iii) *Making connections* – I found that students experienced meaningful learning by making connections between new and prior knowledge and also forging connections through the world around them. For example, connecting the larger concept of the changing climate to the understanding of atmosphere, everyday weather patterns, related instruments and then to the wider ecology. Association and engagement with real world disasters such as hurricanes (Philippines Super Typhoon) further situated the topic of study and allowed for meaningful connections for the students.

The above-mentioned connections to deep learning was clearly supported within the finding strands of '*piquing interest*' and '*positioning the topic*'. '*Relevance*' situated through *piquing interest* includes the reference to engaging in discovery and curiosity-driven exploration. This forms the basic approach towards providing deep learning experiences. Further codes such as real world experiences, field work and making connections that form part of this theme highlight the combination of *piquing interest* and *positioning the topic* through the use of mystery images, paintings, videos, articles and fieldwork, that laid the groundwork for undertaking a project which allowed for key questions to be researched by the students. This involved **challenging and engaging the students while simultaneously allowing students to feel empowered** as they work collaboratively and independently. Thus, from my findings I note that deep learning within the learning experiences of students, was approached through – developing understanding, making meaningful connections and development of qualities/skills and/or attitudes. This lends more to the definitions of deep learning where the focus is not only of transfer of skills across situations and subject areas but also the importance of making meaningful connections and providing a sustained environment that allows for experiences that are challenging, motivating, engaging and empowering.

### 7.3.2 Relevance and ‘transformative teaching’

Rosebrough and Leverett (2011) situated their transformational pedagogy to include academic, social and spiritual goals. The initial framework comprising of the elements relating to transformation through learning for this study (sec 5.3.1) also included the spiritual realm, but during the iterative development of the framework this element was excluded due to its complexity and wide range of associated literature. Instead I have included the idea of ‘holistic education’ within my conceptualisation of transformation which Miller (1997) says is “based on the premise that each person finds identity, meaning and purpose in life through connections to the community, to the natural world, and to spiritual values such as compassion and peace” (p. 1). In relation to the findings, I note that transformational pedagogy at NELCS was approached through the core idea of ‘making learning relevant’. It is through this main experience that I find transformation through learning goes beyond deep learning that merely focusses on mastery of existing content knowledge. Thus, it is through this objective of learning that transformative experiences involving real world experiences and connections allow for students to find relevance through ‘piquing interest’ and ‘positioning of the topic to be worthy’.

Rosebrough and Leverett (2011) note “we teach to change the learner, and we have not taught unless the learning is taken place” (p.85). They highlight the importance of teaching to be more than presenting or having only the goal of transmission of information, for it to be transformational. Elaborating the differentiation between an instructional paradigm and a learning paradigm by Barr and Tagg (1995), they note the focus of the former being on knowledge as existing ‘out there’, whereas the latter sees knowledge as how our individual experience shapes it (p. 86). Within their transformational pedagogy, it is this connection between teaching and learning that transforms, supported by the academic-social-spiritual connection between teachers and students. Thus, the ‘how’ of the process and transaction between teacher and learner matters. In relation to this, I find this theme ‘making learning relevant’ highlights the importance of focusing on the learning paradigm – where connections between content and student experiences make learning meaningful and personal. Further, I notice the two strands within this theme – ‘piquing interest’ and ‘positioning topic to be worthy’ also furthers the argument made by Rosebrough and Leverett (2011) that the combination of novelty and meaning to be at the crux of the cognitive process, and the interaction between persons and situations provides opportunity for new and meaningful experiences. Blumenfeld, Kempler, and Krajcik (2006) argue that cognitive engagement can be attained through an

inquiry approach that motivates by “influencing value and perceived autonomy” (p. 480). Thus, feelings of value for students come from authentic learning, from tying classroom activities to real-world topics and academic disciplines, thus *making learning relevant*.

At the same time, this theme ‘making learning relevant’ resonates with the main overarching principles of transformative teaching highlighted by Slavich and Zimbardo (2012, p.581). These principles have been distilled from various theoretical perspectives, contemporary approaches to learning and classroom instruction previously highlighted within the literature review (Sec. 2.3). Relevance I find is crucial while *facilitating acquisition and mastery of course concepts* (the first principle of transformative teaching). The findings showed the twin strands of ‘piquing interest’ and ‘positioning the topic to be worthy’ was accomplished through various instructional strategies that supports this first principle, I briefly elaborate these here. Firstly, collaborative and group work allowed the students to be challenged and supported by each other, sharing knowledge, communicating possibilities and responsibilities and developing understanding or reaching a consensus that allows for discovery and problem solving. These approaches were embedded within the classroom instruction that piqued students interest that allowed them to find relevance within their learning experiences. Secondly, student’s choice and voice in shaping their learning discovery process and topic for further exploration allowed for them to make personal connections with the topic of study to find relevance within their learning experiences. For example, the final project for the LTME about the solar system was a true or false book, where each student chose and wrote a true or false statement and accompanying description based on their interest and choices they made during the research and discovery phase of the learning expedition. Thirdly, the focus on group discussion, questioning, listening and debating different viewpoints, analysing and reacting to stories or videos during the learning expedition, engaged and challenged the students to think and analyse their thinking while questioning and reflecting on different views and perspectives. This again allowed the students opportunity for their interest to be piqued or realise the worthiness of the topic as their learning experience became relevant. Finally, using self-assessments and peer-critiquing as methods of assessments highlights the final principle of “personalising feedback and allowing opportunity for ample ‘preflection’ and reflection” (Slavich and Zimbardo, 2012, p. 594). I note that this process further helped students to integrate and synthesise their learning experiences and find relevance within them. These above four points relating to the theme *making learning relevant*, lends to the first principle of transformative teaching ‘facilitating the acquisition and mastery of key course concepts’ by Slavich and Zimbardo (2012, p. 581).

Further, I found that, the idea of mastery of key course concepts need not be associated with each student knowing all the facts about the subject. For example, during the climate change expedition, groups of three students focused on specific projects which involved understanding the effects of climate change on certain habitats, locations or situations such as, coral bleaching in the Great Barrier Reef. Thus, only in groups of three, students researched their chosen topic and subsequently shared their findings with the whole group and during this process the other students, again in groups were deeply researching and mastering another topic. So, after their project, one group might be an expert about coral reef and climate change whereas the other group would master knowledge about droughts in Africa. I thus note that 'mastery of concepts' is not necessarily related to every student getting and retaining the same information or facts that they deeply researched, but instead related to the general skills that are developed while undertaking such projects.

The second transformative teaching technique by Slavich and Zimbardo (2012), is aimed at *enhancing students' strategies and skills for learning and discovery*. This connects to the classroom approach of expeditionary learning which includes hands-on project based learning, undertaking research and fieldwork experiences. Both the strands within this theme '*piquing interest*' and '*positioning the topic*' are geared towards providing opportunity for the students to make meaningful connections and find relevance within their learning experience. Thus, I notice that facilitating learning through a curiosity-driven, discovery based learning experiences was the basis of the classroom approaches within the thematic finding of making learning relevant.

Finally, the third transformative teaching technique aims at *promoting positive learning-related attitudes, values, and beliefs in students*. This was clearly evident from the strong focus on development of qualities, skills and attitudes within the lived experiences of learning depicted previously in fig 6.33 and discussed in findings Chapter 6 (sec 6.2.2). I address this point further in the section 7.4 while discussing the importance of mindsets and transformability. Overall, I find that *relevance* within learning also includes the development of associated skills and attitudes.

Another connection is through the six core methods of transformational teaching (Slavich and Zimbardo, 2012) that can be employed within classroom, which were also evident within the findings. These six methods are – "(1) establishing a shared vision for a course; (2) providing

modelling and mastery experiences; (3) intellectually challenging and encouraging students; (4) personalising attention and feedback; (5) creating experiential lessons that transcend the boundaries of the classroom; and (6) promoting ample opportunities for prelection and reflection” (p. 585). I now illustrate the connections with theme making learning relevant. The ‘learning targets’ help establish a shared vision of the course/ unit/ topic addressing the first method above. The learning targets for the students are were both understanding-based as well as related to mastery of course concepts. They help to situate relevance within their learning by highlighting the key objectives of the topic being studied. For example, related learning targets for the climate change expedition were: –

I can cite scientific evidence to describe how our climate is changing and the methods scientists use to analyse and interpret changing weather patterns; I can research and identify the pros and cons of one energy source (coal, natural gas, oil (petroleum), solar, hydroelectric, geothermal) ~ D\_LTM Expeditions curriculum map 2013-14\_Gr5.

These learning targets link to the developing learning target which is based on the common core standards for Grade 5 -

Explaining connections between people, events, and ideas in informational text and integrating information from several texts on the same topic to write and speak about it. ~ D\_LTM Expeditions curriculum map 2013-14\_Gr5

The in-depth expeditionary projects are experiential lessons that transcend the boundaries of the classroom and allows various other methods listed by Slavich and Zimbardo (2012) to be implemented such as - opportunity for student’s model experts (their thinking and actions), mastering specific skills and intellectually challenging and encouraging students (methods 2,3 and 5 respectively). All these classroom strategies provide and facilitate opportunities that ‘pique interest’ of the students and help to ‘position the topic to be worthy’. Further, the critique and feedback loop, including self-assessments and peer-critiques (detailed in sec 6.2.1.3 and sec 6.2.5.2) allows for personalising attention and feedback (method 4) along with promoting prelection and reflection (method 6). This assessment process as discussed previously facilitates the acquisition and mastery of course concepts which through the expeditionary classroom strategies allow for making students’ learning relevant.

### 7.3.3 Relevance and Dewey's theory of experience

I notice that the two strands within the theme *making learning relevant*, i.e. 'piquing interest of the students' and 'positioning the topic of study in ways to show that it is worthy to be looked at' forms the basis of the experience of learning for the participants. At its roots, I find '*relevance*' connecting with Dewey's theory of experience, where he positioned education as the continuous reconstruction of experience and emphasised on experience as the combination of trying and undergoing (1892, 1902, 1897, 1916). He elaborates an intricate relationship between experience and learning -

To 'learn from experience' is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. Under such conditions, doing becomes trying; an experiment with the world to find out what it is like; the undergoing becomes instruction – discovery of the connection of things (1916, p.140).

I note that the overall focus on 'relevance' highlighted through this theme is very much situated within this idea of learning from and through experience. The classroom approaches observed such as hands-on project-based and experience-based learning objectives tie into Dewey's view of education as *learning by doing* to which experience is central. At the same time, I do acknowledge that for Dewey, experience is at the heart of the educational process and education is defined in terms of the extent to which it develops and reconstructs experience:

The concept of education is a constant reorganising or reconstructing of experience. It has all the time an immediate end, and so far as activity is educative. It reaches that end – the direct transformation of the quality of experience... We thus reach a technical definition of education: It is that reconstruction or reorganisation of experience which adds to the meaning of experience and which increases ability to direct the course of subsequent experience (Dewey, 1916, p.59).

Thus, I would argue that one's 'lived experience' of learning is the same as Dewey's idea of experience where experience is at the heart and not something additional or separate. In relation to the theme 'making learning relevant', I find connections to the essential components of learning which are highlighted by Dewey and within the literature on deep learning (sec 2.6) where there is: a focus on differentiating information from knowledge; focus on understanding; and positioning reflection as a key process within learning. The data collected showed *piquing interest* and *positioning topic of study* as key findings within this theme, but going deeper within these two strands the classroom approaches that defined these findings clearly resonate with



the abovementioned essential components of learning. To elaborate, during the climate change expedition, the focus was on understanding and developing knowledge about the topic at hand. This was accomplished through piquing interest at key times i.e. at the start of the expedition, allowing the mystery images to connect with the students, driving their curiosity and allowing them to find relevance through their experience; and later fieldwork helped provide hands-on experience connecting with everyday life and learning by doing. Further, group work and discussion included the process of reflection which works its way into their learning experience. Hence, 'relevance' and 'meaning' within learning I found to be underlined by the focus on experience which is supported by the aforementioned essential components of learning. Further, 'relevance' is not only situated within *positioning of topic* and *piquing interest* in relation to external issues, the topic being studied or learning approaches, but also making connections within the 'personal realm' of the students. Here I find it important to discuss that 'experience' also includes making personal connections, opportunity to empathise and relate and make a contribution when possible. For example, the natural disaster in Philippines (Super Typhoon) not only provided an opportunity for the students to immediately relate to the topic being studied but also provided a means for the students to engage in fundraising and education for relief efforts through the use of posters and brief speeches making a plea to contribute towards the relief efforts. Grade 5 student Kevin shared his reflection on experiences shared by his aunt and mother who participated in relief efforts during the recent Haiti earthquake and provided opportunity for other students to also find personal relevance and connections. Similarly, the students' choice of making a climate change rap song as a project with lyrics written by them with personal significance situated 'relevance' within the personal realm as well as a means to reach out to others through their learning experience. I find that making such personal connections enhanced their developing understanding of the effects of climate change. Thus, *relevance* here, meant knowing or wanting to know more about the intricate connections between 'what's out there' and the inner workings of their own experience.

### **7.3.4 Relevance and 'teaching for understanding'**

I also notice connections between the above transformative teaching technique 'facilitating students' acquisition and mastery of key course concepts' and Teaching for Understanding (Blythe, T., 1998). Though I have previously covered the idea of Teaching For Understanding (referred as TFU hereafter) under the larger umbrella of deep learning I noticed further links that I present here. According to Blythe (1998), the view of understanding taken by the TFU project

is known as the 'performance perspective'. Briefly this means that understanding is a matter of being able to do a variety of thought-provoking things with a topic, such as explaining, finding evidence and examples, generalising, applying, analogising, and representing the topic in new ways. Thus, it positions understanding as being able to carry out a variety of actions or "performances" that show one's grasp of a topic and at the same time advance it or being able to take knowledge and use it in new ways. Their proposed Teaching for Understanding Framework, includes four key ideas: Generative Topics, Understanding Goals, Performances of Understanding and Ongoing Assessment. Here they elaborate the importance of choosing a generative topic which is central to one or more disciplines, interesting to students and teachers, accessible to students and which provide opportunities for multiple connections.

I find that these abovementioned features link directly with the theme 'making learning relevant' where the focus is on 'piquing interest' and 'positioning the topic of study in ways to show that it is worthy to be looked at'. First key idea within the framework is aimed at ensuring the topic being studied is interesting and allows for connections highlighted within this theme can be considered to be close to the idea of choosing generative topics to provide opportunity for teaching for understanding. This I do agree is important, especially when understanding is viewed within the 'performance perspective' described above. Thus, the process of making learning relevant here involved choosing a generative topic which 'piques interest' and is 'positioned to be worthy of study' and allows for the students to be able to do a variety of thought provoking things as they explore the topic.

The second idea within the TFU framework relates to the statements or questions that express what is most important for students to understand in a unit or course or Understanding Goals. In this study, this is referred to as Learning Targets which are goals for lessons, units or projects derived from the educational standards which are written in a concrete, student-friendly language – beginning with the stem "I can". I note that these learning targets are ultimately used to assess growth and achievement or Ongoing assessment which is the fourth idea within the TFU framework. Further, I noticed within the data that the students also spent a good amount of time discussing and analysing these learning targets and sometimes are also involved in creating or modifying them. This links to the thematic idea of finding 'relevance' within learning by students being actively involved in thinking, understanding or even developing these learning targets resonating with the 'performance perspective of understanding' referred in TFU project. At the same time, I find that by ensuring the learning target statements begin with "I can" also

makes it personal to their experience as they discuss, understand and reflect on them. The third and fourth ideas within TFU framework relates to the interplay of providing opportunities for activities that both develop and demonstrate students' understanding of the learning targets by requiring them to use what they know in new ways and the ongoing assessment and feedback, which completes the TFU framework. I elaborate all these key ideas within the TFU framework through an example from the current study below.

For example, the students' understanding about weather and climate was developed further by piquing their interest through fieldwork at the Blue Hills Observatory. This allowed for the students to look and observe scientists at work who measured and analysed various aspects of weather (such as - rainfall, pressure, temperature) and chart its changes across time. They looked at weather instruments, noted their characteristics, recorded the readings and asked questions as they discussed with experts and among themselves about the larger implications and use of tracking weather and climate change. This was followed by providing the students with an opportunity to demonstrate their understanding about the weather instruments by undertaking a hands-on project of making these instruments. Subsequently, using their understanding they delved deeper into the implications of climate change on ecology. Also, the use of group discussion, collaborative projects and self and peer-assessments in relation to these activities formed part of the ongoing assessment and feedback process. Taking the performance perspective of understanding, the students working in a group collaboratively, were involved in doing a variety of through-provoking things with the topic which was piqued through fieldwork and led to hands-on building/making weather instruments, explaining its characteristics and understanding its uses and benefits, discussing possible large scale implications, researching deeply and finding evidence about such climate change on ecology, applying and sharing their knowledge with a larger audience through a climate change fair and creating a climate change rap song. Thus, this situates 'relevance' within the idea of 'Teaching for Understanding' (Blythe, T., 1998) which in turn is positioned as facilitating students' acquisition and mastery of key course concepts' under the transformative teaching techniques highlighted by Slavich and Zimbardo (2012).

### **7.3.5 Creative teaching and creative learning involves making learning relevant**

The research work of Woods and Jeffrey beginning in the nineties and continuing through the next two decades has been useful in identifying features of creative teaching and creative learning, namely relevance, ownership, control and innovation (Woods, 1995; Woods and Jeffrey, 1996, 1997, 2003, 2009; Jeffrey and Craft, 2003; Jeffrey, 2006). I discuss below the feature 'relevance' in relation to the literature and the findings of this study:

The higher the relevance of teaching to children's lives, worlds, cultures and interests, the more likelihood there is that pupils will have control of their own learning processes. Relevance aids identification, motivation, excitement and enthusiasm. Control, in turn, leads to ownership of the knowledge that results. If relevance, control and ownership apply, the greater the chance of creative learning resulting – something new is creative, there is significant change or 'transformation' in the pupil – i.e. innovation (Woods, 2002, p.7)

This highlights the connection across the four identified features of creative learning and teaching and the importance of relevance within this can be seen. Discussing the relationship between teaching creatively and teaching for creativity (as distinguished by the NACCCE, 1999), Jeffrey and Craft (2004) note that the teachers at the case study school of the study by Jeffrey and Woods (2003) prioritised strategies that engaged the learner and they acted creatively to adapt the strategies to the appropriate age range, context and individual. When the teachers focused on the pedagogic relevance to the learner to the topic which was to be learnt or experienced, the learners took ownership of the experience. Further, they noted that the teachers also implemented the teaching for creativity principles (NACCCE, 1999) firstly by, making teaching and learning relevant and encouraging ownership of learning and then, by passing back control to the learner (Jeffrey and Craft, 2003) and encouraging innovative contributions. Again, this highlights the importance of making learning relevant. The thematic finding in my study 'making learning relevant' connects with this literature by sharing the aim to engage the learner. This is evident through the strand 'piquing interest of the students', which included activities that engaged all the senses of the students; involved them in hands-on projects; and started conversations that allowed for interesting connections to be made by the students. The stories and projects that students were engaged in or created also provided them with a sense of ownership. This meaningful engagement fuelled their passion and perseverance (discussed in section 6.2.6), allowing them to be involved in authentic experiences of labour

while also providing them with a sense of accomplishment and joy. Control over the activity or project was mainly with the students but was guided by relevant parameters enforced by the teachers, such as, the duration of time for a discussion or brainstorming session among the students and the flow and steps within a hands-on project.

In particular, Jeffrey and Woods (2009) identify three major features related to teacher pedagogy that are significant for making learning relevant: positive teacher-learner relations, engaging interest and valuing contributions. The findings in this study highlight two strands within the theme making learning relevant - 'piquing interest of the students' and 'positioning the topic of study in ways to show that it is worthy to be looked at'. As discussed, the strand 'piquing interest' relates to engaging interest, but the foundation of all activities within a classroom is by ensuring positive social relations. This includes: the teachers gaining trust; making students feel that they are valued and not giving up on them by constant encouragement and the attitude 'you can do more than you think you can'; taking the extra effort to organise projects and field work that connect with all students and shows their commitment to the students; modelling behaviour such as collaboration through working with other staff and adults, being honest and clear, empathising and respecting multiple view points and also valuing the student's opinion.

The findings show that students found relevance in their work when their interest was piqued, as they made connections through hands-on projects and/or by making personal and emotional connections. This echoes the literature, where both Abbs (2002) and Woods & Jeffrey (1996) note that making learning relevant involves helping children find relevance in their work either through practical application or by making emotional and personal connections. At the same time, Jeffrey and Woods (2009) note that "relevance is increased if a real event is involved, one that is seen to be purposeful and worthwhile" (p.21). This connects with the second strand within this theme which is, 'positioning the topic of study in ways to show that it is worthy to be looked at'. This was evidenced by using hands-on project activities to move beyond just 'piquing interest' but also showing that it is worthwhile and meaningful. For example, creating a climate change conference for sharing the knowledge gained; creating a climate change rap song that engages all, and participating in fundraising efforts for providing relief during a real-world typhoon disaster.

The third feature of making learning relevant listed by Jeffrey and Woods (2009) is valuing contributions. This was somewhat implicit within the findings and did not constitute a separate

strand within the theme and was also witnessed in multiple ways. For example, allowing students to choose and have control over their research questions that they delve into deeply during the learning expeditions; celebrating their understanding and knowledge through the final projects by culminating the learning expedition with publications and/or performances for various audiences that demonstrates this; valuing their opinions, discussions and questions during all the interactive activities; considering them experts of the topic they choose to focus on including, being a good evaluator, analyst and critique. I note that 'valuing contributions' is not just related to the thematic finding making learning relevant but also more closely part of their everyday interactions and thus embedded within all interactions across the school. It went beyond just teacher-student interaction and included feeling part of a collaborative atmosphere (sec 6.2.4) where students are valued co-participants, collective participants and collaborative participants.

### **7.3.6 Related pitfalls and challenges**

After discussing links between the theme 'making learning relevant' with the literature above, I now also acknowledge certain pitfalls and challenges that I observed in relation to the learning approaches and learning experiences that situate this theme. These stemmed mainly from often interrelated issues surrounding the time allotted for an expedition, the amount of group and collaborative work, the effective mixture of knowledge-based learning targets vs understanding-based targets and the application of knowledge from one topic across other expeditions or activities. To elaborate, a learning expedition is undertaken for one term or about 3 months, but sometimes there is opportunity for overlap between two expeditions, for example the fall semester expedition titled 'Heating Up, Chilling Out: Global Climate Change' has links to the expedition undertaken during the winter semester titled 'Energy Savers: Building a Greener Tomorrow'. Though effort is made to make such connections during the planning phase of the expeditions, it doesn't translate to students having longer time to engage with each and every aspect of the topic. This along with, the overall plan for expedition might result in a structured execution of activities and predetermined choice and execution of the final product which culminates and encapsulates the students' journey through the learning expedition. For example, the hands-on project which involved students making weather instruments involved the use of standard predetermined steps and directions for building the weather instrument with limited time devoted towards exploring other possibilities for use of the materials provided and for envision such designs. Whereas, on another occasion, a hands-on project involving making

a working windmill using a choice of varied materials along with testing its effectiveness provided ample opportunity for group work, collaboration, freedom to choose and experiment, critiquing design choices and incorporating core practices within science such as – Asking questions and identifying problems; Developing and using models; Collecting, analysing and interpreting data; and Planning and conducting investigations or experiments. It can be argued that both the hands-on projects mentioned above aimed at fulfilling different objectives or engaging students in different ways during their journey through the learning expedition. Thus, I find that the challenge in providing transformative learning experiences through creating opportunities for students to find ‘relevance’ within their learning requires maintaining a balance among factors such as available time, collaborative opportunities and opportunities for critiquing and feedback.

## **7.4 The significance of music within the NELCS school culture**

Briefly, my findings point to music having a binding effect in relation to the lived experiences of the participants as well as the larger school culture. The key points within this theme were in relation to music defining the culture of the school, making connections through music, use of orchestral model to build a sense of community and fostering qualities and skills through being a musician. I now discuss these findings in relation to literature and make possible connections, thus situating the significance of music within the school culture through the lived experiences of participants at the research site.

As noted previously, the El Sistema music programme adopted by the school incorporates an orchestral format and approach towards music education. Each and every student in the school is learning music and is part of an orchestra (one among the four school orchestras). This provides an opportunity for the whole school to be involved in the activity of playing music within an orchestra and making it the only such repeated activity that every student undertakes every day. Some specific opportunities that arise due to this format have been previously noted in the findings chapter, these include - Mixing of students across grades; Close relationships between resident artists and students; Engagement and group work. As noted in the literature, outcomes or benefits derived from high quality arts education can be categorised in one of more categories identified in the PACH (2011) report. Though this study is not quantitative in nature but findings from the lived experiences of the participants within this study did highlight certain

categories of benefits due to the music programme and arts-infused learning approach within the school:

- Increased student motivation and engagement.
- Development of qualities such as perseverance and habits of mind including working with others, focused attention and integration of multiple skill sets.
- Development of social competencies, including collaboration and team work skills, social tolerance, and self-confidence.

Previous small studies conducted by researchers as well as NELCS staff have shown increase in student achievement represented by reading and mathematics performance on tests, but I must note that these results cannot be directly correlated to the music programme and could be a result of various other factors including, teachers, new curriculum, adoption of expeditionary learning framework and school leadership to suggest a few.

Further, noticing the significance of music within the school culture, I find that music defines the school culture as well as its identity. This begins with the NELCS being a charter school with specific focus on music. Further, being a charter school comes with its own challenges ranging from, being faithful to their charter, fundraising, attracting students, providing quality education, as well as, a gamut of administrative and practical issues that could vary across time and location. The challenges and opposition faced by the current charter school system in the United States is not new. It stems from similar interrelated issues mentioned above, but also includes expectation of improvement and academic achievement according to the State standards across the country. I find that NELCS after almost being under the threat of closure after their evaluation by the State due to not sufficiently meeting their charter of infusing music, has turned around to re-envision music-infusion and school curriculum under new leadership to undergo almost what could be characterised as a 'whole school transformation'. The adoption of the EI Sistema programme and Expeditionary Learning framework has helped shape this transformation. Videos of orchestral performances and student expeditionary learning products (e.g. music videos and books) have become a way to showcase the school, its practices, achievement and help in fundraising activities. Thus, music defines the identity of this school and to elaborate the *significance of music within NELCS culture*, I have used the following sub-points as signposts to organise this discussion -

- a) Music-infusion as 'skills development' and 'character education' (Seider, 2012)
- b) Music-infusion as deep learning experience
- c) Acknowledging some related pitfalls and challenges.



### 7.4.1 Music-infusion as ‘skill development’ and ‘character education’

Overall, my findings do point to the deep and often transformative experience that continuous group work, through the participation in the orchestra and other music activities, has had on the students involved. Connection among students as musicians, respect and peer camaraderie has led to music defining their identity and memory of their school experience as a whole. I notice that the focus and position taken by the music programme within NELCS has played an important role in developing a whole school culture with a strong emphasis on character building. To bring in connection to the literature previously discussed, specifically the work of Seider (2012) about character education, I notice a strong focus on what is characterized as ‘performance character’ within the literature i.e. “the qualities such as effort, diligence, perseverance, a strong work ethic, a positive attitude, ingenuity, and self-discipline needed to realize one’s potential for excellence in academics, co-curricular activities, the workplace, or any other area of endeavor” (Lickona, T. and Davidson, M 2005, p.18). I found that the development of crew qualities overlaps with the focus on development of skills related to being a musician (discussed in sec 6.2.2 table 6.2, pg.171); which in turn relates to character development. Thus, this highlights the significance of music-infusion at NELCS to include skills development and character education.

Every day orchestra rehearsals form the basis for continuously practicing and reflecting on qualities such as perseverance, self-discipline, focused effort and positive attitude. Aiming for high quality work is something that I found students understood and persevered towards. This strongly links with what is characterised as performance character. Further, developing commitment to doing work that is *excellent* in quality, carried out in *ethical* manner and is *engaging* for the participants forms the three E’s of good work stated by Gardner (2001, 2004). Here, a commitment to doing excellent work also aligns with performance character reflected within the findings. Though I notice connection with the literature on good work by Gardner (2001,2004) with other themes in the findings such as, making learning relevant, collaborative atmosphere and developing crew qualities, the connections to the significance of music within the culture at NELCS is what I find as the overarching and is elaborated through this section.

Having just discussed another term ‘performance perspective’ with TFU framework in the previous section (sec 7.2.4), here, I discuss any links in relation to this term ‘performance

character'. At the outset, I notice that both these terms, with the use of the word 'performance', signifies some kind of 'action' which is either, a part of the learning experience such as doing a variety of thought-provoking things with a topic such as explaining, reflecting, findings evidence, applying, analogizing and representing (Blythe, 1998), or, a resultant of a learning experience that might include the above and results in a project or presentation (Seider, 2012). Further, though the two terms represent focus on development of certain skills or qualities, the position taken by the 'performance perspective' is in relation to the idea of understanding whereas 'performance character' relates to core qualities, values and skills of an individual. Looking at the data from this study, I find a link between the two here at NELCS. Both these are geared towards providing depth within students' learning experiences and illustrates the aim of educating for the future, where through the learning experiences at school, students are able to develop, transfer and apply skills or habits of mind (sec 2.7.1) that they acquire across different situations in real-life. This is the whole premise of deep learning. In relation to the music and classroom programmes (El Sistema and Expeditionary Learning), I note that the music programme focused strongly on developing 'performance character' where the regular rehearsals and musical performances were central to their learning experiences. In contrast, the EL program which covers all other subject areas takes a 'performance perspective' of understanding. However, it is supported by the focus on development of 'performance character' through the process of making the culminating projects such as, a narrative non-fiction audiobook, composing and performing a climate change rap song or a True or False book about the universe. The strong, intensive, everyday focus on 'performance character' through the orchestral model positions music learning as the binding thread that allows for 'performance character' to be developed and practiced across the school, permeating across the lives and learning experiences of the students.

At the same time, I found that there was little or no space for some qualities in an orchestral setting such as, creativity, freedom, exploration and play. These practices that define the El Sistema programme could at the outset be debated to not allow for learning approaches and practices that foster creativity, especially since there is growing literature in the field of music education that calls for and advocates for a more open and group improvisational based approach (Beegle, 2010; Sawyer, 2007, 2008; Black, 2008; Monk, 2013; Burnard, 1999, 2002). This is in spite the fact that the findings within this study show that the music programme through its approach also successfully provides transformative learning experiences, where creativity is embedded within the group work, development of qualities related to such group

work, self-confidence, perseverance, overall character development and sharing and reflection on musical experiences (including rehearsals and peer-learning). Thus, I would include skills such as 'being creative' in relation to the lived experience of music learning in a limited way.

### **7.4.2 Music-infusion as deep learning experience**

Examining the role of arts and music within the learning experiences of the participants, which I found to have a binding effect of the whole school culture defines the overall approach of music-infused learning adopted by the school. I now discuss its position in relation to the various types of learning in and through the arts previously discussed in literature review (Chapter 2; sec 2.8.2) - Arts as Curriculum; Arts-Enhanced Curriculum; and Arts-Integrated Curriculum. The focus and time devoted to music within a school day at NELCS positions its practice more towards the argument of 'Arts for arts sake', developing techniques, skills and qualities related to being a musician. All musical activities and curriculum are planned around the orchestral format, thus orchestral performance becomes the primary means and product of music learning. Further, being a charter school with music-infusion stated within its school charter, I notice that NELCS has been experimenting with various types and levels of integration. They moved from trying to integrate music within the curriculum as a way to teach other subjects, for example, teaching mathematics through music, to a more flexible integration where music engages students and becomes a means for expressing their learning expedition journey through a musical product. As the Head of school noted, they decided not to try to "*force fit*" music or try to teach many core subject topics through music. Now music within the classrooms includes, singing and listening to songs relating to the themes/topic being studied. This is undertaken as part of the listening project and also composing songs reflecting their learning journey through their learning expedition. Other examples of music integration within the curriculum include understanding music during the times of the American Revolution as part of their expedition or understanding sound waves by relating it to the way musical instruments generate sound. Thus, music-infusion at NELCS I find, is accomplished through ensuring every student is learning music through participating in an orchestra (El Sistema programme) and making connections by using music as a means of expression as they undertake their journey through learning expeditions (LTME). This I find allows for a dual focus akin to the double focus cross-curricular learning highlighted by Barnes (2015). On the one hand, the El Sistema programme represents one end of the arts-integration continuum (Arts-As Curriculum) while on the other hand, the LTME classroom topics infuse music at different levels which are aimed at enhancing the

curriculum such as, listening/learning a song or music related to the topic being studied (Arts-Enhanced Curriculum) or composing and performing music such as, a blues song during Grade 4 expedition on the Great American Migration or making a snakes music video as a final project during an expedition where the second graders become herpetologists (Learning in and through the Arts), thus providing a wide range of music-infusion opportunities across the school day.

The transformative nature of music is acknowledged by many researchers and artists (Creech et.al. 2016; Tunstall, 2012; SA O'Neill, 2012; Upadhyay, 2011; Zander, 2008; Schmidt, 2005; Hesser, 2001; Schorr, 1993). This study has focused on exploring transformation through lived experiences of students in a music-infused school where transformation is conceptualised as embedded within the everyday learning experience. I find that participants experience and are involved in a deep learning experience through the practice of music. Music practice at NELCS definitely finds connections to the deep learning literature discussed previously. This ranges from development of skills, habits of mind to making connections at a personal level, school community level and to the world at large. I acknowledge here that specific aspects such as critical thinking and problem-solving might not be the focus during the music learning experience; but, opportunity for group work and collaboration often gives rise to the need for critical self and peer assessment, reflection and problem-solving attitude. Thus, transformation through learning in relation to music practice is purely embedded within the idea of experience and its intricate relation to learning highlighted by Dewey (1916).

To 'learn from experience' is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. Under such conditions, doing becomes trying; an experiment with the world to find out what it is like; the undergoing becomes instruction – discovery of the connection of things. (1916, p.140)

This includes the experience of being in an orchestra, the experience of making music together, the experience and realisation of one's contribution towards creating music together within an orchestra and experience of connectedness through music. The thematic finding 'collaborative atmosphere' is strengthened by the everyday experience of being in an orchestra composed of students across the school. The experiential nature of orchestral practice was the focus with the objectives of not just being able to play music but learn and develop certain qualities, skills, values or mindsets. Further, the music program provides opportunity for the students to become gritty. Grit is defined as "perseverance and passion for long-term goals" (Duckworth, Peterson, Matthews, & Kelly, 2007, p. 1087) and as "... not just resilience in the face of failure, but also

having deep commitments that you remain loyal to over many years” (Duckworth as quoted in Perkins-Gough, 2013, p. 16). I noted that, though not every student wanted to become a career musician, they were generally passionate about music. This passion along with perseverance through the process of learning in an orchestral setting every day gives the students the opportunity to be committed and develop related qualities and skills. Thus, I find the empowering nature of the mindsets, confidence and skills through rehearsal and performances, I find provide a sense of ownership and empowerment for the students.

On the other hand, it can also be argued that being involved in any intensive repeated activity can lead to transformative experiences whether it is a musical activity or something else. But considering the present research study, I find no need to challenge the above argument and instead focus on the experiences of the participants of this study which involved participation in an intensive orchestral music programme. Through this study, I was not aiming to propose or conclude music or the music programme as practiced at NELCS as the ‘transformative’ aspect within the lives of the participants. Instead I have here, highlighted the significance of such a music-infused environment within the lived experiences of the participants.

### **7.4.3 Acknowledging pitfalls and challenges**

I find that it is hard to distinguish students’ music learning and teaching practice from their focus on musical performances which in turn involves everyday orchestra rehearsals involving learning and improving on repertoire. At the same time, it is easy to fall into a loop whereby the musical identity of the school created through the orchestral performances by the students can be thought to be beneficial for fundraising. This intense focus on the orchestral format stemming from their adoption of the El Sistema programme can be challenged to question its contribution to the music teaching and learning approach. This approach can be considered narrow and lacking creative opportunities for the students involved. Learning experiences of the students through their learning expeditions involves various aspects of learning approach adopted such as - project-based; opportunity for repeated reflection, critique and feedback; hands on experimentation; group work that encourages and provides opportunities for engaging with different perspectives; time for open-ended and free exploration of the topic; and opportunity to create products/work. These features are largely absent within the El Sistema music programme at the school leading to the argument questioning the quality of the music learning and teaching experience at the site. Note that I refer to the term ‘quality’ here in relation to

music teaching and learning approaches that incorporate and allows for more freedom for the students, student-centered music learning, creative expression and engagement with music beyond the traditional orchestral format.

At the same time, it is necessary to acknowledge that the six methods of transformative teaching listed by Slavich and Zimbardo (2012) are somewhat addressed by the music programme in its present format. Regarding the first method, I observed that, the 'shared vision for the course' (music programme/ rehearsals etc.) was to provide opportunity to persevere, immerse oneself in playing and performing music and to develop various related skills/ qualities (discussed previously). Working with resident artists who are musicians, the students are inspired by musical performances of other orchestras and artists who become role models. This, along with a continuous stream of performances, address the second method provide the students opportunity for modelling and mastery experiences. Further, short and often intense collaboration opportunities with other artists and musicians provide challenging experiences that are balanced with ample encouragement from the teachers and peers during group work, addressing the third method of transformative teaching. The latter three methods listed by Slavich and Zimbardo (2012) includes personalising attention and feedback; creating experiential lessons that transcend the boundaries of the classroom; and promoting ample opportunities for prefection and reflection respectively are not completely addressed through the music programme. The reflection and feedback cycle is not always integrated into the learning experiences and the personalised attention might seem difficult in a group/orchestral format. The experiential lessons outside the classroom in relation to the El Sistema programme is focused on providing regular, multiple and varied performance opportunities. Other music related learning experiences are integrated within learning expeditions that transcends the boundaries of the classroom and the listening project (these are described within the findings as well as in **Appendix – 5**). Thus, the lack of other features within the music programme that are crucial to the learning expeditions do not necessarily result in lack of transformative experiences. The focus on development of skills and qualities through the practice of music including a sense of community I find defines the overall school culture at NELCS.

## 7.5 Methodological contribution

Exploring transformation through learning, which I consider to be a subtle area posed various challenges which ultimately shaped my methodological approach. These challenges not only ranged from the practicalities arising from an exploratory nature of this study, but also involved the development of the understanding that defined *transformation through learning* for this study. I use the following sub-sections to organise this discussion about the methodological contribution of this study by discussing the challenges and the resulting approach that I adopted for this study to clarify the contribution made through this study -

- a. Challenge 1: Lack of common language about ‘transformation’
- b. Challenge 2: Connecting multiple strands of literature to conceptualise ‘transformation through learning’
- c. Challenge 3: Focusing on the embedded nature of transformation through learning
- d. Challenge 4: Exploratory nature of this study
- e. Challenge 5: Situating arts/music within this research

Note, that many of these challenges overlap with each other in the methodological approach that was used to address them. But this does not preclude them for also being a separate methodological contribution of this study.

### 7.5.1 Lack of common language about ‘transformation’

The term ‘transformation’ itself posed a challenge right from the beginning of the study. Within the literature, there is an assumption that transformative learning is different from other kinds of learning (such as acquiring a new skill or elaborating on existing knowledge) (Mezirow, 2000), but as Cranton and Taylor (2012) note, the boundaries remain unclear. Further, Brookfield (2000) problematises the idea of transformative learning, describing what he sees as the “misuse of the word transformation to refer to any instance in which reflection leads a deeper, more nuanced understanding of assumptions” (p. 139). Similarly, Newman (2011) presents examples in which change of any kind (for example, becoming more open to other points of view, gaining self-confidence, “seeing things differently”) are described as transformative. He challenges us to consider whether transformative learning exists as a distinct form of learning and Brookfield (2000) proposes that learning can be called transformative only if it involves a fundamental change at a very basic level.

Realising the subtle and open-ended nature of the term ‘transformation’ I began firstly by developing an initial framework that included elements or behaviours related to transformation. I began to use this framework as a lens to identify and explore ‘transformation through learning’ within everyday learning experiences of the participants at the research site. This I find allowed me to clarify both my conceptualisation of ‘transformation through learning’ adopted for this study, as well as allow for multiple perspectives related to this term be explored within this study. This initial framework has been discussed previously in Chapter 5 (sec 5.3.1). As I progressed, I soon realised that the literature about ‘transformation through learning’ mainly, transformative teaching and transformative learning were not sufficient to define the term ‘transformation’ for this study. This further became clearer during the pilot study, where I found that there was no common language about ‘transformation’ among the staff and often the term seemed to indicate some ‘definite’, ‘visible’ and ‘sudden’ ‘change’. Hence, I found the need to clearly situate the term ‘transformation’ within the learning experience and proceed to explore it in a manner that would be true to the research aims for this study. Thus, literature about pedagogy, instructional strategies, literature relating to understanding, culture and thinking became important as it provides a way to think about change at a very basic level.

The development and use of a ‘framework’ that reflects the elements or behaviours related to transformation in this study provides insight into a methodological way to approach such subtle research topic. At the same time, allowing for this framework to iteratively developed provided a way to reflect, acknowledge, adapt and expand the understanding of the topic. I find this methodological contribution, provides a way of exploring an area that lacks common language perhaps due to its subtlety.

## **7.5.2 Connecting multiple strands of literature**

Expanding and reviewing the relevant literature that connects with the idea of ‘transformation’ provided a better picture as I clarified the conceptualisation of ‘transformation through learning’ for this study. The multiple strands of literature often originated from different background/ disciplines – ranging from psychology (Maslow, 1970, 1971; Rogers, 1961, 1969), adult education (Mezirow, 1991; Cranton, 1996), higher education (Hermida 2014; Slavich, 2012), creativity (Craft 2002) and various research projects especially those from the researchers at Harvard Project Zero ranging from arts to the nature of intelligence, understanding, thinking,



creativity, cross-disciplinary and cross-cultural thinking, and ethics (Gardner, 2006,2011; Ritchhart, 2005, 2011, 2015; Claxton, 2002, 2011; Tishman et.al, 1993, 1995; Blythe et.al, 1998; Wiske et.al., 1998; Barnes, 2015; Berger et.al., 2014, 2016). This along with my pilot phase experiences, led to the need to revise and expand the framework representing transformation through learning that was initially developed. Thus, I began to iteratively develop the framework representing the elements and behaviours relating to transformation through learning. The resulting framework, incorporated deep learning at the core of transformation through learning, thus connecting related literature discussed within sections 2.2 and 2.2.2 to the idea of transformation adopted for this study. I find that this framework allowed for the abovementioned multiple strands of literature to be represented and connected, allowing for a deeper or wider understanding of ‘transformation through learning’ to emerge.

### **7.5.3 Focus on the embedded nature of ‘transformation through learning’**

Due to the subtle, often invisible and embedded nature of transformation through learning, I choose to research this topic through the everyday lived experiences of the participants using ethnography as the overarching methodology. The choice of ethnography allowed me to utilise a variety of data collection methods and more importantly, enter the research site, spend time with the participants, imbibe their culture, gain trust and capture critical incidents and moments easily. At the same time, due to the embedded nature of transformation through learning, I found it a challenge to continually focus and delve deeper into the lived experiences of the participants. This led me to use data collection methods such as learning walks, conceptual drawings and ‘now’ and ‘then’ question framing during informal discussions with participants. These methods allowed the participants to reflect and express their lived experiences in different modes such as a drawing or taking me on a tour around the classroom or school. These tours/walks allowed them voice to express their perspectives of their learning experiences, relate to the displayed artefacts at various locations within the school to be noted and explored.

### **7.5.4 Exploratory nature of the study**

Aiming to fill a gap within literature addressing transformation through learning for everyday students in a comprehensive school setting, I have chosen this research to be exploratory in nature. This was mainly due to the variety of literature that shaped my conceptualisation of transformation for this study to lay a foundation within this area, as well as allowing for the embedded and subtle nature of transformation through learning to be explored without any straight-jacketed view adopting any particular literature framework/model. Thus, firstly, using the iteratively developed framework as a lens for this study, and secondly, using inductive thematic data analysis rather than, adopting or applying any existing framework/model or principles from literature allowed for an exploratory study that I consider appropriate for a subtle area that lacks detailed research.

### **7.5.5 Situating arts/music within this research**

The importance of arts and music within this study is evident from the title itself, but it is important to note that the focus of this study is on ‘transformation through learning’ and not just transformation through learning in and through the arts or music. My interest in the arts and music especially integrating them within everyday learning in schools made me focus on finding a research site that allowed for such practices. Thus, it was important from the beginning to realise that the arts and music did not guide my search for transformation through learning but was an additional component within the everyday learning experience of the participants. Hence, the thematic data analysis, includes data relating to the ES music programme and music-infused curriculum units within the EL projects, but, the role of music within transformation through learning is explored as a separate research question within the findings.

Overall, I note that the major methodological contribution of this study has been the iterative development of the framework that informs the understanding of transformation through learning. This has resulted in expansion of the scope and understanding of the area of transformative education by connecting it with other relevant literature such as transformative teaching (Slavich and Zimbardo, 2012; Rosebrough and Leverett, 2011), creative pedagogy (Seider, 2012; Ritchhart, 2015; Claxton et.al, 2011) and deep learning (Hermida, 2014; Mehta,

2014; Blythe, 1998; Wiske, 1998), thus allowing for this case study findings to inform connections across the literature.

## **7.6 Summary of Discussion**

In this chapter, I have argued four main ideas that lend to transformation through learning arising from this research study. These are - Why making learning relevant matters; The importance of growth mindset and transformability; and The significance of music within the school culture. I have made connections to literature relating to Deep learning, Transformative teaching, Teaching for Understanding, Character education and Mindsets. I have highlighted the importance of growth mindset for transformation through learning. This includes a school-wide culture which incorporates positive mindsets, belief in the potential and abilities of the students and development of habits of mind, skills and character. Further, I have also argued that transformation through learning involves challenging and engaging students along with 'finding relevance' within learning experiences. I have also discussed challenges and related methodological approach adopted for this study as a contribution which could be helpful other research studies that aim to research an area that is subtle and embedded as 'transformation through learning'. This study has expanded the scope and understanding of the field of transformative education by connecting it with other relevant literature offering a model framework from the practice at this research site as a case study from which other sites could create their own. Thus, my findings of lived experiences of transformation through learning at NELCS and the role of music within this, alongside the key ideas discussed within this chapter, reflect my contribution to the understanding of transformative education in a comprehensive school setting to inform connections across the literature and practice. In the next chapter, I will provide a summary and critique of this research study along with highlighting the key contribution of this study for future research.

## CHAPTER EIGHT

# 8. CONCLUSION

### 8.1 Introduction

In this culminating chapter of this doctoral thesis which I begin by summarising the research study which sought to answer the main research question - *What are the teachers' and students' lived experiences of transformation through arts and music infused creative learning at North East Lab Charter School?* I follow this by presenting conclusions derived from the above findings, seeking to clarify the contribution of this study, both to theory and research. Finally, I provide a critique of this study addressing its limitations along with possible further research directions.

### 8.2 Summary of the research study

This thesis gives a glimpse into the real life context of transformation through creative learning at a K-5 School in the North East of the United States through asking the following questions, 'What are the teachers' and students' lived experiences of transformation through music and arts infused creative learning as practiced at an Elementary School in Northeast of USA?' and 'What is the role of the arts and music in this process?'. It also provides a map of my methodological and analytical journey while exploring a complex and subtle process of transformation embedded within everyday learning.

This study set out to explore transformation through learning in a comprehensive school setting, aimed at filling a gap within the literature that addresses this context. Further, under the present context of globalisation where countries are pushing to revamp or revitalise their education systems, especially aimed at equipping students for participating and contributing in a changing society, exploring and understanding the transformative power of learning becomes relevant. The research site for this study was NELCS, a school in the North East of USA and the participants included 7 – 14-year-old students (Grade 2 – Grade 5) and staff, including resident artists.

I found the interpretive paradigm to be appropriate for the aims of this study, where I investigate the phenomenon through a range of sources within its natural environment. As detailed in the methodology chapter, I adopted ethnography as the approach for this exploratory study aimed at investigating the lived experiences of the participants in a real-world (school) context. Several data collection methods such as semi-structured interviews, observation and field notes, audio and video recordings, conceptual drawing and learning walks were used, providing rich data that is in-depth, detailed, permitting triangulation which strengthened the findings and allowed for an illuminating understanding of the topic. Further, an iteratively developed framework representing elements or behaviours relating to transformation was utilised as a lens to identify relevant critical incidents and critical events during the data collection process (Chapter 5, sec 5.3). This framework was developed by expanding on the scope of literatures that were reviewed to situate the understanding of transformation through learning. This included, deeper learning to be central to transformation through learning with autonomous, interactive, reflective, creative being the next layer situated within the elements representing social, emotional and cultural realms (visual representation in, Chapter 5, fig 5.2). Finally, thematic analysis was undertaken on the data collected to identify the final eight thematic findings.

The findings include themes titled: Doing more than you think you can; Development of crew qualities; Making learning relevant; Collaborative atmosphere; Reflection; Passion and Perseverance; Self-discovery; and Music as the binding aspect within the school. These findings were first presented distinctively in Chapter 6, which form part of the model framework representing elements and behaviours related to transformation through learning at the research site NELCS (Fig 6.33). Subsequently, I pull together these thematic findings and situate them in relation to the literature within the Discussion Chapter 7. The main ideas arising from the findings within this study discussed were – Why making learning relevant matters; The importance of growth mindset and transformability, The significance of music within NELCS culture; and Methodological contribution of this study. As with case studies, I make ‘naturalistic generalisation’ (Stake, 1995) with the findings presented here. Thus, I propose that the findings presented here to be relevant to other schools, teachers and researchers in understanding ‘transformation through learning’ and offer a model framework from the practice at this research site from which others could create their own.

### 8.3 Contribution of this study

The findings presented in this thesis respond to one main research question and a related sub question that was addressed in chapter 6. The following concluding discussion revisits the main research findings, seeking to clarify the contribution of this work to the field and any emerging issues. Nevertheless, the findings of this doctoral study provide insight into the area of transformation through learning within a comprehensive school setting with focus on creative learning and the arts. Overall this study may have wider significance to the field of transformative education, transformative teaching and learning: *firstly*, by providing an insight into transformation through learning to fill a gap within literature that addresses this topic in a school setting with everyday pupils; *secondly*, by making connections across varied literature to conceptualise transformation and thus contribute to the area of education futures with focus on deeper learning; *thirdly*, to illuminate important aspects/elements within learning experiences that lend to transformative experiences for the students; and *finally*, it positions the arts to be vital in building a whole school culture with potential to provide transformative experiences. Briefly, the findings of this study are presented through the following visual representation.



**Figure 6.33:** What are the lived experiences of transformation through learning at NELCS?

Based on the four key points that highlight the contribution of this study, followed by the findings represented above, I elaborate on contribution of this study through the following points:

- i) Insight into transformation through learning in a regular elementary school setting

- ii) Connecting transformation through learning with deeper learning
- iii) Key ideas of 'relevance' and 'mindsets'
- iv) Music/ Arts as central to the school culture

### **8.3.1 Insight into *transformation through learning* in a regular elementary school setting**

As noted previously, the research literature on transformative learning has mainly focussed on participants who were disadvantaged in some way or in alternative learning contexts (E.g. adult education, alternative provisions). This study has provided insight into transformation through learning in a regular elementary school with students representative of an urban public school as participants. Here, the understanding of transformation through learning was embedded within their everyday learning process and researched through the lived experiences of the participants. This developed the conceptualisation of transformation, to be not necessarily sudden, visible or continuous but rather, as a varied developmental process within the constructivist notion embedded within the learning process. Further, findings from this ethnographic case study of practices in a music-infused school has highlighted key elements within the learning experience that lend to transformation (See Fig. 6.33 above). These include, overlapping attitude and skills covering some aspects of deeper learning (Themes 1, 2 & 3 sec 6.2.1; 6.2.2 & 6.2.3 respectively); reflection and focus on social, emotional and cultural elements related to the school culture (Themes 2, 4, 5 & 8 sec 6.2.2; 6.2.4, 6.2.5 & 6.2.8 respectively). Thus, this study clarifies and contributes to the overall area of 'transformation through learning' in a comprehensive school setting while providing a model framework from the practice at NELCS from which others could create their own.

### **8.3.2 Connecting *transformation through learning* with deeper learning**

The conceptualisation of 'transformation through learning' adopted for this study, including the iteratively developed framework identifying the developing representing elements/behaviours relating to transformation has highlighted the connection with deeper learning. This connection has stemmed by conceptualising transformation to be embedded within the learning process. It acknowledges that profound and meaningful understanding of the underlying meaning of the text/topic is associated with gaining a set of knowledge, skills and beliefs. This process of

learning is in itself transformative. Thus, the findings of this exploratory study on transformation through learning through an ethnographic case study of practices in a music-infused school has shown key elements that characterised the lived experiences of the participants were shaped by the overall school culture that fostered deeper learning through a mixture of enculturating positive growth mindset and crew qualities along with connecting with students by making their learning relevant while incorporating music (and the Arts) within their everyday learning experiences. This connects with the various definitions of deeper learning previously discussed in the literature review (Sec 2.6) by supporting the goals of deep learning which are aimed at students gaining the competencies and dispositions that will prepare them to be creative, connected, and collaborative life-long problem solvers and to be healthy, holistic human beings who not only contribute to but also create the common good in today's knowledge-based, creative, interdependent world (Fullan and Langworthy 2013; Barber, Rizvi and Donnelly 2012).

### **8.3.3 Key Ideas of 'relevance' and 'mindsets'**

The two main ideas relating to 'transformation through learning' that were identified through the findings are 'relevance' and 'mindsets' are original contribution to the field as framework for/of transformation through learning. Further, the iteratively developed framework (Sec. 5.3.2) providing an overall integrated conceptualisation of 'transformation through learning' is also an original contribution to knowledge. The theme *making learning relevant* lends to the first idea of 'relevance' and is centrally positioned in the visual representation (Fig. 6.2.9) above. The key idea of 'mindsets' arises from many overlapping themes within the findings, but the theme *doing more than you think you can* I find plays a crucial role and as represented visually above, it forms the bedrock of all the themes/ lived experiences. I have previously discussed how these key ideas connect and contribute to the relevant literature in Chapter 7, sections 7.2 and 7.4 respectively. Here, I highlight its key contribution.

#### **8.3.3.1 Relevance**

The findings show the importance of 'piquing interest' and 'positioning the topic of study in ways to show that it is worthy to be looked at', which together comprise the theme *making learning relevant*. The iteratively developed framework adopted for this study positions deep learning experiences to be central to 'transformation through learning' which connects with the idea of relevance identified within this study. The growing acknowledgement among policymakers to



focus on education futures or providing skills for preparing individuals for a changing world further highlights the importance of deeper learning. The definitions of deeper learning have been discussed within the literature review in Chapter 2 (Section 2.6). Briefly, it is associated with gaining a set of knowledge, skills and beliefs that are transferable to other subjects and situations. Currently, these definitions and related literature have highlighted features within various pedagogical approaches or provided practical tools for classroom instruction but the larger topic of 'transformation through learning' has not been the focus. The present research study lays an exploratory framework that highlights *relevance* which includes the twin process of 'piquing interest' as well as 'positioning of the topic' to be crucial for providing transformative learning experiences. Students find *relevance* through making both, practical everyday connections with the real-world, as well as, personal connections. This in turn involves challenging and engaging the students while simultaneously allowing the students to feel empowered during their learning experience. Relevance is also noted as one of the features of creative teaching and learning (Woods, 1990; Woods and Jeffrey, 1996, 1997, 2003, 2009; Jeffrey and Craft, 2003) and the practices at NELCS includes the major features related to teacher pedagogy identified by Jeffrey and Woods (2009) that are significant for making learning relevant, namely: positive teacher-learner relations, engaging interest and valuing contributions. Further, this also connects 'transformation through learning' with Dewey's (1916) theory of experience (sec 7.2.2) by highlighting the primacy of experience of learning through the theme *making learning relevant*.

### 8.3.3.2 *Mindsets*

An important theme within the findings is *doing more than you think you can*. This theme highlights a belief and attitude that laid foundation to all the learning experiences of the participants. This is a positive mindset or growth mindset (Dweck, 2006) which is based on the belief that basic qualities can be cultivated. I note, having this mindset as the bedrock of all learning experiences is crucial for 'transformation through learning'. At the same time, the theme/ attitude *doing more than you think you can*, not only relates to being aware that one's basic qualities can be cultivated but goes beyond, to make individuals realise that they can go beyond one's current perceived ability or limitation. Thus, the mindset *doing more than you think you can* is not just a belief, but is cultivated as an attitude. This is seen through the overlap of other themes within the findings such as, development of crew qualities, self-discovery, passion and perseverance. These qualities are encouraged to become habits of mind (Costa and

Kallick, 2008), thus bringing to focus the importance of growth mindset during the learning experiences.

### **8.3.4 Music/Arts as central to school culture**

This study has highlighted the central role played by music within the school culture at the research site. NELCS has focused mainly on music and has infused it within its school day as well as incorporated arts and music within the learning expeditions undertaken by their students. The primary role of music when exploring transformation through learning was identified through the theme – *music as the binding aspect within the school* (Sec. 6.3.1) and discussed in relation to literature in Chapter 7 (Sec. 7.3). Through the specific practices and music programme at the site, my findings highlight the following two main aspects which make music / arts central to the school culture, which offers a possible framework for practice as a contribution of this study.

- i) Developing qualities and character
- ii) Developing collaborative community

#### *8.3.4.1 Developing qualities and character*

The focus on development of qualities and character is evident from the findings through the theme *development of crew qualities*. I noticed that music and the arts is considered as essential, following the argument ‘arts for art’s sake’ but was also infused within everyday learning expeditions across subjects such as, science and social studies. The intensive El Sistema programme has allowed for the whole school (all the students) to practice crew qualities such as, being empathetic, being perseverant, being responsible and being cooperative. The students gain an identity as a musician within the orchestra which furthers certain expectations relating to development of certain qualities present in a musician. Further, the school culture allows for the development of ‘performance character’ (Seider, 2012), highlighted previously in section 7.3.1. The everyday focus on development of qualities and character development, through the infusion of music/ arts within the school permeates across the lived experiences of the students at the school providing transformative learning experiences. Positioning music and the arts at the centre of the school culture and developing, reinforcing and practicing qualities and character allows for opportunities for transformation through learning.

### *8.3.4.2 Developing a collaborative community*

The whole school approach for infusing music and arts observed at NELCS contributes to the collaborative atmosphere at the school. This has been detailed within the findings Chapter 6 section 6.2.4 and 6.3.1.3. The orchestral model of the music programme El Sistema allows students from various grades to interact within an orchestra, building a collaborative camaraderie among them. Further, learning expeditions also infused music and arts within the discovery, exploration and product phases (beginning, research and end phase) of the unit. This is accomplished through collaboration among the classroom teachers with resident artists and on many occasions with external experts. Placing the arts at the centre of the school culture and to develop it through the practice of the art form (music in this case) has provided opportunity for 'transformation through learning' by becoming a close-knit collaborative community.

## **8.4 Critique of this doctoral study**

In this section I present a critique and evaluation of this doctoral study reflecting on the limitation of the research design and make suggestions for areas of further investigation.

### ***a. Small scale – exploratory study***

I acknowledge the scope of the findings of this study to be that of a small-scale study with a focus only on one case or setting - 'the research site'. Findings from this type of scale and scope can be argued to be sealed from the outside world, but, the research design I adopted for this study aimed to combat this bias by the use of ethnography and in-depth case study focusing on multiple participants which allowed for capturing multiple perspectives of the lived experience providing a rich exploratory portrait. Further, I hoped that making my methodology transparent as well as keeping an analytical trail would strengthen the quality of the study and thus, enable 'naturalistic generalisation' (Stake, 1995) and opportunity for transferability in other contexts.

### ***b. Methodological critique – broad framework and conceptualisation of transformation***

Though I have highlighted the strength of ethnography especially due the focus of this study, I must acknowledge the common critique associated with the methodology adopted and its implication on this study. It can be argued that an exploratory study here can result in providing a rich portrait within the context and/or setting being studied, but the challenge of encompassing

various related literature to provide a clearer focus that led to the conceptualisation of 'transformation through learning' adopted for this study can in itself be a limitation due to what could be considered lack of focus. The broad framework adopted for this study I find is appropriate for an exploratory study but can be argued to be too broad or general. The lack of common language about transformation at the school, made it clear for me that, I am not trying to prove any cause and effect in relationship within the data in relation to any one type or set of actions/ steps that lead to transformation. In turn, I argue that I made an explicit choice to not limit my conceptualisation to any one literature which lists a set of principles or aspects of transformation through learning, to specifically make connections across various literature that lend to this concept.

### ***c. Data reduction dilemma***

Consideration must be paid to the strategy of episode selection or what I have previously referred to as the critical incidents and critical events. I found the need for 'honing in' to narrow both the participant sample as well as selection of episodes that had potential to answer the overall research question. I acknowledge that in hindsight that, though I had collected a lot more data, I found that a more focused approach during an ethnography would have been helpful to collect data that goes deeper within lived experiences of the participants. I accept the possibility that there are unused data which could be considered as missed opportunity to discover further insights. This can be considered a limitation, but is a vital choice in keeping the doctoral study manageable and realistic in the available time frame.

### ***d. Approach to data analysis***

The use of thematic analysis through I argue is appropriate for this exploratory study, but the use of grounded theory or deductive frameworks that situate this study within one specific literature could also have been undertaken. I chose not to undertake this due to the objective of this study to connect across varied literature and well as allow for inductive thematic findings that provide insight into the emergent processes which resonates with the subtle embedded nature of exploring transformation through learning. Thus, rather than offering theory generation, this thesis offers emergent conceptualisations linked with the pedagogy and approach towards teaching and learning that are based on the lived experiences of participants at NELCS. My findings seek to offer a contribution to a topic that connects across varied literature and classroom practice by providing a glimpse of transformation through learning through one framework that can be adopted, adapted and developed further by other sites.

### ***e. Overcoming tensions and dilemmas – my learning journey***

Throughout my time at the research site, I have been mindful and concerned regarding the impact of my presence in the participants' lives. It has been a concern that, case study as the methodology can be uncontrolled intervention in the lives of others, can give a distorted view of the world and can have a tendency to 'embalm' practices which are actually always changing (Walker, 1983). Thus, I have tried to be careful to allow the context and complexity of the site and the experiences of the participants to the best of my knowledge, present itself without distortion. At the same time, as an ethnographer, I acknowledge that the meaning I have made is through my own lens, at the same time situate my research within the constructivist view. Though my role and voice as a researcher in an ethnography is important, I have continued to be reflexive and question my voice as a researcher throughout the study. A final tension and dilemma was about being aware to keep an open but analytic view regarding the data (both during the data collection process as well as during analysis), especially since the research site being a charter school adopting creative practices and programmes, they had a strong marketing push, making materials that were used for fundraising and brought to it a lot of attention from media and other professionals.

## **8.5 Looking forward**

Currently, countries are spending more time, money and resources than ever before on education (OECD, 2012). Further, more than at any time in history, an individual's educational attainment is vital to her or his future success in life. Yet our mainstream education institutions are increasingly portrayed as obsolete, designed for the purposes of an earlier, mass-production, industrial era. (Mehta, 2013 a; 2013b). Though it is important to deepen students' academic knowledge and skills, stakeholders across the board acknowledge that success in today's world demands more. Students also need to be able to communicate their ideas to a variety of audiences, work with others to solve problems, think creatively, and manage their own learning (Autor, Levy, & Murnane, 2003; National Research Council, 2008; Carnevale & Desrochers, 2003). New pedagogies that foster deeper learning has been considered one approach to assist students in meeting these new expectations and demands (National Research Council 2012; Hewlett Foundation 2012; ATC21s.org). Furthermore, reports such as *Reinvesting in Arts Education* by the President's Committee on the Arts and the Humanities (PACH, 2012) explains why American schools are falling short in providing students the opportunity for a well-rounded curriculum and a rich arts education that will prepare them for

success in the future. Also, the *Champions of Change* report (Fiske, 1999), notes that when young people are involved with the arts, something changes in their lives. Thus, through the findings of this doctoral study exploring ‘transformation through learning’, I combine both these above arguments which focus on providing deeper learning opportunities and arts education for providing deep and meaningful connection with their learning experience.

Having addressed a gap within the literature by exploring transformation through learning in a comprehensive school setting with arts/music infused creative learning practices; I have highlighted the importance of relevance, mindsets and placing arts at the centre of the school culture within the learning experiences. Considering this doctoral study findings, I hope that this study will encourage and lead other researchers to pursue points raised here. This exploratory study opens various prospects for future research. For example, empirical work on specific practices adopting one of the many principles or guides highlighted with the deep learning literature would be beneficial; focus on transformation through learning aimed at deep learning and college preparedness, investigating transformation through learning experiences would shed light into this new area of deeper learning. It would also be interesting and relevant to investigate transformation through learning with specific focus on only the arts in relation to deeper learning practices especially since empirical research in this area is lacking and focus is currently on the impact of the arts on student achievement. This would provide an alternative approach to understanding impact of transformative learning experiences. Further, I note that additional analysis on the data collected for this study might provide additional insight into the practices at NELCS, such as exploring transformation through the experience of undertaking learning expeditions, with focus on the various stages within the process; focus on adoption or adaptation transformative teaching principles by the staff; and understanding ‘transformation through learning’ using models suggested by projects highlighted in section 2.7, such as the cultures of thinking project, making thinking visible and building learning power.

# Appendix 1: Contemporary approaches to Learning and Classroom Instruction

TRANSFORMATIONAL TEACHING (Slavich and Zimbardo, 2012)

## A. Contemporary Approaches to Learning and Classroom Instruction (Slavich and Zimbardo, 2012, pp. 571-574)

Active Learning involves the notion that students must read, write, discuss and engage in problem solving to maximize their potential for intellectual growth (Bonwell and Eison, 1991; Meyers and Jones, 1993; Svinivki and McKeachie, 2011). This process engages higher-order cognitive strategies such as analysis, synthesis, and evaluation, and are considered to be most effective when done in pairs or groups which provides opportunity for students to articulate their logic and to consider different points of view when solving problems (Smith et al., 2009).

Student-centred Learning follows the principle that instructors should shape course curriculum and content based on students' needs, abilities, interests, and learning styles (Brandes and Ginnis, 1986; Brown Wright, 2011; Estes, 2004; Hannafin et al., 1997; Kilic, 2010). Instructors engage students in active, collaborative discovery, which increases students' responsibility for learning and gives students the ability to shape their learning experience (Brown, 2008).

Collaborative Learning follows that learning occurs best when done in groups (Johnson and Johnson, 1974; Slavin, 1977; 1995). Working with others is more dynamic and motivating than working alone (Svinivki and McKeachie, 2011). It also has several benefits such as: It encourages students to restructure their own knowledge and understanding of concepts (O'Donnell et al., 2006); Helps students recognize gaps in their understanding (Cooper, 1999); Promotes social modelling of effective problem-solving strategies (Smith et al., 2009); and Teaches students to synthesize, communicate, and discuss ideas in ways that advance conceptual understanding (Barkley et al., 2005).

Experiential Learning involves engaging students in activities that enable them to experience course content (Svinivki and McKeachie, 2011). Although experiential activities can take place in the classroom, there is an expressed emphasis on assigning projects that occur outside the classroom, where concepts can be better integrated into students' lives (Svinivki and McKeachie, 2011).

Problem-based Learning focuses on providing students with opportunities to identify and tackle complex, multifaceted problems in both small groups and on their own. In this approach, which refers to both a curriculum and a process, teachers serve as "tutors" or "facilitators" who guide learning by modelling and scaffolding, and by maximizing students' responsibility for learning (Amador et al., 2006; Boud and Feletti, 1997; Duch et al., 2001; Hmelo-Silver, 2004; Loyens et al., 2008; Norman and Schmidt, 2000; Svinicki, 2007).

| <i>APPROACH</i>                  | <i>BRIEF DESCRIPTION</i>  | <i>EXAMPLE ACTIVITIES</i>   | <i>SELECT REFERENCES</i>  |
|----------------------------------|---|---|---|
| <b>Active Learning</b>           | Instructors actively engage students in the learning process by assigning guided activities and exercises that require students to articulate and communicate ideas, explore attitudes and values, and utilize higher-order cognitive strategies such as analysis, synthesis, and evaluation.   | One minute paper<br>Debating topics<br>Role-playing<br>Daily journal<br>Think-pair-share<br>Analyzing/reacting to videos<br>Collaborative learning group  | Bonwell and Eison 1991; Johnson et al. 2006; Meyers and Jones 1993; Moeller 1985; Richmond and Kindelberger Hagan 2011; Yoder and Hochevar 2005                               |
| <b>Student-centered Learning</b> | Instructors assign primacy to students' needs, abilities, interests, and learning styles by making them active learners and giving them autonomy and control over choice of subject matter, learning methods, and pace of study, which in turn increases students' responsibility for learning and helps them develop skills to actively choose and manage their educational goals. | Self-initiated assignments<br>Self-paced teaching booklets<br>Self-directed learning kits<br>School-based action research projects<br>Learning logs<br>Role-playing<br>Class activities and fieldwork<br>Co-creating curriculum | Brandes and Ginnis 1986; Brown 2008; Brown Wright 2011; Estes 2004; Hannafin et al. 1997; Kilic 2010; O'Neill and McMahan 2005; Tärnvik 2007; Weimer 2002                     |
| <b>Collaborative Learning</b>    | Students learn best when they tackle problems and questions with peers—especially more knowledgeable peers—insofar as such experiences provide students with opportunities to learn new problem-solving strategies and to debate ideas in a way that challenges their understanding of concepts.  | Jigsaw classroom<br>Group roundtables<br>Paired annotations<br>Send-a-problem<br>Think-pair-share<br>Three-step interview   | Aronson and Patnoe 1997; Barkley et al. 2005; Johnson and Johnson 1974; Millis 2010; O'Donnell et al. 2006; Slavin 1977, 1995; Smith et al. 2009; Svinivki and McKeachie 2011 |
| <b>Experiential Learning</b>     | Instructors promote learning by having students directly engage   | Team pair solo<br>Circle the sage<br>Keeping a reflective   | Beard and Wilson 2006; Cantor 1995; Clements 1995; Kayes et al. 2005;   |



**Problem-based Learning**

|  |   |   |
|--|---|---|
| <p>in, and reflect on, personal experiences that takes place in four stages (concrete experience, reflection, abstract conceptualization, and active experimentation), leading to increased knowledge, skill development, and values clarification.</p>  | <p>journal<br/>Observing phenomena or behaviour<br/>Conducting interviews or experiments<br/>Participating in discussion boards<br/>Playing games or simulations<br/>Taking field trips<br/>Role playing<br/>Building a model</p> | <p>Kolb 1984; Kolb and Fry 1975; Kolb and Kolb 2005; Maudsley and Strivens 2000; Miettinen 2000; Moon 2004; Svinivki and McKeachie 2011</p>   |
| <p>Instructors (called “tutors” or “facilitators”) facilitate learning by having students tackle complex, multifaceted problems in small groups while providing scaffolding, modeling experiences, and opportunities for self-directed learning, which enhances students’ content knowledge, and increases their academic self-efficacy, problem- solving skills, collaboration skills, and self-directed learning skills.</p> | <p>Small-group teams<br/>Clarifying concepts and terms<br/>Developing and testing hypotheses<br/>Delegating research workload<br/>Studying privately<br/>Synthesizing and reporting new information</p>                           | <p>Amador et al. 2006; Barrows 1996; Barrett 2010; Boud and Feletti 1997; Duch et al. 2001; Gasser 2011; Hmelo-Silver 2004; Karpiak 2011; Loyens et al. 2008; Schmidt 1983; Svinicki 2007</p> |

**Table** adapted from Slavich and Zimbardo (2012, pp. 572-573) detailing the contemporary approaches to learning and classroom instruction

## DEEPER LEARNING (Hermida, 2014)

### B. Various Approaches which calls for Deep Learning Processes (Hermida, 2014)

| <i>APPROACH</i>                      | <i>BRIEF DESCRIPTION</i>   | <i>SELECT REFERENCES</i>                         |
|--------------------------------------|--|--|
| <b>Performances</b>                  | A series of activities or actions that students engage in, in-order to discover and construct knowledge. They need to be frequent, continual, connected, and authentic. They need to be visible and meaningful to others. They include the following five components- Activity, Reflection, Collaboration, Passion and Community   | Tagg, 2003;<br>Shulman, 1997                     |
| <b>Problem-based Learning</b>        | A process where groups of students work with authentic – or simulated problems and as they attempt to solve these problems, students engage in a process of discovery and creation of knowledge. For example, the process could involve, brainstorming, applying and sharing pre-existing knowledge, investigating, planning, taking action and reflection.  | Barrows and Wee Keng Neo, 2007;<br>Perkins, 2009 |
| <b>Student Teaching</b>              | Students engaging in teaching peers or colleagues as part of normal everyday learning. It is also known as peer learning.  | Schulman, 1997                                   |
| <b>Teaching with your mouth shut</b> | An approach that encourages students to engage in productive dialogs that foster motivating and deep learning environment. It shares many features of problem-based learning and the Socratic method. It is often implemented through the adoption of inquiry-centred teaching which consists of the investigation of a problem or question, complemented with the reading and discussion of books in an inquiring spirit.                             | Donald Finkel, 1999                              |
| <b>Out-of-class Performances</b>     | Given the fact that meaningful and significant student learning takes place out of class, this approach involves designing learning environments that help students learn deeply outside of the confines of the classroom walls. This could range from being involved in a research project with a teacher, participating in a school play, playing varsity sports, attending conferences, preparing and participating in film debates and book clubs. | Light, 2001;<br>Burfee, 1999;<br>Perry 1970      |
| <b>Whole Learning</b>                | A list of principles that can inform many activities in order to facilitate whole learning. These principles are - (i) playing the whole game of the discipline; (ii)  | Perkins, 2009                                    |

**Collaborative Learning**

making the game worth playing; (iii) working on the hard parts; (iv) playing out of town; (v) uncovering the hidden game of the discipline; (vi) learning from the team and the other teams; and (vii) learning the game of learning.

Collaborative activities emphasize the collective negotiation of meanings among students as members of a community of knowledge or as candidates to join a new community of knowledge.

Burfee, 1999;  
Lave and Wenger, 1991;  
Finkel, 1999

**Table** adapted from Hermida (2014) detailing approaches to learning and classroom instruction that foster deep learning

**C. Hess' Cognitive Rigor Matrix: Applying Webb's DOK levels to Bloom's cognitive process dimensions.** [Table (next page) adapted from Hess et.al (2009)]

| <i>Bloom's Revised Taxonomy of Cognitive Process Dimensions</i>  | <b>Webb's Depth of Knowledge (DOK) Levels</b>  |  |  |   |
|--|--|--|--|---|
|  | <b>Level 1 Recall and Reproduction</b>   | <b>Level 2 Skills and Concepts</b>   | <b>Level 3 Strategic Thinking/Reasoning</b>  | <b>Level 4 Extended Thinking</b>  |
| <i>Remember</i><br><b>Retrieve knowledge from long-term memory, recognize, recall, locate, identify</b>  | Recall, recognize, or locate basic facts, ideas, principles<br>Recall or identify conversions: between representations, numbers, or units of measure<br>Identify facts/details in texts  |  |  |   |
| <i>Understand</i><br><b>Construct meaning, clarify, paraphrase, represent, translate, illustrate, give examples, classify, categorize, summarize, generalize, infer a logical conclusion (such as from examples given), predict, compare/contrast, match like ideas, explain, construct models</b> | Compose & decompose numbers<br>Evaluate an expression<br>Locate points (grid/, number line)<br>Represent math relationships in words pictures, or symbols<br>Write simple sentences<br>Select appropriate word for intended meaning<br>Describe/explain how or why | Specify and explain relationships<br>Give non-examples/examples<br>Make and record observations<br>Take notes; organize ideas/data<br>Summarize results, concepts, ideas<br>Make basic inferences or logical predictions from data or texts<br>Identify main ideas or accurate generalizations | Explain, generalize, or connect ideas using supporting evidence<br>Explain reasoning when more than one response/approach is possible<br>Explain phenomena in terms of concepts<br>Compose full composition to meet specific purpose and audience<br>Identify theme(s) using text evidence | Explain how concepts or ideas specifically relate to other content domains or concepts<br>Develop generalizations of the results obtained or strategies used and apply them to new problem situations                                     |
| <i>Apply</i><br><b>Carry out or use a procedure in a given situation; carry out (apply to a familiar task), or use (apply) to an unfamiliar task</b>   | Follow simple/routine procedure (recipe-type directions)<br>Solve a one-step problem<br>Calculate, measure, apply a rule<br>Apply an algorithm or formula (area, perimeter, etc.)<br>Represent in words or diagrams a concept or                                   | Select a procedure according to task needed and perform it<br>Solve routine problem applying multiple concepts or decision points<br>Retrieve information from a table, graph, or figure and use it solve a problem requiring multiple steps<br>Use models to represent                        | Use concepts to solve non-routine problems<br>Design investigation for a specific purpose or research question<br>Conduct a designed investigation<br>Apply concepts to solve non-routine problems<br>Use reasoning, planning, and   | Select or devise an approach among many alternatives to solve a novel problem<br>Conduct a complex project that specifies a problem, identifies solution paths, solves the problem, and reports results<br>Illustrate how multiple themes |

|  |  |  |  |   |
|--|--|--|--|---|
|  | relationship<br>Apply rules or use resources to edit spelling, grammar, punctuation, conventions   | concepts<br>Write paragraph using appropriate organization, text structure, and signal words   | evidence<br>Revise final draft for meaning or progression of ideas   | (historical, geographic, social) may be interrelated  |
| <i>Analyze</i><br><b>Break into constituent parts, determine how parts relate, differentiate between relevant-irrelevant, distinguish, focus, select, organize, outline, find coherence, deconstruct (e.g., for bias or point of view)</b> | Retrieve information from a table or graph to answer a question Identify or locate specific information contained in maps, charts, tables, graphs, or diagrams | Categorize, classify materials<br>Compare/ contrast figures or data<br>Select appropriate display data<br>Organize or interpret (simple) data<br>Extend a pattern Identify use of literary devices<br>Identify text structure of paragraph<br>Distinguish: relevant-irrelevant information; fact/opinion | Compare information within or across data sets or texts<br>Analyze and draw conclusions from more complex data<br>Generalize a pattern<br>Organize/interpret data: complex graph<br>Analyze author’s craft, viewpoint, or potential bias | Analyze multiple sources of evidence or multiple works by the same author, or across genres, or time periods<br>Analyze complex/abstract themes<br>Gather, organize, and analyze information from multiple sources<br>Analyze discourse styles across texts |
| <i>Evaluate</i><br><b>Make judgments based on criteria, check, detect inconsistencies or fallacies, judge, critique</b>  |  |  | Cite evidence and develop a logical argument for concepts<br>Describe, compare, and contrast solution methods<br>Verify reasonableness of results Justify conclusions made   | Gather, analyze, & evaluate relevancy & accuracy<br>Draw & justify conclusions<br>Apply understanding in a novel way, provide argument or justification for the application   |
| <i>Create</i><br><b>Reorganize elements into new patterns/structures, generate, hypothesize, design, plan, construct, produce</b>  | Brainstorm ideas, concepts, or perspectives related to a topic or concept  | Generate conjectures or hypotheses based on observations or prior knowledge  | Synthesize information within one source, data set, or text<br>Formulate an original problem, given a situation or data set Develop a complex conceptual model for a given situation   | Synthesize information across multiple sources or texts<br>Design a model to inform and solve a real-world, complex, or abstract situation  |

[Table adapted from Hess et.al (2009)]

# Appendix 2: Literature references relating to Thinking, Understanding and Culture

## RELATED LITERATURE SECTION 2.7

### A. Seven dispositions by Perkins, Jay and Tishman (1993, p.7-8) (Sec 2.7.1)

- 1) The disposition to be broad and adventurous.

Key inclinations: The tendency to be open-minded and to look beyond what is given; the impulse to probe assumptions and examine alternative points of view; the desire to tinker with boundaries and play with new ideas; the urge to speculate, generate many options, and explore multiple interpretations.

Key sensitivities: An alertness to binariness, dogmatism, sweeping generalities, narrow thinking, parochialism, and occasions when alternative perspectives are neglected.

Key abilities: The ability to identify assumptions, to look at things from other points of view, to generate and review multiple options; brainstorming; empathic thinking; flexible thinking.

- 2) The disposition toward sustained intellectual curiosity.

Key inclinations: A zest for inquiry; the urge to find and pose problems; the tendency to wonder, question, probe.

Key sensitivities: An alertness to unasked questions, anomalies, hidden facets; detection of gaps in one's knowledge or understanding; noticing what is unknown or unclear.

Key abilities: The ability to observe closely, to identify and challenge assumptions, to formulate and investigate provocative questions, to focus and persist in a line of inquiry.

- 3) The disposition to clarify and seek understanding.

Key inclinations: A desire to apprehend things clearly; the impulse to anchor ideas to experience and seek connections to prior knowledge; an urge to sharpen conceptions and examples; a desire to grasp the essence of things.

Key sensitivities: Alertness to unclarity and discomfort with vagueness; alertness to superficiality; detection of occasions needing a sharper focus; a leaning toward hard questions.

Key abilities: The ability to ask pointed questions and to build complex conceptualizations; the ability to apply and exemplify ideas, to make analogies and comparisons, to identify and classify details.

- 4) The disposition to be playful and strategic.

Key inclinations: The urge to set goals and to make and execute plans; the tendency to approach things in a calculated and/or step wise fashion; a desire to think ahead.

Key sensitivities: Alertness to aimlessness, lack of direction, lack of orientation; alertness to off-hand thinking and sprawling thinking.

Key abilities: The ability to formulate goals and to evaluate alternative modes of approach; the ability to make and execute plans and to forecast possible outcomes.

5) The disposition to be intellectually careful.

Key inclinations: The urge for precision; a hunger for mental orderliness and organization; a desire to be thorough.

Key sensitivities: Alertness to the possibility of error, to disorder and disorganization; awareness of the abiding potential for inaccuracy and inconsistency.

Key abilities: The ability to process information precisely, to recognize and apply intellectual standards, to construct order out of disarray.

6) The disposition to seek and evaluate reasons.

Key inclinations: A leaning toward healthy skepticism; the tendency to question the given, to probe assumptions and biases; the drive to pursue and demand justification; the urge to discover underlying grounds and sources.

Key sensitivities: an alertness to evidential foundations; a responsiveness to superficiality and over-generalization, a wariness of gaps in knowledge.

Key abilities: The ability to distinguish cause and effect, the ability to identify logical structure; the ability to reason inductively, the ability to weigh and assess reasons.

7) The disposition to be metacognitive.

Key inclinations: The urge to be cognitively self-aware and to monitor the flow of one's thinking; the impulse to stand back and take stock; the desire to be self-challenging.

Key sensitivities: Alertness to loss of control of one's thinking; detection of complex thinking situations requiring self-monitoring; recognition of the need to look back on a thinking episode.

Key abilities: The ability to exercise executive control of mental processes, to conceive of the mind as active and interpretive, to be self-evaluative, to reflect on prior thinking.

### **B. Thinking Routine Matrix (Sec, 2.7.2) (Ritchhart, Church and Morrison, 2011)**

Three ways of looking at Thinking Routines involves, using thinking routines -

- i) As Tools – for promoting thinking. This includes thinking that promote understanding such as, observing closely and describing, building explanations and interpretations, reasoning with evidence, making connections, considering alternative viewpoints and perspectives, capturing the central idea, forming conclusions, wondering and asking questions, uncovering complexities and going beyond the surface.
- ii) As Structures – where thinking routines act as natural scaffolds that can lead the student's thinking to higher and more sophisticated levels. They also can often become a structure for whole-class or small group discussions.
- iii) As Patterns of Behaviour – the idea that thinking routines are positioned and practiced as culture builders not just thinking strategies. For example, many routines are designed not to elicit specific answers but to uncover student's nascent thinking around the topic. Thus, realizing learning is not absorption of other's ideas, thoughts or practices, but involves uncovering ones' own ideas as the starting point.

The following table organizes thinking routines into three major categories – *Introducing and Exploring*; *Synthesizing and Organizing*; and *Digging Deeper*.

| <i>Routine</i>  | Key Thinking Moves   | Notes and Brief Description   |
|---|--|---|
| <i>Routines for Introducing and Exploring</i>         |  |   |
| <i>See-Think-Wonder</i>                               | Describing, interpreting, and wondering  | Good with ambiguous or complex stimuli  |
| <i>Zoom In</i>  | Describing, inferring, and interpreting  | Variation of See-Think-Wonder using only portions of an image   |
| <i>Think-Puzzle-Explore</i>                           | Activating prior knowledge, wondering, planning  | Good at the beginning of a unit to direct personal or group inquiry and uncover current understandings as well as misconceptions  |
| <i>Chalk Talk</i>                                     | Uncovering prior knowledge and ideas, questioning  | Open-ended discussion on paper; ensures all voices are heard, gives thinking time   |
| <i>3-2-1 Bridge</i>                                   | Activating prior knowledge, questioning, distilling, and connection making through metaphors | Works well when students have prior knowledge but instruction will move it in a new direction; can be done over extended time during the course of a unit                 |
| <i>Compass Points</i>                                 | Decision making and planning, uncovering personal reactions                                  | Solicits the group’s ideas and reactions to a proposal, plan, or possible decision  |
| <i>The Explanation Game</i>                           | Observing details and building explanations  | Variation of See-Think-Wonder that focusses on identifying parts and explaining them in order to build up an understanding if the whole from its parts and their purposes |
| <i>Routines for Synthesizing and Organizing Ideas</i> |  |   |
| <i>Headlines</i>                                      | Summarizing, capturing the heart   | Quick summaries of the big ideas or what stands out   |
| <i>Colour, Symbol, Image</i>                          | Capturing the heart through metaphors  | Nonverbal routine that forces visual connections  |
| <i>Generate-Sort-Connect-Elaborate: Concept Maps</i>  | Uncovering and organizing prior knowledge to identify connections                            | Highlights the thinking steps of making an effective concept map that both organizes and reveals one’s thinking   |



|   |   |   |
|---|---|---|
| <i>Connect-Extend-Challenge</i>             | Connection making, identifying new ideas, raising questions                                 | Key synthesis moves for dealing with new information in whatever form it might be presented: books, lecture, movie etc. |
| <i>The 4C's</i>                             | Connection making, identifying key concept, raising questions, and considering implications | A text-based routine that helps identify key points of complex text for discussion; demands a rich text or book         |
| <i>The Micro Lab Protocol</i>               | Focusing attention, analyzing, and reflecting   | Can be combines with other routines and used to prompt reflection and discussion  |
| <i>I Used to Think ..., Now I Think ...</i> | Reflecting and metacognition  | Used to help learners reflect on how their thinking as shifted and changed over time                                    |

### *Routines for Digging Deeper into Ideas*

|                                  |   |   |
|----------------------------------|---|---|
| <i>What Makes You Say That?</i>  | Reasoning with evidence   | A question that teachers can weave into discussion to push students to give evidence for their assertions                                   |
| <i>Circle of Viewpoints</i>      | Perspective taking  | Identification of perspectives around an issue or problem   |
| <i>Step Inside</i>               | Perspective taking  | Stepping into a position and taking or writing from that perspective to gain a deeper understanding of it                                   |
| <i>Red Light, Yellow Light</i>   | Monitoring, identifying bias, raising questions   | Used to identify possible errors in reason, over-reaching by authors, or areas that need to be questioned                                   |
| <i>Claim-Question Tug-of-War</i> | Identifying generalization and theories, reasoning with evidence, making counterarguments | Can be used with text or as a basic structure for mathematical and scientific thinking  |
|                                  | Perspective taking, reasoning, identifying complexities                                   | Identifying and building both sides of an argument or tension/dilemma   |
| <i>Sentence-Phrase-Word</i>      | Summarizing and distilling  | Text-based protocol aimed at eliciting what a reader found important or worthwhile; used with discussion to look at themes and implications |

**Table** adapted from (Ritchhart, Church and Morrison, 2011, pp. 50-51) listing various thinking routines

### C. Six key principles of the Culture of Thinking project (Sec, 2.7.6) (Ritchhart, 2015)

1. *Skills are not sufficient; we must also have the disposition to use them.* Possessing thinking skills and abilities alone is insufficient for good thinking. One must also have the disposition to use those abilities. This means schools must develop students' inclination to think and awareness of occasions for thinking as well as their thinking skills and abilities. Having a disposition toward thinking enhances the likelihood that one can effectively use one's abilities in new situations.
2. *The development of thinking and understanding is fundamentally a social endeavour,* taking place in a cultural context and occurring within the constant interplay between the group and the individual. Social situations that provide experience in communicating one's own thinking as well as opportunities to understand others' thinking enhance individual thinking.
3. *The culture of the classroom teaches.* It not only sets a tone for learning, but also determines what gets learned. The messages sent through the culture of the classroom communicate to students what it means to think and learn well. These messages are a curriculum in themselves, teaching students how to learn and ways of thinking.
4. *As educators, we must strive to make students thinking visible.* It is only by making thinking visible that we can begin to understand both what and how our students are learning. Under normal conditions, a student's thinking is invisible to other students, the teacher, and even to him/herself, because people often think with little awareness of how they think. By using structures, routines, probing questions, and documentation we can make students' thinking more visible toward fostering better thinking and learning.
5. Good thinking utilizes a variety of resources and is facilitated by the use of external tools to "download" or "distribute" one's thinking. Papers, logs, computers, conversation, and various means of recording and keeping track of ideas and thoughts free the mind up to engage in new and deeper thinking.
6. *For classrooms to be cultures of thinking for students, schools must be cultures of thinking for teachers.* The development of a professional community in which deep and rich discussions of teaching, learning, and thinking are a fundamental part of teachers' ongoing experience provides the foundation for nurturing students' thinking and learning

# Appendix 3: Literature references relating to Benefits of Arts Education

## RELATED LITERATURE SECTION 2.4

### A. Selected studies about Benefits of Arts Education (Sec, 2.8.1) (PACH, 2011)

| Source  | Summary  |
|---|--|
| Fiske, E. (Ed.). (1999). <i>Champions of change: the impact of the arts on learning</i> . Washington, DC: The Arts Education Partnership and the President’s Committee on Arts and Humanities | A compilation of seven studies that show correlations between high levels of arts participation and higher grades and test scores in math and reading. Studies also show engagement of students who are not otherwise interested in school and how the arts forge connections among students through project-based learning and collaborations.  |
| Deasy, R.J. (Ed.). (2002). <i>Critical links: Learning in the arts and student achievement and social development</i> . Washington, DC: The Arts Education Partnership                        | A compendium of 62 studies representative of the best current examples. The collection focuses on the cognitive capacities that are developed by learning in the arts such as thinking skills and problem solving as well as transfer of arts skills to reading and mathematics. Studies also tracked changes in motivation to attend school and growth in student self-confidence. Taken together the studies demonstrate 65 core relationships between arts and other outcomes of interest to educators. |
| McCarthy, K.F. et al. (2004). <i>Gifts of the muse: Reframing the debate about the benefits of the arts</i> . Santa Monica, CA: RAND  | This RAND report examines the evidence for the full range of arts’ private and public benefits and concludes that the national discussion of these benefits should place far more emphasis on the “intrinsic” pleasures of the arts that benefit not only individuals, but the public good as well. Benefits of interest to educators include focused attention, capacity for empathy, cognitive growth, social bonds, and expression of communal meaning.   |
| Stevenson, L.M. & Deasy, R.J. (2005). <i>Third space: When learning matters</i> . Washington, DC: Arts Education Partnership  | Findings from case studies of schools that serve at-risk students and use arts-integrated instruction describe how schools motivate improvements in reading, writing, and speaking and describe the positive inclusive environment created in the school by arts integration.  |
| Ruppert, S. (2006). <i>Critical evidence: How the arts benefit student achievement</i> . Washington, DC: National   | A summary of evidence related to the links between arts and subject area skills along with information about the place of arts within the No Child Left Behind legislation. Focuses on outcomes of academic performance and social skills.   |

|   |   |
|---|---|
| <p>Assembly of State Arts Agencies and the Arts Education Partnership</p>   |   |
| <p>Burnafor, G. <i>et al.</i> (2007). <i>Arts integration frameworks, research, and practice: A literature review</i>. Washington, DC: Arts Education Partnership</p>             | <p>A description of the research literature related to arts integration written between 1995 and 2007. The book covers all aspects of arts integration and includes a chapter on research findings. Helpful appendices provide an inventory of arts-related academic and social outcomes in subcategories from <i>Critical Links</i> and an inventory of studies by discipline (e.g., visual arts, dance) within the categories of cognition and motivation.</p>  |
| <p>Seidel, S. <i>et al.</i> (2009). <i>The qualities of quality: Understanding excellence in arts education</i>. Cambridge, MA: Harvard Graduate School of Education</p>          | <p>Harvard Project Zero researchers explore the challenges of achieving and sustaining quality arts learning. The report includes a discussion of seven purposes of arts education, including development of habits of mind and dispositions, aesthetic awareness, engagement with civic issues, and self-development and expression. The report includes a set of tools that can assist in making decisions about achieving and sustaining quality arts education.</p>   |
| <p>Asbury, C. &amp; Rich, B. (Eds.) (2008). <i>Learning, arts and the brain: The Dana Consortium report on arts and cognition</i>. New York: Dana Press</p>                       | <p>The Dana Foundation supported neuroscientists from seven universities to conduct studies to unpack the connections between arts training and learning. The cognitive neuroscientists who participated in the study found a “tight correlation” between exposure to the arts and improved skills in several areas of cognition and attention for learning.</p>  |
| <p>Winner, E. &amp; Hetland, L. (2000). <i>The arts and academic achievement: What the evidence shows</i>. <i>Journal of Aesthetic Education</i>, 34</p>                          | <p>A review of fifty years of studies connecting arts to academic improvement, including many unpublished papers. The authors calculated effect sizes and conducted a number of meta-analyses. The review identified a small number of studies that found reliable causal relationships between arts study and specific learning outcomes. Many studies were correlational, of course, and the researchers advocated for additional research and theory building to strengthen the field.</p>                               |
| <p>Catterall, J.S., Chapleau, R. &amp; Iwanaga, J. (1999). <i>Involvement in the arts and success in secondary school</i>. Included in <i>Champions of Change</i> (see above)</p> | <p>Using the National Educational Longitudinal Survey database of 25,000 students, UCLA researchers found a correlation between students with high arts involvement and performance on standardized tests. Students who were more involved than others in the arts watched less TV, were less likely to be bored in school and more likely to participate in community service. Students with high involvement in the arts across the socio-economic strata performed better in school and stayed in school longer than</p> |

|  |  |
|--|--|
|  | students with low involvement.   |
| Catterall, J.S., & Waldorf, L. (1999). <i>Chicago Arts Partnerships in Education: Summary evaluation</i> . Included in <i>Champions of Change</i> (see above)  | Researchers studied the impact of CAPE (Chicago Arts Partnerships in Education) over a six-year period, reviewing test scores as well as using surveys of students and teachers. Student achievement data over the years favored the CAPE schools compared to other Chicago public schools. CAPE schools outscored the other schools on over fifty comparisons.  |
| Noblit et al. (2009). <i>Creating and sustaining arts-based school reform: The A+ schools program</i> . New York: Routledge<br>Nelson, C.A. (2001). <i>The arts and education reform: Lessons from a 4-year pilot of the A+ schools program</i> . Greensboro, NC: Thomas S. Kenan Institute for the Arts | There are many studies that have been conducted about the A+ school experience, most of them by the team of Noblit, Wilson and Corbett. Descriptive studies of implementation, partnership, networking, and professional development have been conducted along with studies of student, teacher, school, and community effects. Studies have identified the essential ingredients of A+ schools that produce outcomes and documented the effectiveness of A+ as a school reform model, especially in schools where there are substantial numbers of economically disadvantaged students. |
| Heath, S. B, Soep, E., & Roach, A. (1998). <i>Living the arts through language-learning: A report on community-based organizations</i> . Washington, DC: Americans for the Arts 2(7)   | Anthropologist Heath conducted a ten-year study in 120 community-based organizations to find out what students were doing in their non-school hours and determine what difference that time might make in student outcomes. By year seven of the study, Heath had discovered that children engaged in the arts were showing positive outcomes and she took a deeper look, finding that students in arts programs significantly benefitted in terms of motivation, persistence, critical analysis, and planning.  |

**Table** adapted from the President’s Committee on the Arts and the Humanities report - *Reinvesting in Arts Education* (2011)

## Appendix 4: Glimpse of Life at NELCS

A glimpse of life at NELCS detailing the routine of the participants along with the learning expeditions that I focused on during this research study.

### A. A typical day for a student at NELCS

It is necessary to get an idea of normal schedules and lived experiences at NELCS for this study and thus, here I include a narrative text depicting a typical day in life of a student at the school.

**8:00 AM - 8:45 AM:** Students from across the NEcity arrive through mainly public school buses to the school. Jim, a fourth grader and his sister Carla in second grade took the 20-minute bus ride from home to school reaching NELCS around 8:30 AM. The classroom teachers have arrived by 8:05 AM and clean up/organize the chairs in the classroom if required after previous day's orchestra sectional practice and dismissal. For the fifth-grade teacher Ms. Raymond - things in her classroom look more or less in good shape when she arrives. She photocopies some sheets of paper with some puzzles for the morning time and other lessons for the day. She writes a welcome greeting and short daily activity for her students on the white board.

Both Jim and Carla reach their respective classrooms and settle down with their classmates. Their classrooms are filled with soft instrumental music; Jim notices his classmates at his table group solving a math puzzle. He quickly gets a snack/breakfast – cereal crisps from the food crate and begins working on the math puzzle first individually and then sharing ideas along with his classmates at his table.

**By 8:45 AM** all students have arrived, submitted any written worksheet homework in the homework bin and have continued to either solving the morning time puzzle sheet or completing any work that was previously pending and if all is completed, they read a book/ draw or get to do some more math puzzles.

**At 9:00 AM** students start with writers' workshop where they continue writing and revising their answer to the True or False statement about the solar system. They are excited to get back to their latest expedition about the solar system. Jim looks at the comments he had received from his peers about his True or False answer and decides that he needs to do a second round of research before he writes his second paragraph. He heads to the shelf where special solar system and universe related books have been kept for reference. Some of his classmates are researching on the laptop in a table group, whereas some others are editing their drafts and another group is having a discussion to get some feedback on their writing. The classroom teacher and the teaching assistant take turns to visit each of the different groups of students as they continue their work and give some suggestions or clarify any questions asked.

**At 10 AM** the class teacher asks the students to gather around in a circle on the rug present at the centre of the classroom. Here by random choice a few students get to share their experiences/difficulties/progress about the expedition. This is followed by a group discussion about everyone's True or False statement. Jim has been trying to make his statement interesting for readers

and shares three different options of his statements with his peers to get their feedback. Other students do the same in turns. They also discuss about other things that might need to be done for making a True or False book as their expedition project.

**Around 10:40 AM** Ms. Raymond asks the students to clean-up and return to their respective group tables as they would be soon be getting a visit from an expert.

**10:45 AM** an Art specialist Ms. Campbell from the Museum of Art, visits the fourth-grade classroom for an interactive hand-on project relating to their LTME. Ms. Campbell bring with her some interesting sample ideas and has a discussion with the students about ways they could incorporate art into their True or False book. Ms. Campbell then leads and supports the students to explore using various ways of representing their True or False statement and/or answer through art. Jim and his classmates would get a few more such visits from Ms. Campbell to decide and create an artwork that will become part of the True or False book.

Students clean up their tables just in time for their lunch break at 12 Noon. Some students bring their own lunch from home whereas others get pre-packaged hot lunch at school. Ms. Raymond helps distribute the school lunch and Jim like his other classmates find a group of students/friends on a table and chooses to eat with them. Lunch is followed by a recess for 35 mins when students leave the school building and walk 2-3 mins to the nearby park. Some resident artists and some class teachers of a few other grades join them as they play.

**1:00 PM** - By the time Jim and his classmates return to their classroom Ms. Raymond welcomes them with music that reminds them of rockets and space and has arranged the tables into different groups. This is part of the science and math link with the LTME. Students watch a video about the earth's atmosphere, its layers and some new distances and measurement units. Over the next hour and some following days Jim learns about the various layers of atmosphere and does mathematical calculations about distance of various layers of the atmosphere from earth using both kilometres and miles as the units of measurement. They also learn and complete puzzles and worksheets about light years as a unit for measuring distance from earth to various planets.

**Around 1:55 PM** Ms. Raymond gathers the students in a circle on the rug for a Read Aloud session where they read a book Wonder by R J Palasio. Jim sits back and listens to the story and makes some notes about the various characters in his notebook. Some of these read aloud session lead to discussion about the personalities, characters, feelings, situations and provides opportunity for reflection.

**2:20 PM** Students wind up and get ready to leave to join their fellow musicians for rehearsals with an exit ticket – answering a question given by Ms. Raymond on a small piece of paper and dropping in in the exit bin as they leave the classroom relating a topic that was covered recently.

**2:30 PM** Jim joins his fellow strings musicians with his Viola as they re-organize another classroom to make it suitable for a strings sectional rehearsal. He is joined with other musicians playing Violin, Violas, Cellos and the Double Bass. Led by the strings sectional leader – resident artist Mr. Jacobs they practice various new bowing techniques, warm-up exercises, and also tackle a difficult section from the new piece

of music from the title song from the movie *The Lord of the Rings*. As Jim was in this classroom joined by other string players from his orchestra, his classmate Roy was a part of the winds and percussion ensemble who were having a group musicianship session in another classroom – sight-singing, sight-reading and doing some music and movement activities. Jim’s sister Carly meanwhile is in her full orchestra rehearsal in another room as she is part of a different orchestra. Some pull-out peer-learning sessions are also taking place in different places across the school hallways and in some smaller rooms where one student is working and teaching the other student to play a particular piece or section of music.

**At 3:35 PM** Jim takes his seat within his orchestra (Dudamel orchestra) for rehearsal. He is now in the orchestra rehearsal room. The Dudamel orchestra conductor starts off with cues to some warm-up exercises before they continue with other music pieces including a Brahms Symphony and the new music piece from *The Lord of the Rings* movie soundtrack. They rehearse specific sections of the piece and sometimes only a part of the orchestra is asked by the conductor to play. Overall this is a focused orchestral rehearsal where all the students are playing together as an orchestra.

**By 4:55 PM** the dismissal process begins. Students from various music rehearsals return to their respective rooms with their bags and wait for the callouts. The resident artists along with some teacher help announce the names of different buses or parents as they arrive at the school. Jim as he hears his bus Brown being called out leaves the orchestra room saying goodbyes to his friends and teachers. He meets his sister Carly as he enters the bus and both their names are checked by one of the resident artists through their iPad app as they leave.

The above narrative journey of Jim and his classmates through a day at NELCS is representative of a normal schedule at the school. There might be some minor changes from day to day due to the planned lessons and activities (fieldwork, performances, etc.), but overall this is a glimpse of a day for a student at NELCS.



# Appendix 5: Learning expeditions & critical events that I focussed on

I introduce here the contexts observed in no particular order that I decided to focus on after the pilot study. This includes an overview, what activity or lessons it incorporated, its objectives and any related pedagogical aspects. I also explain my role and involvement (if any) along with the kind of data that was collected. Though this I lay the foundation for the findings that delve deeper into the experiences of the participants, to situate the ways and structure of learning that was implemented in order to better understand and situate the findings relating to the main research question of this study presented in the next chapter.

## 1. Solar system expedition (Grade 4)

This fourth Grade LTME on the Solar System and beyond, in essence involved students grappling with questions about the universe, applying research, writing, and artistic skills to synthesize their learning and create an interactive true or false book. I was present through this expedition and collected data through, observation with field notes, informal interactions with the participants, video recording of few sessions, photographs and documentation.

Students began by studying their own home, planet Earth - Sun & Moon. Many hands-on activities undertaken such as - recreating layers of the Earth with play dough; using instruments including a simple flashlight and a globe to better understand how the Earth rotates on its axis and revolves around the Sun to cause day, night, and seasons. Students kept Moon journals to explore the phases of the Moon, wrote stories about their own moon myths and listened to space/universe inspired music. Math and writing is embedded within these activities e.g. calculating the distance of different layers of earth; understanding different units of measurements; writing creative moon myth stories.

Students also listened to musical scores from popular science-fiction movies, such as *E.T.* and *Star Wars*, as well as orchestral music *The Planets Suite* by Gustav Holst. As the students listened to Holst's suite, they tried to match each piece with the planet it represents based on rhythm, dynamics, and other music elements, as well as the nicknames of the planets. This was aimed at allowing students to explore how artists give expression to the awe-inspiring wonders of outer space. Music was part of the background, setting the environment as well as part of planned listening project sessions where students actively listen to a piece of music and analyse its components, think about some specific questions as well as use drawing/art to express the emotions/ feelings/ thoughts that the music evoked.

Fieldwork at the Charles Hayden Planetarium in the Museum of Science were planned to spark students' interest and provide inspiration for researching different topics as they worked on true or false informational essays.

Writing the book part of the expedition involved a lot of research by the students' - right from identifying the elements that make a high-quality true or false book by reading other books to researching about our selected topics and also fact checking across sources. Students also created illustrations using oil pastels for their respective topic as they worked with an expert artist who helped and critiqued their work.

## **2. Snake expedition (Grade 2)**

Second Graders in this expedition become herpetologists as they discover the truth about snakes by practicing diverse scientific methods and skills including observing, questioning, conducting and analysing surveys, researching, inferring, taking notes, and drawing scientific sketches. This expedition takes about 6 months and various aspects of this expedition has been widely recognized as best practice and has been featured in various conferences/seminars. I was present through parts of this expedition and collected data through, observation with field notes, informal interactions with the participants, video recording of few sessions, photographs and documentation.

Two case studies form the core of this expedition. Once on the corn snake and other about snakes across the world. The *first* case study is normally launched with scavenger hunt, reflecting on ones' feelings about snakes – *what makes a snake a snake?* Students build background knowledge about the essential attributes of a snake through research and fieldwork. They undertake an in-depth investigation of the corn snake, during which students observe and care for a live corn snake in the classroom. They learn to use journals to observe, reflect and learn. Fieldwork at Broadmoor Wildlife Sanctuary and Herpetology Department at Harvard's Museum of Comparative Zoology and meeting with experts support and aid in this process. Music is often infused as students compose and perform an original song that teaches listeners about their pet corn snake. They work with resident artist to explore and make choices about various aspects of composing music e.g. key, meter, and tempo to set the lyrics to music. As well as incorporate instruments, as well as movements and gestures to enhance their performance. Throughout the expedition, students practice the five creative/music processes—*listening, questioning, creating, performing, and reflecting*. These creative processes parallel the scientific processes of *observing, questioning, researching, analysing, and reflecting*.

In the *second* phase/case study, students start to explore snakes from around the world. Students use diverse methodologies to investigate snakes and their habitat; they research information in nonfiction texts, analyse illustrations and captions, interview herpetologists and other snake experts, and conduct fieldwork both inside and outside the classroom. As they become snake experts, students learn important

life science concepts about how an animal lives, grows, and reproduces. They learn how a snake interacts with its environment through its senses, how its habitat provides its basic needs, and how its physical features and behaviours help it adapt to its habitat. Students learn comprehension strategies, undertake guided reading, independent reading, participate in read aloud and develop writing techniques as they work at the main project/product. Students also get opportunities to practice and apply math skills to real-life problems. Findings ways to measure and understand length of snakes; Survey and Graphing, as they develop, administer, and analyse the results of a survey about how much people in their community fear snakes. Throughout the expedition, students create scientific sketches and drawings of snakes. A collaborative multistep revision process guides students as they create detailed, scientifically accurate drawings that is incorporated into their final products.

During the previous academic year, the final product for this expedition was making a music video. This year the second graders created an eBook audiobook 'Slithering Snake Stories'. This involved many steps which was carefully managed by the students through a project management chart. They researched their chosen snake, did multiple closed reading of other narrative non-fiction books and analysed these texts to develop criteria for what would make an outstanding nonfiction narrative about a snake. The writing process involved weeks of drafting, peer feedback, revising and editing till they completed their stories. The illustrations were the scientifically accurate drawing that they were simultaneously creating which also went through redrafts, peer-critiques and guidance from experts. Through reader's theatre workshops students created criteria for what a quality narration should sound like, focusing on voice, articulation, pacing, and expression. Guided by a student-created rubric, second graders self-assessed their narrations after recording themselves reading their stories on an iPad before recording the stories in a professional recording studio. A resident artist helped select musical pieces for the audio book which comprised of some of the songs that the students were learning. Finally, they were recorded performing these selections of music and the students chose where they wanted each selection to appear in their narration.

During the expedition, students become young scientists, musicians, authors, and artists as they discover the joys of the natural world and experience the pride of creating quality work about the topic.

### **3. Street Performances (Students from Grade 4 – 6) (*main study*)**

The Dudamel Brass ensemble led by resident artist Mr. Marcel perform at various events across the city. Being a small ensemble they perform often and can often be transported to locations in cars rather than needing a school bus for transportation.

In 2013, they performed at various places and cultural events across the city as part of community efforts along with interacting with the public. On September 29, 2013, North East Lab's Dudamel Brass

Ensemble spent most of the day performing in a parade and at different locations along Blue Hill Avenue as part of a free *Circle the City* program sponsored by the Emerald Necklace Conservancy and NEcity's Open Streets, Open Parks. The event transformed Blue Hill Avenue into a paved park, featuring fitness clinics, biking and walking tours, kids' games, yoga, art activities, live music, and dance classes.

Students also participated in the *Celebrity Series'* 75th Anniversary Celebration, featuring a citywide event called "*Play Me, I'm Yours*" that took place between September 27 and October 14, 2013. This event included a Public Art Piano installation of 75 pianos sponsored by different art, cultural, and educational organizations. NELCS donated a piano that was painted by a local artist and was set near the school's location. On Saturday, October 5th, 2013, the Brass Ensemble performed at several locations in and around Copley Square where other painted pianos were located.

I was able to accompany and observe the ensemble through these street performances.

#### **4. Book Group discussion and reflection (Grade 4 – 5) (pilot study & main study)**

Through the academic year, the students in fourth grade are grouped into about 5 book groups consisting of about 4 or 5 students each. Each book group read, discuss and reflect about one/two selected book/s per term. Snippets of the 5 possible books are circulated among the students without revealing the names of the books written to pique their interest. Students rank their choice of book and this forms part of the decision through which the book groups are constituted.

The book group meets at least once where they discuss the chapter/pages they have read. They use a booklet to record their thoughts e.g. summarizing the main idea of the chapter, write questions as points of discussion e.g. right there questions (answers are easily found in the text); think and search questions (finding answers involve thinking and searching within the book); Author and Me questions are mainly reflective questions (answers are not from text but from through putting oneself in the author's shoes or have an different take than then author); On my own questions are developed from an ideas in the text that connected to the students. Mind mirror activities provide opportunity for book group students to interact with other book groups to introduce and represent one main character from the book. Students reflect both on their books they read, their opinions about the characters, any connections they make with the events/situations or characters as well as work on having good quality discussions.

#### **5. Peer Learning & Collaboration (Grade 2 – 6 across orchestras)**

Peer learning is an active component of the EL Sistema programmes. Following the common statements/beliefs of El Sistema in Venezuela "If a student knows four notes, he teaches one who knows three.", the students work together as a musician, rehearsing as a team in orchestras; at the same time there is immense focus on peer-learning and collaboration with other experts/students. Peer learning

takes place through different opportunities at NELCS such as – 1) Students often ask for peer mentoring from their peers from the same or higher orchestras; 2) At times for a specific period stand-partner relationships are formed where a more experienced player is placed next to a less experienced one; 3) Students keen to peer-mentor often ask for opportunities and volunteer to work with their peers. These peer-partnerships provide peers to learn in an informal setting, from their peer-role models getting insights from a students' perspective. It is aimed at cultivating the habit of mind in which such responsibility is a natural part of the work; promoting interpersonal and social development; encouraged to work together to meet their goals rather than in competition and building a strong sense of community.

Peer interdependence, learning and teaching perhaps are more effective when students are supported with guidance on strategies and approaches to listening, encouraging and explaining, as well as building trust and respecting boundaries. Though the students are not specifically taught how to be a peer-mentor but the resident artists often note and discuss with these students as they reflect on their experience. E.g. providing feedback on the quality of these student interactions, help students reflect on the process "What did you notice? Why did it happen? What could you say or do that could be helpful?" and sometimes demonstrate an exercise they could do together.

Further, the students often get mentored by external students/artists volunteers who are either part of an orchestra, are studying music at a conservatory or university or are part of any ongoing collaboration with NELCS. The students collaborate with various other individuals one-on one or as a group, this is further aimed at developing the same collaborative skills and presented opportunities for varied experiences, interaction and reflection through learning. I was able to observe peer-learning and related collaborative activities during my time at NELCS, and collected data through, observation with field notes, informal interactions with the participants, video recording of few sessions and photographs.

## **6. Climate change expedition (Grade 5)**

This expedition was undertaken by fifth graders and comprised of two sub expeditions. The *first* was Heating Up, Chilling Out: Global Climate Change where students studied climate and effects of climate change and the *second* Energy Savers: Building a Greener Tomorrow where students explore alternative sources of energy and energy optimization.

Students first explored the understanding of weather and climate - how it was measured?, weather events, forms of precipitation, global patterns, water cycle its impact on climate. They also explore characteristics of some adapted plants and animals along with some endangered and extinct species due to climate change. Other science topics such as photosynthesis, states of matter and light energy is also embedded within this expedition. Students undertake fieldwork at the Blue Hills Weather Observatory and the Harvard Museum of Natural History to explore how atmospheric scientists measure and track weather

over time to determine whether, how, and why our climate is changing. Students then, organized in ambassador teams from different regions of the world, take on the roles of real-life scientists and activists to study the causes and effects of climate change. Students read diverse scientific texts, including diagrams, charts, thematic maps, on causes and effects of climate change in a particular region. Music infusion in this expedition was through the students work with a non-profit organization that engages, educators and musicians and their fans to take help make concerts “greener.” Students come up with strategies and solutions to make NELCS public performances greener. They also listened to environmental protest music about climate change. They also worked with a local Hip-hop artist and composed made their original Climate Change rap for which they had worked with. The students applied hip hop artist's skills--rhythm, rhyme, and alliteration--to synthesize their learning with a plea for people to wake up to the threat of climate change and to take action now. Additionally, this year the students additionally also raised awareness and asked for donation for the recent typhoon in South Asia through posters across the school.

The second part of the expedition is more focused on science, engineering and technology. They learn about the carbon cycle through activities and games and synthesize their understanding through making their own carbon cycle comic strip. Students explore the sources of energy used to power our community and conduct an energy audit of the school. Within this context, they investigate forms of energy and the principles of magnetism and electricity through hands-on activities and experiments. Through fieldwork, students discover how NEcity's buildings use alternative energies to reduce our carbon footprint. Students become engineers as they design wind-powered devices to convert wind energy into electricity. Students continued to explore how all humans have a responsibility to care for our Earth by reducing our carbon footprint. They also work on a hands-on project where working in groups of 3 or 4 they design and test their wind-powered device as they understand and implement the stages of the engineering design process.

Finally, this expedition culminated in a mock climate change summit, where regional teams present their findings including their science posters. The students explained to the visitors about various consequences of climate change such as rising sea levels, coral bleaching, intense hurricanes, droughts etc. and performed their original 'Climate Change Rap'. I was able to observe and collect data through this expedition across two academic years with two different sets of Grade 5 student participants.

## **7. Fieldwork experiences (Grade 2 - 5)**

As mentioned previously all students undertake fieldwork as part of their learning expeditions. I was able to collect data, interact and observe first-hand their lived experiences as I accompanied the students for their fieldwork. I embedded myself with the students as they travelled together, interacted with experts and undertake other activities. I accompanied the students to three such trips; 1) Woods Hole (National

science "village" in Falmouth, MA on Cape Cod) with Grade 5 students; 2) Plimoth Plantation (a Wampanoag Home site to become historians as they explore the history and culture of the native people and 17<sup>th</sup> century English people who sailed there) with Grade 3 students and 3) Blue Hills Observatory (Foremost structure associated with the history of weather observations in the USA in Milton, MA) with Grade 5 students.

#### **8. Orchestra rehearsals and performances (Dudamel Orchestra comprising of students from Grade 4 – 6)**

Dudamel orchestra is the highest-level orchestra at NELCS. It comprises of students across Grade 4 to Grade 6. These students rehearse together as an orchestra for around or 1 to 1.5 hours every day. Since the school is currently in a temporary leased location, there is just one room that could just about/ barely fit all the musicians of the Dudamel orchestra. It comprises of strings, winds and percussion sections totalling to over 70 musicians.

Students have three big school concerts every year and about 3 – 7 more concerts where they collaborate with other artists and musicians; perform as smaller ensembles for various audiences across the city. Student's experience of preparing for a concert, collaborating with others and reflecting on their practice was my focus as I collected data.

#### **9. Great Migration – House of Blues (Grade 4)**

In this expedition, the fourth graders explore the relationship between art, music, and poetry as they investigate the period of the Great Migration in American history. The two main case studies that they undertake are – The Great Migration and Blues Journeys. In the *first* study students explore Who is the woman in panel no. 57 in Jacob Lawrence's *The Migration Series*? After zooming in on this powerful portrait, students are immersed in a multisensory exploration of African American art, poetry, and music that paints a moving portrait—in images, words, and sounds—of the men, women, and children who left their homes in the rural South to pursue the promise of a better life in the North during the Great Migration. Through the creative expressions of Jacob Lawrence's, *The Migration Series* to the poems of Eloise Greenfield and Langston Hughes to the blues songs of Bessie Smith and Muddy Waters - students to step inside the narrative of this historical period and develop empathy for the migrants and their families. Students compare and contrast first-hand and second-hand accounts of the period to delve deeper into the causes and effects of this epic migration. At the end of the case study, students synthesize their learning by writing a persuasive letter in the voice of a character from Lawrence's *The Migration Series* to family or friends back home in the South.

The *second* case study explores the history and sound of blues. Working with resident artists and teachers, students identify the elements of a 12-bar blues song and analysing blues poetry by Langston

Hughes, Eloise Greenfield, Walter Dean Myers, and others, and then students write their own blues poems. Students also create colourful collage of self-portraits to accompany their poems with the help of workshops conducted by experts/artists. Throughout the case study, students explore the relationship between art, poetry, and music, discovering multiple avenues to express a mood, a feeling, or an idea. The students conduct fieldwork at the House of Blues, a live music concert hall and restaurant in the NEcity, featuring an interactive music performance that takes students on a historical journey from the roots of the blues in West Africa to its enduring influence on the music students enjoy today. I was partly present during this expedition and collected data, documentation and products created during the expedition.

### **10. Whose Story Is It? - Wampanoag and the Pilgrims (Grade 3)**

Grade three students in this expedition are introduced to the diverse geography of Massachusetts before looking back into our past to compare and contrast the perspectives and ways of life of the state's first inhabitants, the Wampanoag, and the Pilgrims. An introduction to the Wampanoag concept of the circle of life sets the stage for later science investigations into the water and rock cycles and animal life cycles. I was present through most of this expedition and collected data through observations, photographs and informal interactions with the participants. As the students began their research they found that they did not know where these places were and began on a flat map and then needed to understand hemispheres and went on to papier mache globes. Many parents also came to assist the students as they made their globes.

Students become historians and interpret the past through researching primary and secondary sources, examining artefacts, and conducting fieldwork at Plimoth Plantation to understand the past through multiple perspectives. The students spent time to prepare for their visit, write questions and kept field journals ready. They asked questions and made notes and drawings in their field journal first, of the native people working at the Wampanoag Homesite followed by the colonial re-enactors at the 17th Century English Village. They compare and contrast worldviews and cultural values of Wampanoag and Pilgrims. Expert visitors also introduced students to colonial music and dances, including musical instruments used and examine the role of music in Wampanoag and Pilgrim cultures and society. Students then finally compiled a turn-around book that feature sections on aspects of Wampanoag and Pilgrim culture and daily life, including musical instruments, food, clothing, and shelter. Art experts visited the classroom to conduct interactive drawing and watercolour sessions which were incorporated into their turn-around book.



# Appendix 6: Field Note Example

## RELATED SECTION 4.7.1

### Colour coding scheme

General info – Date, Time, Who are there in the class, Wherever groups etc. mention Background/ setting, (where, what happening, where are the kids in the classroom)  
Instruction/ learning targets etc. - topic being done - Any resources/ materials, Any work/assignment / activity  
My observations and own questions... Points I am noting, for example - What is the teacher doing? - strategies? - its impact/ synergy?, What are children doing? - how are they learning?, Why?, How?  
Aims and objectives - acc. to teachers and my views  
What do I think - any questions - what I feel, my understanding?

**Wednesday, 1<sup>st</sup> May 2013**

Interview - Grade 3 classroom teacher - 10:40 am - 11:05 am - Audio recorded

Grade 5 - Observation - Turbine Challenge - 11:10am - 12:15pm

### Turbine challenge

The students in groups of 3/4 are designing and building a wind turbine - as part of their original expedition about climate change  
Main background purpose - understanding engineering principles of - planning, designing, physics about the model, trying and making a model of a wind turbine and testing it to realize the effectiveness of the design  
This is being done with the collaboration of students from Tufts university - so they were there guiding and recording the students through their learning process to know - how they are going about such a project and what they might need to do better to teach the concepts and give them the practical hands-on experience

*Did not talk to the students - only observed*

Student were at various stages of making the wind turbine

- All were working on the blades of the turbine - trying out different materials and designs
  - Aluminum foil wrapped into a blade (2 different versions)
  - Chopsticks stuck together (2 different versions)
  - Plastic bottles cut outs
  - Plastic cups etc. as blades

- Questions I saw the students thinking and working on
  - How to connect the blade to the base
  - How to make a good blade (what does good mean?)

The students tested their wind turbines - connected to battery - and tested for its strength using equipment to measure how it performed when placed near a fan which made the blades of their turbine move.

- Some goals they were keen to meet -
  - Broad blades - will move more air
  - Base has to be strong
  - Let's test today - let's make something then we can correct
- Take away questions for the students
  - My blades not moving why?
  - How to make it better?
  - Size, weight, no. of blades etc.

### Mixture of groups

- Some working completely together - whereas others they were all doing different parts of the turbine
- Some participants distracted
- Some keen to test
- Some groups had a clear leader - doing the main work

Some students were really thinking about their design before they began to work on it/ make it

Why, How-, What are they looking at

Some teams were curious trying different things, whereas some were disconnected i.e. every member doing their own curious things

But yet - is there some goal in this randomness?

I see the students are getting chance to explore - feel free with materials and make something

This fuels their questions both about engineering, wind energy - bio energy

Some students are talking about how amazing it would be if everything was bio

This project - not many instructions - purposely?

The chance to test their turbines

Students making different designs - all different approach

Not much of testing as part of process though

The students often reflect together - what are they doing, what are they meant to be doing? How are they feeling they are doing?

Hands-on application of understanding

Yay - it's fun - I am making the

Not all tested today - they continued

## Wednesday, 18<sup>th</sup> September 2013

### Grade 5

#### 1 PM - Listening Project

Students sat in their regular assigned seats - in groups of 3 or 4 in a table

This year the Grade 5 will listening to classical music genre for their listening project. Some students being new needed to be explained about the concept and they all found it interesting and were excited to begin with it.

Learning targets - of becoming an active listener, a cooperative crew member and to responsibly discuss ideas and feelings were being undertaken.

#### Process of listening project:

1. The students listen to part of the music without any writing
2. Then as the piece is being replayed they start answering the guiding questions. The music is played many times (3-4 times) for them to get immersed in the music.
3. They share with each other and the whole class about their ideas and feelings about the music being played.
4. Following this the teacher introduces and explains the background of the piece - normally a short 2 - 5 slide PowerPoint to give some context to the music - who is the musician, what type of music, any specialties, the time/age when this was composed - any meaning associated with it what instruments were used etc.
5. They then reflect on what was learned

#### Titled - sacred music

Today's piece generated much surprise among students. Having played in an orchestra for a few years now through the El Sistema programme at the school the students somewhat expected a certain kind of music to be classical music.

As they listened to the music - it did not match their expectation of classical music genera - but with this surprise they began doing their listening project.

#### VIDEO recording

The music sounded like a Gregorian chant type music

#### Guiding questions

- How does this piece of music make you feel? - Because
- Do you like this piece of music? Why or hwy not?
- What instruments do you hear?
- What do you visualize as you listen?

Overall most of the students felt - sad, bored, slow, airy etc.

They then visualized through a drawing

- Most students had church in their visualization
- Dreamy

**EXCERPT OF EXPANDED FIELD NOTES - for the listening project, 18<sup>th</sup> September 2013**

Today was the first listening project for the year. The students were informed that this year they would focus on classical music. The instructions about the process they need to follow during the listening project was projected (using a projector) in front of the classroom as well as listed within their listening project notebooks.

As I sat in the corner near Aiden, Sophia and Tanya before the start of the listening project, I notice Sophia talking to Tanya - "we just have to listen carefully, and let ourselves feel the music. Its always interesting to reflect on our feelings about music, we can share what it meant to us and that also helps us . . . when we play in the orchestra". .

Everyone was ready to listen to the music and Ms. Raymonds played it for the first time. I could notice almost everyone look surprised as they heard the music. Ryan turned his head towards the speaker, extending his neck and looking at Thomas, making an expression, what is this? The music I hear is more like Gregorian chants or early church music.

By the second and third time the piece was played everyone started to focus more on the music, getting immersed in it and noting points about their feelings in their notebooks. I think the main surprise was that they expected classical music and the music they heard didn't seem classical to them. Their expectation of classical music was mainly based on their experience of learning through the orchestra at school or perhaps what they would have listened at home or on the radio. I see Aiden actively listening to the music now focusing on what instruments they can hear - "bells, choir, strings, may be a viola? "

After they finish writing and discussing with their table group and now share their thoughts with the whole class. The teacher leads with a question. - How did you feel when you heard this music?

Most the students remarked that they felt sad or slow when listening to the music. Some also said it was like a prayer or sacred.

# Appendix 7: Informal Interview Questions

## RELATED SECTION 4.7.3

### List of broad questions for teachers/staff/resident artists

#### GENERAL INFORMATION

- i) Can we start with you describing your background that has led you to teaching at NELCS?
- ii) Why become a teacher? Your motivations, inspirations, aspirations etc.
- iii) Have you taken any specific training for arts-integration, EL etc.

#### TEACHING PRACTICE

- iv) Do you follow or believe in any particular philosophy in terms of your teaching?
- v) What do you think is your role as a teacher?
- vi) What are your beliefs and values about teaching and learning?

#### AT NELCS

- vii) How has your experience with NELCS been? How has it been different to other/previous experiences? What do you like about it?
- viii) What would you consider as highlights of your work as a teacher at NELCS?
- ix) Describe some critical moments which you consider to be transformative for the students. (conceptual drawing?)
- x) What do you think about the teaching and learning practices at NELCS? (Conceptual drawing)
- xi) Use conceptual drawing to depict teaching and learning at NELCS

#### ARTS & MUSIC

- xii) Could you briefly elaborate your experiences with LTME (Learning through music expeditions) – also highlight some specific student learning experiences
- xiii) What role do you think arts/music plays for the students at NELCS?
- xiv) How has your experience with NELCS been? How has it been different to other/previous experiences? What do you like about it?
- xv) EL and EI Sistema teaching methods very different – what are your thoughts on this?

# Appendix 8: Certificate of Ethical Research Approval

RELATED SECTION 4.9

STUDENT HIGHER-LEVEL RESEARCH  
DISSERTATION/THESIS



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.

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**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:** Pavithra Arvind

**Your student no:** 590060514

**Return address for this certificate:** Please send a scanned version over email for ease and speed before mailing to: 24130 Chipmunk Trail, APT 206, Novi, MI 48375 USA

**Degree/Programme of Study:** PhD in Education (4year PhD Programme)

**Project Supervisor(s):** Prof. Anna Craft and Sarah Hennessy

**Your email address:** pm275@exeter.ac.uk

**Tel:** +1-7343869633

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I hereby certify that I will abide by the details given overleaf and that I undertake in my thesis 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: .....  ..... date: .....8April 2013.....

*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.*

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Chair of the School's Ethics Committee  
updated: April 2011

# Certificate of ethical research approval

Your student no: 590060514

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**Title of your project:**

Exploring Transformation through Arts-integrated Creative Learning Process – Perspectives of students, teachers and facilitators

**Brief description of your research project:**

Education is considered to have a power to transform the individual. In the area of transformative education includes the concept of transformative learning, which has been researched and theorized especially in the field of adult education. A wide diversity of paradigms and fields of knowledge inform existing transformative learning frameworks within the literature – such as Mezirow (1978); Boyd (1991); Freire (1970); Illeris, (2004); Cranton & Roy, (2003); Dirkx, (1997); O’Sullivan, (1999). Comparatively, the area of transformative teaching has been less explored or understood. Slavich (2005, 2006, 2009) inspired from the literature on transformative leadership among others highlighted how instructors can serve as motivational leaders in this process by compelling students to realize a shared vision for a course, which encourages students to work together to maximize their personal and collective potential. Also Rosebrough and Leverett (2011) have proposed a transformational pedagogy model based on a holistic approach towards education and define transformational teaching as “an act of teaching designed to change the learner academically, socially, and spiritually” (p. 16).

In a larger context, many countries are undergoing rapid economic and social change; and there are increasing efforts worldwide, to reform, revamp and revitalise education – to equip students for living, working, participating and contributing in a culturally diverse and changing society. Since the 90s there has been an increased call for creativity in education by policy-makers in many parts of the world (reports from UK, Australia, Canada etc.). School curriculum changes incorporating creativity encompassed two assumptions (Lin, 2009); first that creativity is accessible to all – a ‘democratic view of creativity’ (Craft 2001; Feldman and Benjamin, 2006) and second that it can actually be developed (Fryer, 1996) both of these assumptions fed the desire to nurture creativity as necessary to both surviving and thriving (Craft, 2005, 2011) especially because of uncertainty and intensification of change that characterizes the 21<sup>st</sup> Century.

There is increasing research literature exploring the area of creativity; creative learning; creative teaching and teaching for creativity. Simultaneously, the area of transformative education and learning also continues to be explored through research furthering existing knowledge. The transformative nature of creativity has been noted by a few including Beghetto and Kaufmann (2007), when they proposed mini-c creativity, making a case towards broadening the developmental continuum of creativity (from mini-c to little-c to Big-C), while highlighting the creative, transformative process involved in developing personal knowledge and insights. Also, the concept of ‘wise’ and ‘humanising’ creativity has been emerging (Craft, Gardner, and Claxton, 2008; Chappell, 2008). More recently researchers have tried to refine the concept ‘humanising creativity’, which according to them is an active process of change guided by compassion and reference to shared values (Chappell, Craft, Rolfe and Jobbins, 2012).

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Thus, the inherent transformative aspect of creativity and creative process can perhaps be considered implicit. Thus, this project aims to explore transformation through lived-experiences through a creative pedagogy. As noted, the area of transformative learning/education and transformation through creative learning processes; has not been directly explored in the existing literature in detail. Also, the research in the area of transformation through learning/education has been mainly focussed on disadvantaged individuals.

This present study will explore the concept of transformation in a comprehensive school setting with participants without any evident difficulties or disadvantages incorporating arts-integrated creative learning practices. Conservatory Lab Charter School (CLCS) is a public charter school with Grades K1 – 6 located in Brighton, Boston, MA. It offers a project-based, music infused, interdisciplinary academic curriculum and also incorporates internationally renowned orchestral music program – El Sistema, within the school day. This unique combination and focus on providing transformative experiences to students makes it an ideal site for the present study.

This is a qualitative research study with an ethnographic approach and will explore the research area through the lived experiences of the participants. I plan to begin my pilot phase of research this academic year between April – June 2013 and will subsequently continue with the main research study which is planned to also proceed through the next school academic year i.e. 2013-2014.

It is anticipated in an ethnographically informed research methodology employed in this study to likely include data collection methods such as – observation with field notes, still images, audio and video recording, interviews, conceptual drawing, focus groups apart from any other instruments that I might develop to suit the research and the site. The exact instruments will be developed and used as required as the research study progresses.

This research hopes to contribute and inform the practice of transformative education, understanding the area of transformation and creativity; fill the theoretical gap in the area exploring 'transformation through creative learning processes' and develop methodological approaches for this subtle research area.

**Give details of the participants in this research (giving ages of any children and/or young people involved):**

The participants in this project would include the following types of sample:

1. Students aged 8-14 years old (Grades 3 – 6) from the Conservatory Lab Charter School (CLCS)
2. Teachers at CLCS (adults)
3. Resident Artists at CLCS (adults)
4. School Administrators at CLCS (adults)
5. Parents of some students at CLCS (adults)
6. Other facilitators (if any) (adults)

Among all the students at the respective grades and other participants I might choose to focus on some individuals who will be essentially selected through purposeful and/or convenience sampling techniques depending on the direction of the research, my access and interaction as an ethnographic researcher.

**Give details (with special reference to any children or those with special needs) regarding the ethical issues of:**

I will be following the Code of Ethics and Conduct set out by the British Educational Research Association (BERA, 2011). Further, since the proposed site is in the United States the ethics code of the American Educational Research Association (AERA, 2011), which overall has a similar framework to BERA will also be adhered to. Issues regarding respect, confidentiality, informed consent, safe guarding, conflicts of interest, will be carefully considered as detailed below.

Respect: The research will be conducted with ethic of respect towards – the Person, Knowledge, Democratic Values, Quality of Educational Research and Academic Freedom as directed by BERA guidelines (2011). The views of children, teachers and external facilitators will be paramount in this study. I will ensure that these are listened to, respected, represented and acted upon. I will also endeavor to respect individual, cultural, role differences and negotiate other issues arising from being an ethnographic researcher with attributes that make me both an insider as well as an outsider at the same time. Care will be taken to ensure equal relationships between researcher and participants, and appropriate steps taken to make clear that my role will not be to evaluate teachers or pupils, and would not impact their status or results. Care will be taken during data collection, to minimise adverse reactions of participants towards the equipment and procedures. e.g., video camera will be placed unobtrusively, sometimes invisibly, to minimize stress. Participants will be duly informed about the observation, and the fact that the videos would be taken purely as a record, to be viewed only by the researcher. I will also seek to reduce my bias as researcher, and aim to be honest while acknowledging the researcher's influence.

Informed Consent: Initial consent for this study will be sought from the head teacher / school in-charge. Further, informed consent will be taken from all participants. Consent for the students involved will be from head teachers and the students' parents/carers as well as from the students themselves. Records of when, how and from whom consent was obtained, will be recorded. All the participants will be provided with an information sheet. They will be made aware about the research study, the kinds of data that is to be collected and how the research findings will be used. Participants will also be informed that they have the right to withdraw from the research at any time for any and no reason and that in such a situation, any data related to them will not be analysed and will be destroyed. However, after initial consent is gained, process consent will be considered throughout the research study. This will take the form of checking that participants are happy to be approached at any particular time, in particular places, and that they are happy with the research process in general. This is particularly important as ethnographic research involves repeated and on-going contact in the participants' naturalistic environment.

Confidentiality: During the data collection, data analysis and write up, data (transcripts, audio recordings, notes and meeting records, photographs, observation records, interview data and individual data) will be stored in a secure and safe place with necessary electronic security. Any other notes/paper-based data and non-electronic data will be maintained securely and stored in a locked filing cabinet. Audio and video data will be downloaded from recording devices at the earliest possible opportunity, and then deleted immediately from those devices. All electronic data will be stored on the University U-drive or in a password protected Dropbox account used only by me. The Information will also be coded with alternative names to ensure anonymity and will remain anonymous in the write up of the research. The list of participants' real names, their pseudonyms or other identifiers and any related participant contact details will be stored in a separate location from all other data and on an entirely different stationary computer hard drive. Precautions will be taken to ensure that there is no harm, detriment or unreasonable stress caused due to the participation in the research study or due to any information provided by the participants

Declaration of Interests: The participants will be informed of the exclusively scientific nature of the research study. There are no commercial interests involved and no conflicts of interest in the study.

*Copy(ies) of the tentative information sheet and consent form(s) I will be using is submitted with this document.*

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**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:**

Since this study has an ethnographic approach, the exact questions and methods are developing and would emerge and be finalized during the study. But, in general, the data collection methods could include some or all of the following:

*Data Collection:*

Data collection is to follow an ethnographic approach involving the following:

Studying, Observing and interacting with participants (students, teachers and external facilitators)

- Written documentation about the programme, teacher's experiences, planning records, learning journals, student records or work product, etc., relevant to the present sample
- Study of other archived documents, photos and audio-video recordings (if available and relevant to this research)
- Field notes, photographs and video recording of learning at CLCS in session and observation
- Interviews with some participants from each type of sample (students, teachers, artists and facilitators) with audio recording which will be transcribed
- Focus group discussions with each type of sample (to be transcribed)
- Conceptual drawing made by participants during interviews or focus groups (discussions will be recorded & photographs of the drawings could be used in the research thesis anonymously)
- Any other suitable instrument that might be developed or be relevant to this study to research the lived experiences of the individuals
- Depending on requirement possible options for data collection and sharing beyond the project would include methods such as skype based interaction and interviews with participants, access to photos, videos, notes, online blog and any other relevant data.

Given the nature of the research study – a naturalistic inquiry about an educational situation - there seems to be no danger of harm that might be caused to the children involved. As mentioned earlier all precautions and measures will be taken to keep the participants at ease through the research process and reduce any possible sense of intrusion which might arise due to the process.

*Data Analysis:*

Audio recorded and video recorded data will be transcribed and analysed alongside the fieldnotes, conceptual drawings, still and moving images, using a qualitative data analysis process, possibly using NVivo software. The data will be coded anonymously and will be kept securely.

**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.):**

During the data collection, data analysis and write up, data (notes, audio and video recordings, meeting records, observation records, interview data, photographs, learning journals and individual data) will be anonymous and securely stored electronically when in digital format with appropriate security, virus and access restrictions i.e University U-drive or in a password protected Dropbox account used only by me. Other data that are not in electronic format would be stored in a secured location and stored in a locked filing cabinet. The consent form will also ask for permission from the adult participants and parents of student participants for use of photos and audio-visual material in dissemination of the research, including thesis, conference presentations and when judged to be reasonable proof within future written reports, presentations and journal articles which make reference to this research. The copyrights release for these material will be sought through the consent form.

**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):**

This project in general does not raise exceptional factors that raise ethical issues, but necessary care and additional sensitivity to the participants' perspectives and rights will be kept.

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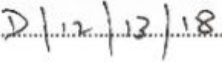
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*This form should now be printed out, signed by you on the first page and sent to your supervisor to sign. Your supervisor will forward this document to the School's Research Support Office for the Chair of the School's Ethics Committee to countersign. 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*

**This project has been approved for the period: 10 April 2013 until: end July 2014**

By (above mentioned supervisor's signature):  .....date **9 April 2013**  
*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:**..........

**Signed:**..........**date:** .....

Chair of the School's Ethics Committee

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GRADUATE SCHOOL OF EDUCATION

***Researching Arts-Integrated Creative Learning***  
**Information Sheet: STAFF**

Dear Colleague,

My name is Pavithra Arvind, PhD research student at the University of Exeter, researching arts-integrated creative learning process through the practices at your school. I am supervised by Prof. Anna Craft and Sarah Hennessy. My PhD research focuses on experiences of the participants - students, teachers, artists and facilitators to help inform understanding of transformative education through arts-integrated learning.

Experiences of the participants will be explored through observation, photos, videos, documentation, records, reflective journals, informal interviews and recorded discussions. I am inviting you to participate in my study. Participation will mean that:

- Sessions you are part of might be photographed and/or videos taken (for analytic and publication purposes) and audio-recordings and field notes made.
- I may interview you (recognizing that not all staff will be interviewed) and the interviews will be audio-recorded. Understanding your time pressures any interviews would be organised according to your convenience. Transcripts of any interview/s with you will be sent to you to check for accuracy and to add anything further.
- I will have access to reflective journals, work product, discussions and documentation about you/ your students /class/ project
- You are welcome to contribute your own observations of children's learning and transformation (methods to be agreed in discussion with the researcher).

All data collected will be stored confidentially and names of the participants will be anonymised unless they specifically request otherwise. Data collected (including consented photo and video data) might be used in the thesis and if judged by me to be reasonable proof - within future written reports, presentations and journal articles which make reference to this research.

The research is motivated by an exclusively scientific aim. No commercial interests or conflicts of interests are involved in the conduct of the study. Given the nature of the research study, there seems to be no danger of harm that might be caused to the participants.

The research will be conducted adopting the University's Code of Ethical Conduct which states documentation will only take place with the permission of participants. Consent will be obtained through the attached informed consent form. If you participate, you have the *right to withdraw at any time*, for any and no reason, by request to me. In this case no data concerning you will be used.

Your involvement in this research will help contribute towards the understanding of creative change through arts. I am most grateful for your co-operation and participation.

If you would like to ask any questions about the study or for further information, please do not hesitate to contact me at [pm275@exeter.ac.uk](mailto:pm275@exeter.ac.uk) / +1-734-3869633 or my lead supervisor Anna Craft at [A.R.Craft@exeter.ac.uk](mailto:A.R.Craft@exeter.ac.uk)

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GRADUATE SCHOOL OF EDUCATION

Researching Arts-Integrated Creative Learning
Informed Consent Form: STAFF

I have read the accompanying Information Sheet and have agreed to take part in this research study. I understand that agreeing to take part means that I am willing to have the researcher observe learning and teaching in my classroom, and, where appropriate, to be interviewed, and to provide the researcher with relevant documentation about creative learning, teaching and transformation as experienced by the participants. I also understand that there may be opportunities for me to document children's learning in between the visits of the researcher and to reflect on my practice for the purposes of the project. I give my consent for:

- The researcher's presence in the classroom during the research period for observation.
• The observed situations to be photographed (for analytic and publication purposes) and for audio-recordings and field notes to be made.
• Contributing my own observations of children's learning (methods to be agreed in discussion with the researcher).

During the research study, the researcher will interact and interview teachers and students in an informal setting and/or in small, informal groups (recognizing that not all teachers and students will be interviewed or involved). Through our interactions, reflections, my perspectives on the transformation through creative teaching and learning through arts-integrated processes will be considered.

I give permission for the researcher to store securely, analyse and publish data about me (including photos and video data), as part of the thesis and also for this information to be used within future written reports, presentations and journal articles which make reference to this research if judged by me to be reasonable future proof. I understand any data related to me will be anonymised unless I specifically request otherwise by contacting the researcher. So I give my consent for:

- To interview me (recognizing that not all staff will be interviewed) and the interviews to be audio-recorded
○ The photo and/or video data collected to be used in publication / dissemination and through this consent release copyright related to the data collected.

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw myself at any stage of the project without being penalized or disadvantaged in any way. Consent can be withdrawn by contacting the researcher Pavithra Arvind at pm275@exeter.ac.uk and simply requesting withdrawal.

I note that should I have any concerns about this project and its conduct, I can contact the researcher Pavithra Arvind, PhD Research Student from University of Exeter at pm275@exeter.ac.uk; Ph: +1-7343869633 or Lead supervisor Prof. Anna Craft at A.R.Craft@exeter.ac.uk

Name \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Data Protection Act: The University of Exeter is a data collector and is registered with the Office of the Data Protection Commissioner as required to do under the Data Protection Act 1998. The information you provide will be used for research purposes and will be processed in accordance with the University's registration and current data protection legislation. Data will be confidential to the researcher(s) and will not be disclosed to any unauthorised third parties without further agreement by the participant. Reports based on the data will be in anonymised form.

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GRADUATE SCHOOL OF EDUCATION

***Researching Arts-Integrated Creative Learning***  
**Information Sheet: PARENTS**

Dear Parent,

My name is Pavithra Arvind, PhD research student at the University of Exeter, researching transformation through arts-integrated creative learning through the practices at CLCS. I am supervised by Prof. Anna Craft and Sarah Hennessy. My study will explore the experiences of the participants - students, teachers, artists and facilitators through observation, photos, videos, documentation, records, reflective journals, informal interviews and recorded discussions.

I am inviting your child to participate in my study. Participation will mean that:

- Sessions your child is part of might be photographed (for analytic and publication purposes) and audio-recordings and field notes made.
- I may interview your child (recognizing not all children will be interviewed) and the interviews will be audio-recorded. Any interviews would be organised according to mutual convenience. Transcripts of any interview/s with your child will be checked by your child for accuracy and to add anything further.
- I will have access to reflective journals, work product, discussions and documentation about your child, class and projects.
- You are welcome to contribute your own observations of children's learning and transformation (methods to be agreed in discussion with the researcher).

All data collected will be stored confidentially and names of the participants will be anonymised unless they specifically request otherwise. Data collected (including consented photo and video data) might be used in the thesis and if judged by me to be reasonable proof - within future written reports, presentations and journal articles which make reference to this research.

The research is motivated by an exclusively scientific aim. No commercial interests or conflicts of interests are involved in the conduct of the study. Given the nature of the research study, there seems to be no danger of harm that might be caused to the participants.

The research will be conducted adopting the University's Code of Ethical Conduct which states documentation will only take place with the permission of participants. Consent will be obtained through the attached informed consent form. If you participate, you have the *right to withdraw at any time*, for any and no reason, by request to me. In this case no data concerning you will be used.

Your support and your child's involvement in this research will help contribute towards the understanding of creative change through arts. I am most grateful for your co-operation and participation.

If you would like to ask any questions about the study or for further information, please do not hesitate to contact me at [pm275@exeter.ac.uk](mailto:pm275@exeter.ac.uk) / +1-734-3869633 or my lead supervisor Anna Craft at [A.R.Craft@exeter.ac.uk](mailto:A.R.Craft@exeter.ac.uk)

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GRADUATE SCHOOL OF EDUCATION

Researching Arts-Integrated Creative Learning
Informed Consent Form: PARENTS

I have read the accompanying Information Sheet and I understand that my child's teacher has consented to have the researcher visit the classroom as part of her research into Creative learning in Arts. I understand that signing this consent form means that I am willing to have the researcher observe learning and teaching in my child's classroom and interact/interview with him/her when appropriate to get children's perspectives on the teaching and learning that occur in his or her classroom. I give my consent for:

- My child to part of the group being observed during the research period, during which time teaching and learning situations may be photographed (for analytic and publication purposes), and audio-recordings and field notes will be made.
• Accessing reflective journals, work product discussions and documentation including photos and audio-visual data about your child, class and projects. And, copies of my child's work to be made to be used for illustrative purposes (recognizing that not all children's work will be involved).
• To interact with my child and have informal discussion and/or interview your child (recognizing not all children will be interviewed) and the interviews will be audio-recorded. Any interviews would be organised according to mutual convenience. Transcripts of any interview/s with your child will be checked by your child for accuracy and to add anything further.

I understand that I am also, welcome to contribute my own observations of children's learning and transformation (methods to be agreed in discussion with the researcher).

I give permission for the researcher to store securely, analyse and publish data about my child (including photos and video data), as part of the research and for this information to be used within future written reports, presentations and journal articles which make reference to this research if judged by me to be reasonable future proof. Through this consent, I release copyrights related to the data collected. I understand that any data relating to my child will be anonymised unless I specifically request otherwise by contacting the researcher.

I understand that my child's participation is voluntary, that I can choose not to participate in the project and that I can withdraw my child at any stage of the project without being penalized or disadvantaged in any way. I understand that if I do not wish my child to participate in this research, any data collected relating to your child will not be used and analysed. Consent can be withdrawn by contacting the researcher Pavithra Arvind and simply requesting withdrawal.

I note that should I have any concerns about this project and its conduct, I can contact the researcher Pavithra Arvind, PhD Research Student from University of Exeter at pm275@exeter.ac.uk; Ph: +1-7343869633 or Lead supervisor Prof. Anna Craft at A.R.Craft@exeter.ac.uk

Name \_\_\_\_\_

Name of your child: \_\_\_\_\_ Class: \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Data Protection Act: The University of Exeter is a data collector and is registered with the Office of the Data Protection Commissioner as required to do under the Data Protection Act 1998. The information you provide will be used for research purposes and will be processed in accordance with the University's registration and current data protection legislation. Data will be confidential to the researcher(s) and will not be disclosed to any unauthorised third parties without further agreement by the participant. Reports based on the data will be in anonymised form.

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