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Curriculum Enactment, Challenges and Enablers for Change and Transformation in Early Childhood Education

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ABSTRACT

This research study examines the ECE curriculum in the changing and evolving landscape of early childhood care and education in a diverse and globalized society and world that is becoming increasingly connected via advances in communicative technology. The study aimed to explore the relationship between the enacted curriculum and the intended curriculum as guided by the national curriculum framework in diverse early childhood education settings in Singapore. With broad objectives framing the study, an exploratory sequential QUAL-quant mixed methods research design was adopted. The first phase involved visual ethnography and netnography, as well as interviews with twenty-two teacher participants. In-depth interviews with five of these twenty-two participants provided a greater depth of understanding of the perspectives and experiences of the early childhood educators. These interview findings, together with participant-generated data were collated in the qualitative phase. A survey instrument was designed drawing on the data derived from the first phase of the study, as well as relevant research literature. Mixed methods research was considered as it is able to integrate qualitative and quantitative data collection techniques; giving voice to participants and allows a greater comprehensiveness by addressing the research questions through complementary approaches. The qualitative phase enabled a more detailed investigation on curriculum enactment and the challenges faced by teachers in ECE settings while the quantitative allowed a more objective description of various aspects of curriculum delivery and challenges faced. The study also identifies some of the enabling conditions that have allowed transformation and positive change within the context of early childhood services in Singapore. The thesis also argues for the development of a sustainable and future-oriented approach to the curriculum through the blending of approaches that include the adoption of not only the national curriculum guidelines, but also more international modern approaches that challenge localized practices and traditions. It

also contends that a pedagogical third space in the curriculum allows for a more inclusive approach that is both culturally and practically relevant. The implications of this study are tied to teacher preparation, professional development, in-service learning and future-oriented curriculum development and research directions.

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LIST OF ACRONYMS

AOP	Anchor Operators
ASD	Autistic Spectrum Disorder
COP	Communities of Practice
CPD	Continuing Professional Development
DAP	Developmentally Appropriate Practice
DOW	Discovery of the World
ECCE	Early Childhood Care and Education
ECDA	Early Childhood Development Agency
ECE	Early Childhood Education
ECERS-R/E	Early Childhood Environment Rating Scale Revised/Extension
EE	Experiential Education
EIPIC	Early Intervention Programme for Infants and Children (Singapore)
EYDF	Early Years Development Framework
IDP/IEP	Individual Development Plan / Individual Education Plan
LEA	Language Experience Approach
MCYS	Ministry of Community Development, Youth and Sports
MELE	Measure of Early Learning Environments
MELQ	Measuring Early Learning Quality and Outcomes
MI	Multiple Intelligences
MM	Montessori Method
MODEL	Measure of Development and Early Learning
MOE	Ministry of Education
MSD	Motor Skills Development
MSF	Ministry of Social and Family Development
MTL	Mother Tongue Language/s
NEL	Nurturing Early Learners
NIEC	National Institute of Early Childhood Development
OECD	Organization for Economic Co-Operation and Development
OT	Occupational Therapist
PCF	PAP Community Foundation
PD	Professional Development
PQAC	Preschool Qualifications Accreditation Committee
PS21	Partnerships for 21st Century Learning
RE	Reggio Emilia
SEL	Social Emotional Learning
SLT	Speech and Language Therapist
SN / SNE	Special Needs / Special Needs Education
SPARK	Singapore Preschool Accreditation Framework
STEM	Science Technology Engineering Mathematics
STEAM	Science Technology Engineering Arts Mathematics
TSLN	Teaching Schools Learning Nation
UNCROC	United Nations Convention on the Rights of the Child
UNESCO	The United Nations Educational, Scientific and Cultural Organization
WDA	Workforce Development Agency
WSQ	Work Skills Qualification

CHAPTER 1: INTRODUCTION

1.1 Overview

This study examines curriculum enactment, change and its transformation in early childhood education (ECE) in Singapore with the background of globalization and international ECE policies and trends. There has been an impetus for change in the Early Childhood Care and Education (ECCE) sector in Singapore as a consequence of a number of international studies that demonstrated a need for greater emphasis on the value of quality and accessible early childhood education provision (Lien, 2012; Pascal & Bertram, 2018). This impetus has led to the formulation of more funded, government-initiated policies that aimed to facilitate and nurture the development and improvement of ECCE provision within the country (Early Childhood Development Agency (ECDA), 2013, 2018; Tan, 2017). There has also been a concerted effort in the implementation of the national curriculum framework guidelines since 2003 in Singapore (Choo, 2010; Tan, 2017). The question, however, is how early childhood care and education is enacted in the context of a globalized society in the 21st century. Internationally, there has been a debate on whether national curriculum policies and frameworks have become overly prescriptive (Birbili & Myrovali, 2020) and thereby undermining the instructional autonomy of the teacher while learners are not given ample opportunity to be active constructors of their knowledge (Christensen & Aldridge, 2013; Harper et al., 2007).

Educators in today's learning environments need to critically reflect on their own teaching and pedagogical practice to challenge the status quo and to rethink assumptions in order to allow critical perspectives to evolve through reflexivity (Grenier, 2016). This reflexivity better creates an awareness of disparities so as to make for a more equitable and cultural democratic learning environment (Christensen & Aldridge, 2013; Darder, 2012). In this chapter, the

research questions are presented, and the rationale and significance of the study will be explained. A brief overview of the research design and chapters in this thesis will also be presented.

1.2 Significance of the Study

Influences impacting the way curriculum is enacted are multiple and complex (Livingston et al., 2015; Soler & Miller, 2003) ; this includes cultural historical theories and models (Vygotsky & Luria, 1978;Vygotsky, 2004). Decisions about curriculum content and the processes of enactment in early childhood settings are continually challenged and contested by historical, ideological, cultural, economic, theoretical, pragmatic and political influences (Livingston et al., 2015). Thus, the curriculum decision-making process in each and every ECE setting is affected by multiple factors that are varied in different contexts and settings (Nuttall & Edwards, 2004; Wood & Hedges, 2016). The national curriculum in Singapore (Ministry of Education (MOE), 2013b) has provided a framework for ECE settings for more than a decade since its first introduction. However, the influx of internationalized approaches and other influences have created a tension and dilemma for early childhood educators in the country to negotiate a curriculum that fits within guidelines and also meets the needs and expectations of the community it serves. The ECE curriculum in Singapore has been evolving and transforming under the various influences, and early childhood practitioners are also faced with challenges and concerns that have arisen from a complexity of factors. This study was designed to explore the complexities of delivering an effective curriculum in Singapore at the present time.

1.3 Central Research Questions

Within a context of a multicultural and relatively cosmopolitan society, early childhood service provision has been diverse in the Singapore context (Ang, 2006; Lim, 2017). An increasing trend of dual income families that have both parents working means that the demand for early

childhood education and care provision has become a necessity (Ministry of Trade and Industry (MTI), 2019). Despite a centralized administration for early learning centres, there is still quite a lot of variation in terms of programme content, and the kinds of teaching and learning approaches adopted in early childhood education centres. The spectrum of variation in curriculum delivery is to meet the diverse needs of learners and their families, due to the diverse socioeconomic strata, ethnic and cultural groups in Singapore (Ang, 2006; Retas & Kwan, 2000). In the past, the perception of what a ‘quality’ curriculum in Singapore looked like was often judged arbitrarily by enrolment numbers, parental expectations, and the local reputation of each centre. Perceptions of centre quality in the population was largely dependent on parental expectations and whether the centre’s reputed educational philosophies, pedagogical practices and curricular emphasis met with these expectations and demands (Ang, 2006). In 2003, a standard national preschool curriculum framework, the Nurturing Early Learners Framework or NEL (MOE, 2013b) was introduced in the effort towards laying down the foundation framework for ECE in Singapore and provide a guide in the context of a culturally diverse background of early childhood education and care provision in Singapore.

It has been argued that the discourse embedded in this framework is permeated by competing tensions and complexities that surround the curriculum which supports learning and education in the early years (Ang, 2006). These tensions and complexities include the goals of education, cultural diversity and pluralism, the balance between providing accessible, equitable and affordable education and care in the early years for all levels of society, including the lower socioeconomic groups, while meeting the expectation and demands of the middle and upper income groups in the population (Choo, 2010; Tan & Dimmock, 2015). Summarized within the iTeach principles from the NEL framework (MOE, 2013b), the key principles include an integrated approach with teachers as facilitators of learning, purposeful play-based learning, quality interactions, authentic learning experiences and the child as an active constructor of

knowledge in a holistic curriculum. In order to support the principles outlined by the national curriculum framework, it has to be upheld and sustained by a clear and coherent position from the state, policy makers and the centres themselves. Thus, the questions raised in this study were designed to examine and throw light onto the diverse practices within different centre settings and to raise public awareness and consciousness in order to find solutions to related issues, concerns and challenges faced by early childhood educators themselves.

In view of the complexities faced by teachers in delivering the early childhood curriculum in Singapore, this study was designed to throw light onto how teachers perceive their role as educators and how they enact the curriculum with the national curriculum framework, while meeting the needs and expectations of a culturally diverse and heterogeneous population through their children, families and the community. Accordingly, the study has been designed to answer the following research questions:

- How the early childhood curriculum is enacted in diverse types of early childhood care and education (ECCE) services in Singapore?
- What challenges do teachers face in delivering the curriculum guided by the national curriculum framework?
- What are the enabling conditions and what further support is required in order for teachers to be effective in their delivery of the Singapore early years curriculum?

1.4 Organization of the Thesis Chapters

This thesis is comprised of nine chapters. This chapter has provided a brief overview of the rationale and significance of the study and presented the main research questions for the study. Chapter 2 provides a review of relevant literature on the topic of enacting the early childhood curriculum within different cultural contexts. The particular focus is on the teaching and learning experiences within the context of a multilingual and multicultural country such as Singapore. Cultural models, critical pedagogy and pedagogical hybridity are some key

concepts that have been used by some researchers as foundations of transformational pedagogy (Apple, 2011; Ong, 2019b; Shpeizer, 2018) and these concepts are explored in this chapter. The shaping of learning and work environments through communities of practice (Wenger, 2001) provide the cultural milieu of early childhood settings. Comparative and cross-cultural perspectives enable us to better understand the areas of convergence and divergence in practices in local, regional and globalized contexts, while the use of a variety of theoretical lenses including that of postmodernist perspectives (Patton & Prince, 2018; Slattery, 2012a; Sumsion, 2005) provides different angles to the analysis and interpretation of the multiple sources of data.

Chapter 3 is an overview of the background and context of the localized research setting of Singapore. It provides historical and cultural backdrop of the early years education landscape and the major milestones in the development of preschool education in Singapore. Next, an overview of the national curriculum framework NEL (MOE, 2013b) is provided, including the principles and domains of learning that will be referred throughout the thesis. Local funds of knowledge in the homes and communities of the country support the multicultural and bilingual policy in the educational context of years education in Singapore (Gupta, 2014b; Hedges, 2012). The challenges to offer a more inclusive policy in mainstream education and the provision for children with additional needs is a key issue in early years education in the country (Yeo et al., 2016). Another aspect explored is that of teacher qualifications and continuing professional development (PD). A model for PD with educators and Singapore's master plan for career pathways and continuing professional development is also reviewed in this chapter. Finally, the role of parents, the community and place-conscious education is explained, as this serves a significant role in better understanding some of the issues and concerns, as well the uniqueness of early years education in Singapore.

Chapter 4 presents the philosophical foundations, the rationale and justification for the research design. The mixed methods research is explained and justified. The study involved two phases of data collection. The first phase involved qualitative ethnographic methods of semi-structured and open-ended interviews, the use of field observations and the use of visual and participant-generated materials or artefacts. Non-participant observations in visual netnography and during centre visits did not entail any intervention or direct interaction with the class or activities with the group. Using a sequential design, the second phase involved a random sample survey of teachers (n=92) in Singapore, which was designed to corroborate the findings of the qualitative study with a larger sample of teachers in Singapore.

Chapter 5 presents the findings from the semi-structured and open-ended interviews completed in phase one. The stories and perspectives of five early childhood practitioners are presented in a narrative format, providing in-depth understandings of teachers' perspectives. Next, the data from interviews with twenty-two teacher participants was presented and interpreted. The three main themes presented in this chapter are: i) curriculum decision-making and processes; ii) change and transformation; and iii) challenges, issues, and concerns of early childhood practitioners.

Chapter 6 presents the description and analysis of the 'Curriculum-in-Action' and includes the findings that were collated during scheduled centre visits and 'open house' events for the data collection. The methods used include interviews, conversations, participant and non-participant observations, as well as the analysis of documents and visual artefacts collated. Another source was the use of internet generated data from social media from five selected centre settings. The findings were coded and categorized to establish trends found in practices, strategies and kinds of activities found in these centre settings.

Chapter 7 presents the findings from the survey which was completed with the 92 teacher participants. The survey was designed to substantiate some of the preliminary data in phase

one of the study and to provide evidence of certain aspects of the curriculum, including the major approaches and forms of pedagogical documentation. It provided greater details and insights into curriculum implementation, pedagogy and assessment. It also further investigated teachers' perceptions of their work environments, the role of digital and other technologies as well as teachers' needs for professional learning and development.

Chapter 8 is a consolidation of findings and a discussion of possible answers to the research questions based on the synthesis from all the data. Challenges identified as areas in need of further improvement are explored. This chapter explores how these findings work towards a curriculum solution that brings together many aspects of modern contemporary early childhood education. It presents an overall picture of the enactment, change and transformation in the ECE sector in Singapore. In addition, the implications of this study suggest ways of overcoming current challenges, allaying concerns faced, and building bridges towards the future in education in the early years in Singapore.

Chapter 9 concludes the thesis with a discussion on how the findings from this study work towards curriculum solutions for the 21st century. Key findings are discussed in relation to the implications for effective implementation of curriculum in a diverse, pluri-lingual society. Recommendations for future policy and practices, as well as future research, are presented as suggestions for building the strength of the education system starting in the early years in Singapore. The next chapter presents the review of literature.

1.5 Chapter Summary

This chapter provides an overview of the significance of the study and presents the main research questions. It gives a synopsis of the subsequent chapters of the thesis. The terms teachers, practitioners and educators have been used almost synonymously throughout the thesis. More specifically, practitioners and educators has been used here to refer to those who have more specialised skills and may include the centre manager or principal in the centre.

CHAPTER 2: THE CURRICULUM

This chapter comprises of three main sections with a brief introduction to the literature review search strategy. The first main section opens with an examination of some of the theoretical frameworks and dominant approaches and perspectives in modern day early childhood education, the influences on curriculum theory, the relationship between the developmental theory and the curriculum, as well alternative conceptions of the curriculum. Next, the second main section elaborates on the use of a critical lens, as well as comparative and cross-cultural perspectives are justified and the influence of globalization and the need for a curriculum that prepares the young learner of the 21st century with the necessary dispositions and competencies will also be looked at through existing literature. In the third section of this chapter, more complex issues of how the curriculum may transpire through the interaction of cultures and ideologies and the role of the teacher practitioner, the influence of parents, partnerships and the role communities of practice play in the enactment of the curriculum. Finally, the influence of teachers' knowledge, beliefs, and attitudes and how this will impact teachers in their roles in the classroom are examined through existing research literature.

2.1 Database management

Relevant and the most current research literature was done through database search, mainly through the university's online electronic resources based on key words in the research questions that included key words such as 'early childhood curriculum' and the context of 'Singapore'. The library electronic data base includes collections such the ProQuest Central Collection, JSTOR e-books, SAGE Open Access Journals and other e-journal and other online resources. Current trends within international and the Singapore context were identified in the literature reading and key words were identified. The headings of sub-sections in the following two chapters provided the key words that were used in the literature search. During the process

of data collection and analysis, beginning with the internet-generated data from social media and coding process, these code categories were also used in the literature search. The literature was organized into categories using an online literature data management system. As the theoretical and conceptual framework was worked out, these also provided the key words in the database searches. These were organized and referenced based on their relevance, date of publications and author/s and retrieved when required.

2.2 The Early Childhood Curriculum

Historically, many ideas about early childhood education originated from Western Europe. Locke, Pestalozzi, Froebel, and Montessori were some of those that were hugely influential in the early 19th century in early childhood education (Cleverly & Phillips, 2017). During the 1900s, early childhood development in the United States (US) and many parts of the world was focussed on the underprivileged, disadvantaged and minority families and was supported by religious and philanthropic organizations. Over time, the attention moved from charitable early childhood services to providing out-of-home services and programmes for children from middle-class families (Willekens et al., 2015). In North America, interest and development in standardized developmental assessment grew in parallel with the development of early childhood provision with the neoliberalist market economy (Connell, 2013).

Child development and psychosocial theories have provided the basis of many modern-day practices. Practical applications from these theories have been developed (Shonkoff & Fisher, 2013). For example, parents and early childhood caregivers welcomed the idea of B.F. Skinner's theory (Schlinger, 2011; Skinner, 1953) of the power of positive reinforcement in behavioural management strategies. Amongst other theories, Gesell's theory of maturation readiness (Dalton, 2005) was translated into organized sequence of developmental milestones (Vereijken, 2010). This approach to understanding child development was readily adopted by paediatricians and middle-class parents to monitor the progress of child development and more

recently by early childhood educators themselves (New, 2015). Together, these developmental theories and research have profoundly influenced both the common person and professional perceptions of what good parenting and healthy development is. More recently, evidence-based research that has shaped early childhood education policies include the Perry Preschool and Abecedarian projects in the US (Parks, 2000; Shonkoff & Fisher, 2013). These longitudinal studies have supported the value of public funding and investment in early interventions measures for young children living in impoverished and low socioeconomic conditions (Heckman, 2006). Scholarship has also contributed to a professional discourse of early childhood education practices and on issues such as school readiness and achievement (Lopata et al., 2005; Weiland, 2016). More recently, there has been critique of relying on a curriculum solely based on child development theories and this is further elaborated on in the next section.

The curriculum, whether in an early childhood, primary, secondary, or tertiary setting, encompasses several commonalities. ‘Curriculum’ is a term of Latin origin and related words include ‘current’ and ‘courier’. The translation into English has a meaning that implies ‘a course’ and thus a running course such as a marathon or the hurdles is a metaphor for ‘a course of study’ (Ellis, 2003). Within the next section, some definitions of the curriculum will be discussed. The review will look at how early childhood development and developmental theories have influenced the way the curriculum has been conceptualized.

2.2.1 Curriculum Theory vs Practice

Curriculum theory may be viewed as a set of related statements, definitions, assumptions and propositions that gives meaning to phenomena related to the concept of a curriculum, its development, its use and delivery and its evaluation (Beauchamp, 1982; Hatch, 2011). This section looks at some definitions of the curriculum and aspects of the translation of curriculum theory into practice.

Definitions of the Curriculum

The definitions of curriculum lean towards either prescriptive, descriptive or a blend of the two forms (Ellis, 2003; McBrien & Brandt, 1997). A prescriptive curriculum is therefore the planned or intended programme with a future orientation and an idea of things to come. This curriculum may therefore be viewed metaphorically as a ‘road map’ and a pre-existing artefact. The analogy has been made to a ‘master plan or plan for all experiences that all learners encounter under the direction of the school’ (Ellis, 2003, p.4; McLachlan, Fleer, & Edwards, 2013; Wood, 2004). The argument against a ‘prescriptive’ curriculum is that it has a tendency towards becoming too scripted, limiting further exploration based on the boundaries prescribed (Wood, 2004).

The other form of a curriculum is often defined as a ‘descriptive curriculum’ which is what transacts when a planned curriculum is engaged, implemented or ‘executed’, and what is actually experienced in the classroom rather than according to what should happen (Ellis, 2003; McBrien & Brandt, 1997). The descriptive curriculum has been defined by Glen Hass (1987) as “the set of actual experiences and perceptions of the experiences that each individual learners has of his or her programme of education” (1987 as cited in Ellis, 2003, p.5). The definition of the descriptive curriculum tends to be retrospective in nature, rather than predictive, and this allows close examination of this enactment and space for reflection and introspection (Ellis, 2003).

However, a third way of defining the curriculum is to consider the plan as well as what happens when the plan is implemented, which is one that uses both ‘prescriptive’ and ‘descriptive’ forms. The definition by Ronald Doll (1996) is ‘the formal and informal content and process by which learners gain knowledge and understanding, develop skills, and alter attitudes, appreciations, and values under the auspices of the school’ (Doll, 1996, p.15). This definition

considers the planned curriculum objectives and intentions of the school. The relationship between child development theories and the curriculum is examined next.

The Relationship between Child Development and the Curriculum

Historically, the practice in nursery schools was associated with the goals and findings of child development researchers and the critical nature of this relationship has withstood the challenges of time (Barbarin & Miller, 2009). Familiar figures in child development theories include Gesell, Skinner, Erikson, Piaget and Vygotsky from whom various theories of maturational, behavioural, psychodynamic and constructivist development have provided the basis and foundation of curriculum theory (File, Mueller, & Wisneski, 2012). The critical position of child development theories and research in early childhood education and care is demonstrated in numerous ways. The relationship between child development and early childhood curriculum is most persuasively reflected in the use of ‘developmentally appropriate practice’ (DAP) as the principles of National Association for the Education of Children (NAEYC) (Bredekemp, 1987; NAEYC, 2009). The dissemination of DAP principles as a theoretical framework and perspective for framing practice has been dominant in the field of early childhood education in many countries, albeit also critiqued (Lim, 2017; Ryan & Grieshaber, 2005).

There are those who have also critiqued the relationship between child development and the curriculum including critique arising from postmodern perspectives (Dalton, 2005; File et al., 2012). These critiques have centred around the themes that include concerns with how the foundations of child development knowledge have been applied directly to teaching without taking into consideration differences in culture, languages and social contexts (Cahill & Gibson, 2012; Lubeck, 1998).

Child development research and theories have not always been directly connected to applications in practice and the curriculum, as this is not always in the interest of the scholar. Some have felt that the dominance of developmental theories as the foundation of early childhood education may be detrimental, as teachers may focus on the predicted development stage of the children and underestimate the children's abilities, thereby presenting them with less challenging experiences (Barbarin & Miller, 2009).

Another group of scholars, belonging to the postmodernist tradition, have questioned the nature and construction of childhood development and raised the concern that child development knowledge and understanding has been assumed to be scientific, objective and rational, but not viewed as being socially-constructed (Cannella & Viruru, 2004; Rogoff, 2003b). The knowledge base from which curriculum developers draw their understanding and developmental sequences as identified by researchers ensure that similar specific questions continue to be raised and with findings collated by the same group usually confirms expectations (File, 2012). In focusing on 'universal developmental sequences', the criticism is that child development understanding lacks sufficient attention paid to context and diversity, thus framing discourses on a specific normal while not allowing for sufficient individual variation (Bloch, 2000). Consequently, this implies a singular 'best and most relevant' theory of learning and development or a universal instrument to evaluate development or learning outcomes (Taguchi, 2008).

The issue with developmental theory-based curriculum has been that of the lag and slow progress in the updating and widening of traditionally accepted early childhood theories that have been accepted despite the shifts (Lee & Johnson, 2007). One example is that of the maturational theoretical perspective that has been considered somewhat outdated and has been challenged for supposedly reducing complex behavioural, perceptual and learning processes to genetic factors (Dalton, 2005).

Mostly, however, the dominant discourse offered by childhood development and developmental psychology has been relatively unscathed by postmodern approaches as it draws its strength from the rejection of multiplicity and diversity (Burman, 2008; Moss & Pence, 2006). Thus, while the developmental theories of Piaget (Ojose, 2008; Piaget, 2001) and Vygotsky (Ivic, 1994; Vygotsky & Luria, 1978) are not practical in deciding the content to be included in the early childhood curriculum, they do have implications on how the learning environment and learning experiences are mediated (Hatch, 2011). In the next section, the research literature around several major theoretical frameworks and approaches that have been adopted in early childhood education contexts will be discussed.

2.2.2 Theoretical Frameworks and Dominant Approaches in ECE

There is a continuing debate at national and international levels over certain aspects of the early childhood curriculum in contemporary research. Three critical themes have been identified by Wood and Hedges (2016) within curriculum theory as content, coherence and control. While curriculum content is often defined as subject matter knowledge, skills, and dispositions and values that constitute the programme, coherence is viewed as how content is structured systematically sequentially or in stages to ensure advancement in the learning process. In early childhood education, coherence also implies alignment with various strategies such as play, pedagogical and assessment approaches, availability of materials and resources and home, centre and community relationships and partnerships. The third consideration is that of control, which refers to the ranges of governmental practices and national ECCE policy frameworks (Dahlberg, Moss, & Pence, 2013; Gupta, 2014a).

With the plethora of choices provided by various early childhood education service providers, one wonders about the philosophies and theory to practice foundations that can be found. There are several 'internationally' recognized curriculum frameworks that are acknowledged and practiced in a great proportion of ECCE centres and service providers. These major early

childhood curricular approaches have been adapted in many settings both locally in Singapore and globally around the world. Much international research has been conducted with each of these major approaches, often extending beyond the early childhood level. However, based on the focus in this research, a number of these studies within early childhood settings will be examined next.

In a directive for education, the Organisation for Economic and Co-operation and Development OECD (2004) report 'Starting Strong: Curricular and Pedagogies in Early Childhood Education and Care', outlined a number of curricular approaches and pedagogical approaches during a workshop for national coordinators of early childhood policy hosted by the Ministry of Education and Science in Stockholm in June 2003. There were five early childhood education and care curricula presented by author-advocates at the event. The curriculum approaches included Reggio Emilia (RE) (Edwards, Gandini, & Forman, 2012), Te Whāriki (MOE, New Zealand (NZ), 2017), Experiential Education (EE) (Laevers, 2005), High/Scope (Hohmann & Weikart, 2000; Holt, 2010) and the Swedish Curriculum (Taguma et al., 2013). These curricula are known in terms of their distinguishing qualities, although there are strands common to all five of the curricula. Although it may be noted that these curricula have Euro-American origins and their distinct Western origins of philosophy is unambiguous, many of the features of these approaches have been endorsed and adapted by 'modern' centre-schools in many parts of the world including Asia and Singapore (Gupta, 2015; Lim, 2015). The first of these, the RE-inspired approach, will be examined next in the context of relevant literature and research.

Reggio-Emilia (RE)

Carla Rinaldi in 'Re-imagining Childhood' (Rinaldi, 2012) emphasized a few the key concepts of the Reggio-Emilia inspired schools. The image of the child, as for example, the "child as a

citizen”, “the competent child” and “the child as possessor of rights” are important foundations for the relationship between the adult and the child (Rinaldi, 2012, pp.18-19; Tarr, 2002). Research in the RE-inspired settings have consistently positioned the teacher as the researcher and qualitative approaches in the form of ethnographic case studies or phenomenological approaches have quite traditionally been adopted (Edwards & Gandini, 2015). The book entitled *The hundred languages of children* (Edwards et al., 2012), provides a rich tradition of creativity in the RE approach. Fernández Santín and Feliu Torruella (2017) describe a vision of creativity and arts-based pedagogy that does not rely on reproducing, copying or re-interpretation of a specific original art work or artist, but relies on spontaneity, individual creativity, and being constructivist in nature (Eisner, 2002). Gencer and Gonen (2015) carried out a study on 18 six-year olds over a period of three months during which they underwent a RE-inspired instruction project in a Turkish preschool. Torrance Tests of Creativity (Torrance, 2000) were used pre- and post-project to assess the effect on the children’s creative thinking skills. The criterion included qualities such as fluency, originality, flexibility, and elaboration. The analysis of the creativity factor scores pre- and post-project tests revealed that there was a significant quantitative difference in the fluency, originality and elaboration subscale scores of the Torrance Tests of Creative Thinking in favour of the post-project creativity scores (Gencer & Gonen, 2015). This supports the approach that allows young learners to follow their natural curiosity and creative thinking skills instead of relying on pre-packaged and scripted programmes and projects.

Other studies suggest that variables such as economic and other socio-cultural factors also play a role in the level and type of creative thinking and activities that take place in RE-inspired early childhood education settings. One example of such a study was done by Bond (2014) who conducted a comparative case study of two Reggio preschools, from contrasting socio-economic backgrounds. There were commonalities found in both sites with findings such as

primarily student-initiated music-making, often in the form of spontaneous vocalizations were occurring at a higher frequency in both settings. However, it was found that the centre with children from the more privileged, high socioeconomic status groups were found to be more prolific and elaborate but these could be attributed to other factors such as funding and the preservation of teacher autonomy (Kilgallon et al., 2008a). Thus, confounding variables, such as socio-economic factors influence the degree positive outcomes in different RE-inspired settings in this study.

Ethnographic projects such as those by Gandini, Caldwell and Schwall (2015) as well as Inan, Trundle, and Kantor (2010) provide detailed examples of the RE approach to *progettazione* or project-based and inquiry learning. These offered some perspectives in the use of the approach in teaching natural sciences and offering authentic learning experiences. In the *Amusement Park for Birds*, the process of the project and documentation by a group of educators is explained (Gandini et al., 2015). One aspect of the project involved creating a fountain that also led to the children's interest in related topics such as waterfalls, water pressure, mechanism of water or water mills and theories of water transformation (Gandini et al., 2015; Lin, 2014). Conversations, dialogue, and illustrations with and by the children provided visualizations and further inspirations for working on the project. The children worked with various materials including paper, clay, wire and paint which are expressive forms of their other languages to represent and construct the models of their ideas (Gandini et al., 2015).

Inan et. al. (2010) provide a thorough exploration of the processes and possibilities in a RE-inspired laboratory preschool. The findings in their study demonstrated that the educators in the RE-inspired preschool were able to provide an inquiry-based learning environment that was socially constructed and integrated into daily curriculum (Inan et al., 2010; Lanphear & Vandermaas-Peeler, 2017). The study also found that both peer culture and school culture

aspects of the learning context were important in creating meaningful and challenging learning opportunities for participation through an inquiry-based approach.

Lanphear and Vandermaas-Peeler (2017) investigated the process of inquiry-based learning and intersubjectivity in a single-site case study design at a RE-inspired preschool. The focus of the study was on children's inquiry and intersubjectivity and teacher guidance behaviours observed in a RE-inspired mixed age preschool environment. The findings in this study indicate that the activity context, the age of the children, and teacher guidance influenced inquiry-based learning, and intersubjectivity behaviours. Child agency and the voices of children has been highlighted as one of the key features of the RE-inspired curriculum (Robson & Mastrangelo, 2017). These examples from current research literature provide the basis of the influence that the RE approach has had around the world and also in many early childhood education settings in Singapore (Bull et al., 2018). The next approach that will be examined is that derived from Gardner's theory of multiple intelligences (MI) (Gardner, 1993). The MI theory approach has also impacted early childhood education in the Singapore context.

Gardner's Multiple Intelligences Theory (MI) Approach

The MI theory was first proposed by Howard Gardner in his book *Frames of Mind* in 1993. This theory challenged the historical view of intelligence as a fixed quantity, while Gardner preferred to describe cognitive ability in terms of eight modalities that include verbal-linguistic, logico-mathematical, visual-spatial, musical-rhythmic, bodily-kinaesthetic, interpersonal, intrapersonal and naturalistic forms to intelligence modalities (Gardner, 1993; Phillips, 2010). Several studies have demonstrated the usefulness of Gardner's MI Theory as a mediator to access content in the curriculum so as to grasp concepts through a variety of modalities and domains based on their abilities and competencies (Murray & Moore, 2012). It also provides a theoretical basis for differentiated instruction by integrating multiple intelligences and

preferred learning styles in problem-solving and finding solutions based on their abilities and competencies (Richards, 2016). This theoretical premise suggests that the application of the MI theory and preferred learning styles approach can facilitate the implementation of a differentiated and more inclusive classroom as it has found applications in classrooms with learners, either gifted or diagnosed with learning disabilities (Eissa & Mostafa, 2013; Katz et al., 2002; Moran et al., 2006).

The implementation of this theory has been documented in various educational settings at different levels and age-groups, including adults learners (McClellan & Conti, 2008). However, a number of studies have also been done within the early childhood age range (Krechevsky & Gardner, 2006; McNamee et al., 2002; Mei-Ju et al., 2014). The range of studies examined here includes those on the development of standardized tools and measures based on the MI theory, its impact on learner achievement, cognitive development and other areas of the learning (Delgoshaeia & Delavaria, 2012; Partani & Sonawat, 2013). Critics of a curriculum based on universal developmental sequences believe that this approach does not pay sufficient attention to diversity, contexts and individual variation (See section 2.2.1) and this supports a MI theory-based approach (Murray & Moore, 2012; Moran et al., 2006). Much research has also been conducted on Gardner's MI approach in terms of inclusivity (Murray & Moore, 2012), giftedness (Moran et al., 2006) and disabilities (Katz et al., 2002), project and inquiry learning (Ozdener & Ozcoban, 2004), authentic (Plucker et al., 2007) and even play-based learning (Lowenthal, 1997). Based on research literature, there are several implications in early childhood classroom settings that may help early childhood practitioners better implement curricula that facilitate learning experiences such as assisting children to discover their own interests and abilities and enable practitioners to better plan learning activities that nurture both dominant and non-dominant intelligence modalities through various teaching and learning styles and approaches (Beceran, 2010; Gardner, 2005; Katz et al., 2002; McNamee et al.,

2002). The question raised here is whether the application of the MI theory can facilitate differentiated instruction and cater to learners of diverse abilities and learning style preferences. The current study aims to investigate the various approaches, including the application and influence of the MI theory (Gardner, 1993; Phillips, 2010) in the context of early childhood settings in Singapore (Bull et al., 2018). The use of the Montessori Method (MM) approach is next examined based on current research literature.

Montessori Approach

The Montessori Method (MM) has been around since the early 1900s and was developed by Maria Montessori in Rome, Italy (Bienen, 2014b; Gutek, 2004). The approach is guided by six interdependent and reciprocating principles: i) respect for the child; ii) support for the absorbent mind; iii) allowance for sensitive periods; iv) support for auto-inclusion; v) prepared environments; and vi) protection of the child's rights to learn (Bienen, 2014a). Research has been conducted extensively on the efficacy of this approach in areas such as its impact on cognitive development, fine motor skills, inquiry and science learning (Bhatia et al., 2015; Rinke et al., 2013).

The impact of Montessori education on cognitive development and inquiry-based science learning programmes has been investigated. Rinke, Gimbel and Haskell (2013) used an ethnographic approach in four Montessori classrooms at the elementary levels to investigate the use of the Montessori Method in inquiry-based learning. Over a 10-month period, it was observed that the Montessori classroom culture nurtured the learners' interests, inquiry learning and communication about a variety of topics. The prepared environment gave learners' free choice and the opportunity to select their own materials. The Montessori philosophy is that children should be allowed to explore and investigate topics of their choice until their natural curiosity is fulfilled (Nancy & Winick, 2003). While working in mixed-aged groupings, the

children were encouraged to collaborate and communicate with their peers while helping to mentor the younger learners. Evidence-based explanations were usually teacher-driven. The authors conclude that to support the learner-driven scientific explanations, scaffolding strategies can help to create the construction and evaluation of explanations. This is particularly significant because Maria Montessori's own description of the child constructing and transforming through their own activities would point to a constructivist perspective in Montessori education (Elkind, 2003; Lillard, 2011). This study corroborates the constructivist philosophy of Montessori's theory (Moll, 2004).

Ahmadpour and Kraskian (2015) investigated the influence on the cognitive development through an instrument to measure intelligence of the Montessori approach on a random sample of 80 five-year olds. This study showed that IQ levels of children educated using the Montessori Method were significantly higher than those educated using a conventional approach. This difference in cognitive performance has been attributed to some of the Montessori strategies such as the individualized learning, which is self-directed and self-correcting and reinforces learning (Mooney, 2013), with activities that gradually focus on abstract concepts after concrete learning experiences through activities with stimulating sensations and objective knowledge acquisition (Lillard, 2016). However, the comparison of academic achievement between Montessori and traditional education programmes by Lopata, Wallace and Finn (2005) through standardized measures of mathematics and language arts did not support the hypothesis that Montessori education was associated with higher academic achievement.

Research has also been done in the use of the Montessori curriculum and materials on children with learning differences or special learning needs (SN). Maria Montessori developed a multisensory developmental approach and designed materials that isolate each new concept the teacher presents to the child (Danner & Fowler, 2015; Humphries, 1998). Several strategies

have been used by Montessori educators for children who learn differently or are at-risk of a learning disability. For example, reducing the level of difficulty or increasing tactile-kinaesthetic input, combining Multisensory Structured Language techniques with Montessori Language presentations, together with a number of other strategies (Pickering, 2017; Ryan, 2015). Pickering and McIntyre (1993) did a study with 22 children between the ages of 4.9 to 7.7 years and applied a combination of Montessori techniques and Multisensory Structured Language methods with at-risk children. The use of this combination of approaches demonstrated a reduction of processing errors and enhanced beginning reading skills in the at-risk children (Frankenburg et al., 1985).

The perspectives and perceptions of parents and teachers on Montessori education have also been investigated. A study by Hiles (2018) indicated that parents' perceptions that match with the Montessori philosophy was a significant factor in their rationale for making a Montessori school their choice for their child. The main reasons included the attraction or appeal to Montessori principles, anticipated valuable outcomes and the appeal of the Montessori environment is why this approach is used in a number of ECE settings in Singapore (Bull et al., 2018). Next, the use of the Experiential Education (EE) approach will be discussed in the context of relevant research literature.

Experiential Education (EE)

The third curriculum approach that will be discussed briefly in this section is that of the Experiential Education (EE) curriculum. This is a contemporary approach in education at all levels which has many models in operation various geographical locations including the United States. In the 1970s, it was associated with outdoor and adventure education in particular (Smith, Knapp, Seaman, & Pace, 2010). This curriculum approach is based on the

belief that students grasp certain concepts, skills and values better if they are given opportunities for challenging small group experiences outside the classroom.

Theoretically, the EE approach is supported by Dewey's educational philosophy (Dewey, 2008; Smith & Knapp, 2010). Later, David Kolb's (1984) experiential learning cycle was used to explain how individuals learn through experiencing, reflecting, generalizing and applying the knowledge. Experiential education has been regarded as a holistic education philosophy whereby carefully selected experiences are supported and followed up by reflection, critical analysis and synthesis. Therefore, it requires the learner to make decisions, pose questions, investigate, explore, experiment, solve problem, exercise creativity and construct meaning while integrating earlier prior developed knowledge (Smith et al., 2010). Some educators use the term EE to be equivalent to 'authentic learning' to describe a kinaesthetic, hands-on approach to acquiring knowledge (Hansen, 2000).

Many aspects of EE appear to have impacted educational philosophies and approaches to the curriculum in early years settings. Pedagogical approaches that advocate experiential and authentic learning contexts have become increasingly prevalent in future-oriented curriculum and practices in educational settings in Singapore (Bull et al., 2018; Garvis et al., 2018). The next approach that will be discussed is also used at all levels in educational settings.

High Scope

The High/Scope approach has been an educational philosophy for preschool, elementary, as well as at higher levels of education and began as a programme for disadvantaged and at-risk children in the High/Scope Perry Preschool project (Parks, 2000). Originally, it was an early childhood intervention targeted at high risk, low-income populations. Its principles have been intended for use as an 'open framework' with groups of individuals at various age levels. The framework used in preschool learning has four segments that include adult-child interactions,

the learning environment, daily routines, and assessment. The core of the framework that involves all four segments is that of ‘active learning’ based on key developmental indicators. These key developmental indicators are divided into five categories of approaches to learning, language, literacy and communication, social and emotional development, physical development, health and well-being, as well as the arts and sciences (Holt, 2010). ‘Active learning’ which is a key tenet of the High/Scope approach has some similarities to the Experiential and authentic learning experiences in that children are proposed to learn most optimally when engaged in active experiences with people, materials, events and ideas rather than direct transmissive teaching approaches (Hohmann & Weikart, 2000; Holt, 2010). The active child thus creates his or her own knowledge within the frames of culture, developmental maturity, as well as the human and material environment of the school-centre (Narey, 2017). There has been successful adaptation of the High/Scope approach in many countries globally outside the United States (Hohmann & Weikart, 2000). The High/Scope approach adopts a conflict resolution and problem-solving approach when it comes to behavioural and disciplinary issues and the learner is brought into a discussion of concerns so as to create an awareness of the impact of their actions on others (Holt, 2010).

In the High/Scope curriculum, the child gains a sense of control through the implementation of a consistent routine while the central element is that of a ‘plan-do-review sequence’ (Albro & Ebert, 2015, pp.12-13). The daily routines include small group and large group experiences for the learners. The Child Observation Record (COR) is used to evaluate a child’s developmental progress and teachers discuss their daily anecdotal notes during their team planning sessions (COR-Advantage, 2012). There are a number of elements in the High/Scope approach that are practiced in many effectively early learning settings and these include quality interactions between adult and child, initiation of activities that are both child-led and adult-led, high levels of parental engagement in the children’s learning, encouragement and

problem-solving in the management of behavioural or disciplinary issues (Hohmann & Weikart, 2000; Holt, 2010). The core values used in High/Scope and its key development indicators (COR-Advantage, 2012) are found in modern early childhood education settings of today although in the Singapore context, it is not very common and is mostly used in combination with other approaches (Bull et al., 2018; Tan, 2007). The next major curriculum that will be discussed in the context of relevant literature is New Zealand's early childhood curriculum, Te Whāriki (Ministry of Education, 2017).

Te Whāriki

One of the key foundations that underlies Te Whāriki (MOE-NZ, 2017), the early childhood curriculum of Aotearoa, New Zealand is its progressive philosophy that promotes the values of diversity, equity and biculturalism. Te Whāriki's approach steers away from subject-based learning domains and adopts a socio-cultural approach based on the goals of nurturing learning dispositions and promoting biculturalism in the early childhood setting (Gunn & Nuttall, 2019). The bicultural nature of the curriculum is established through the principles with five major strands, goals and learning outcomes (MOE-NZ, 2017, pp. 22-46) summarised as: Mana Atua – Well-being, Mana Whenua – Belonging, Mana Tangata – Contribution, Mana Reo – Communication and Mana Aotūroa – Exploration that are derived from the Māori culture. These five goals are the basis in its approach for support the development in children of all cultures through a bicultural curriculum framework. There are four guiding principles (MOE-NZ, 2017, pp. 17-21).

These include:

- Whakamana- Empowering learning and growth in the child through the curriculum
- Kotahitanga - Reflecting the holistic approach to children's learning and development.

- Whānau tangata - The family, community and the wider world is an integral part of the curriculum.
- Ngā hononga' - Responsive and reciprocal relationships with people, places and things.

A holistic approach to assessment and pedagogical documentation of children's learning, 'being and be-coming' (Arndt & Tesar, 2015) is derived from the principles and strands of Te Whāriki (MOE-NZ, 2017) in the practice of 'learning stories' (Carr & Lee, 2012; Carr, 2001). Te Whāriki, as well as the pedagogical documentation through the learning stories approach (Carr & Lee, 2012; Carr, 2001) provides a socio-cultural curriculum model with an emphasis on learning dispositions, democratic learning and teaching principles, building identities and nurturing intangible attributes such as confidence, reflexivity, a sense of belonging, contribution and curiosity (Mitchell, 2008). In brief, a number of major approaches to the ECE curriculum have been described which have become internationally accepted as influential in the modern contemporary ECE curriculum, not only found in the Singapore context. The next section examines several trends in the educational landscapes found in the globalized context and impacting the current research context of Singapore.

2.2.3 Shifting Landscapes and Paradigms

In the past two decades, the various global crisis, and more recently the global pandemic, has impacted educational environments. These evolving and changing trends within the shifting social-cultural and historical contexts have opened up spaces for greater dialogue around issues such as sustainability and place-conscious pedagogy that have impacted educational environments and practice (Brown, 2019; Jean-Sigur et al., 2015). These paradigms have supported the idea of the curriculum as dynamic and evolving rather than fixed, static and unchanging (Pacini-Ketchabaw & Pence, 2011). Postmodernism can be viewed through a number of different lenses or perspectives that include the evolving and rapidly emerging modern industrial and technological age, a movement that goes beyond the grand narratives

of the modernist era, an acknowledgement and celebration of ‘otherness’ and a questioning of absolute ‘truths’ (Slattery, 2012b). There has been some debate and the critique of the modernist traditional one singular definition of ‘best’ and the definitions of ‘quality’ that are prevalent in early childhood education discourse (Marshall, 2004; Siraj - Blatchford & Wong, 1999). Postmodern perspectives also offer a critique of traditionally accepted norms of the construction of childhood and development. These postmodernist perspectives are discussed in a number of sections in this thesis.

Pacini-Ketchabaw and Pence (2011) argue for a discourse of meaning-making and re-interpretation of national curriculum frameworks so that alternative pedagogies can emerge, allowing for teachers and young learners to co-construct new knowledge and to resist dominant discourse and understandings that have become the norm. This argument would hold true for many multicultural democratic societies as in the context of Singapore. Through the processes of globalization and migration, most countries are culturally and linguistically heterogeneous (OECD, 2017). This ethno-diversity can be said to be unavoidable and these populations are inevitably faced with a series of important challenges related to issues such as language rights, political representation, educational programmes, national holidays, just to name a few. The moral and political responses to these issues are the most significant challenge that democracies are faced with (Petrovski et al., 2011). Many modern societies are faced with the challenge of acknowledging the identities of minority ethno-cultural groups, as often minority individuals are integrated into socio-political communities that adopt the language, practices and traditions of the population majority. The idea of a socially or ethnically homogenous nation state with a single dominant culture is becoming obsolete as people of different ethnic and national origins with different languages, customs, religions and social habits encounter one another (Spring, 2015; Wu & Chang, 2015). However, countries are faced with the challenges of social cohesion with the increased social and cultural conflicts

between native-born and foreign-born populations unless immigrants are integrated into the social structure (Council, 2005). The context of Singapore is not very dissimilar with its ethnic diversity and where multiculturalism is an everyday living phenomenon (Mathews, 2018). The impact of diversity and multiculturalism of the society would also have a significant influence on how these influences are integrated into the curriculum. Next, a theoretical basis is provided to explain the differences in achievement between ethnic cultural groups in a society.

The Cultural Deprivation and the Cultural Differences Paradigm

Two theories have emerged from research with other multicultural and multi-ethnic populations in the United States to explain the differences in achievement between the different racial ethnic groups in the country. The first was the cultural deprivation theory that emerged during the 60s and 70s and again in the 1990s with the idea that characteristics in impoverished social environments of the poor and minority groups were the cause of cultural deprivation and cognitive deficiencies (Bloom et al., 1965; Payne, 2012). It was theorized that the development of programmes, practices and the creation of the right cultural environment would enable such children to acquire the knowledge, skills and attitudes to adjust and function in mainstream society. However, this theory has been severely criticized (Bomer et al., 2008) because it failed to portray with accuracy the socialization process of the child of a minority group (Darder, 2012).

The cultural differences paradigm rejects the notion that students of minority cultures suffer from culturally deficient environments. In fact, the minority groups in the United States, for example, that include the African Americans, Mexican Americans and others have rich and diverse cultures that are made up of a diversity of languages, cultural values, learning and behavioural styles. This theoretical perspective suggests that these marginalized groups of students fail to achieve academically because schools ignore and try to isolate these students

from their home and community cultures (Lopez, 2008). The proponents of the cultural differences theory believe that schools must adjust their practices so as to reflect and respect the cultural strengths of learners from these diverse groups, as well as to use pedagogical strategies that take cultural differences in learning into perspective (Chen, Nimmo, & Fraser, 2009; Harcourt, 2015).

Certain considerations have significant influence and impact on the approaches that practitioners use to implement curriculum and assessment in early childhood settings. Espinosa (2005) examined factors such as cultural, linguistic and socioeconomic diversity in the backgrounds of children and how teachers who face the challenge of classes with such diverse backgrounds plan the curriculum and learning environment. The observation is that the cultural discontinuity between the learning culture in the home environment and the school can cause the child be at greater risk or vulnerability (Ibáñez-Cubillas et al., 2017). This cultural discontinuity between home and school can cause the child to develop a negative self-perception as a learner. Therefore learning and teaching contexts have to be made meaningful socio-culturally and linguistically for all learners in the classroom and so we speak of culturally responsive approaches (Chen et al., 2009; Schonleber, Kelling, Kula, & Kamakau, 2018). Using such approaches to manage programmes with a diverse population is referred to as equity pedagogy, culturally relevant or culturally responsive pedagogy (Howard, 2003; Mcgee et al., 1995). Research studies have indicated that integrating the culture and values of these marginalized groups into the educational materials and utilizing the ‘funds of knowledge’ (Moll, 2019) from these homes and community networks enable these minority students to become more active and engaged participants in their own learning (Madkins & Nasir, 2016). Thus, scaffolding learning by creating links with home and community cultures is an important means of enabling minority learner groups (Piña & Boardman, 2015). These ‘funds of knowledge’ embedded in the cultures and values of non-dominant groups will be

further discussed in other chapters of this thesis. In the book entitled *The Singapore Ethnic Mosaic*, the author Mathew Matthews talks about the critical role of teaching cultural literacy that will enable ‘enlightened’ multicultural learners to integrate the values and perspectives of the various cultural groups of people who are contributing members of the society (Mathews, 2018, p.24). Cultivating cultural literacy through culturally responsive pedagogies in the ECE curriculum is therefore crucial to maintaining a harmonious society in a culturally diverse country like Singapore.

Multiculturalism and its Challenges

The concept of ‘multicultural education’ can be traced back to the historical civil rights movement in the United States when the African Americans fought for equity and equality in education, policies and practices (Banks, 2013). Multicultural education has been defined as having five dimensions (Banks & Banks, 2004). These dimensions include content integration, a social cultural-historical knowledge construction process (Gupta, 2015), prejudice reduction through cross-cultural approaches (Derman-Sparks & Ramsey, 2005; Miranda & Gaudreau, 2020) and eliminating deficit perspectives (García & Guerra, 2004). Other dimensions of multicultural education also include equity pedagogy (Mcgee et al., 1995) that acknowledges different groups in terms of race, language and cultures, as well as empowering school culture and community through equitable experiences.

Multicultural education is based on the foundations of educational equity and social justice so that each child is encouraged to reach his or her full potential. It acknowledges that educators, centres and school communities are an important part of laying the foundation for the transformation of society and the removal of social injustices (Mcgee et al., 1995; Ramsey et al., 2003). The objective of multicultural education is therefore to transform schools and society through education and through social change. This transformation involves the self,

the teaching process and the community (Banks & Banks, 2004; Souto-Manning & Cheruvu, 2015). The first phase in this process is to start with the educator 'self' by acknowledging one's own identities, beliefs, experiences, values as being culturally moulded and influenced (Derman-Sparks & Ramsey, 2005). Thus, only if educators acknowledge themselves as cultural beings whose practices are culturally-shaped, then can they engage in the critical and continuing process of examining how their socialization and any biases inform and influence their teaching practices and therefore the educational experiences of their students (Freire, 1998). Educators who engage in multicultural education are continually reflecting and engaging in critical self-examination. Multicultural education is about facilitating the acquisition of knowledge, attitudes and skills necessary so that learners are able to participate in cross-cultural interactions and in other personal, social and civic actions that make the society more democratic and just (Banks & Banks, 2004).

Through a learner-centred or student/child-centred curriculum, the experiences, practices and values of the children, their families and communities are brought into focus. A learner-centred curriculum can therefore make learning authentic, relevant and engaging, allowing participatory practices rather than a transmissive pedagogy (See section 2.4.4 Pedagogy for Transformation) that depends on teachers as the expert (Ramsey et al., 2003). An inclusive curriculum would mean that multiple perspectives and ways of representing and expressing are present in the learning environment. The ultimate end goal of a multicultural education approach is to move towards the positive transformation of the community and society. This is achieved through the critical interrogation and evaluation of the issues of whether educators are prepared to meet the challenges of a cultural and social diverse classroom through equity and social justice (Schoorman, 2011; Souto-Manning & Cheruvu, 2015). Thus, ideally, a culturally responsive pedagogy looks to respond to challenges presented in many societies and

a ‘one-size-fits-all’ ideology would be detrimental to the development of socially cohesive and equitable society.

Progressive education was first described by Dewey as being an outcome of dissatisfaction with traditional education (Dewey, 1938). Dewey described progressive education as learning experiences that were socially engaging, developmentally appropriate for the young. He also believed that learning in schools should be representative of real-life contexts, and occur flexibly in a variety of settings. With culturally responsive approaches in the curriculum, a number of other progressive paradigms have evolved in modern early childhood settings and have been identified in research literature. These include place-conscious (Harcourt, 2015) and transformative pedagogical approaches (Yelland & Gilbert, 2017), environmental awareness and sustainability (Huggins & Evans, 2018), as well as community and parent partnerships (Lekli & Kaloti, 2015; Nitecki, 2015; Tilhou et al., 2018) in early childhood education settings. These progressive paradigms are aligned to international trends and issues in early childhood education that pave the way for change and transformation through future-oriented practices in Singapore early childhood education settings. Next, the measurement of quality is examined based on an OECD framework and assessment and evaluation is outline in the following sections based on relevant literature.

2.2.4 Policy and Measurement of Quality in ECE

International research such as that by Bertram and Pascal (2016) shows that there are an extensive range of policy aims for early childhood education to support the child’s development and learning goals. In addition, policy aims to address social and civic issues, as well as support language and special needs amongst a number of other global and international issues and concerns within early childhood education (UNESCO, 2008; United Nations, 1989). Research suggests that ECE policy is used to meet a range of social, economic, education and political expectations and demands in various countries (Ang, 2006; Taguma, Litjens, &

Makowiecki, 2012; Wood & Hedges, 2016). Public policy varies from country to country and usually includes family literacy and parent education. Providing early education to facilitate children's language and literacy competencies, basic numeracy and physical development, social emotional learning, school preparation and readiness is a key component of many early childhood curricula (Garvis et al., 2018; OECD, 2010; Roopnarine et al., 2015). In the past decade, both political and social focus and attention on Early Childhood Care and Education (ECCE) has been increasing with the recognition by policymakers of the long-term benefits of quality early childhood care and education on children's learning and development (OECD, 2004, 2010). According to the Education for All (EFA) Global Monitoring Report, the focus has been on access to education and not always on the quality of learning (UNESCO, 2015a).

Based on a number of international studies, research has demonstrated the importance of a quality education and environment in the early years in supporting and sustaining social, emotional and cognitive development in children (Manning, Wong, Fleming, & Garvis, 2019; Tobin, 2005). There is strong evidence of the benefits of quality early learning experiences which is universally acknowledged in research literature (Dahlberg, Moss, & Pence, 1999; Lien, 2012; Tobin, 2005). However, the question remains as to what quality looks like in early childhood education and care in the 21st century context and how it is enacted in different countries. In order to address this area of concern with the issue of quality in ECCE, the Learning Metrics Task Force (LMTF) was designed by UNESCO to provide a global framework to measure learning in the early childhood curriculum with the underlying assumption that this correlates to the quality of education provided (UNESCO, 2013). The LMTF proposed a universal framework for seven domains of learning by educational stages of early childhood, primary and post-primary levels (See Figure 2.1).

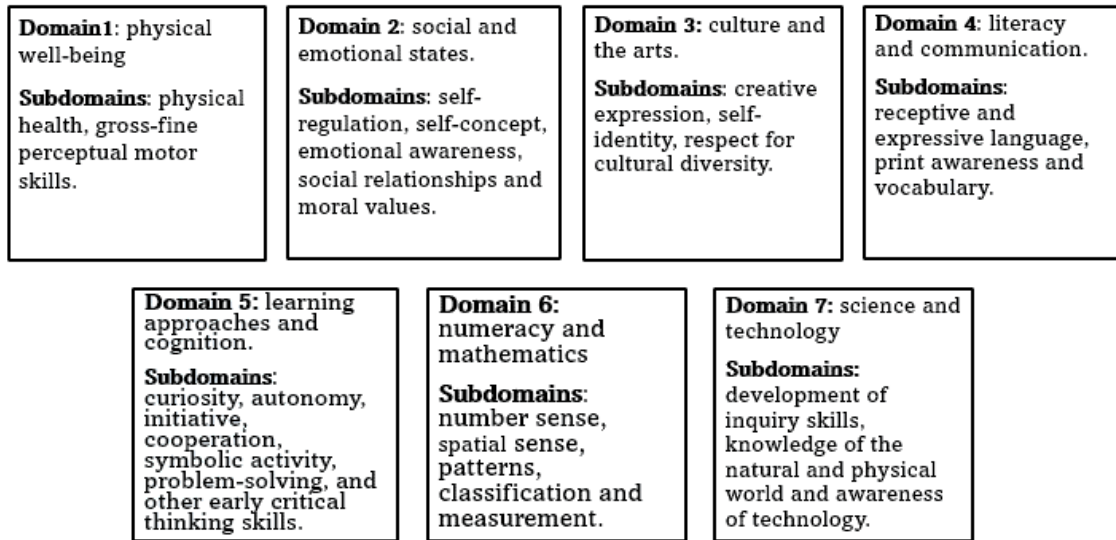


Figure 2-1 UNESCO LMTF Universal Domains (Source : UNESCO, 2013)

The task force of UNESCO LMTF identified the seven domains of learning necessary for a holistic education and to equip the individual for success in the 21st century. Tracking and measuring learning outcomes in all the seven domains at all stages of learning including primary and secondary levels is not always possible or pragmatic at the national or even global level. However, as mentioned in the report, the children's exposure to learning opportunities in these seven domains is measurable in several ways. The added rationale is that the transition from early childhood educational settings to primary school is a major milestone in the child's learning trajectory and the appropriate early childhood experiences that promote the development within a holistic curriculum covering multiple domains increase the chances of success of these children. Existing measurement efforts include the Early Development Instrument or EDI (Janus & Offord, 2007) developed by the Offord Centre for Child Studies. It has been proven to be a reliable and valid measure for predicting learning outcomes in mathematics and reading achievement levels (Janus & Offord, 2007).

The UNESCO Learning Metrics Task Force also selected six areas of measurement that were judged feasible as indicators of quality learning on a global level based on the LMTF domains.

These six areas represented the vision for how learning can be measured globally and internationally. However, it is acknowledged that these necessitated improvements in assessment and monitoring capacity in a number of countries before all six areas could be measured at a global and international level. These six areas (UNESCO, 2013, pp.11-12) are:

- i. Access to and completion of learning opportunities
- ii. Exposure to a breadth of learning opportunities across all seven domains
- iii. Early childhood experiences that promote development and learning in multiple domains.
- iv. Bilingualism and multi-literacy skills.
- v. Contextual and authentic learning using numeracy skills
- vi. Skills and adaptability to meet the demands of the 21st century.

Although these six areas of measurement for global tracking by the Learning Matrix Task Force are applicable across levels including the primary and post-primary levels, learning at the early childhood stage is also important. In 2014, the Measuring Early Learning Quality and Outcomes (MELQ) was initiated in anticipation of the new global emphasis on early childhood development. This was a project led by UNESCO, the World Bank, UNICEF and the Center for Universal Education at the Brookings Institution (UNESCO, 2017b). The objective was to promote realistic, accurate and practical measurement of children's learning processes and development at the start of primary school and also the quality of pre-primary early childhood learning environment. MELQ consists of two measurement frameworks (see Figure 2.2 section 2.2.2 Comparative and Cross-Cultural Perspectives). One was the MODEL that is the acronym for Measure of Development and Early Learning that aims to measure children's learning and development. The other is MELE, the acronym for Measure of Early Learning Environments (UNESCO, 2013, pp.11-13). The development of the MODEL framework was guided by three main objectives. First, the objective was to measure predictors of children's future academic performances. Second, the framework was developed based on the broad definition of children development that include pre-academic skills, social-emotional development and other contextual variables, ensuring the identification of factors

associated with inequity. Third, the MODEL framework was to be adapted so as to align with national and cultural priorities (UNESCO, 2017, p.14). The MELE framework was designed to account for the quality of the classroom environment and the level of support, engagement and collaborative partnerships that exist between the parents and families, communities and programme management. Thus, the domain constructs include the following:

- i. Environmental and physical setting: safe, adequately resourced equipped with culturally relevant materials.
- ii. Family and community engagement through programmes that promote opportunities and positive relationships.
- iii. Personnel that are trained in early childhood development and pedagogy and appropriate teacher: child ratios.
- iv. Quality of interactions.
- v. The level of inclusiveness.
- vi. Pedagogical curriculum content that is age-appropriate and addresses the needs of learners.
- vii. An environment and curriculum that allow appropriate play-based activities.
- viii. Other elements include policies that support educator professional development and the adequate funding of early childhood learning and preschools.

Although not all countries globally have used the MODEL and MELE modules as prescribed, the framework provides a guide for the design and validation of similar instruments in different country's contexts. Through the measurement of early childhood development and learning, essential information on the overall status and quality of learning in young children and the factors that are associated with inequities can be addressed (UNESCO, 2015b, 2015a, 2017a). This information would help to mould and formulate policies and practices that ensure that all children have access to services that will address the issues of inequity in early childhood learning experiences. These universal guidelines formulated provide a framework on which international and local policies pertaining to early childhood education can be structured around. It also provides a comprehensive framework around which questions regarding the implementation and enactment of the curriculum can be based. These universal guidelines may also point out possible gaps or limitations in the current interpretation and delivery of the early

childhood curriculum in Singapore and are therefore useful for analysing the answers to the research questions in this study. A review of some of the assessment and evaluation practices that are found in early learning settings is examined next.

2.2.5 Assessment and Evaluation in ECE

The guidelines (UNESCO, 2013, 2015b, 2017b) discussed in the earlier section have been designed to be universal and serve as key quality indicators for assessment and evaluation in early childhood. The term ‘assessment’ in education is used to refer to any procedure or activity to obtain information about the knowledge, attitudes or competencies or skills of a learner or a group of learners (Kellaghan & Greaney, 2001; Mitchell, 2008). This information is used to give feedback about progress, strengths and weaknesses, to make instructional decisions and to judge the effectiveness of instruction and adequacy of the curriculum, as well as to inform policymakers (Kellaghan & Greaney, 2001; McNamee et al., 2002). Assessment at the various levels of education is an indispensable consideration not only for the educator’s work with children, individuals and collective groups, but also with regards to their accountability to society and the system (Ebbeck, Teo, Tan, & Goh, 2014; Grisham-Brown, Hallam, & Brookshire, 2006; McLachlan et al., 2013). Moreover, the principle foundation that assessment informs instructional decisions and assessment is an integral aspect of the teaching process in early childhood education as in all other levels of the education system (Bowman, Donovan, & Burns, 2000; Dunphy, 2010).

Early childhood assessment is also an important prevention-based domain of practice for school and clinical psychologists, although the current study will not focus on this aspect of assessment in the clinical settings (Brusch & Evangelista, 2016; Mowder et al., 2012). Teachers, however, can play a significant role in observing and picking up early signs of learning or behavioural conditions that may require further specialist assessment and intervention (Lian, Ho, Choo, Shah & Chan, 2012; Purdue et al., 2009). The effective

assessment of this particular group demands a comprehensive approach involving the documentation and collection of information from parents, teachers and other caregivers across multiple developmental domains (Garro, 2016; Robson & Mastrangelo, 2017). In this section, several more prevalent assessment practices are examined in the light of the research literature.

Formative, Authentic and Alternative Assessment

In most early childhood educational settings, assessment that is integral to the teaching and learning process is through formative assessment (Dunphy, 2010; Riley-Ayers, 2014). This involves documenting, analysing, and reflecting on the information collected, which is then used for further curriculum planning and implementation. When the educator makes judgements about promoting further learning through the information gathered through observations and interactions with them, the assessment process is considered formative (Riley-Ayers, 2014; Torrance, 2001; Tunstall & Gipps, 1996). The process of assessment in a formative approach involves observation, communication, interviewing, documenting, reflecting on the learning process, putting together portfolios and developing narratives of the learning process; these steps are ideally carried out in authentic contexts (Dunphy, 2010; Hooker, 2017b).

Alternative assessment in the form of authentic assessment, which can be part of a portfolio assessment, endeavours to provide a holistic and constructivist view of development and learning of the child (Branscombe, 2014; Chitpin, 2003). Authentic learning and assessment approaches engage what educator and philosopher, John Dewey (1938) described as ‘Habits of Mind’ (Altan, Lane, & Dottin, 2019, pp. 2-3). Dewey (1933) has been debatably been viewed as the founding father for Habits of Mind as his theories promote reflective thinking and critical attitudes of the mind that include open-mindedness, taking calculated risks and

being able to work interdependently (Dewey, 1933; Williams, 2017). Other theorists have also contributed significantly to supporting the relationship between the concepts of intelligence and designated thinking attributes represented by HoM (Altan et al., 2017; Williams, 2017).

Authentic learning refers to learning through an experiential context, that may be a performance task based that allows an understanding of a concept through applied knowledge (Janesick, 2006). Authentic assessment may be viewed as part of the ongoing everyday experiences occurring in the classroom and in early childhood education setting often refers to the systematic documentation of developmental observations about naturally occurring behaviours and functional competencies during daily routines by familiar and knowledgeable practitioners and caregivers (Bagnato et al., 2011, 2014).

Riley, Miller and Sorenson (2016) provides a systematic overview of a comprehensive range of authentic and performance-based assessment tools that are utilized by qualified trained professionals in the United States. These may be curriculum-based or embedded instruments that provide evaluation or a number of purposes including individual education plan (IEP) goals and intervention planning to monitor progress, diagnostic purposes for various domains, particularly in children with disabilities or who are at risk for developmental delays (Heiskanen et al., 2021; Pierce & Bruns, 2013).

Authentic assessment in preschool children has been defined by Grisham-Brown, Hallam and Brookshire (2006) as having several characteristics, which include being conducted in a naturalistic environment, employing multiple methods, having the connection between assessment purpose and real-life context; with the involvement of families during the assessment process.

Puckett and Black's (2008) definition authentic assessment in preschool children consist of the 4 Ps of authentic assessment: Process, Performance, Products and Portfolios. These have been

also described in performance-based assessment (Brusch & Evangelista, 2016; Plucker et al., 2007). The use of portfolios in authentic assessment of preschool children usually entails multiple methods and approaches, is process-oriented and involves a dimension of formative and self-assessment and can involve the family (Frey et al., 2012).

It has been recommended by NAEYC (2009) and other experts in the field that alternative assessment approaches should be considered with children from linguistically and culturally diverse backgrounds and there should not be overreliance on traditional standardized testing (Espinosa, 2005). The individual background, including the primary language and home culture should be taken into consideration and as far as possible, the child should be assessed in the home language as well as in English. The parents, caregiver/s and other family members should be involved in the collaborative assessment process of the child and measures should be reviewed regularly for any cultural bias and progress (Ball, 2011; Chan, 2011; Schonleber et al., 2018).

Other forms of assessment in education settings include summative (Archer, 2017), ipsative (Bourke & Mentis, 2014), criterion-referenced (McDermott et al., 2009), as well as dynamic assessment (Petersen et al., 2018). Ipsative assessment which is the practice of assessing a student's progress based on earlier work, may draw on various forms of assessment to follow change in learning outcomes over time, and has often been neglected as a possible motivational tool to support learning goals (Bourke & Mentis, 2014). It has also been said to be useful, particularly in inclusive education approaches. The role of portfolios as a form of formative and authentic assessment by teachers in many early childhood settings in Singapore (Bautista et al., 2016) will be dealt with in greater detail next.

Use of Portfolios

The use of the portfolio for early years education has been a tool to provide evidence and documentation to demonstrate the accountability of achieving standards and allowing authentic assessment (Chitpin, 2003; Deans, 2009). The portfolio is a collection of a variety of artefacts and documentation, which may be in the form of learning stories (Carr & Lee, 2012) or in other forms. It should be a systematic collation of the learner's work and is a tool that demonstrates the child's abilities, skills and interests and can be presented in a hard copy or electronic formats. It could also be a guide for the emergent curriculum planning and support the learners through their own learning with a reflective process (Seitz & Bartholomew, 2008).

The process of compiling a portfolio is a purposeful process of gathering documentation and items to allow teachers, parents, administrators and other members of the team to understand the child or a group of children as a collective, even the level or class in a more contextual and holistic manner (Lynch & Struewing, 2001; Peters, Hartley, Rogers, Smith, & Carr, 2009). The portfolio as a collective or its individual components can be used both as a formative and summative assessment tool (Garrison & Ehringhaus, 2016) depending on how these are collated and for what purpose. It can therefore facilitate the process of documenting how the learner is achieving standards at various points throughout the year and if integrated into the classroom routine, it may in fact ease the time constraints despite the beliefs of the opposite (Lynch & Struewing, 2001; Seitz & Bartholomew, 2008a). The portfolio may also allow opportunities for interactive assessment and the learner to reflect on goals and discuss further development (Carr & Lee, 2012; Peters et al., 2009).

Peters et al. (2009) undertook a study using a variety of data collection methods including participant observation, interviews, and focus groups with teachers, principals, parents and 5-

6-year olds. The study looked at how the use of the portfolio created a way for a new child or school entrant to transition from one setting to another and assisted in overcoming some of the challenges in the transitions and differences in backgrounds and experiences of the children (Sayers et al., 2012; Woodhead & Moss, 2007). It looked at how the use of the portfolio addressed issues of empowerment of the child in the new environment.

Stockall et al. (2016) provide a detailed review of the use of the portfolio, particularly as a progress evaluation tool in special needs education programmes or more specifically for special needs learners (Carothers & Taylor, 2003; Thompson & Baumgartner, 2008). This form of portfolio assessment is referred to as progress-monitoring portfolio (PMP) that can facilitate response to intervention (RTI) and recognition and response (R&R) models by guiding the collation and organization of more precise data and visually communicating the progress of the young child. The PMP is distinctive in that it can be used to show mastery of specific skills and content standards, represent stages of growth and development and progress towards the learner's individual education programme (IEP) goals and is useful in ipsative assessment (Bourke & Mentis, 2014).

Although portfolio assessments have been used at all levels in the education system, the focus here is on the early childhood portfolio, including those used for inclusive education in the ECE settings. Carothers and Taylor (2003) outlined the types of portfolios that can be used including showcase, cumulative, reflective and goal based. For example, reflective portfolios enable parents, teachers and learners think about the dimensions of learning, help address strengths and weaknesses and may provoke ideas that can help the learner progress on to the next level. Cumulative portfolios can help show the developmental stages of the student's learning and acquisition of new skills and understanding (Deans, 2009). Goal-based portfolios have pre-established objectives and goals and can help document progress towards goals set in an individual education plan or IEP. Unlike standardized tests and assessment which may

be unable to measure small improvements and the information from these tests are insufficient for instructional and curriculum planning, portfolios used for learners with autistic spectrum disorder (ASD) or with other special needs have certain benefits over traditional types of assessment (Carothers & Taylor, 2003; Thompson & Baumgartner, 2008).

The use of portfolios may help communicate instructional information and other aspects of learning to parents without excessive technical language and it allows information from a variety of learning domains to be collated in a single place. As a form of pedagogical documentation and assessment, portfolios offer an adaptable approach that can provide a holistic overview of the child's progress (Bautista et al., 2016). It has become a widely accepted approach in ECE settings in Singapore. The influences on the curriculum will be discussed in the context of relevant literature next.

2.3 Influences on the Curriculum

This section examines a number of influences on the ECE curriculum including the use of cultural models that have emerged through a body of research and informed theories of the cultural nature of child development and child-rearing (Rogoff, 2003b; Tobin, Yeh, & Karasawa, 2009). An overview of some comparative and cross-cultural perspectives is explored here and will be examined more closely in Chapter 3 where different curriculum models that have originated in different cultures and countries are compared with the national curriculum framework (NEL) in Singapore. Other influences that have impacted the way the curriculum has been enacted include globalization, and the tendency towards a neoliberalist market economy which has been balanced by educational policy changes and reform in the country.

2.3.1 Cultural Models

Anthropological research has brought a better understanding of the cultural influences and roots on child development (Ibáñez-Cubillas et al., 2017; Rogoff, 2003b; Tobin, 2005). Adult ideologies and expectations, as well as child-rearing approaches are influenced by cultural beliefs, values and practices. Cumulative research has informed theories of the cultural nature of child development (Rogoff, 2003b), the critical role of parental belief systems (Jucks & Pauler-Kuppinger, 2017; Yamamoto & Holloway, 2010) as well as the significant role of the environment (Hirsto, 2001). Current research and scholarship challenge the universal theories of development, as well as the processes and outcomes in learning, cognition and language development (Munroe & Gauvain, 2010). This highlights the subjective nature of concepts of competence, developmental delay and deviations from the norm. Cultural models of child care are derived from anthropological studies and interpretation of culturally diverse parental goals, expectations and childcare practices (LeVine et al., 1994; New, 2015). The concept of cultural models also originates from the understanding that a core set of values and beliefs are the basis of decision-making that are made visible through the social traditions, discourses and norms of practices, behaviour and development as accepted by a particular community (LeVine et al., 1994).

The variability and differences in ECE approaches to non-familial, community care and early education in different country contexts can be explained by the concept of cultural models (McLachlan et al., 2012a). The relationship between cultural values, national policies and early childhood services in different country contexts and diverse nations such as Japan, China, Italy and United States for example can be demonstrated based on anthropological observations and research (Edwards et al., 2012; New, Mallory, & Mantovani, 2000; Tobin, Yeh, & Karasawa, 2009b). The diverse cultural practices often run against age-based expectations or stage-theory interpretation of typical development norms, attention spans, the

standardized measure of what quality learning environments and the universal acceptance of what is perceived as developmentally appropriate practice (New, 2015). The negotiation of pedagogical practice and the enacted curriculum would therefore be specific and unique to each cultural and country context. A few specific challenges and dilemmas that may arise because of these cultural and contextual differences are discussed next.

Contemporary Dilemmas

A few contemporary dilemmas are prevalent in current ECCE practice. Two will be discussed in the context of this study. The first dilemma is the way in which professional discourses or the way we talk about the children and the use of certain terms or phrases that are widely used in practice can be problematic if they are interpreted in the wrong light or impede conversation with others outside the field (Fennimore & Goodwin, 2011). One example is the use of the phrase ‘play-based curriculum’, which is often misinterpreted and misunderstood by people outside the field such as parents in Asian cultures (Frewen et al., 2015). It has been said that discourses about what is ‘developmentally appropriate practice’ may work against the young learner’s best interests because they may for example discourage teachers from providing more challenging activities and materials (Ryan & Grieshaber, 2005). Discourses about differences between children may cause adults to limit their expectations and opportunities provided to them (Mueller, 2019). Even as professional educators use their knowledge and understanding of cultural and individual differences between children to determine what is ‘appropriate’, the use of deficit labels and bias may prevent them from seeing the child holistically, failing to see the child past the label already put on them (Shifrer, 2013).

Another challenge is that caused by educational institutions defining and delimiting services for particular groups of children (e.g. children with autism), thereby reinforcing the idea of an ‘expert practitioner’ that specializes in specified differentiated areas of learning. This approach

of engaging specialists with compensatory policies creates a fragmentation of services (Bricker, 1995; Finn-Stevenson & Stern, 1997). Often such services require people to qualify by specific eligibility criteria such as falling within a specific income range, particularly with state-funded programmes. The stigma of disability and being in a welfare-funded programme may discouraged parents and families from seeking the assistance that they require for their child that opposes the actual goals of social justice and equity (Khan et al., 2013). This may be particularly so in some Asian cultures. The differences between various cultural and geographical context in terms of policies and practices that may be the limiting factor in generalizing research across different contexts and this will be examined next. The findings and interpretations in this study are made specifically within the socio-cultural context of ECE settings in Singapore.

2.3.2 Comparative and Cross-Cultural Perspectives

Comparative education perspectives not only help to describe educational systems, processes and outcomes but also can facilitate the development of educational institutions and practices (Noah, 1984). Comparative education has several purposes that include that of educational borrowing in order to find solutions through the adaption of forms of education, ideas and activities from other countries so as to help resolve issues in a certain context (Mbozi, 2018). Academics use these comparisons to better understand different domains and fields and the forces and influences that shape education systems as well as the function and role of these education systems in social and economic development (Bray, Adamson, & Mason, 2007; Watson, 2012). It also enables a better understanding, appreciation and reflection upon one's situation from broader and also different perspectives (Watson, 2012). International cross-national studies such as those undertaken by UNICEF, OECD and the LIEN Foundation have shed much light on the policies and practices in different national contexts around the world (LIEN, 2012; OECD, 2011; UNESCO, 2017b) As previously discussed, globalization has

caused world governments internationally to become progressively outward-looking and forward looking as they work towards cooperative strategies and global influences interact with local contexts and actors so that education policy become modified and transformed (Wiseman, 2010). Comparative and international research studies on policies have demonstrated that the ‘one-size-fits-all’ developmental model and ‘world standards’, while working well in one part of the world and specific contexts may not work as suitably in other contexts (Yang, 2007).

The relevance of the cultural context or the differences in cultural context is significant as policy and practice in each country arises from a specific set of cultural values, beliefs and practices and therefore generalizations across different countries can be problematic and should not be used (Pascal & Bertram, 1993). On the ground level, there are differences in language and differential use of certain terminology. For example, the use of the term ‘nursery’ or ‘preschool’ can have different meanings or references in different country contexts. Cultural differences in the teaching and learning process is also an important consideration and there has been an often described distinction between ‘Western’ and ‘non-Western’ methods (Watkins, 2000). Even as there are comparisons made between the East and West binary, many early childhood education concepts and philosophies are incorporated eclectically from the West, such as the Project approach, Reggio Emilia and Montessori. These ideas are seen as progressive and in some countries such as in China, they were often imported and adopted ‘lock stock and barrel’ ignoring the pre-existing framework of local traditional beliefs and practices (Tobin, Yeh, & Karasawa, 2009a; Yang & Li, 2019). However, more recently, this aggressive push towards the adoption of progressive and child-centred approach is being counterbalanced by the acknowledgement of traditional ‘non-Western’ pedagogical practices and theories that has led to the hybridization of ‘Western’ and local domestic educational

beliefs and ideas that place on emphasis on memory, mastery, content knowledge and performance (Ergas & Todd, 2015).

In terms of the ways of learning, socialization and language acquisition, studies have shown that there are tremendous cultural variation in terms of rates of language acquisition, children's agency in the learning process, the influence and role of adults in 'teaching' language to young learners and also the overt expectations applied to the learning of culturally appropriate language usage (Munroe & Gauvain, 2010; Ochs, 2020). Historical and contemporary cross-cultural research studies in the processes of learning and socialization, there is a dialectic existing between two opposing views of the child and childrearing practices (Carter & Roe, 2013; Frewen et al., 2015). Social cultural theory suggests that children are active agents and constructors of their own learning and development. The other traditional perspective represents the child as a passive recipient in the processes of learning and socialization and builds on a deficit model (Munroe & Gauvain, 2010). Therefore, cultural models of child care vary and based on anthropological studies, these differences of diverse parental expectations and childcare practices form part of the basis of the differences in educational policies and curriculum decision-making.

At the level of examining and comparing curricular within and across national and cross-national contexts, there are a few specific aspects that can be analysed and that are manifested in different ways. This includes ideology, the planned and intended goals and objectives, as well as the actual enacted and experienced curriculum (Adamson & Morris, 2007). With regards to ideology, curriculum content may be examined and typically revealed mainly through policy and curriculum documents, texts and academic papers (Millei, 2011). In the aspect of the planned or intended curriculum, policy and curriculum documents, prospectuses, teaching materials, lesson plans, assessment materials, minutes of meetings, notices can be viewed as usual manifestations (Grossman et al., 2008). The actual enacted curriculum can be

observed and documented through teacher and student actions and roles, the interest and involvement, interactions through lesson observations, teacher interviews, teacher logs, activity records and ethnography (Alexander, 2001). The experienced aspect of the curriculum may be observed through the changes in attitudes and behaviours of teachers and students also in transformed learners' cognitive processes and can be qualified or measured through questionnaires, interviews, reflective self-narratives and psychometric tests (Cogan, Morris, & Print, 2002; Cortazzi, 1998). Thus, these four elements or aspects of the curriculum that include the ideology, the planned the enacted and the experienced curriculum have demonstrable and subtle manifestations that can be examined (Adamson & Morris, 2007). The units of comparison mentioned so far include that of cultures, policies, curricula and approaches to learning. This list is not exhaustive as illustrated by the Bray and Thomas Cube, first presented by Bray and Thomas (1995) in the paper 'Levels of Comparisons in Educational Studies: Different Insights from Different Literatures and Value of Multilevel Analysis' (See Figure 2.2). The paper argued that that although cross-national comparisons were the dominant

type of study in comparative education studies, such comparisons were of limited levels and lacked perspective. In comparative studies that engage the three-dimensions with multilevel analysis, this better achieved a multifaceted and holistic analysis of educational phenomena (Bray et al., 2007; Bray & Thomas, 1995). Depending on the specifics of the dimensions, the cell unit within the cube

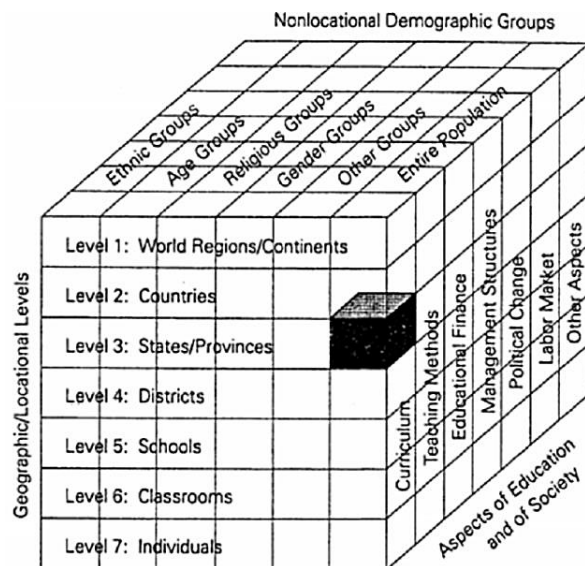


Figure 2-2 Bray & Thomas Cube: A Framework for Comparative Education Analysis

can be defined. The example shade in the Figure 2.2 is a study on the curricula for the entire

population of two provinces or states. This study would be situated mainly in Level 5.6 and 7 with emphasis and focus on mainly the curriculum and pedagogical approaches found in different ECE centre settings, as well as with different individual early childhood practitioners and professionals. It demonstrates that a ‘multi-dimensional’ approach to comparative and cross-cultural analysis would provide better overall perspective and understanding. Next, the rationale for the adoption of a postmodernist lens is discussed.

2.3.3 Postmodernist Lens

Postmodernity has been described as an momentous shift from the modernist era and traditional approaches to viewing self-identities towards a more transformative era (Keddell, 2009). It offers counter narratives as an alternative to ‘official’ or the grand narratives that are the tendency of the modernist era (Giroux et al., 1996). Postmodern theories are highly influential across various aspects of the early childhood education field including that of the curriculum (Pacini-Ketchabaw & Pence, 2011; Ryan & Grieshaber, 2005), teacher education (Kincheloe, 2011; Sumsion, 2005), professional identities and how cultural identities and other influences construct narrative identities in practice (Keddell, 2009; Slattery, 2012a; Usher & Edwards, 1994). A postmodernist perspective re-examines the role of underlying societal beliefs, values and cultural-historical constructions of the ‘child’ and provides a tool for interdisciplinary critical inquiry (Canella, 2002).

Several key features of a postmodernist theoretical approach may be useful in negotiating the journey as a teacher educator. A key trait in a postmodernist perspective involves questioning certainties, the multiple identities within the role and agency, the interrelationship and connection between knowledge, power and discourse and the politics of representation (Keddell, 2009; Pacini-Ketchabaw & Pence, 2011; Sumsion, 2005). Adopting a postmodernist stance is characterized by questioning the ‘certainty of truths’ and rejecting systematic explanation to challenge existing concepts and scientific attitude or knowledge (Usher &

Edwards, 1994). It implies that individuals may have to navigate their path without traditional anchoring points in a world of rapid change and perplexing instability. Communication and the media overload swamp people with 'information' to the degree where the boundary between reality and the word/image that portrays it dissolves into a condition of hyperreality (Baudrillard & Poster, 1988; Usher & Edwards, 1994). The phrase 'politics of representation' has been debatably used here in the aspect of the representation professional and collective identities of the ECE profession by the public and media. Images, text and the information they intend to convey have become open to multiple interpretations, reflecting multiple perspective and the dissolution of 'objectivity'. Sumsion (2005) argued that the appreciation of postmodern perspectives can help educators and practitioners in the field to develop and sustain agency in the field while encountering the ambiguities and uncertainties faced as early childhood educators.

Based on the postmodernist philosophical perspective, identities are viewed as multiple, complex and formed through discourse (Foley, 2002). This is in contrast to the modernist notions of identity as being single and stable whilst the postmodernist view is that identities are deconstructed and reconstructed through the discourses allow us the agency to 'resist, subvert and change' these discourses and to recognize or acknowledge multiple readings so that no single positioning should dictate one's' identity (Davies, 2004; St. Pierre, 2012). These postmodern viewpoints on language, discourse and subjectivities assert our agency as social actors who have the choice to enact and perpetuate, to resist and subvert or improvise on conventional structures and discourses (Foley, 2002).

The postmodernist stance is that language and meaning are not stable but shift according to varying social, cultural and philosophical contexts (Giroux et al., 1996; Sumsion, 2005). In other words, language constructs meaning rather than reflecting reality as it is. If language is understood as competing discourses and competing meaning-making processes, then language

becomes a political struggle. Therefore, dominant discourses often become accepted as normative and these shape our own understanding and interpretation of what is desirable or good and it is difficult to think beyond these normative and accepted discourses (Dahlberg et al., 1999; Pierre, 2000). For these reasons, Foucault (1980) argued the position that discourse, knowledge and power are indistinguishably intertwined.

Thus, it is not to say that research-driven theories on child development and learning by Piaget, Vygotsky, Erikson, Bronfenbrenner, and others are not relevant, as these are still well regarded. However, in this day and age of globalization, educators may find the relevance of a pedagogical practice that departs from a solely developmental approach and become more receptive to perspectives and discourses that emerge from both the local and global contexts (Ryan & Grieshaber, 2005). This is particularly relevant in the culturally diverse settings in Singapore and point the direction towards future-oriented practice. The impact of globalization, neoliberalism on policies, as well as 21st century student outcomes and support systems will be discussed next.

2.3.4 Globalization, Neoliberalism and Policy Change

Globalization is an important factor that needs to be considered in the influences on early childhood curriculum because knowledge, events and practices in one geographical setting can impact another. With the improved modes of travel, together with rapid spread of technological innovation, globalization has allowed the easy exchange of information, ideas, and cultures internationally. Globalization of education refers to worldwide and global networks, institutions and processes affecting educational practices and policies in the local context (Spring, 2015). Thus, events that occur on a global scale can have profound effects on national decision-making and local schools and educational settings. While globalization influences are bidirectional, they have served as a conduit for bringing in ‘Western’ influences into the ‘non-West’ and this directly and indirectly has a profound impact and effect on

educational policy internationally (Wiseman, 2010). Consequently, this impact then flows to more localized educational practices and policies and has an impact on decisions on the type of curriculum that will be adapted and on other educational decisions within local institutions and centres (Arnove, 2007). While ‘foreign’ influences and practices are assimilated into local contexts, the movement of people and immigration also have a profound influence on many areas of life with consequent hybrid identities being formed as various people of different ethnicities, religion, race and cultural identities cross geographical borders (Apple, 2011). Such movements have consequential influence on how governments and community groups perceive the relative importance of early childhood education.

There is a cumulative interconnectedness of societies who often face similar challenges and issues that relate to governance, financing, accessibility of education opportunities and outcomes for diversely placed social groups, particularly those that have historically been marginalized or discriminated against such as ethnic minorities, immigrants and rural populations (Ban, 2012; UNESCO, 2017a). Although these challenges and education agendas may be similar, regional, national and local responses vary (Phillipson et al., 2018). As elaborated in the previous section, international organizations such as the United Nations, OECD and the World Bank play an active role in promoting global educational agendas that focus on goals and discourses in areas such as economic development, multiculturalism, school and work readiness. As such, these international non-governmental organisations (NGOs) are specifically concerned about human rights and environmentalism issues which in turn impacts school curricula globally (Spring, 2015). Such influences also impact practice in local ECE settings in the Singapore context. Specific international policies that impact on local early childhood curriculum are examined next.

Impact on Policies

The United Nations Convention on the Rights of the Child (UNCROC) is a legally binding covenant based on the signatories from almost all countries in the international community (United Nations, 1989). This international framework and initiatives provide a set of non-negotiable standards and obligations that provide a guide for the promotion of children's rights. However, international frameworks and initiatives based on the Convention on the Rights of the Child are implemented differently in each country, region or locality.

Globalization has a deep impact on education policy in several ways. Yang (2007) in 'Comparing Education Research' elaborates on six changes in the area of international educational policy that has resulted from the effects of globalization. The first change is that of economic impact. Due to economic downturns and recessions, spending on public services such as education have been reduced while at the same time, countries have allowed greater privatisation and neoliberalist market economy structures. With many neoliberalist and capitalist societies, there are multinational corporations and organizations that are marketing educational products and services to governments, school and parents. These for-profit corporations are involved in publishing, information, testing and for-profit schooling (Connell, 2013; James et al., 2010). The second change is that of the demographics of many countries. In developed countries, the baby boomer generation is going into retirement and therefore with an aging population and increasing public healthcare costs, increasing amount of private and public funds go into this thus reducing the amount of public funds for other services. The third change caused by globalization is that of ideological change. Business and educational policies have moved from equality to meritocracy, excellence and accountability while giving the consumer choice. The fourth change caused by globalization is that of the nation-state framework where national policies have limitations due to the increased influence and authority of transnational players and powers. The fifth effect is increasing individualism due

to the influences of neoliberalist capitalism has an incapacitating effect on public policy concerning public services, agencies and education. Finally, the impact of globalization has also caused a progressive scepticism and cynicism due to the growing distrust in political decision makers that in turn harms the core of the democratic process.

With progressive globalization, there has been an increasing emphasis in measuring learning with monitoring at all levels of the education system. However, the focus in developing national and regional measuring framework systems usually reflect the local values and priorities rather than accepting common prescriptions and transnational measure (Arnové, 2007; UNESCO, 2017b). These educational framework systems have not been unquestionably accepted but rather they are a dialectic involving interaction with national and local contexts which can be modified, adapted, and transformed. Policy makers, school operators and other key stakeholders therefore play a key role in steering the direction of educational policies, frameworks and content of the curriculum that is relevant to the local regional setting. The impact of these influences has also transformed the ECE landscape in Singapore. More specifically, the role of global citizenship and future-oriented practices in the ECE curriculum will be examined next.

2.3.5 Global Citizenship and Skills for the 21st century

Curriculum policies need to be relevant and future-oriented so as to reduce the problems of conflict that may arise due to issues of stereotyping, bias or discrimination in a culturally diverse society in the context of globalization (Ebbeck, 2006; Jean-Sigur, Bell, & Kim, 2015). The terms ‘global citizenship’ and ‘global competence’ have become buzzwords in the age of technology and information exchange. There are many advocates for the early childhood institution to become an important site for the enactment of children’s citizenship and space in which cultural and critical democracy is demonstrated and nurtured (Mitchell, 2019; Woodrow & Press, 2008). In order to promote global citizenship, it has been said that several

aspects of a transformative educational reform should include cultivating skills that are needed to participate in a global world economy and must be practiced from an early age as the child is a rapidly developing individual (Faas & Wasmuth, 2019a). Global citizenship would also mean that young learners should also be made aware of global issues such as the need for conservation, sustainability in our environment and gender equality to name a few. Modern educational theorists have attempted to define global citizenship for the young and these include aspects such as basic needs, environmental issues, cultural democracy and other global issues (Collins, 2008; Ebbeck, 2006). Therefore, educational policies that support tolerance and an inclusive curriculum is critical and early childhood educators are in the position to facilitate this ideology.

In addition, in many countries, social demographics show that there is an increasing percentage and diversity of immigrants so dual language programme have become more common that cater to a progressively pluralistic society and heterogeneous population. Sometimes, not just dual language or having a bilingual policy but multiple language learning is increasingly common with the recognition of the benefits in participating in the global economy (Brown, 2019; New, 2015). The concept that young children can develop dimensions of identity that include individual, national and global identities is put forward by Brown (2019). The individual identity is the assurance and confidence of one's self and being part of a family with sense of belonging and connection to one's cultural background and origins or where one was brought up (Brooker & Woodhead, 2008; Salamon & Chng, 2019). National identity is defined as the acknowledgement and pride of seeing oneself as a citizen of the nation while global identity is the awareness of the world around us and the self as part of this global community (Brown, 2019). The cultural identity of the person often integrates aspects of the individual, social and national identities. Ideally, these three levels are acknowledged, nurtured and internalized even in the young child (Christensen & Aldridge, 2013). The issue of identity in

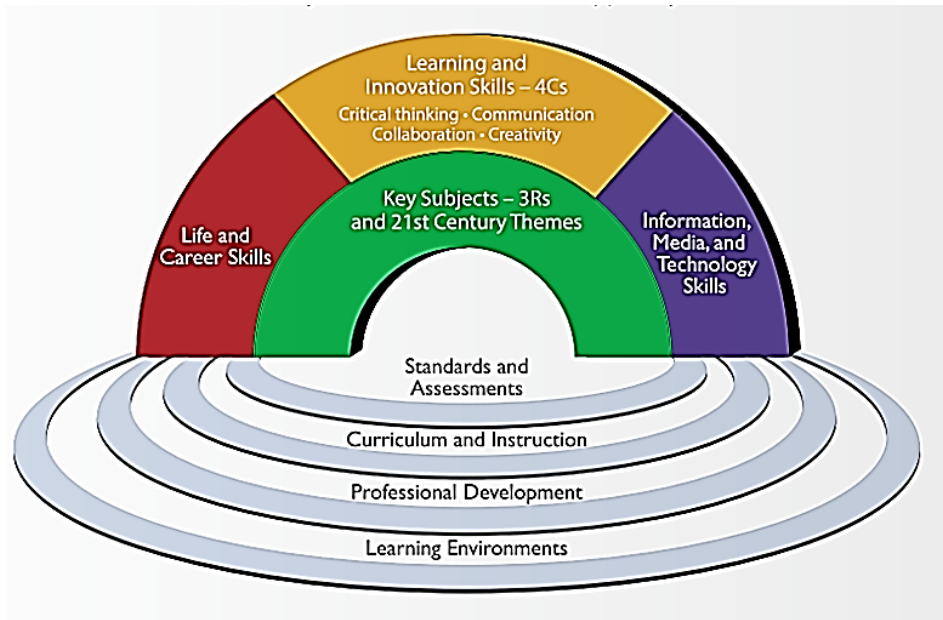


Figure 2-3 21st Century Student Outcomes and Support Systems

relationship with critical pedagogy is further discussed in this chapter. With the assumption that the curriculum is also a reflection of the expectations that society has for the young, as well as being a statement of values, citizenship education in the curriculum can be viewed as useful to the individual and socially required or as a nurturing of the student’s value system (Grossman et al., 2008).

The Partnerships for 21st Century Learning (PS21, 2007) vision for success in the new global economy would mean that the foundation and support systems starting from the youngest children would include standards, curriculum and instruction, professional development for educators and learning environments (See Figure 2.3). The curriculum would integrate learning and innovations skills, information, media, and technology, as well as life skills such as flexibility, self-direction, social and cross-cultural skills, accountability, leadership, and responsibility. Thus, in order to deliver this curriculum, educators will require such skills

themselves, together with an awareness of the interconnectedness between global issues across disciplines, as well as the ability to utilize a variety of approaches (Reynolds et al., 2017).

In today's society, there is a risk of being inundated by technology and young children are often surrounded by technology in both their home and community settings (Parette & Blum, 2015). Thus, in various learning environments, teaching and learning are supported in varying degrees by a range of instructional technologies. Technology has also been a tool to support communication and collaboration between home and school (Beaumont-Bates, 2017). In addition, technology been used as an assistive tool in supporting children in accomplishing tasks which they would not normally be able to accomplish without facilitation (Donohue, 2014). Applied appropriately, the role of STEM (Science Technology Engineering Mathematics) and increasingly STEAM (Science Technology Engineering Arts Mathematics) is critical in providing multiple ways of nurturing creativity and imagination within the context of real-life experiences (Lindeman et al., 2013). These help young learners discover, explore and question, thereby providing the foundations of inquiry-based learning and scientific understanding. The present study will examine some of the dimensions of future-oriented practices and the perspectives of ECE practitioners with regards to their role in the integration of these practices and skills within the ECE curriculum. The following section will examine literature and theoretical models for several aspects of pedagogy and practice in relationship to a culturally diverse and increasing complex society in the global context.

2.4 Negotiating Pedagogy and Practice

The influences on pedagogy and practice will be discussed here in the context of the role teachers' knowledge, attitudes, values and beliefs. The impact of teachers' qualifications and professional development on the quality of the enacted curriculum will also be examined in the context of current research literature. Other factors such as the teacher's experiences and the critical role of parents, the value of critical pedagogical practice, as well as that of a

pedagogical third space are also brought into this discussion about negotiating pedagogical practice. Pedagogy and practice are also interpreted in the context of communities of practice and place-conscious approaches in practice. These will be examined in the context of current literature in this section.

2.4.1 The Role of Teachers' Knowledge, Attitudes, Beliefs, and Practices

Teachers' beliefs, practices and attitudes are critical in order to better understand and improve educational processes and they are closely connected to teachers' strategies in coping with challenges in the everyday professional work and their general well-being (Hamre et al., 2012; OECD, 2009; Tan, 2018). These factors are important in shaping the students' learning environment and how educators influence learner motivation and achievement (Wiesman, 2012). Teachers' beliefs can originate from several sources such as personal values, background, stereotyping, or through teaching experience itself. These beliefs affect how the teacher plan learning experiences and what their students will learn (Pajares, 1992; Rubie-Davies, 2015). The learning environment is formed through the teachers' pedagogical decisions and the socio-emotional conditions of a class come such as the way the teacher interacts with students and the relationship between them (Rubie-Davies, 2015).

In the context of globalization and today's rapidly changing world, teachers' beliefs are constantly shaped by new knowledge and experiences, with the reconstruction of beliefs, attitudes and teaching conceptions (Goodwin, 2010; Tzuo, Tan, & Yang, 2013). At the same time, there is an accommodation of teaching beliefs that are both of traditional and new concepts. Teachers, therefore have to negotiate between the teachers' authority (traditional and 'old concepts) and the child's autonomy (new concepts) in a learner-centred classroom. These two beliefs can be reconciled by teachers allowing children more autonomy in deciding the processes of learning while the teacher remains in control of the 'content' in learning. It has been said that teachers often have to rethink and renegotiate back and forth between the old

and the new, history and the future, as well as between local and global (Latta & Field, 2005; Oysler, 1996; Popkewitz, 2003).

Another perspective on teaching beliefs is that it can be viewed as an integration of subjective knowledge that is shaped by objective knowledge such as scientific theories and personal experiences (Hosford & O'Sullivan, 2016; OECD, 2009). The former is usually acquired and developed in teacher education programmes. It can be said that objective knowledge and personal experiences construct and shape teachers' beliefs. These teacher beliefs can be identified and grouped into five categories in the context of globalization that include: personal, pedagogical, contextual, sociological and social domains (Goodwin, 2010; Schultz et al., 2015; Tzuo et al., 2013). Goodwin highlighted the importance of all five domains influencing teachers' beliefs in the fast-paced and multi-faceted context of education in the age of globalization. These domains of knowledge, experiences and beliefs influence the way teachers negotiate their pedagogical practice in early childhood education settings. By examining these five domains of ideas, knowledge and experiences, it is possible to better understand the factors that impact teaching practices. The significance of teachers' qualifications and professional development on the quality of the curriculum and learning experiences will be examined next.

2.4.2 Teachers' Qualifications and Professional Development

Although there has been some debate on the actual impact of early childhood education professional qualifications, these have been the focus of reforms in early childhood education internationally (OECD, 2005). Studies in the United States and United Kingdom with programmes such as Head Start Family and Child Experiences Survey and the Effective Provision of Pre-School Education (EPPE) have shown that early childhood teachers who have completed a basic degree programme are more competent professionally (Purtell & Ansari, 2018; Spies et al., 2017). The relationship between classroom and programme quality, ability

to adopt innovative methods and improve motivation, knowledge funds to nurture children's social, language and cognitive development have been found to be positively correlated with teacher qualifications (Howes et al., 2003; Torquati et al., 2007).

One of the key elements that has been consistently cited as found in quality early childhood learning environments is the presence of trained and qualified early childhood educators (LIEN, 2012; Schachter, 2015). However, it has not always been demonstrated in research that teacher education and certification is always consistent with a higher quality learning environment, classrooms and pre-academic skills (Bogard et al., 2008). In order to be effective in enhancing the quality of early childhood education through teacher education, the content and quality of these early childhood teacher education programmes has to be monitored in order to ensure that these programmes are meeting the expectations and needs of the sector (Manning et al., 2019). Another important lever for improving classroom teaching practice and the quality of learning experiences is professional development and in-service courses and research suggest that this might be the most effective approach to improving key learning outcomes above and beyond teacher certification attainment (Schachter, 2015). Thus, in terms of professional development (PD), it has been observed that teachers' experiences with professional development has been connected to higher classroom quality and this is most influential in improving children's learning above and beyond expectations of teacher qualifications attainment (Schachter, 2015). The model of professional development proposed by Clark and Hollingsworth (2002) is based on dynamic interconnected model of professional development with four domains that include teachers' knowledge, beliefs and attitudes (personal domain), external influences and information (external domain), professional experimentation (domain of practice) and key outcomes (domain of consequence). This model will be further discussed based on the implications of the study. (See section 9.2). The role of parent influences, expectations, attitudes, involvement and partnership will be examined next.

2.4.3 The Role of Parents

Parents who were once considered to be passive recipients of education services, are now viewed and engaged as partners and may be deemed to be consumers of educational services (Wilkins, 2012). In current times, parents are often the educated ‘consumer’, often comparing and assessing schools and centres based on various sources of information; these include brochures, websites, parent-teacher exchanges, reports and various forms of school evaluation. Centres often organize various, parent information talks, participatory workshops, as well regular teacher-parent communication through newsletters, online and mobile app platforms and more direct forms of interaction and communication.

Parental awareness and understanding with regards to the provision of appropriate learning experiences that support children in stimulating, structured and developmentally appropriate environments have been raised with greater parental education. A discrepancy between parental and centre institutional priorities may have a negative effect on parent-school collaboration and the children’s performance later (Harding, 2006). Parents, as well teachers, are important stakeholders of early childhood services and if parents believe that their expectations and priorities are not considered or valued, they may become hesitant or reluctant to support the objectives of the curriculum (Ebbeck, 2010).

Parent involvement typically refers to parents’ behaviours in homes and school-centre setting that are intended to support their children’s educational progress (Nokali et al., 2010). An earlier study also indicated other aspects of parental involvement in childcare such as such as parenting styles and forms of discipline (Cheung & Hawkins, 2014). Parent involvement can also indicate the home attitudes and values regarding education and the aspirations that they may hold for their children. The degree of parent involvement may be gauged through indicators such as the quality and frequency of communication with teachers as well as participation in school-centre events and activities (Machen et al., 2003). Even though parental

attitudes and values may not directly influence academic outcomes, they can support academic achievement indirectly by nurturing children's motivation and persistence in challenging educational tasks (Englund et al., 2004). Parent involvement connects two or more key contexts in children's early development, and these include the home, school-centre and often also the community settings (Bronfenbrenner & Morris, 2006; Tudge, Merçon-Vargas, Liang, & Payir, 2017). Based on the Bronfenbrenner's Bioecological model, the interactions between these contexts or key microsystems is conceptualized as a mesosystem. Each setting may independently influence how the home, school, centre and community contexts interact to provide a unique impact through parent engagement by providing continuity between the different environments (Nokali et al., 2010). An example is when parents are aware of the teacher's instructional goals, they may help to supplement and provide resources and support for learning goals at home. The current study looks at the role and influence of parents through the perspectives of teacher educators in ECE settings. The role of critical pedagogy in today's early childhood education settings and teacher education will be examined next.

2.4.4 Critical Pedagogy

Critical pedagogy is an integral term that theoretically incorporates the continuous challenge to accept and embrace another's knowledge, culture, language, traditions, values (Christensen & Aldridge, 2013). It provides an alternative strategy for educators at every level to reflect critically on teaching and learning practice and espouses a view of knowledge that is both historical and dialectical (Darder, 2012). Critical pedagogies of place bring to attention and focus the role that power and knowledge plays in defining and creating space and in moulding individual' statuses within places (Perumal, 2015). The relationship between physical material spaces and power through social constructions are shaped by ideologies, expectations, hierarchies and experiences. Critical pedagogies of place acknowledge the importance of people speaking their own stories so that can be both affirmed and confronted by challenge.

These individual stories and perspectives are connected to the larger global patterns of dominance and resistance and this is consistent with Fraser's (2008) exposition and conceptions of social justice (Fraser, 2008). Critical pedagogy is theoretically grounded where critical theory is applied to pedagogy in the classroom and makes us aware of the political nature of education and is a process of transformation, paying attention to gender, class, race and ethnicity issues. It challenges the status quo and is constantly evolving, providing critical perspectives to understand and deal with disparities and inequity in education and to re-examine assumptions. It thus fosters cultural democracy and an authentic and inclusive education (Christensen & Aldridge, 2013; Stringer et al., 2010). In enacting the curriculum, teacher educators are at times faced with issues of inequity and disparities in class, race and socioeconomic status and finding ways to manage these challenges would be part of an effective curriculum. The relationship between identity and cultural capital is examined next.

Identity and Cultural Capital

Identity formation is connected to social, cultural, political and economic influences and is interwoven with social change and transformation (Asghari-Fard & Hossain, 2017). The formation of identities includes not just of the young child but also of teachers' personal and professional identities. The example in the Reggio Emilia approach is that learning, and the curriculum is an emergent process. Teacher agency is constructive in guiding young learners in their interactions within diverse learning communities and enabling children to understand and recognize their place as citizens and members within the community and beyond (Dahlberg et al., 2013; Malaguzzi, 1994). In developing familial relationships through trust and security, children come to understand and respect characteristics about themselves such as name, gender, ethnicity, language which together with other contextual information are formative in how they come to view themselves (Christensen & Aldridge, 2013; Derman-Sparks & Ramsey, 2005). It has been observed that ethnicity awareness begins as early as

toddlerhood, and it is also a challenge for educators to help children develop positive self-identities. Attitudes towards other nationalities, cultures, ethnicities and religious backgrounds are often developed at a very young age (Mitchell, 2019). Tolerance, prejudice and discrimination or intolerance are also influenced by the social and cultural milieu of young children while teachers' identities also have an impact on this aspect of the child's identity and attitudes (Kincheloe, 2011; Meyer, 2011). The construction of self, collective, and social cultural identities of young learners plays a critical role in enabling children to become active and positive contributors in their local and global communities. This would be one of the important goals and values of a successful curriculum. The construction of identities is also closely interwoven with cultural capital.

Cultural capital has been defined in several ways. Bourdieu (2018) classified cultural capital into three forms: the embodied state, the objectified and the institutionalized state. Based on Bourdieu's cultural reproduction theory, social class differences in educational outcomes come from parents' unequal possession of cultural capital. For example, children from middle class backgrounds have parents who are familiar with the dominant culture and transmit their cultural capital to their children who in turn convert their cultural capital into educational outcomes in educational settings (Mikus et al., 2020). However, cultural capital is brought into the school-centre setting by children and their families regardless of their socioeconomic status. Educators who are aware of this are able to use this knowledge to inform practice so as to reveal and utilize such cultural knowledge (Christensen & Aldridge, 2013). For example, getting parents to volunteer and share aspects of their culture such as certain ethnic craft or food within the classroom settings allows such cultural capital to be shared and celebrated within the local community. Cultural capital, like local funds of knowledge can be harnessed in collaborative partnerships between home and early childhood education settings and these become part and parcel of the learning experiences of a child.

Pedagogy for Transformation

Paulo Freire's view of the goal of critical pedagogy and education is develop critical consciousness that becomes the mechanism for transformation, particularly of the disadvantaged whose transformed consciousness and increased self-awareness incentivises and motivates them to better their own lives (Dale & Hyslop-Margison, 2011; Freire, 1973). Christensen and Aldridge (2013) defines teaching to be of four forms: transmissive, transactional, inquiry or transformational. Transmissive pedagogy is the traditional and most common form type of teaching. This approach often involves a scripted curriculum and materials with a 'scope and sequence' plan for the range of skills to be taught and in what order (Foorman, 2005). Although there are strengths and a rationale behind the transmissive form of teaching, there are several issues related to this form of pedagogy (Christensen & Aldridge, 2013). Firstly, transmissive pedagogy does not encourage critical or creative thinking. It is typically non-reciprocal and does not nurture oral language development and skills (Otto, 2006). The transmissive mode of teaching is often overused and is the main mode of teaching with many special needs learners, lower socioeconomic groups as well as English and dual language learners. It marginalizes both the teacher and the students; the teacher losing instructional autonomy while learners are not given the opportunity to construct knowledge and their understanding (Aldridge et al., 2010; Harper et al., 2007). Finally, it does not move towards transformational teaching and learning, and is content focused.

The second form of teaching that is elaborated here is the transactional approach. The transactional curriculum is also known as the generative curriculum model and the constructivist curriculum (Christensen & Aldridge, 2013; Wink, 2011); learners are active participants in the construction and co-construction of knowledge. Teachers, although guided by a given curriculum framework, have a greater decision-making role and choices than the transmissive curriculum. Activities and tasks are more open-ended that would require higher-

level critical thinking and greater decision-making in the process of learning and acquisition of knowledge (Kato et al., 2002). Although the teacher is usually required to ‘teach’ a prescribed curriculum, he or she plays a role in facilitating discussion and social interaction, to select appropriate and relevant materials and to allow learners to represent what they have learnt and understood based on their shared sustained learning interaction with others. The strengths of ‘transactional’ and participatory pedagogy include the space for learners to develop language skills and opportunities to negotiate their learning through collaboration and cooperation (Cranton, 2002). It encourages learners to be more reflective decision makers and to explore in-depth content in their area of interest. However, there are several challenges to this form of teaching and learning. For example, it is difficult to cover a lot of material within a limited period of time. It also requires certain management skills in order to effectively implement this form of teaching while accountability processes in institutions and schools do not favour the transactional mode over the transmission mode of teaching and learning (Christensen & Aldridge, 2013). Although both transmissive and transactional types of teaching have their roles, the transformational pedagogy is advocated as a vehicle to address inequities and social injustices (Cranton, 2002). Through the process, learners are able to develop critical dispositions such as problem-solving, negotiation and conflict resolution skills as well innovative and transformational thinking towards various issues (Mckenna et al., 2018). Despite their young age, children when viewed as ‘competent learners’ are capable of developing these skills in the right environment through facilitated and scaffolded activities (Carter & Roe, 2013; Malaguzzi, 1994).

Depending on the age group, the extent to which students are able to play an active role in transformational pedagogy may be limited. However, while transmissive, transactional and even inquiry approaches are used in many educational settings, the critical educator with the support of management can move beyond these traditional and conventional boundaries to

make a difference to their community and beyond. The importance of critical education in teacher development also play a crucial role in determining the capability and motivation of educators in educational settings in implementing a transformational approach to the curriculum (Dale & Hyslop-Margison, 2011; Shpeizer, 2018). Future-oriented practice necessitates that learners play an active role in their own learning experiences; hence transactional and transformational pedagogy is becoming an integral aspect of the young child's learning and therefore the early childhood curriculum (Brown, 2019; Christensen & Aldridge, 2014; New, 2015). The present study examines curriculum enactment and practice in Singapore's ECE settings in terms of how current practice align with future-oriented practice that trends towards more a more active transformational approach. Next, the concept of a pedagogical third space will be discussed in the context of relevant research literature.

2.4.5 Pedagogical Hybridity: The Third Space

The home setting (first space) has been recognized as being critical to the ways in which children first develop their language and literacy skills while the school or centre (second space) has been traditionally regarded as the formal learning environment. There is a socially and culturally constructed space that is defined as the third space that bridges home and school discourses (Levy, 2008; Yahya & Wood, 2017). Pedagogy of the third space refers to an evolving and emerging space that brings together possibilities, discourses and dialogue (Quigley & Hall, 2014). Looking from a postcolonial perspective (Cannella & Viruru, 2002; Gupta, 2015), it can be argued that many early childhood curricula and pedagogical approaches in modern early childhood settings are influenced by Euro-American or 'Western' philosophies and educational theories such as Reggio-Emilia, Waldorf and others. However, many other settings outside the Euro-American context, culturally diverse pedagogical ideas and discourses can be observed. Teaching strategies include more traditional cultural values, with approaches that usually develop and favour academic proficiency and learning in young

children, as well as the use of child-centred approaches in line with progressive educational philosophies (Gupta, 2015). Quite often, in many Asian countries including Singapore, despite having policy recommendations for a more learner-centred and play-based approach, this is in conflict with more traditional and conventional approaches to teaching and pedagogy in the local context (Ang, 2014; Gupta, 2014d).

It is critical that we acknowledge and recognize the multiple realities and perspectives that interact within this third space. There is a moving away from the position that there is only one possible reality and strategy to a position that allows a tolerance of grey areas and ambiguities when diverse cultures are juxtaposed (Roskos & Christie, 2007; Sawyer & DeZutter, 2007; Sumsion, 2005). Moreover, in many countries, although there is prescribed national curriculum framework guidelines, educators realize the significance of an ‘alternative’ curriculum that incorporates the social-emotional skills and values into the programme that again develops within the ‘third space pedagogy’ (Bauml, 2016; Birbili & Myrovali, 2020). Thus, there cannot be a ‘one size that fits all’ approach with early childhood pedagogy and therefore no universal approach but rather a space where pedagogical hybridity evolves from a blending of established practices, as well as more contemporary and neo-colonial ideas, educational philosophies that are incorporated into the curriculum (Bauml, 2016; Gupta, 2018; Ong, 2019b).

In particular, language learning merges with the children’s sociocultural and linguistic experiences that can be of a diverse nature. This creates the potential for the third space to be transformative, critical with learning that is transferable across the boundaries of learning spaces within the students’ lives (Gutiérrez et al., 2007; Piazza, 2009). With this in mind, teachers may utilize traditional texts, curricula, and daily, as well as festive practices as effective instruments to facilitate teachers and learners to negotiate new understanding and interpretations of the local within the global context. Gutiérrez (2008) contends that literacy

and language arts practices conventionally depend on definitions of literacy as specifically vertical skillsets. However, a collectively negotiated third space is inclusive of the learner's culture/s, history, language/s and outside school literacies and experiences as well as their communities and is not just based on building alphabetic and phonemic awareness or skills instruction (Gutiérrez, 2008; Lewis, 2001; Piazza, 2009). It can also serve as a space where bridges are nurtured and home-school-centre connections are strengthened.

Some others use the term 'pedagogical hybridity' to refer to the adoption of innovative and novel pedagogy as opposed to the traditional 'Asian' classroom such as creative pedagogical methods (Lin, 2014). These strategies may be opposed to what the teacher and student are used to as demonstrated by their attitudes and conventional practice. This hybrid pedagogy is a form of resistance against dominant ideological patterns of knowledge and power relationships (Darder, 2012). This form of opposition to dominant ideology may signal the need for greater 'dialogue' and 'gap-bridging' initiatives. The re-evaluation of traditional values and practices and the roles of the teacher, learning process and strategies to nurture creativity and how they can be complemented by 'Western model' in order to create their own contextualised model appropriate for their practice and setting (Leung et al., 2004). Thus, a future-oriented curriculum would most likely integrated a 'blended' or 'hybrid' form of curriculum. The current study examines some possible combinations of dimensions of the curriculum and how these may serve as models of future-oriented practice. It also looks at possible deficiencies within current models of practice. Next, the role and place of communities of practice and place-conscious approaches will be examined.

2.4.6 Communities of Practice and the Environment

Jean Lave and Etienne Wenger (1991) first coined the term 'communities of practice' in their discussion of the notion of legitimate peripheral participation arising from a social theory of learning. Etienne Wenger extended the application of the concept to domains such as

organizations and online learning communities (Wenger, 1998). Building on Lave and Wenger's definition, the central characteristics of COP can be defined (Barab & Duffy, 2012; Hoadley, 2012).

Firstly, communities of practice tend to emerge because of a common enterprise or common purpose of members that unites them and validates the activities that are deemed significant. The central function of the community would be to develop the expertise and instruments in order to accomplish the purpose. Often, successful communities possess a common cultural and historical heritage that in some measure captures social negotiated meanings that include shared goals and practices. Another characteristic aspect of COP is that it is an interdependent system with an ability to grow and integrate new members through a share purpose and identity for the individual members as well as the community as a whole (Hill, 2012; Rogoff, 2003a). The sustained and shared purposes of communities of practice within the early childhood education field in part provides the impetus and basis in the design of learning environments. Thus, these communities of learners facilitates the emergence of learning environments that are able to engage and involve both educators and young learners as legitimate peripheral participants in a community whilst developing identities individual and collective (Barab & Duffy, 2012; Wenger, 1998). Professional learning communities (Thornton & Cherrington, 2018) may arise from communities of practice and further support teacher practice and promote greater public dialogue and commitment towards improving curriculum and practice. The role of place-based or place-conscious approaches is examined next.

Place-conscious Education and Transformative agenda

A place-based or place-conscious approach to curricula is not actually a new phenomenon but rather its goal is to base learning in local phenomena and the learners lived experiences (Smith, 2002). It is not something ground-breaking but it highlights the significance for learning about

the local place, the community and the connections to that place as a means of putting the local in the global context and brings learners into a real-life participation in the local community and environment (Nicol et al., 2015)

Smith (2002) proposes five main thematic patterns that can be found in place-based education: cultural studies, nature studies, real world (authentic) problem-solving, internship or entrepreneurship opportunities and induction into community processes. Although Smith's experience is mainly with high school students rather than young children, these five thematic categories are useful in helping identify what types of place-based activities can take place. In the Singapore context, many early learning centres utilize community spaces, the neighbourhood and connections with these places are explored as will be seen in the following findings chapters. A place-conscious approach to early years learning has a number of strengths that allow a transformative agenda to be developed in several ways (Smith, 2002; Smith & Sobel, 2010). Place-based education overcomes the discontinuity between school-centre and the children's lives, so that teachers and learners make use of phenomena that surround them as a basis for the curriculum. Using these experiences as a foundation, more abstract phenomena and knowledge can be developed. Allowing learners to become constructors of knowledge rather than mere consumers is a critical feature of the place-based approach. It enables learners to become better engaged and take greater ownership of their own learning. In such familiar and locally based settings, teachers take on the role of 'experienced guides and brokers' of community resources and local funds of knowledge which allows them to facilitate students achieve skills and dispositions of successful learners. Interactions between the community and the school-centre becomes more accommodating, allowing community members to come into the school setting while students can also play an active role in the community. Thus, community partners can be brought into the early learning

settings or alternatively, the children go out into the community through walks, field trips and participation in various community projects and events.

Urie Bronfenbrenner's Bioecological Theory

The Urie Bronfenbrenner's theory of bioecological development (Bronfenbrenner, 1979; Urie Bronfenbrenner & Morris, 2006) looks at human development as a phenomenon of continuity that extends over time, both individually and as a collective group. The immediate environment and interactions with the individual as well as those more distal have been defined as the microsystem (immediate environments), mesosystem (relationship between two or more microsystems), the exosystem (settings that have an indirect influence) and the macrosystem (ideologies and attitudes of the culture). The chronosystem looks at environmental events and transitions over the life course, as well as socio-historical conditions. Urie Bronfenbrenner's Bioecological model provides a theoretical foundation to processes of concepts such as local funds of knowledge (Moll, 2019), place-based education (Sobel, 2004) and communities of practice (Wenger, 2001). The present study examines the perspectives and roles of teacher educators within their own professional learning communities and in the context of the local communities.

2.5 Chapter Summary

The chapter provides an overview of cultural-historical perspectives of early childhood education, some definitions of the curriculum and the context of theoretical and internationally accepted approaches in the ECE curriculum. It has discussed a number of factors that influence the negotiation of pedagogical practice. A review of the dominant approaches to early childhood education and the shifting landscapes and paradigms within a global perspective were examined. From the curriculum to its influences, some comparative and cross-cultural perspectives are presented, and a critical lens was used to examine contemporary and

postmodernist issues in early childhood education and development. Several trends in the educational landscape were identified. These included globalization as well as neoliberalism that calls for global citizenship and skills for the 21st century to become priorities in the curriculum. Other factors influencing pedagogy and practice include the role of knowledge, attitudes and beliefs of teachers and the role of parents. Finally, the chapter covers issues of critical pedagogy, pedagogical hybridity, as well as the significant role of communities of practice in being enablers in future-oriented practices. The role of the pedagogical third space and place-conscious approaches in early childhood education settings in creating bridges and allowing the connections to be made between home-family cultures, languages, and practices with that of the school-centre was also examined. The next chapter examines the context of the research setting of Singapore.

CHAPTER 3: THE CONTEXT

Chapter 3 examines the specific contextual influences on the curriculum and pedagogical practice, as well as the background and other considerations brought into the interplay within the early childhood education context of Singapore. Historical and demographic influences, as well as earlier research studies on various aspects of ECE practice and policy within the country will be summarized and reviewed in this chapter. Relevant policy and curricular documents and literature on ECE practice in Singapore will be examined. Parts of the NEL curriculum framework (MOE, 2013b), the key curriculum document for early childhood education in Singapore, will also be considered. This chapter also looks at how changes and reform in education policy during the past decades influence trends in the context of globalization to provide a background for the critical analysis of issues in early childhood education in the country.

3.1 Background to ECE provision in Singapore

Singapore has a multiracial and multicultural population with a resident ethnic distribution of 74.4% Chinese, 13.4 % Malays, 9% Indians and 3.2% Other ethnicities (MTI, 2019). Since independence in 1965, the demographic distribution of CMIO (Chinese-Malay-Indian-Others) ethnic groups has been relatively stable while the Malays have been acknowledged to be the indigenous, native people in the country. It has a population of 5.7 million with a total land area of 725 square kilometres (280 sq. miles). As a small nation state, Singapore has limited natural resources, and thus, human capital has always been the republic's most valuable asset (Choo, Villanueva, Sawch, & Vinz, 2017; Tan, Koh, Chan, & Costes-onishi, 2017). The Singapore education system has gone through several development phases (OECD, 2016) which will be discussed next.

The education development in Singapore has gone through several development phases since the late 1950s, post-war. The ‘survival driven phase’ (1959-1978) when a single national education system was established while replacing schools that had previously catered to individual ethnic communities. It was also during this phase when the bilingual policy was introduced with English as the official national language for communication and in schools, together with the official mother tongue languages (Chinese, Malay and Tamil) (Bolton & Ng, 2014; MOE, 2013d).

The second phase of development in the education system was the ‘efficiency driven phase’ (1979-1996) when the country was compelled to move up higher on the economic value chain during the global oil crisis. The aim was to enable the nation to compete effectively with other Asian markets that were providing low-cost manufacturing and to remain attractive to foreign investors. Considerable changes were made to the education system and the new model included alternative pathways and options for students of differentiated needs and abilities. The aims of these policy changes were to improve the quality of the education system, reduce dropout rates and to develop the skills required for the new capital and skills-intensive economy (Koh & Hung, 2018). Schools offered more options for students with curricula that were differentiated and pedagogical strategies adapted so as to enable students to progress into secondary school and post-secondary and tertiary institutions (Goh & Gopinathan, 2008). Educational institutions were built to gear towards providing graduates with industry-relevant skills and meeting the demands of a technologically driven economy (Goh & Gopinathan, 2008; OECD, 2016).

The third phase was the ‘ability-driven and aspiration-driven phase’ (1997-2011) that worked in tandem with the new economic philosophy, in which the country established a new educational philosophy ‘Thinking Schools, Learning Nation’ (TSLN) (Goh, 1997). ‘Thinking Schools’ was based on the stance of developing creative and critical thinking skills in students

instead of merely imparting knowledge to them and also instil a passion for lifelong learning (Goh, 1997; Tan et al., 2017). These goals were achieved through increased flexibility in the schools system allowing more curriculum time for inquiry-based activities with information and communications technology (ICT) facilitating new modalities of learning (Choo et al., 2017; Lee, Goh, Fredriksen, & Tan, 2008).

The current ‘student-centric, values-driven phase’ (2012–present) is based on the development of a framework for 21st Century Competencies and Student Outcomes (21CC Framework, See Figure 3.1) that came out of the momentum of the TSLN vision (Poon et al., 2017). The 21CC framework articulates core competencies and values for the education system and guided the development of subject syllabi for both curricular and co-curricular programmes in schools at various levels. At the same time, a culture of commitment, collaboration and professionalism is expected from educators (Chung et al., 2017; OECD, 2016). Global awareness, cross-cultural skills, critical and inventive thinking were skills that were articulated in this 21CC Framework (See Figure 3.1) for future-oriented competencies and student outcomes to nurture confident, self-directed learners who can become active contributors to the society. These values and objectives have been extended into the national curriculum framework (MOE, 2013b) for the early years in Singapore.

The phases of education development in Singapore that fuelled initiatives such as the ‘Thinking Schools, Learning Nation’ has also spurred ECE curriculum reform in the past two decades. These initiatives and reforms have facilitated the alignment of Singapore education with the current prevalent international trends of inquiry-based learning, child-centred pedagogy and reflective teachers. These changes in early childhood education were in contrast to previous norms and practices that were efficiency-driven learning approaches, using a standardized and highly regulated curriculum with teachers’ professionalism based on guidelines provided by a prescriptive curriculum (Ho, Lee, & Teng, 2016; Tzuo, 2010). The

transformative process has compelled teachers to align themselves between international trends and localized traditions and practices. Early childhood service provision in Singapore will be elaborated in greater detail next.

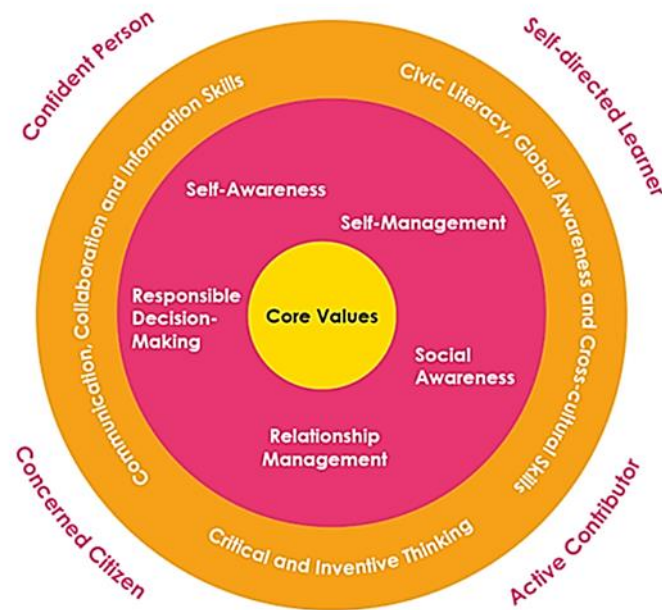


Figure 3-1 Framework for 21st Century Competencies and Student Outcomes (Source: OECD, 2016; Poon et.al. 2016)

3.2 Early Years Education Landscape in Singapore

The Early Childhood Development Agency (ECDA) was established in 2013 to integrate the government’s approach towards early childhood care and education in Singapore as part of the national effort to raise the standards and quality of early childhood programmes (ECDA, 2013, 2020b). It is an autonomous agency cooperatively administered by the Ministry of Education (MOE) and the Ministry of Social and Family Development (MSF). Prior to 2013, the division of responsibilities and auspices between the two ministries created a divided administrative system for the early childhood sector and also contributed to the view that ‘care’ and ‘education’ in young children were separate aspects of childhood development (Tan, 2017).

ECDA serves to oversee the regulation and development of kindergarten and child/infant care programmes for children up to six years of age.

The objectives of ECDA are five-fold and include the following (ECDA, 2020b; MOE Singapore, 2013):

- i) Oversee measures that enforce and incentivise regulation, quality assurance certification and the provision of early childhood development resources.
- ii) Facilitate the training and professional development of quality early childhood educators.
- iii) Develop the masterplan for the infrastructure and manpower resources to support the early childhood sector.
- iv) To provide subsidies and grants to keep early childhood education programmes affordable particularly to low- and middle-income families.
- v) Conduct public education and outreach programmes and services in order to raise parents' awareness and support for children's early development.

Early childhood service providers in Singapore can be classified into a few broad categories: childcare/day-care centres, kindergartens, intervention/special needs, and enrichment service providers. Other than intervention/special needs and enrichment service providers, most childcare centres and kindergartens cater for children between 18 months and 6 years with some also providing infant care for children below the 18 months.

The two main categories of early childhood service providers are that of the childcare/day-care centres and the kindergartens with the former becoming the more prevalent type. The childcare centres provide childcare services and education programmes for children between 18 months and six years of age. These may be full day, half day or flexi-programmes to cater to the needs based on the parents working schedule with large percentage of enrolment being full day care (Choo, 2010). Kindergartens provide mainly 'education' focused programmes for four- to six-year olds, usually operating three- to four-hour sessions in the morning and afternoon. In 2019,

there were more than 1400 licensed childcare centres and 400 kindergartens registered with ECDA with a capacity of up to 170 000 places (Statistics SG, 2020).

Community-based services providers are mainly not-for-profit centres that provide affordable, mainly government-subsidized services and these include PCF centres (PAP Community Foundation), those operated by religious and welfare establishments, and more recently, the MOE Kindergartens MKs (Bull et al., 2018). In 2009, the Anchor Operator Scheme (AOP) was launched to provide greater funding support for selected preschool operators and better professional development prospects for early childhood educators (ECDA, 2018). The anchor operators were selected based on their past track records and proposals were evaluated based on a range of criteria such as financial stability, the integration of governance processes, the ability to enhance capacity and the implementation of quality and affordable programmes (ECDA, 2017a; Sum et al., 2016). Corporately-owned centre types belong to a cluster or chain of centres and follow a ‘franchise’ type of operation (Lim, 2017). Privately operated centres are generally those with smaller numbers of stakeholders and usually with a limited capacity for enrolment numbers (Bull et al., 2018).

One of the major educational objectives is to provide early exposure to and foster an appreciation for the mother tongue language (MTL) and their cultures during the preschool years to ensure a firm foundation for bilingual learning (MOE, 2013d). Most centres and all AOP centres provide Chinese language education while the MOE Kindergartens (MKs) provides learning in the three official languages MTL (Chinese, Malay, and Tamil). The Ministry of Education (Singapore) aims to have all AOP centres expand their provision of Malay and Tamil languages by 2022, in addition to Chinese language in the effort to strengthen and cultivate bilingualism from an early age. The government has stipulated that the number of MOE Kindergartens (MKs) will also increase to over 50 MKs by 2023, giving parents a wider

range of preschool options that offer instruction in their mother tongue languages (ECDA, 2018).

Over the past two decades, a number of major milestones were made in the Singapore early childhood sector (Ong, 2018; Tan, 2017)). Figure 3.2 delineates the major milestones for preschool education in Singapore. In 2011, the preschool quality assurance framework or the Singapore Preschool Accreditation Framework (SPARK) was introduced to support and enable preschools to raise their quality. It has provided a benchmark standard for preschools to measure themselves against. At the same time, it has provided recognition and support for preschool leaders in their efforts to raise the standards of teaching and learning so as to implement a holistic curriculum and enhance the well-being of children (ECDA, 2020a). The three levers key of quality that have become the focus are teacher quality, programme and curriculum quality as well as centre quality (MOE Singapore, 2013; Pascal, Bertram, & Veisson, 2018; Tan, 2017). These three aspects of quality in the ECCE curriculum will be discussed next.

Major milestones in Singapore preschool education

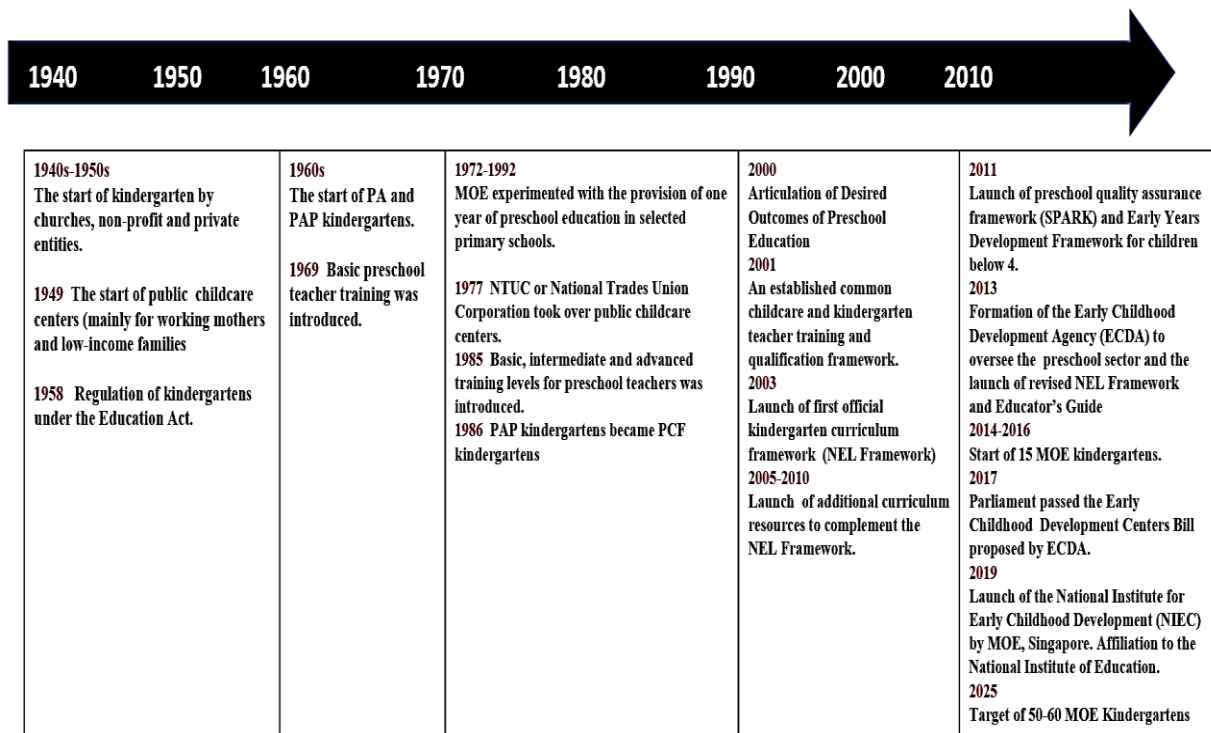


Figure 3-2 Major Milestones in Singapore Preschool Education

3.2.1 Teacher Quality

In the past decades, the training of preschool teachers, unlike primary and secondary school teachers, was conducted mainly by private training institutions and a few local polytechnics and government post-secondary educational institutions (Bautista et al., 2017; ECDA, 2014). In 2001, the Preschool Qualification Accreditation Committee (PQAC) was set up to assess and approve course content, assessment modes, trainer qualifications, training facilities and resources for teacher-training programmes for the early childhood sector up till the diploma level (MOE-MCYS, 2008). Between 2001 and 2013, the PQAC served as the gatekeeper for teacher preparation programmes for this sector by reviewing and keeping accreditation standards up to date with new developments in the field. Since 2014, all ECCE programmes conducted by private training institutes had to be accredited by the Workforce Development Agency (WDA) that was integrated with the workforce skills qualifications system (WSQ). To improve the calibre and quality of the teaching staff in the preschool sector as well as to enhance manpower capacity, an accelerated conversion pathway was made available from 2009. This was to incentivise and prepare mid-career prospective candidates and new university graduates with the competencies and skills to enter into the early childhood sector (Skills Future SG, 2019).

Teachers and personnel who hold leadership positions are also encouraged to continue to upgrade their professional knowledge and qualifications (ECDA, 2014). However, despite these measures, there is still a teacher shortage in the early childhood sector with centres and employers facing the challenge of recruiting qualified and quality staff, as well as having staff retention issues (Nirmala, 2014). This teacher shortage persists because salary scales and career pathways for qualified ECE staff although improved, had not kept up with other sectors in the job market (Ang, 2006; ECWI, 2019). The challenge has been in developing a more professional and qualified workforce in the early childhood sector by reviewing and ensuring

training standards as well as supporting a competitive remuneration structure of the sector (Teng et al., 2018). There are also considerable differences in remuneration scales between the private and for-profit settings and the not-for-profit, community or welfare centre settings. The findings in earlier studies point to a need to raise the overall working conditions in terms of perception of status and pay conditions in order to recruit and retain qualified and committed staff in the early childhood sector (Ang, 2014; OECD, 2016).

In August 2017, it was announced that a new training institute for early childhood educators, the National Institute of Early Childhood Development (NIEC) was to be set up under the National Institute of Education (NIE) which has been the national institute for teacher education and educational research in Singapore. NIEC is funded and directed under the Ministry of Education and opened its doors for the its first cohort early childhood educators in 2019 (Siau, 2017). The evaluation and monitoring of centre quality, which is the second lever of measurement for quality in the ECCE curriculum, will be examined next.

3.2.2 Centre Quality

Within the past two decades, many changes and reforms to the system administration and structures were put in place to encourage self-monitoring, and evaluation for continuous improvement in early childhood education centre programmes and processes. Between 2003 and 2011, the Ministry of Education developed and implemented a self-evaluation instrument which became the basis of the quality rating scale (QRS) used in the quality assurance framework known as the Singapore Pre-School Accreditation Framework (SPARK) that was launched in 2011 (ECDA, 2020a; MOE-MCYS, 2008). This system enabled preschool centres to perform first an internal self-evaluation of their strengths and areas for improvements. Quality benchmarks in the QRS are in the areas of leadership, planning and administration, staff management, resources, curriculum, pedagogy as well as hygiene and safety (Tan, 2017). This process has been validated against three established instruments which include the

following: the Early Childhood Environmental Rating Scale – Revised (ECERS-R) (Bull et al., 2017; Harms et al., 2005); the Early Childhood Environment Rating Scale-Extension (ECERS-E) (Siraj-blatchford & Taggart, 2003); and Program Administration Scale (PAS) (Talan & Bloom, 2004). SPARK-certification is valid for three years and all certified centres conduct an annual self-appraisal exercise using the QRS with a follow-up annual action plan so as to ensure systematic and sustainable efforts towards continual improvements and enhancements (ECWI, 2019; Fleeer & Van Oers, 2018; Tan, 2016). Although SPARK (ECDA, 2020a; MOE-MCYS, 2008) as a form of centre evaluation and appraisal that can help to recognize and promote excellent performance and establish baselines for centre decisions, there are some pitfalls and concerns. For example, centres may focus on obtaining positive and excellent annual evaluation based on their productivity just prior to the appraisal rather than consistent work throughout the year. Such appraisals and evaluations are often based on performance criteria and data that are quantified. However, the success of certain roles and outcomes are sometimes not quantifiable in terms of objective figures. Also, as these evaluations are not mandatory, centres may choose other criteria for their operations, including profit and costs. Next, the third lever of measurement for quality in the ECCE curriculum is considered.

3.2.3 Programme Quality

The national curriculum frameworks and guides include the Nurturing Early Learners (NEL) (MOE, 2013b) and Early Years Development Framework (EYDF) (ECDA, 2013) that have been used for young learners and have guided programmes in infant and early childhood education settings since 2003. The first national curriculum framework (NEL) was first launched in 2003 and was revised in 2012 to provide consistent quality standards in the delivery and implementation of early childhood education and kindergarten programmes across the sector. This national curriculum framework outlined the desired best practices for

implementation in the preschool and kindergarten settings. The framework known as the ‘Nurturing Early Learners: A Framework for a Kindergarten Curriculum (NEL) in Singapore’ serves as a broad guide with key principles of practice to the curriculum for children between four to six years. Between 2005 and 2010, several additional curriculum resource packages were developed to support more consistent quality practice across the sector. The additional resources included the curriculum guide for the three official mother tongue languages (MOE, 2013d), approaches to learning or teaching strategies to complement the Nurturing Early Learners (NEL) Framework (MOE, 2013b) and another resource to support the nurturing of learning dispositions (Tan, 2017). The guides for the six learning domains for NEL framework also serve as a resource for early childhood practitioners in Singapore (MOE, 2013b). The Early Years Development Framework (EYDF) was launched in 2011 to provide guidelines for quality care and learning experiences for children younger than four years of age in childcare settings (ECDA, 2013).

These two frameworks, the NEL and EYDF, were to ensure a continuity of standards in quality care, development and providing learning experiences for children from infancy to the kindergarten years (ECDA, 2017b). The integrated efforts of the government at the turn of the millennium has transformed the sector from a laissez-faire and relatively unregulated approach to a more systematic approach towards greater teacher and leadership regulatory requirements, as well as promoting and sustaining quality standards in the sector with the delivery of a quality curriculum and programme (Ang, 2014; Tan, 2017). The question regarding the use of the national curriculum concerns its sufficiency in meeting the needs of diverse learners and in providing an equitable and culturally relevant approach without being overly prescriptive. The next section will present an overview of the NEL framework.

3.3 The Nurturing Early Learners (NEL) Framework

An overview of the NEL framework will be examined in this section, as well as some of the challenges to its implementation since its introduction and the issue of curriculum priorities presented in its delivery.

3.3.1 Key Stage Outcomes of Pre-school Education

The Nurturing Early Learners: A Curriculum Framework for Kindergartens in Singapore was first launched in 2003 by the Ministry of Education. A revised version was published in 2012 to provide a framework and guide to delivering a quality curriculum for children between four to six. The NEL framework (MOE, 2013b) is a nationally endorsed curriculum framework based on established developmental theories (Slater et al., 2003; Tudge et al., 2017) and evidence-based practice (Shonkoff & Fisher, 2013; Ward & Wilcox-Herzog, 2019), which is also a reference point for use in the SPARK quality rating scales in the area of centre evaluation of curriculum and pedagogical strategies (Ang, 2014). It is also the guide which local teacher preparation courses refer to (Bautista, Ng, Múñez, & Bull, 2016; Tan, 2017). The NEL Framework is based on six principles summarized in the acronym iTeach (See Figure 3.3) as the foundation for best practices in the Singapore context.

These six iTEACH principles that guide the curriculum are aimed to build the foundation for young learners to achieve the Desired Outcomes of Education and Key Stage Outcomes (MOE, 1997) by facilitating their acquisition of knowledge, skills and dispositions through the six learning domain areas and six learning dispositions (MOE, 2013b). The six learning domains are: i) aesthetics and creative expression; ii) discovery of the world; iii) language and literacy; iv) motor skills development; v) numeracy; and vi) social and emotional development.

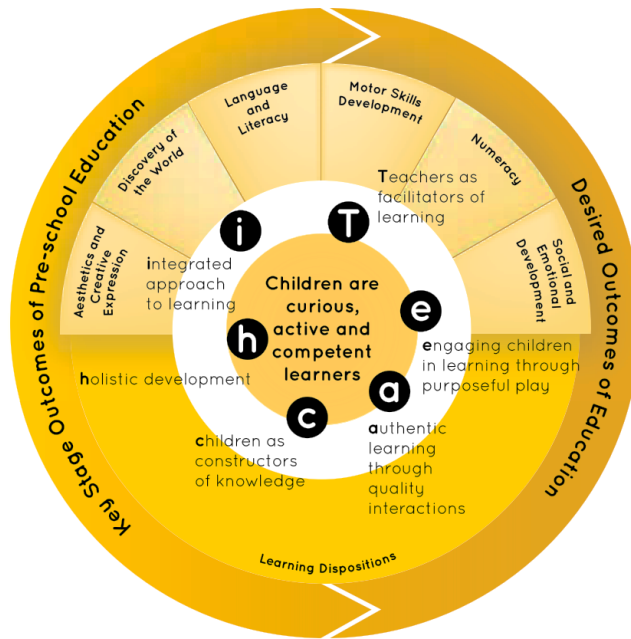


Figure 3-3 Overview of the NEL Framework (MOE, 2013)

The six iTeach principles are

- I**ntegrated approach to learning
- T**eacher as facilitators of learning
- E**ngaging children in learning through purposeful play
- A**uthentic learning through quality interactions
- C**hildren as constructors of knowledge
- H**olistic development

The NEL learning domains correspond to UNESCO’s (2013) Learning Matrix Task Force Domains of which there are seven, with the extra domain being ‘Learning Approaches and Cognition’ (See Figure 2.1). The NEL domains are supported by the complementary teaching resources and guides for each of these domains which integrate the pedagogical approaches/strategies and learning dispositions curriculum resources packages The learning dispositions emphasized in the NEL curriculum are explained in the acronym PRAISE: perseverance, reflectiveness, appreciation, inventiveness, sense of wonder and curiosity as well as engagement (MOE, 2013b, p. 6).

The iTEACH principles reiterate and echo a child-centred approach based on ‘Developmentally Appropriate Practices’ (NAEYC, 2009; Ng, 2014). These curriculum

principles, incorporating play-based, authentic learning, and viewing children as competent learners and active participants and constructors of their own knowledge through an integrated holistic curriculum, echo many well established philosophies and approaches in child development and education (Carter & Roe, 2013; Malaguzzi, 1994; Riley et al., 2016; Wien, 1996). Although the NEL framework is the official nationally endorsed curriculum framework for four to six year olds, it is not a mandatory syllabus for kindergartens and childcare centres, but is generally closely adhered to in community-based centres such as the PCF and MOE Kindergartens (Ang, 2008; Tan, 2017). Centres have the autonomy to adapt and modify the curriculum and pedagogical approaches that are most appropriate and fit the centre educational philosophy often in order to cater to the preferences and expectations of the parents and more individualized or collective needs of the children (Tan, 2017). Since its inception in 2003, there has been revision to the original national curriculum framework and with the move towards future-oriented practices that advocate critical thinking, creativity and self-directed learners (PS21, 2007). This has presented challenges to teachers who have become used to traditional and didactic approaches and the issue will be discussed next.

3.3.2 Challenges to Curriculum Reform

With changes in government educational policies and the vision of ‘Thinking Schools Learning Nation’ (TSLN) (Goh, 1997), there was a push towards greater opportunities for young learners to explore and engage in creative and critical thinking and to encourage children to embrace life-long learning rather than pursue a more formal teacher-centred approach (Goh, 1997). Since the official launch of the national curriculum guide in 2003, the NEL framework, it has been the intention to shift the preschool and kindergarten curriculum from a more academic, didactic and teacher-centred approach to one that was more child-centred, experiential, inquiry and play-based (MOE, 2013b; Teo, Yan, & Ong, 2017).

Resistance to change can be on an individual level, due to habit, conflicting beliefs, values, practices, and it can also be on an organizational level due to organizational rigidity or due to the prevailing situation and climate in the organization (Ebbeck & Waniganayake, 2003; Ebbeck & Chan, 2011). Resistance in the form of persistent parental expectations for a more academic-focus programme and teachers' adherence to 'old' approaches have posed a serious challenge in the transformation of the curriculum (Ebbeck & Chan, 2011; Moss, 2017; Ng, 2014; Tan, 2017). The factors that posed limitations and disincentives to change include the practice of using a rigid time-table, inappropriate teacher: child ratios, and the learning environment (Ng, 2014). Teachers who have been used to 'traditional' ways of practice needed to transition from a teacher-centred approach to not only being facilitators of learning experiences, but also that of a co-constructor of knowledge and understanding in the classroom (Fraser, 2012). There is also a push to transform the strategies that teachers use to monitor and evaluate the progress of children and engage in pedagogical documentation and even taking on the role as teacher-as-researcher (Biffi, 2019; Oliveira-Formosinho & de Sousa, 2019).

One challenge mentioned earlier is related to the attitudes, expectations and concerns of parents in Singapore (Ebbeck & Chan, 2011). As in many Asian contexts, parents often have strong concerns about their child's school readiness or transition into formal schooling and expectations such as being able to read before they get to primary school (Ebbeck & Chan, 2011; Lim & Torr, 2007). It has been observed in anthropological research that parental expectations are influenced by their cultural and societal expectations, which also shape their views and expectations even when they are deciding on the 'right' centre for their child (Tobin et al., 2009b; Wilkins, 2012). On one hand, parents who are better educated and informed about the latest trends and developments in the field of early childhood development and education that advocate creative and play-based learning (Edwards & Cutter-Mackenzie, 2013). On the other hand, centres and kindergartens are compelled to implement a more academic approach

to learning due to the demands and expectations of parents that their child should be school-ready (Choy & Karupiah, 2016). Thus, despite the fact that the endorsed national curriculum has been in circulation for more than decade, there is still a challenge for kindergartens and preschools to transform the curriculum in order to meet the needs of a diverse population (Tobin et al., 2009a), and the vision of the 21st century learner (Molina & Lattimer, 2013; Tan et al., 2017). The current study aimed to better understand these challenges to curriculum reform through the perspectives of experienced teacher practitioners. The question of curriculum priorities will be examined next in the context of a holistic approach to curriculum and development.

3.3.3 Curriculum Priorities

With the implementation of the Singapore's Ministry of Education (MOE) curriculum framework in 2003, and with subsequent reviews and revisions in 2008 and then 2012, the NEL framework emphasizes learning and development in both academic and non-academic areas, thereby nurturing children's holistic development (MOE, 2013b). With six domains of development and learning articulated, the question that has been raised concerns how teachers prioritize the importance of these learning domains of the NEL framework and how these may affect the professional development needs of early childhood practitioners in Singapore (Bautista et al., 2016, 2017). As discussed in Chapter 2, other priorities in a future-oriented practice would include that of nurturing skills for the 21st century based on the 21st CC Framework (See Figure 2.3); these include soft skills such as communication, cultural awareness, critical thinking and creativity. Some of these priorities may be also found in the 'hidden curriculum' such as concepts and values unintentional taught and imbibed by young learners (Boland, 2015; Rietveld, 2010).

This question is of central importance to this thesis as it provides insight into the actual practice in the curriculum and brings to light some of the challenges that are faced by practitioners

within the early childhood setting in Singapore. The next section addresses the multi-dimensional composition of society in Singapore and how local funds of knowledge within the homes and communities can provide ample resources of cultural and social capital for learning experiences.

3.4 Multiculturalism and Local Funds of Knowledge

This section will introduce the roots of multiculturalism in Singapore and its role in the national identity and global citizenship of its people. Local funds of knowledge come from the local environment, community resources, and activities such as festive celebrations and materials that come from the diverse cultures in the community. These local funds of knowledge are an integral and crucial aspect of the curriculum (Gupta, 2014b). This section will highlight the relevance and important role of early childhood education and the local funds of knowledge in cultivating attitudes and skills that enable learners to integrate and participate in a culturally diverse society for just and equitable outcomes.

3.4.1 Diversity and Identity

Singapore, with its colonial history, was a multicultural society long before it became established as an independent nation state. Multiculturalism has been deeply embedded in society, in not only the private and everyday lives of the Singapore people, but also in its governance. Originally, CMIO (Chinese, Malay, Indian and Others) multiculturalism was premised on the recognized founding races of postcolonial Singapore (Lian, 2016). It was only after independence that it was resolved largely based on political reasons that were connected with Peninsular Malaysia to emphasize the principles of multiculturalism (Goh, Gabrielpillai, Holden, & Khoo, 2009).

Over the past three decades or so, the multi-ethnic dimensions of Singapore have developed in complexity with the continued migration and globalization of the economy. The government

has worked relentlessly to integrate the population through multiracial policies with the purpose of Singaporeans embracing a national identity (Lian, 2016; Mathews, 2018). National and ethnic identity in Singapore is closely and intricately connected with the integration and interaction of the main ethnic identities becoming a critical component (Chua, 2003; Mathews, 2018). The Prime Minister Lee Hsien Loong (2017), in a speech in the opening ceremony of a cultural centre in Singapore said:

Today we are a modern and developed society but remain rooted in our Asian cultures. This sense of rootedness gives us a sense of identity and confidence. We are also a multiracial, multi-religious and multi-cultural society. This diversity is a fundamental aspect of our respective identities.

Singapore may be more appropriately described as a ‘mosaic’ rather than a melting pot of ethnic cultures, as the different ethnic communities have maintained their cultural distinctiveness and uniqueness (Chua, 2003). Thus, because of its diversity, cross-cultural competencies, and empathy amongst cultures within the society is an important goal of multicultural education. The early years is a crucial time when the tenets and values of multiculturalism can be integrated into early childhood education (Berthelsen & Karuppiah, 2011a, 2011b). The family, the school-centre and community play an important role in this socialization process in the values, beliefs, ideas and practices that are held within their cultures (Berthelsen & Karuppiah, 2011b; Mathews, 2018). An important purpose of multicultural education is that students acquire knowledge, attitudes and skills that enable them to integrate and participate in a culturally pluralistic and democratic society (Banks & Banks, 2004; Robinson & Diaz, 2006). A vital source of these skills and knowledge that develop and arise historically and culturally is that of local funds of knowledge which will be examined next.

3.4.2 Local Funds of Knowledge

In the context of Singapore, the local funds of knowledge of home and ethnic communities and cultures (González, 2005; Moll, 2019; Moll et al., 1992) are apparent both within the centre settings and also in the neighbourhood communities (Gupta, 2014b; Mathews, 2018). Quite often, centres observe and celebrate the local festivals and use these occasions to enrich the learning experiences of the students. Chinese New Year, Hari Raya and Deepavali are designated as public holidays, with many centres preparing for and celebrating these occasions with activities such as baking Chinese New Year goodies, lantern making craft with red packets during Chinese New Year, the display of rangoli and henna painting for Deepavali, and the making of ketupat craft for Hari Raya (Gupta, 2014e; MOE, 2013d). These ethnic practices and traditions are regularly brought into display on Racial Harmony Day when children are encouraged to wear their traditional dress and costumes such as the *cheongsam*, *sari* and *baju kuring* and to participate in a ‘catwalk’ or fashion parade. Traditional games, crafts and foods are also shared. Teachers use this opportunity to create greater awareness of cultures outside the local community including other Asian, as well as outside national boundaries (Gupta, 2014c).

The use of ‘funds of knowledge’ (González, 2005; Moll, 2019) in this instance through the cultures within and outside their own homes and in the community is portrayed in the NEL framework (MOE, 2013d) in the learning domain ‘Discovery of the World’ (MOE, 2013a). Some learning dispositions and attitudes that are encouraged in this domain are related to the notion of the child as a curious, active and competent learner; developing a ‘sense of wonder’ and positive attitudes towards learning; as well as learning to care and respect the environment and the world around themselves (Lewis, 2018; MOE, 2013b). Alongside multiculturalism, Singapore has a bilingual educational policy and the multicultural, multi-ethnicity of its

society necessitates that its community is effectively multilingual. This aspect will be covered next.

3.4.3 Bilingualism and Multilingualism

Language is an obvious aspect of ethnic identities and one of the ethnic markers that draw the social boundary between different ethnic groups (Canali et al., 2015). One of the goals of the Singapore's educational policies was to provide early exposure to and to foster an appreciation for the Mother Tongue Language (MTL) and associated cultures during the preschool years to ensure a firm foundation for bilingual learning and an appreciation for their own ethnic identities. Most centres and all anchor operators (AOP) centres provide Chinese language education while the MOE Kindergartens (MKs) provides for learning in the three different official MTL (Chinese, Malay, and Tamil). The aim is to have all anchor operator centres expand their provision of Malay and Tamil languages by 2022, in addition to Chinese language in the effort to strengthen and cultivate bilingualism from an early age (Beanstalk, 2017; ECDA, 2018). The number of MOE Kindergartens will also increase to over 50 MKs by 2023, giving parents a wider range of preschool options that offer instruction in their mother tongue languages (ECDA, 2018). With private-operators, although the bilingual policy is observed, there is no fixed stipulated amount of time spent on MTL; private centres are able to decide on their own curriculum content as well as the time assigned to English and MTLs and there may be considerable differences in time, pedagogical materials and resources used (Curdt-Christiansen & Sun, 2016). Often, both English medium and mother tongue language medium teachers must work together in order to implement a bilingual curriculum. English language and mother tongue language instruction are usually taught separately. With children coming from a variety of family backgrounds and home-language use, young learners speak the English language and their mother tongues languages with varying degrees of proficiencies

(Curdt-Christiansen & Sun, 2016; Tan & Ng, 2011). Hence, the need for differentiated instructed and varying centre policies regarding bilingual language instruction.

3.4.4 Language Ideology and policy

The way teachers and parents perceive a language is directly correlated to the status, power, value and utility of the language within a society. There are conflicting language ideologies and practices (Curdt-Christiansen & Sun, 2016; Yazici et al., 2010). For example, although parents may be positive regarding their attitudes on mother tongues (MTs), their concern and priority about academic achievement and utility of the language may cause them to decide intentionally or unintentionally to use mainly English in their everyday communication. On the other hand, the opposite practice is found when parents deliberately use their mother tongue language in their everyday communication to encourage their child in that language. It may be highlighted that children come from a variety of family backgrounds and speak either or both languages with a wide range of language proficiencies (Curdt-Christiansen & Sun, 2016). The successful implementation of bilingual programmes require cohesive policies with clear goals, shared vision with communication and consensus between policy-makers, teachers and parents as well as consistent approach with continuity in curriculum provision (Curdt-Christiansen & Sun, 2016; Tan & Ng, 2011).

The NEL Framework for Mother Tongue Languages (MOE, 2013d) articulates the educational policy on a bilingual curriculum and envisions children as active learners and appreciate their mother tongue language and giving them a sense of cultural identity. The key objectives in preschool mother tongue teaching and learning is summarised in NEL as Communication, Culture and Connection. The guiding principles articulated in the framework (MOE, 2013d pp.39-41) are as follows:

- Mother tongue is a living language to the children; that is utilized in authentic situations and in routine and everyday events e.g. learning to greet an elder in a culturally appropriate manner.
- The teaching of mother tongue language should cater to diverse learners; teachers should plan for differentiated learning as children come from different backgrounds and abilities with varying proficiency of the language.
- Learning of mother tongue languages is active and interactive taking place in authentic settings.

Although the NEL framework for mother tongue languages (MOE, 2013d) provides clear guiding principles for MTL learning experiences at the preschool level, there are certain dilemmas faced by policy makers and centre management (Curdt-Christiansen & Sun, 2016; Zhao & Zhang, 2014). There has been an emphasis on the importance of developing cultural awareness and learning to appreciate ethnic cultures and this has been highlighted often and repeatedly in public and political discourse over the years (Bolton & Ng, 2014; Frewen et al., 2015; Tan & Ng, 2011). However, this ‘cultural persuasion’ approach has not always been observed as effective. This is because the linguistic pragmatism that values languages for their economic and utilitarian benefit has been underlying the bilingual policy, so that a language may be acquired not merely as a heritage language but also for economic goals and for potentially facilitating social mobility (Curdt-Christiansen & Sun, 2016; Tan & Ng, 2011). Thus, non-Chinese parents have been open to having their child develop some familiarity with Mandarin and develop at least some basic conversational skills in the language regardless of their ethnicity.

This section has examined some of the issues of multiculturalism in the context of Singapore and how local funds of knowledge, education and language ideologies and practices in the country have served to create an inclusive and tolerant society in terms of cultural and ethnic pluralism. Another aspect of a more inclusive approach in educational settings is to do with

the attitudes, policies and practices with regards to learners with disabilities. This will be addressed in the following section.

3.5 Towards Inclusion and Equity

Prior to 1988, children diagnosed with disabilities attended school separately in a number of privately-operated special education schools. It was only in 1990 that the Ministry of Education began to assume the responsibility of co-funding and educational supervision of schools for children with special needs. In 1988, a report by the Advisory Council for the Disabled recommended that these children with special needs be in mainstream schools whilst being provided with the necessary support (Hardy, 1988; Poon & Yang, 2016). It was also recommended that the child be placed in a special school only if he or she is unable to receive adequate education in a regular school. Since then, there has been call for more inclusive education system and to provide greater specialised support for such children. From 2004 to 2008, MOE recruited extensively candidates to be trained as allied educators and teachers of students with special needs in order to support learners with mild to moderate disabilities in mainstream schools. They were deployed mainly in primary and secondary school settings (Lim & Tan, 2004; Yeo et al., 2016).

Up to the age of at least six years prior to entry to primary school, children with additional needs, special needs support and provision has been through the access of services provided by family centres in the community, welfare organizations, private organizations and specific public hospitals (Yeo et al., 2011; Yeo & Tan, 2018). More recently, an increasing number of regular ECE centres are open to the inclusion of children with mild to moderate disabilities, including those on the autistic spectrum, usually complemented with specialist support services outside the centre setting (Yeo et al., 2016). Based on research literature, the critical elements of successful inclusion are that of a ‘teamwork’ approach with partnership and

communication between therapists, special education teachers, ECE teachers as well as parents (Odom & Bailey, 2001).

In the past, a ‘pull-out’ approach had been used with the child with special needs being taken out from the mainstream class and given individual or specialised attention by the specialists, therapist/s and/or special needs teacher. Mainstream ECE teachers have reported the perceived need for greater knowledge through professional development workshops and courses to better understand and meet the needs of children with additional needs (Bautista et al., 2017; Chong & Kong, 2012). Service delivery that facilitates inclusive educational practices and early intervention often depends on the collaboration and coordination of public and private sectors, as well as by voluntary welfare organisations (VWOs) with partial funding and regulation from the government (Poon & Yang, 2016).

Children with disabilities are faced with certain challenges in the quest for their right to education. The declaration of the right of every person and child to education was first proclaimed in the Universal Declaration of Human Rights in 1948 and again compellingly reaffirmed by the World Declaration on Education for All (1990) (Lester et al., 2017; UNESCO, 2017a). Since then, despite several declarations and frameworks in the call for action by UNESCO with the most recent in a framework for inclusion and equity in education (UNESCO, 2017a), there has been a challenge to the access of mainstream education with specialised provisions and support in Singapore. Although there is currently no legislation in the country that mandates or requires mainstreaming of children with special needs, there have been several measures and actions taken for this particular group of young learners (Yeo et al., 2011).

This section has provided an overview of the inclusive policies and practices in Singapore and the transforming education landscape with the government’s vision of Singapore becoming an

inclusive society. The next section examines the way early childhood educators have been prepared through initial teacher programmes and current professional development pathways for their roles as educators in the ECE sector.

3.6 Teachers' Competencies and Professional Development

Teaching, particularly at the formal schooling levels, has been a well-regarded and respected profession in Singapore. Greater attention was given to continuing professional development (PD), particularly since the initiative of 'Thinking Schools Learning Nation' (TSLN) (Goh, 1997). This nurtured the concept of the teacher as a 'reflective professional' rather than a mere 'technician'. In 2005, initiatives included the 'Teach Less, Learn More' philosophy with the current professional development model has highlighted the critical role that PD plays in the improvement of quality of education (Tan et al., 2017). There has also been a general consensus amongst policy makers, teacher educators and researchers that for major curriculum and pedagogic reform, greater innovation in PD and capacity building in teacher competencies are essential in order for reform and transformation to succeed (Bautista et al., 2017).

3.6.1 Competency-based approach

In the Singapore context, the government has implemented many changes and created many pathways including in-service training for early childhood educators to continue to improve their professional portfolio (ECDA, 2017a, 2017b, 2019; WDA & ECDA, 2016). Entry qualifications are at the certificate level for educarers (trained caregivers for infants) and at the diploma level for early childhood teachers, after having also met the relevant academic, language and professional requirements for ECDA certification (ECDA, 2019a; ECWI, 2019). There has been specified three 'career' pathways for early childhood professionals: educarers for children aged two months to four years; teachers for children between four to six years; and the leadership pathway. Within each pathway, there are multiple roles and pathways to

progress by achieving new competencies and qualifications (ECWI, 2019; SkillsFutureSG, 2019).

Professionals and workers in the early childhood sector have been integrated into a wider effort of national workforce development referred to as *SkillsFuture Singapore* (ECWI, 2019) which aims to provide opportunities for workers to further develop their skills continually, regardless of their starting points. The *Early Childhood Manpower Plan* (ECMP) was launched in 2016 with *SkillsFuture Singapore*, ECDA in consultation with unions, professional associations and early childhood operators (ECDA, 2017b; ECWI, 2019). This ECMP focused on bolstering professional development opportunities for early childhood workers, providing more supportive work environments, and enhancing the status and recognition of the early childhood profession. It is also envisioned that by attracting more eligible people to the early childhood profession and by making it a viable long-term career choice and helping to boost the skills of workers in the profession, the overall quality of the sector will be ultimately be improved (Skills Future SG, 2019).

The four pillars described in the skills framework for the ECCE sector comprises of the following: i) developing the child holistically; ii) collaborating with families and the community; iii) building professional capacity; and iv) building organizational capacity (ECDA, 2017b; SkillsFutureSG, 2019). Unique competencies, skills and specific responsibilities have been identified within each of these four pillars that are required for the various early childhood roles. One of the purposes of the Skills Framework is to enable employers and operators in the sector to improve their human resource policies such as in the recruitment processes, evaluation of staff performances and to support professional development options for staff (SkillsFutureSG, 2016). The Skills Framework also shows the professional and career development pathways for educators to move laterally across tracks or to advance into more senior and leadership positions. Within this framework, educators in this

sector can chart their existing skills, assess the gaps as well as prioritize learning needs and plan professional development. Next, continuing professional development, which is ongoing process and enables early childhood professionals to stay updated and relevant in their field is examined.

3.6.2 Continuing Professional Development

An industry roadmap referred to as the ‘Continuing Professional Development Master Plan’ (ECDA, 2019a) enables ECDA-certified workers to acquire the know-how and skills needed to progress within and across the educarers, teacher and leader pathways. A set of core and milestones courses are offered by various training agencies, polytechnics and universities that are fully and partially subsidized by the government. These core courses are categorized into the four pillars of the Skills Framework, whilst the milestone courses prepare early childhood professionals and workers for roles with greater responsibilities. The government provides incentives to employers to allow their staff time and opportunity to take up additional training and further professional developing through schemes such as the *Absentee Payroll Funding* to help employers cover the cost of sending their employees for certifiable training during working hours and days (ECDA, 2017b, 2019a). This was amongst a number of initiatives introduced to help reduce turnover in the ECCE workforce and improve career prospects by supporting the professional development of early childhood teachers. As these policies have been put in place quite recently (ECDA, 2017b; ECWI, 2019), it is expected that some of the results will take some time to emerge and become evident. More immediate effects have been the increased participation of ECCE workers in training programmes and the doubling of enrolment at the local polytechnics since 2015 (ECWI, 2019).

Although ECCE educators are relatively paid lower compared to other professions, including primary school teaching, it has become a more economically viable option for those looking to work in this sector with the increase of median salaries by 15%, as compared to an average

of 8% across sectors over between 2016-2018 (ECWI, 2019). Continuing professional development and the building of skills and capacities of teachers' competencies will enable the much-required reform and the change and transformation in the ECCE sector.

3.7 Chapter Summary

Chapter 3 provides an overview of the context of the localized ECE setting in Singapore. First, a historical and cultural overview of the early childhood education landscape and its development in Singapore was presented. Second, an outline of the principles and domains of the Nurturing Early Learners curriculum framework and principles was described and explained. Third, the role of a multicultural approach to education and how local funds of knowledge have been used in supporting the foundation of multiculturalism and the bilingual policy in the country was explored. Fourth, the development and progress towards inclusive and equitable education policies in order to fulfil the vision of an inclusive society was reviewed. Finally, a perspective of how the professional development through a competency-based model is used in teacher preparation and development in the country. The next chapter explores the research design and the methodologies used in the present study.

CHAPTER 4: METHODOLOGY

In this chapter, the rationale and basis for the research design and approaches used in this study is elaborated. In the first section, the major philosophical perspectives and worldviews that have been adopted by educational researchers are outlined and the paradigms that have been used in this study are justified. The rationale for the use of a mixed methods approach in the present study and the population sampling is explained in the second section. The third section outlines the main research methods that were employed in the data collection process, followed with a description of the data analysis process. Finally, research considerations and issues related to validity, reliability, transferability, and generalisability of the study are also examined in this chapter. Ethical considerations, dilemmas and tensions that emerged before, during and after the completion of the study are also discussed.

4.1 Philosophical Foundations

According to Crotty (1998), there are four key elements that guide the research process and the development of a research study. These four elements may be viewed in the sequence of epistemology, theoretical perspective, methodology and finally methods. Epistemology has been described as a core area of philosophical study that integrates the sources, limits, rationality, as well as the justification of knowledge (Given, 2012). Objectivism, constructivism, subjectivism and their variants are aspects of epistemological considerations and these influence the type of relationships between the researcher and the researched, whether it is impartial and objective, collaborative or participatory (Creswell & Plano Clark, 2017; Crotty, 1998). Arising from epistemological considerations are theoretical perspectives such as positivist, postpositivist, interpretivist, critical inquiry, and postmodernist viewpoints. These theoretical positions form the underlying foundation and assumptions for the methodological framework of the study whether it is experimental research, ethnographic or

phenomenological, grounded theory or action research. Thus, the epistemological perspectives of the researcher also play a key role in determining their choice of methodology and methods in the study. There are four main world views or set of beliefs and philosophical assumptions that have been used in research: postpositivist, constructivist, transformative or participatory and pragmatist (Creswell, 2014; Creswell & Plano Clark, 2017; Crotty, 1998). Although categorized here specifically into four separate categories, they should not be viewed as strict classifications but rather as frameworks to view the different research approaches.

4.1.1 The Research Paradigms or Worldviews

These four philosophical worldviews or research paradigms that provide the foundations for inquiry and research include postpositivist, constructivist, pragmatist and transformative. The first three research paradigms are more relevant pertaining to the current study and will be discussed here. These philosophical worldviews are the assumptions that the researcher makes about reality and how knowledge is acquired, as well as the methods by which this is achieved. These worldviews are examined in turn and the relevance to the current study is justified.

Postpositivist

The postpositivist paradigm is most representative of traditional research and the assumptions here hold true more for quantitative research. This is also positivist or scientific research but the term ‘postpositivist’ represents the challenge towards ‘absolute truth’ and it tends to be deterministic and reductionist in its philosophy in its attempt to reduce concepts and ideas to smaller and discrete sets. From the epistemological perspective, objectivity, impartiality, and distance is maintained between the researcher and that being researched. The postpositivist position has developed from positivism or empiricism and is similar in many aspects with the exception of one or two fundamentals (Creswell, 2014; Willis, 2012). While positivism or empiricism is seen as an accurate reflection of reality, the postpositivist perspective is that

there may never be one truth or objective reality because you cannot discover the truth or one objective reality through just one study. While positivists develop theory through the scientific approach, postpositivist test theory through scientific research. The postpositivist paradigm searches for universal beliefs, concepts and ideas that are applicable to many different situations (Ryan, 1999). The approach in this form of research is to find ‘universal statements’ that can be used to generalize across different contexts.

As part of a mixed methods study, quantitative components of the research allow distance and impartiality to the findings of the study. The use of a survey is a method that has its basis in post-positivism or post-empiricism. Developing numeric measures of observations through frequency counts and forms of statistical description or analysis allow deductive approaches to interpretation of findings. These are some approaches that have been adopted in the current mixed methods study.

Constructivism

The constructivist or social constructivist perspective which is often combined with interpretivism holds the worldview that meaning is constructed and is subjective (Creswell & Plano Clark, 2011). These subjective meanings are formed and negotiated through the interactions with others and through the historical and cultural experiences of the individual (Creswell, 2014). Several assumptions operate based on this paradigm (Crotty, 1998; Guba & Lincoln, 2005). Individuals construct meaning as they engage and interact with the world and context they are in. There is a spectrum of constructivist epistemologies that differ on certain premises but the commonality shared is a scepticism of taken for granted and unquestioned concepts and practices, as well as in generating explanations and making re-interpretations (Hacking, 1999).

In the current research design, it was intended that eliciting perspectives and views of multiple participants with the possibility of various interpretations with possibly conflicting viewpoints are co-constructed and juxtaposed in a constructivist research paradigm (Grand, von Arx & Ruegg-Sturm, 2015; Phillips, 1995). The researcher's own experiences and background also shapes his or her interpretation of the findings. The final assumption is that the process of qualitative research is inductive as researcher generates meaning from the data that is collected. Meanings or interpretations derived from the participants, data may be multiple, varied, and there is a possibility of a convolution and complexity of views, rather than a limited interpretation of things. Thus, constructivism as part of the spectrum in the research paradigm in this study brings together a number of voices, experiences and perspectives from interview participants to bring together an integrated picture of curriculum enactment and its challenges in ECE settings in Singapore.

Pragmatism

The premise on which pragmatism is qualified as a philosophical framework for social research is that it not only is able to serve as a philosophical system but also functions in terms of practicality (Morgan, 2014). Pragmatism as a paradigm tends to be goal or problem orientated. Ontologically, there is no construction of a single or multiple reality but real-life issues and practice that influence the methods and approaches that 'best solve the problem' (Creswell, 2014). The pragmatist framework allows the possibility for multiple methods, different worldviews and perspectives, assumptions and different forms of data collection and analysis. Thus, the pragmatist worldview attempts to work with the tensions and differences between the different worldviews, integrating them towards the goal. Teacher participants in the process of curriculum delivery and enactment are at times challenged by issues of inequity and diversity and finding effective solutions as part of successful curriculum delivery becomes part of pragmatist research worldview.

Pragmatism as a research paradigm is not entirely new and is based on the emphasis on Dewey's concept of inquiry rather than on a more traditional knowledge-based approach (Dewey, 2008; Morgan, 2014). Deweyan pragmatism is based on the assumptions about the nature of human experience and that our understanding and interpretation of our own experiences influences our consequent actions on these beliefs (Morgan, 2014). Based on the theories of John Dewey, the pragmatist paradigm integrates beliefs and actions into the process of inquiry and pursuit of knowledge through the activity termed research. For the pragmatist researcher, there is an emphasis on the experiences as a continual interaction of beliefs and actions and not a specific ontological or epistemological stance taken toward research practice. The paradigmatic shift towards pragmatism and its association with mixed methods research emphasizes the practical and procedural issues on how to effectively combine the strengths of qualitative and quantitative methods rather than on the philosophical assumptions and claims. This is different from the traditional lens of viewing social research in terms of ontology, epistemology and methodology. As will be iterated later, the pragmatist worldview is results focussed and requires that practical solutions for some of the issues and challenges raised in the course of the study are developed (Shannon-Baker, 2016; Tashakkori & Teddlie, 2010). In looking to answer the main research questions in the study and to base interpretation of findings on real experiences rather than abstract concerns, a pragmatist research worldview was used in many aspects of the research design of this study.

4.1.2 Justification for the Research Design

Epistemologically, the study can be said to be positioned between the postpositivist and interpretative ends of the research continuum as there was a need to utilize a objective and practical approach and to validate the many voices and interpretations due to the complexity of the context and viewpoints of the participants in the study (Creswell & Plano Clark, 2017; Edmonds & Kennedy, 2013; Mertens, 2010). There were several reasons justifying the use of

mixed methods research in the study and these included obtaining more rigorous conclusions by offsetting the strengths and weaknesses of qualitative and quantitative methods (Onwuegbuzie, 2012). The complementary aspects (Tashakkori & Teddlie, 2010) of each method that was able to elucidate different aspects of a phenomenon and obtaining more credible conclusions by grounding them in a number of perspectives through multiple methods, participants and theories (Clark & Ivankova, 2018; Mertens, 2010). The use of the preliminary findings from the qualitative first phase of this exploratory sequential study facilitated the development of the quantitative survey instrument in the subsequent phase of the study (Creswell & Plano Clark, 2017). Finally, this balance of both qualitative and quantitative methods has a pragmatic component in discovering a few challenging issues of inequity and social justice (Plano Clark & Ivankova, 2018; Morgan, 2014). Next, the relationship between the dialectical perspectives in the research process with research participants within their communities of practice is examined.

I would like to highlight the influence of the pragmatist worldview which is characterized by an emphasis on shared meaning-making and communication so as to come up with practical solutions as a consequence of the study (Shannon-Baker, 2016). The other aspect of pragmatism in this study is the possibility of transferability to consider the implications of research. In the qualitative phase, transferability suggests possible local and external connections that data can reveal about a phenomenon or whether knowledge we have gain can be transferred to other settings (Mertens, 2007; Shannon-Baker, 2016).

In terms of research practice and pragmatism as a research paradigm, the concept of communities of practice thus helps to bind several characteristics. Firstly, there are shared issues and specific challenges that are face by research participants within their own communities of practice. Shared practice and a shared identity are common to members of such communities and finally, the paradigm operates through groups of practitioners who

through their interpersonal networks can come to collaborate with others who face similar issues and challenges (Denscombe, 2008; Morgan, 2007). Through shared learning and mutual collaboration, the key issues, challenges, and questions are generated even as members develop shared distinctive practices, repertoires, resources and language.

In bringing together two or more worldviews or paradigms into the research process, a dialectic perspective looks at the tensions that arise consequently. Dialectics is used as an approach to address divergent data and results when bringing together paradigms with conflicting theories (Greene & Hall, 2010). The dialectic approach provides a framework for management and the analysis of data, the relationship between researcher and participants and dialogues across the various paradigmatic worldview perspectives. It places equal emphasis on different groups with no hierarchal structure and is therefore an ideal approach to utilize when placing an equal priority on various data strands and groups in a mixed methods study (Johnson & Stefurak, 2013). Participants of different backgrounds, experiences and standings in their professional communities were involved in the study and these were juxtaposed and presented with each other, allowing various perspectives and opinions to be brought into the study.

4.1.3 Postmodernist approach to qualitative inquiry

Within the broad umbrella of methodological approaches to qualitative inquiry in constructivist-interpretative research, there are several modes that may be used more selectively or combined. These include ethnography, case study approach, phenomenology and participatory research (Creswell, 1998; Elliot, 2005). The interaction and reciprocity between researcher and the researched are an important subjective element in postmodern qualitative research. This postmodern perspective calls on not only how the researcher interprets phenomenon and co-constructs meaning with participants, but they also consider how the contextual milieu and how the research process shapes their interpretations (Ryan, 1999; Sumsion, 2005; Usher & Edwards, 1994).

This study was located within the socio-cultural milieu of various centre settings that included privately-operated, for-profit corporately- operated and community based or not-for-profit ECE settings within the Singapore context. It aimed to explore and discover the lived experiences and perspectives of the early childhood professionals and educators within these settings. Although the perspectives of other key stakeholders including that of parents and children were not directly obtained, these were brought into consideration through the perspectives of the teachers as partners and collaborators with parents, children and the community. The focus of these experiences included the curriculum and approaches used in these various centres and the perceptions of self-efficacy of early childhood educators. These considerations, together with the challenges within ECE work environment were also explored with a larger group of teachers via a survey.

Next, the planned exploratory sequential design for the study, as well as the actual timeline that occurred during the process is summarized in Table 4.1. The procedures or processes and the outcomes/products of each of the qualitative and quantitative phases of data collection and analysis, as well as instrument design and the interpretative stage is outlined in Table 4.1. The next section elaborates on the methodological considerations of the research study.

4.2 Methodological Considerations

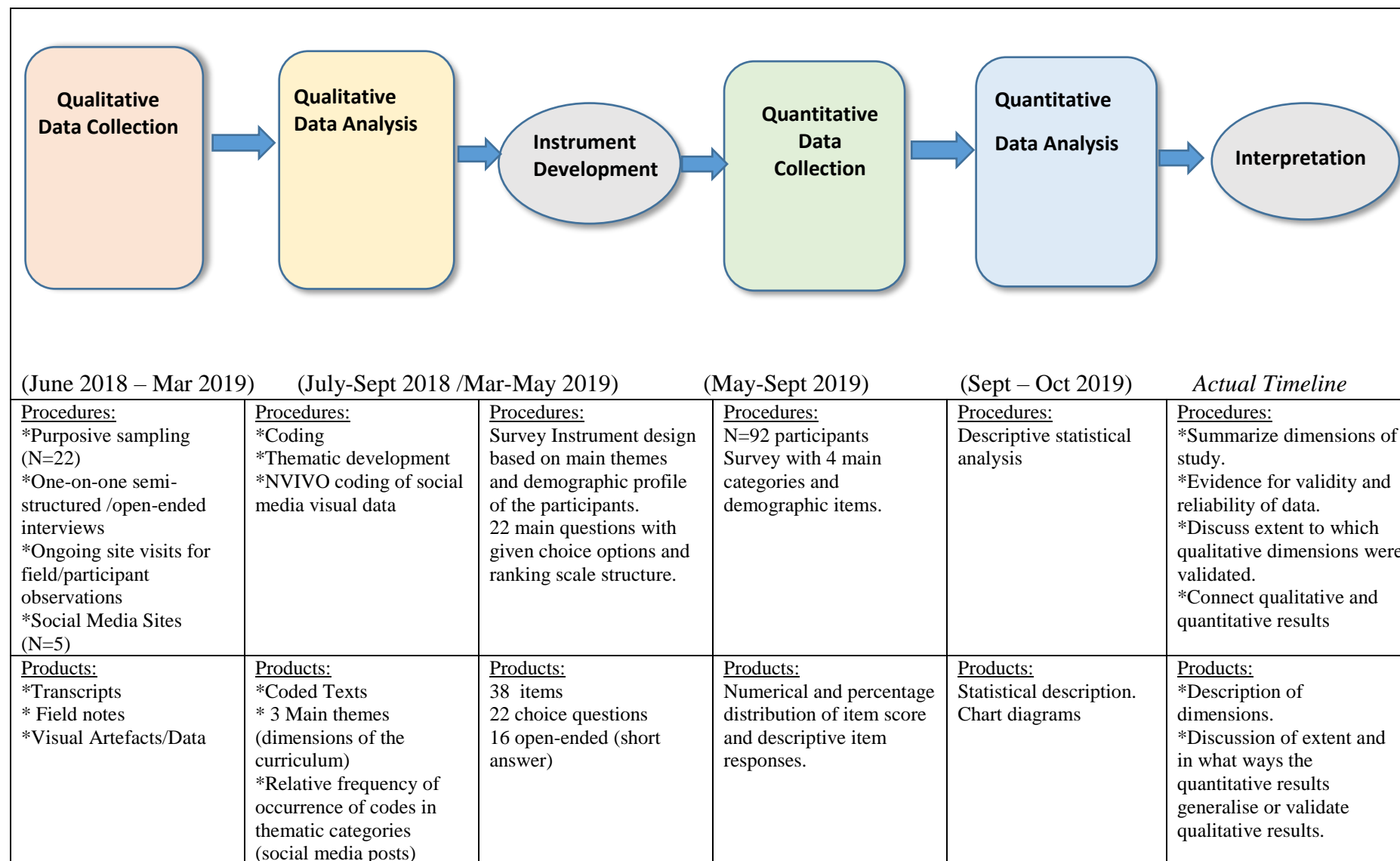
Several methodological considerations are discussed in this section. The rationale for the use of a mixed methods model and the adoption of a mainly ethnographic approach to the inquiry is examined. Other considerations discussed in this section include a justification of the mixed methods model, as well as the population and sampling approaches used in the study. In Table 4.1, the planned stages for the exploratory sequential mixed methods study is in the coloured text boxes while the actual timeline of the phases is indicated below. An outline of the procedural processes and products of each stage is summarized below each of the phases in the study.

4.2.1 The Mixed Methods Model

There are three main mixed methods used in social sciences and educational research (Creswell, 2015; Edmonds & Kennedy, 2013). The first model described is the convergence parallel mixed methods model. In this research design, both quantitative and qualitative data are collected at the same time and the data from both sources are merged in the interpretation of the overall results (Agarwal, 2011). The second model described is the explanatory sequential mixed methods model. This is when the researcher conducts the quantitative research first and then based on the analysis of the results, goes into the qualitative stage of the study in order to explain the initial quantitative findings (Crouch & McKenzie, 2006). The third model that is the exploratory sequential model which provided the design for this study (Ballesteros & Mata-Benito, 2018). The first qualitative phase provides the data that is analysed and interpreted in order to help design the instrument for the second quantitative phase.

Mixed methods have also been used to avoid biases that can be intrinsic to single method, single observer and single theory approaches or as a strategy to compensate for strengths or weaknesses associated with certain methods (Patton, 2015; Rocco et al., 2003). Mixed methods research has been used to enhance the validity of data and to enable triangulation as a strategy to seek convergence across both qualitative and quantitative methods (Onwuegbuzie, 2012; Rocco et al., 2003). However, it can also allow findings that demonstrate divergence from the main argument and allows for the development of more credible and realistic conclusions by grounding them in multiple perspectives, participants, methods and theories (Johnson & Onwuegbuzie, 2004; Mertens, 2010). In this study, mixed methods research was appropriate in addressing the different research questions presented as qualitative and quantitative methods to achieve complementary findings about different facets or aspects of the phenomenon or issue being investigated. The use of an ethnographic approach to frame the qualitative data collection is discussed next.

Table 4-1 Planned Exploratory Sequential Mixed Methods Research Design for the Study



4.2.2 Ethnography

Ethnographic research is regarded as a scientific approach to investigating and discovering social cultural patterns and meanings in communities, institutions and other settings (Schensul et al., 2013). Ethnographic approaches may encompass both qualitative and quantitative methods. In order to collect data that is both valid and reliable, the ethnographic researcher has to frame questions carefully in a culturally appropriate manner (Bryne, 2001). The ethnographic methods used in this study are outlined next.

Observations

Although, the ethnographic researcher must listen and observe what the members of the community under research engage in and learn through participation in everyday routines, activities and events, the researcher also seeks to understand the connections between what happens locally, and regionally. The ethnographic researcher also seeks to understand how global and international events, policies and how political and economic structures are linked (Schensul et al., 2013). In this study, ethnographic methods were used to discover the everyday issues and challenges found in ECE settings, allowing more detailed and comprehensive accounts of various social phenomena or processes that might not be captured in a one-off interview. The initial exploratory and open-ended observations included participant observations in day-to-day everyday routines and activities of participants in the research settings. Qualitative ethnographic research has been referred to as ‘naturalistic’, ‘practice-guided’ or ‘interpretative’ (Geelan, 2007 p.6).

Ethnography, therefore, helps overcome the limitations of solely relying on interview data and facilitates the triangulation of data from variety of sources including observations, interviews and documentary forms of data (Reeves et al., 2013). The methods of the traditional approach to ethnography typically includes participant observations, in-depth interviews, life histories

and documentary data. Triangulation in this approach integrates and compares the multiple methods with the objective of providing a greater in-depth and holistic understanding of the phenomena being researched and to establish greater methodological rigor (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014; Denzin, 2012). The rationale of ethnographic interviews is examined next.

Interviews

Our everyday lives are often conversational, and conversations are pervasive in every culture and society. We can observe language, culture and reflections as emergent features of conversations and therefore, the use of interviews is a useful tool in the investigation of cultural phenomena and the social sciences (Reissner, 2017). People are conversational beings and the fact is that we live in a dialogical existence, which philosopher, Steven Mulhall, describes as form of enacted conversation (Mulhall, 2007). The conversational process of knowing was conceptualized under the term 'interviewing' in the late 19th century in journalism and in the early 20th century in the social sciences (Brinkmann, 2013). Dialogic conversations have been described as a mode of knowing and a basic ontology of humankind and cultures are continually being produced, reproduced and reinvented in dialogues among members (Mannheim & Tedlock, 1995).

Scholarly literature also refers to various genres of interviews such as ethnographic, informant, respondent, narrative and discursive interview types (Tracy, 2013). Ethnographic interviews have been described as informal conversational interviews that are emergent and are often a spontaneous exchange of remarks or comments which may accompany exploratory open-ended observation (Brinkmann, 2013). Ethnographic interviews can also consists of in-depth and open-ended interviews or semi-structured interviews (Schensul et al., 2013). Open-ended unstructured interviews are intended to explore and identify new domains of knowledge and understanding in facilitating the building of the conceptual formative model in the study. Semi-

structured interviews based on a prepared interview protocol or guide can be exploratory in nature based on the initial research study questions and theoretical model.

Qualitative interviewing typically falls within the continuum between semi-structured and unstructured open-ended interviews (Brinkmann, 2013). Even in structured interviews, participants often say things that go beyond the prescribed structure and the criticism against structured interviews is that utterances, meanings and interpretations that fall outside the planned framework are usually left out (Brinkmann, 2013; Tracy, 2013). On the end of the continuum, the unstructured interview tends to be very flexible and open-ended. The interviewer enters the conversations through flexible questions, prompts or probes and a very loosely structured interview guide is used to stimulate discussion and not dictate or steer the direction of the interview (Tracy, 2013). In a phenomenological narrative, there may be specific storied aspects of the individual's lived experiences, influences, circumstances or lessons that may be told in this form of interview in a largely uninterrupted account (Atkinson, 2002; Wengraf, 2001b). Although most of the interviews in this study was semi-structured in nature, at times, other forms of interviewing were used.

4.2.3 Population and sampling

The samples in the qualitative and quantitative stage of this mixed method study were from different population frames. Thus, three separate population frames were used. The first population frame included the centres with social media sites. The second population frame were the interview participants, and these were from centres that were different from those used in visual netnography. The third population frame were those in the interviews.

With visual netnography, five centres were purposefully selected through a random sample of eight centres. These five centres were deemed to be representative of their centre types and had an adequate level of activity in their social media posts (Further elaboration in section 5.3).

The process of obtaining the interview and survey samples is reviewed next, as well as the characteristics of centres visited for the purpose of this study. In the qualitative phase for the interviews, selection of participants was through non-random and purposive sampling (Creswell & Plano Clark, 2017; Ingleby, 2012). Purposive sampling involves an intentional and deliberate choice of a participant for the qualities that the participant had (Etikan, 2016). Therefore, the researcher makes a decision on what phenomena or issue that is being investigated and sets out to find individuals who are able to and are willing to provide the information by virtue of their experience, knowledge or position (Palinkas et. al., 2015). This usually also involves the selection of persons or group of individuals who are well-informed with the relevant expertise and who are able to communicate their perspectives, experiences and opinions in a reflective and articulate way, as well being able to engage in expressive dialogue with the researcher (Creswell & Plano Clark, 2017; Etikan, 2016).

Although it was planned initially to seek direct access and consent to conduct the study in selected ECE centres in Singapore, it was challenging to obtain physical access to many centres and official consent to conduct the study within the centres itself. Consent from educators were sought on a more individual and personal level, while physical access to some centres was not always possible. Several interviews were conducted off-site and via zoom or audio conferencing and where I did not conduct field observations within those centres themselves. There were seven interviews conducted off-site, outside the centre settings. A total of nine centres were visited with fifteen interviews and conversations with participants from these centres (See Table 4.2). These participants were mostly teachers, centre principals, centre managers and others in the roles of early childhood educators or practitioners, including an early intervention teacher, enrichment facilitators and an allied educator.

The centres that were selected had enrolments that ranged between 35 to 120 children each. In general, the privately-operated centres had smaller enrolments (See section 3.2, p.72 on centre

types). The Montessori-based centres in general, tended to have smaller capacity in terms of the size of enrolment although one corporate and one privately-operated Montessori centre were within the sample. All the centres visited fulfilled licensing requirements (ECDA, 2019c), and met or exceeded teacher:child ratios requirements for the size of enrolment as specified by ECDA. One centre was located in a primary school compound, another within a hospital's premises, one in a public housing void deck, three were located within privately owned buildings with gardens, while another three were located within commercial or office buildings. Except for those located in commercial or

Table 4-2 Centre characteristics

Centre Type	Centre Characteristics	Data
Community-based A (CB-A)	Enrolment: ~120 Sessional kindergarten (am/pm) Additional day-care services Location: School compound	2 interviews Centre visit / observation
Community-based B (CB-B)	Enrolment: ~100 Half day/Full day-care Location: HDB void deck /Nearby park.	1 interview /observation Centre visit/ observation
Community-based C (CB-C)	Enrolment: ~ 80 Half day/Full day Location: Hospital premises	1 interview Centre visit / observation
Privately-operated A (PO-A)	Enrolment: ~35 Half day /Full day Private house with outdoor compound	2 interviews /observation Centre visit / Observation
Privately-operated B (PO-B)	Enrolment: ~25 Half day/ Full day Private house /outdoor compound	2 interviews Centre visit / observation
Privately-operated C (PO-C)	Enrolment: ~45 Half day/ Full day Private Building / Outdoor compound	1 interview Centre visit / observation
Corporate-owned A (CO-A)	Enrolment: ~100 Commercial building / Indoor gym	3 interviews Centre visits / observations
Corporate-owned B (CO-B)	Enrolment: ~70 Commercial building / Indoor playground	1 interview Centre visit / observation
Corporate-owned C (CO-C)	Enrolment: ~60 Commercial building / Indoor playground	2 interviews Centre visit / observation

office buildings, the centres either had their own outdoor space and garden or there were parks and open green spaces close by (See Table 4.2).

The third main sample (n=92) that was used with the survey component of this mixed method study consisted of separate cohorts. In this phase, non-random convenience sampling was used

(Etikan, 2016). This meant that the members of the target population had to meet certain practical criteria (in this case, it was a minimum of 1-year experience with a relevant qualification), accessibility, availability, and willingness to participate in the survey. The assumption that is associated with convenience sampling is that members of the target population are no different from a random sample or if gathered from a more inaccessible part of the population (Creswell & Plano Clark, 2017; Etikan, 2016). One group of the survey respondents came from early childhood practitioners who were undergoing professional development courses in a local training institute, while the remaining respondents came from online survey participants who responded to the online Qualtrics survey that was sent to them through LinkedIn messaging. The non-random convenience sample of potential survey respondents from the training institute had certain specific characteristics, such as all of them were undergoing the same professional development workshop, while the survey respondents from LinkedIn had more varied characteristics (i.e. varied in level of qualifications and roles in the ECE sector). Collectively, the sample provided a relatively representative sample of early childhood educators as they came from a wide range of centre types and in terms of the range of years of experience and qualification types in the early childhood education and care sector.

4.3 Methods

The mixed methods research approach involves both qualitative and quantitative data collection and in this study a number of diverse sources of data are used (Tashakkori & Teddlie, 2010). The data collection process in mixed methods research consists of several key aspects including sampling, gaining permissions and consent, collecting data, recording data and administering data collection (Creswell & Plano Clark, 2017). Different population samples were used in the qualitative and quantitative components of the study and the survey instrument was designed after sufficient qualitative data was gathered, coded and analysed to provide the themes that were to be covered by the survey items.

Table 4.2 shows the initial central research questions, the sources of data and the group of participants involved and the research methods that were used to investigate each of the questions. The sources of data included the individual teacher participants through interviews, as well as sharing by various educators, social media posts of five selected centres were used to demonstrate the approaches used in these centres. The specific methods for data collection are reviewed next.

Table 4-3 Preliminary research questions, participants and methods

<i>Research Questions</i>	<i>Individual / Group Participants</i>	<i>Research Methods</i>
How is the early childhood curriculum enacted in diverse types of early childhood education and care (ECCE) services in Singapore?	*Teacher participants from various centres *Conversations and sharing by educators. *Social media sites *Survey respondents	*Interviews *Participant-generated data *Observations *Social media analysis *Survey
What challenges do teachers face in delivering the curriculum guided by the national curriculum framework?	*Individual participants *Survey respondents	*In-depth interviews *Survey
What are the enabling conditions and what further support is required in order for teachers to be effective in their delivery of the Singapore early years curriculum?	*Teacher participants	*Participant interviews

4.3.1 Visual Research Methods

Both researcher and participant-generated visual materials formed the basis of dialogue and this included video- or photo-elicited interviews, as well as internet-based generated media (Drew & Guillemin, 2014; Ong, 2020; Pink, 2011). Materials created by learners during class or pedagogical documentation by teachers were shared, allowing for ‘participant-generated’ materials to be utilized as the stimulus for discussion about the approaches or strategies used in the ECE settings. Next, the use of visual ethnography and netnography is reviewed.

Visual ethnography through photography and/or video captures a sense of the place, the learning environment and its historical, social and cultural contexts which includes languages, social interactions and other material and sensorial realities of the environment and place (Pink,

2008; Prosser, 2007). It is said to be inevitably collaborative and to a certain extent participatory in nature. It is also connected to understanding how well we know about the environments in which knowledge is created and also involves engaging with the philosophy of practice and of the place and space (Metcalf, 2016).

Visual netnography, on the other hand, is an online research method that originates from the terms ‘visual ethnography’ and ‘the internet’ (Costello et al., 2017; Kozinets, 2006). It is a qualitative research approach that adapts traditional ethnographic techniques to online methods, communities, practices and cultures that have been created through computer- or internet-mediated communications (Addeo, Paoli, Esposito, & Ylenia Bolcato, 2019). However, in this study, a quantitative component was embedded and will be detailed further in Chapter 5. Visual research methods have been said to be not purely ‘visual’, although placing emphasis on visual aspects of culture, should not be interpreted independently of data from other methods (Pink, 2011). The analysis of visual data through the use of social media posts will be discussed in the next section. Next, interviews will be discussed. This included photo-elicited conversations that were ‘provoked’ by visual materials or media. It should be noted that participant-generated visual data obtained through a participatory approach with teacher will usually be selective and partial.

4.3.2 Interviews

Interviews, both semi-structured and open-ended, were chosen as one of the main methods of the study, as it is particularly useful when obtaining detailed perspectives and opinions on sensitive topics (Denscombe, 2010; Willis, 2019). The interviews were mostly audio-recorded with the consent and knowledge of the interviewee.

The participants

The participants came from a variety of centre types and the objective initially was to gain an in-depth interview with one or two individuals from each of the representative centres selected. However, this was not always possible. Twenty-two interviews were conducted either face-to-face (15 participants) and through videoconferencing (7 participants) approaches.

Forms and Types of Qualitative Interviews used

The interviews were conducted mainly in person or via audio/videoconference in this study. The face-to-face interviews were often conducted outside the centre setting at a date, time and location that was most convenient for the participant and this was usually followed up with email communication subsequently, such as when the transcripts were returned to the interviewee for checking. Similarly, several (7) interviews were conducted through audio/video conference that was scheduled according to the interviewees' convenience. The interviews were conducted on an individual one-on-one approach, partly because of the great challenge in getting a larger group together in one setting in this context and because it was felt that a more personally reflective response would be obtained in this approach. Although focus group interviews were in the initial research design, this was not done due to the constraints in time and schedules. In this study, some of the conversations were based on the participants' own generated artefacts and documentation that were shared with the researcher and others were based on participant's perspectives and views on issues surrounding the curriculum.

There was an initial interview protocol guide (See Appendix C), however, many of the interviews were quite open-ended, other than specifying the initial areas of area of interest to the participant and referring to the interview protocol occasionally so as to redirect or prompt the participant in a direction of interest. In this study, the themes that were explored were within the framework of the research questions that included the approaches adopted and the

enactment of the ECE curriculum, challenges, issues and concerns faced by the ECE practitioners and enabling conditions and support required as perceived by the participants.

4.3.3 Participant-generated data

In today's context of research, the availability of multimodal communicative methods such as email, the smartphone, associated mobile apps, as well as audio and video-conferencing technologies allow a dialogic process involving these diverse modes of communication in order to co-construct knowledge, meaning and understanding between the researcher and participants at various stages of the research process (Pfister et al., 2015).

Traditionally, there has been a dominant dependence on mainly qualitative interviews with participants and less reliance on participant-generated artefacts and visual materials (Nunkoosing, 2005). It has been acknowledged that data generated that is not solely language-based, may be more inclusive and offer alternative ways of expressing and describing their experiences and perspectives (Kortegast et al., 2019; Literat, 2013; Pink, 2007). The engagement with an approach that allows the collaborative use of participant-generated data allows for empirical and first-hand opportunities for the researcher and participants to co-construct meaning, knowledge, context and identities from emic and etic perspectives (Keller et al., 2008). Participant-generated data is part of the researcher-participant collaborative process and this can provide a very direct and literal representation of the participant's viewpoints, the contexts and also be a creative outlet for reflective practice (Liebenberg, 2009; Pfister et al., 2015). Collaborative and participatory research facilitates the process of demystifying and democratizing the research process and disrupts the power imbalance that is found in many research environments (Schensul et al., 2013).

In the context of this study, the participants were invited to share their experiences and approaches with the ECE curriculum through the use of artefacts such as their pupils' work

samples, their own assessment documentation, photo or video clips, reflective logs and displays in the classroom.

4.3.4 Survey

The survey was designed to investigate some of the key themes found in the qualitative interviews with educators in the field. It was also based on some other similarly structured ethnographic research data from studies done in the context of Singapore (Bautista et al., 2016, 2017; Tzuo et al., 2013) and from the research literature of relevant studies in New Zealand (Cameron, 2018; Mitchell, 2008).

The survey integrated questions arising from first phase of the study and questions derived from surveys in other studies, as mentioned earlier. The aim of the survey was to provide validation of the data collected during phase one interviews and to re-examine the relevance of the research questions in the context of Singapore. The key questions in this survey were mainly closed but allowed for an open-ended response if the respondent selected the option of ‘Other’ from the given options. Other question formats used included ranking and rating item options (Schensul et al., 2013).

In the initial qualitative findings, one of the questions that emerged was the degree to which the national curriculum frameworks was adopted into practice and what were some other influences on the use of these frameworks (Bautista et al., 2016; Tzuo, 2010). These influences included the teachers’ sense of self-efficacy in implementing the curriculum based on the domains outlined by the national curriculum framework and adopting inclusive educational practices for learners of additional needs (Trivette et al., 2012; Yeo et al., 2016). Other areas of interest that emerge during the qualitative data collection and literature analysis included the learning and work environments in ECE settings (OECD, 2009; Steele et al., 2016), the use of new technologies in pedagogical assessment documentation practice, and communication with

families of children (Hooker, 2017b; Sullivan & Bers, 2018; Nicola Yelland & Gilbert, 2017). Thus, the survey was designed with questions from each of these thematic groups which included influences on and use of the national curriculum, pedagogical practices and approaches, teacher professional development needs, ECE learning and work environments; and the use of new technologies in ECE settings. Next, the use of data from secondary and archival sources in the study will be reviewed.

4.3.5 Secondary Data

Secondary and archival data were used to support the comprehensiveness of the data collection process, facilitate the interpretation of findings, and allow for better cross-cultural, cross-national comparability and generalisability (Schensul et al., 2013; Serra, 2016). Secondary data from local reports on general demographic, cultural, linguistic and socioeconomic characteristics of the research community and other specific areas of the population of interest to researchers was also available from local archival data (Serra, 2016).

There was a number of possible sources for secondary data (Curtis, 2018; Peyrefitte & Lazar, 2018; Serra, 2016).. The data from private entities and agencies, however, should be used with caution as not all private research is dedicated to objective scientific research. The use of newsletters, internet and social media posts, magazines and visual data from various sources are also be a sources of secondary documentary data (Bowen, 2009). The use of internet data through various instruments including professional data science tools for data extraction is known as web-scraping. Secondary data may also come from the data sets of other researchers or data bases shared by journal websites (Curtis, 2018; Serra, 2016).

Participant-generated visual material was a source of secondary data and it was mainly to allow the participants to explain and sometimes illustrate what they had talked about during the session (Kortegast et al., 2019). Internet-generated data from social media in this study in the

initial qualitative phase was considered a source of secondary data as its primary purpose was not intended to be a primary part of the study. Next, the process of data analysis in the study is examined.

4.4 Data Analysis

This section elaborates the process and purpose of analysis of the qualitative and quantitative data findings in the study. In a mixed methods study, both qualitative and quantitative data are analysed separately and also looked at as whole, where both forms of data are integrated to be interpreted in the context of the other (Creswell & Plano Clark, 2017). Both data sets go through similar stage of analysis, including data preparation, interpretations of analysis, validation and finally interpreting the results in the context of the research questions of the study.

4.4.1 Qualitative analysis

The main qualitative data generated in this study were the transcripts of interviews with teachers, field observations and various forms of secondary data that included internet-generated data from centre social media sites. These sources of descriptive data provided valuable insights in the representation and portrayal of sociocultural experiences in greater depth (Denscombe, 2010). Descriptive data serves as a platform for further analysis through dissection and interpretation. Norms, patterns and trends in this descriptive data can provide clues to the association and links between certain phenomena and occurrences and can also provide clues to making projections and certain predictions (Capraro, 2016; Nassaji, 2015). Iterative analysis allows the alternation between emic emergent readings of the data that is being analysed and the use of existing theoretical models or an etic perspective (Kennedy-Lewis, 2014). This approach allowed reflection not just on the emergent data, but also on the current literature, research questions, priorities, and various theories. This was a reflexive process where the researcher visits and revisits the data to build on connecting emerging insights to progressively refine the focus and understanding in the study after the data

preparation process, with the search for recurrent themes and the identification of categories and codes (Creswell & Plano Clark, 2017; Heath & Cowley, 2004). The eventual purpose of analysis was to develop and build on concepts and theories that encapsulate the meaning within the data. The approach was largely inductive and sought to utilize findings from particular occurrences and themes as a basis for developing statements and theoretical constructs that apply at a more general level (Denscombe, 2010; Liamputtong, 2013). See Figure 4.1 that showed the stages in the qualitative analysis of this study.

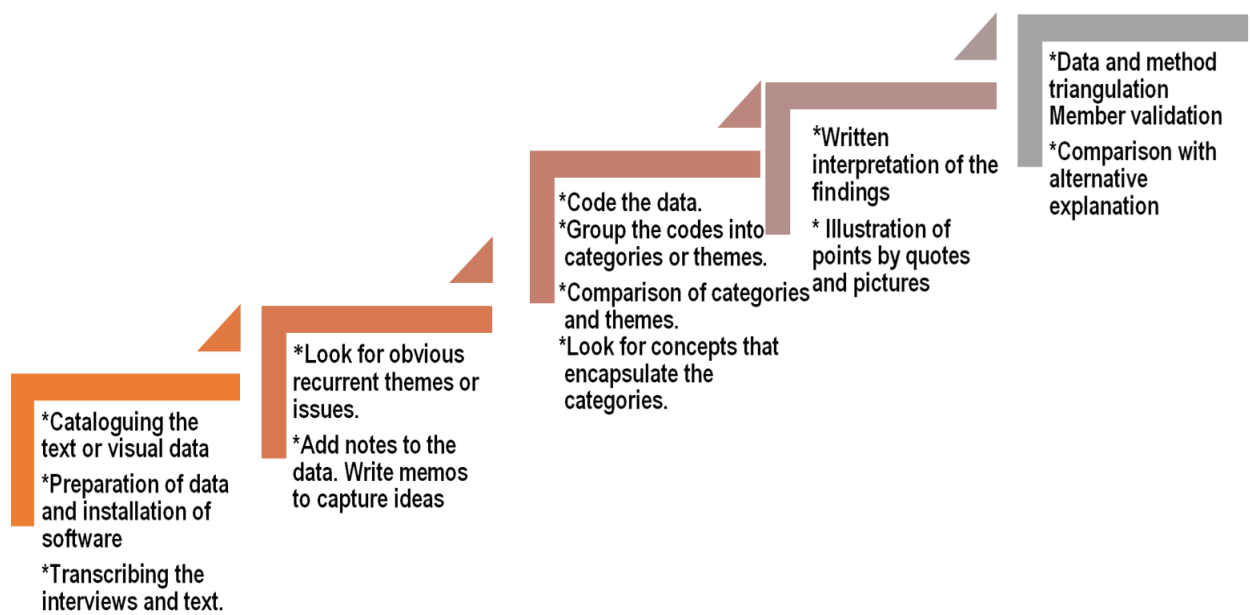


Figure 4-1 Stages in Qualitative Analysis
(Adapted from Denscombe, 2010)

Coding

The preliminary data that was used for open coding included the use of visual and text data derived from selected social media sites and the early conversational transcripts from fieldwork. Some of the data was visual data, in the form of images and the codes were initially descriptive that were further grouped into categories and labelled (Charmaz, 2015; Corbin & Strauss, 2008; Gibbs, 2018) with analytic codes (Gibbs, 2018). Although done manually initially, the use of computer assisted data analysis software, NVIVO, was used to organize, categorize, and code the transcript texts. Another data set came from secondary visual data from social media sites of selected centres that were deemed to be representative of ECE curriculum settings in the context. This analysis of this visual data will be dealt with next.

Constant Comparative analysis

This first stage of data analysis included the use of coding, such as hierarchal coding. Coding allows a simplified approach for making comparisons between different settings, individual participant approaches and events, between incident/activity with another (Corbin & Strauss, 2008; Gibbs, 2018). Qualitative tables are used as a convenient and accessible way to display text from across selected parts of the dataset so that systematic comparisons are easier. Going beyond the descriptive stage, comparative analysis between summaries, key quotations and cases will help provide greater insights into understanding the relationship between phenomena, settings, and other factors (Gibbs, 2018; Kennedy-Lewis, 2014). With such comparative analysis, it is hope that a model of the situation is developed that identifies causes, strategies and possible intervening actions and to develop new concepts and theories that explain these relationships (Kennedy-Lewis, 2014). Dominant discourses can be identified and the frequently taken-for-granted approaches to the subject matter and the understanding that these may be embedded in our institutions and social cultural communities and context (Bloor & Bloor, 2013; Gibbs, 2018; Reid & Romanoff, 1997).

Visual Data Analysis

Internet-based visual data was used in phase one of the data collection. A sample of five centres were selected as a representative of early childhood centres in this context. This was a purposeful sampling of social media posts from five representative centres were selected. These five centres were active in updating their social media sites with blogposts of their activities throughout the year. The selected posts from these centres were a representative sample from social media posts over a period of up to twelve months. These posts fulfilled specified criteria and were images captured with at least one of these criteria: the children as active participants in the learning environment; both children and teachers or facilitators engaged in an activity; and /or children, teachers and parents participating or engaged in an activity or event. It is significant to note that the learning environment was not always within the centre setting itself but sometimes it comprised of environments that the class was immersed in during field trips. The constantly transforming environment within the centre itself was captured through these images, particularly during the various celebrations and festivals. Each social media post consists of a cluster of photographic images captured during a particular activity or event (See Appendix I). Each of these posts were categorized thematically (for example: pedagogical approaches or collaborative partnerships) and sub-coded analytically. The frequency distribution for each thematic category and analytic codes were represented. The visual image and accompanying notes in bulleted points were categorised and coded often being placed in more than one thematic category and codes. The process was replicable for another time frame for a different set of selected centre sites. The role of quantitative analysis in current study is briefly examined next.

4.4.2 Quantitative analysis

The main quantitative method in this study is the use of a survey in the planned exploratory sequential mixed methods design. The population sample in the survey was different from the

population participants in the qualitative stage of the study because a larger number of participants from the target group of experienced early childhood professionals was required (Creswell & Plano Clark, 2017). A survey design aims to provide a quantitative or numeric description of trends, opinions or attitudes of a population by surveying a sample of the population (Weisberg et al., 1996). In this study, the use of descriptive statistical data was so that the raw data could be presented in a meaningful way. The data was not used to any specific hypothesis in this study. The main categories of questions in the survey were regarding demographic, curriculum approaches and frameworks, assessment documentation, as well as ECE work environments, including challenges faced. These findings were interpreted and triangulated with the qualitative data findings and in the context of the research questions (Guetterman & Fetters, 2018). Next, some critical considerations of the research process will be examined and discussed.

4.5 Research Considerations

Important considerations of the research process will be examined here. This includes the need for ethics approval and permission to conduct the study (Dhillon & Thomas, 2018; Guillemin & Gillam, 2004), the strengths of using triangulation to enhance validity and reliability of findings (Carter et al., 2014; Kirk & Miller, 2012) and researcher reflexivity (Attia & Edge, 2017; Letiche, 2017).

4.5.1 Ethics and Permission to conduct the Study

Ethical processes (Guillemin & Gillam, 2004) in the study are outlined in this section (see Appendix A,B,C,D, E for copies of documents). Ethics-in-practice as opposed to procedural ethics, occurs when there are unanticipated contingent issues that may revolve around how data collection is permissible or actually acceptable in the research setting, even if it was approved in principle by the university ethics review board prior to the start of the study (Guillemin & Gillam, 2004; Phelan & Kinsella, 2013). Thus, while ethics approval was

obtained through the university's ethics committee for the initial research design, not all components of the research design could be carried out in the context of ECE centre settings in Singapore.

Ethics approval application was made through the Faculty of Education Ethics Committee prior to the commencement of data collection. Advice and permission from the Early Childhood Development Agency (ECDA) and National Institute of Early Childhood Development (NIEC), Singapore was sought. Both administrative bodies advised that permission from individual centres and participants needed to be sought as many of them were private entities and corporations. Although participant information and consent letters were distributed to more than twenty-five different centres, physical access to only nine centres was gained. The participants were briefed individually about the objectives of the research study and their rights as participants in the study.

Regarding the use of material and secondary data from social media sites, the specific organizations requested that the corporate communications and marketing departments of these organizations be contacted first prior to use of the data in academic publications. Interview participants were informed of their rights to withdraw from the study or interviews prior to data analysis and transcripts were returned to them for verification of information and authenticity (Nunkoosing, 2005). To ensure confidentiality and anonymity of interview participants, pseudonyms have been used in this thesis. For the survey, as far as possible, no specifically identifying data was collected from the respondents. An introduction and preamble to the survey questions was provided and participation in the survey was entirely voluntary (See Appendix E). There were some adjustments to the phases and timeline of the study from the original proposed schedule and these are reflected in the Table 4.1. The use of triangulation in the mixed methods process is discussed next.

4.5.2 Triangulation

There is some debate on the definition of the term ‘triangulation’. Denzin (2012) describes triangulation as an alternative to validation, but not strategy for validation by itself. It is defined as a combination of multiple methodological strategies, empirical approaches, perspectives and observers in a single study that enhances rigor, breadth, depth, richness and complexity to research inquiry (Denzin, 2012; Flick, 2018). Triangulation is the process of using multiple qualitative methods to obtain convergence, corroboration and correspondence of results (Christ, 2013; Greene & Mcclintock, 1985). Several forms of triangulation have been described and this includes data, methods, and investigator triangulation, as well triangulation with theoretical perspectives (Denzin, 2012; Flick, 2018). Data triangulation refers to the use of various sources of data and to studying a given phenomenon at different locations and times and with different individuals. Investigator triangulation refers to the strategy where different observers and interviewers are engaged to reveal and minimize biases originating from the individual researcher which in this instance is provided by other studies. Theory triangulation would refer to the use of different theoretical perspectives and assessing which of these perspectives are useful or complementary in the analysis of the phenomenon. The use of theory triangulation allows the researcher to develop alternative explanations or theories rather than keeping to preliminary assumptions.

In this study, a survey instrument is used to corroborate some findings from the interviews. Social media data analysis also allows demonstration of convergence and correspondence of results. Theoretical perspectives such as postmodernist and comparative education perspectives enable certain findings to be better interpreted and explained in terms of these various theoretical angles.

4.5.3 Validity and Reliability

The validation of findings in qualitative and quantitative data findings do not have the same connotations. In qualitative and ethnographic research, terms that address and define validity include trustworthiness, authenticity, and credibility (Creswell, 2014). In quantitative research, validity implies how accurately the ‘concept’ is being measured (content validity), the extent to which the research instrument (in this case, the survey questions) measures the intended construct (construct validity) and the extent to which the research instrument is related to other variables that measure the same variables (criterion validity), while reliability refers to the consistency of a measure (Heale & Twycross, 2015).

There are a number of validity strategies that are used to assess the accuracy and authenticity of qualitative findings (Creswell, 2014; Creswell & Miller, 2000). Through the lens of the researcher, these include the use of triangulation, disconfirming evidence (although this should not exceed or outweigh the confirming evidence) and researcher reflexivity (Attia & Edge, 2017b; Creswell & Miller, 2000; 2012). With the participants, the validity procedures include member checking (as in the returning of the interview transcripts to the participants for checking), the prolonged and extended engagement in the field, together with collaborative processes with participants (Cowie et al., 2016; Creswell & Miller, 2000; Hall, Chai, & Albrecht, 2016). The third source of validity procedures is through persons external to the study including readers and reviewers such as with an audit trail; the use of thick rich descriptions and the use of peer debriefing (Creswell & Miller, 2000; Lincoln & Guba, 1985; Magnusson & Marecek, 2018). Each of these validity processes will be recounted in the relevant sections of this study. In an ethnographically based study, it is challenging to maintain researcher detachment from participants in the study and this is sometimes viewed as a threat to the validity and reliability of the findings (Schensul et al., 2013). For example, the survey was not

administered directly through the principal investigator but through an online portal, as well as through an external survey administrator. Researcher reflexivity will be discussed next.

4.5.4 Researcher Reflexivity

Reflexivity in qualitative research is an issue frequently discussed and an aspect of this is the process during which the researcher reflects on how their personal background, culture and experiences influences their interpretation and analysis (Creswell, 2014). Reflexive research practice also refers to the awareness of the researcher in the way that he or she can influence the way in which the research process is conducted and also the outcomes (Cunliffe, 2003; Reissner, 2017). Issues such as interactional challenges that include the phrasing and negotiating of questions or researcher self-disclosure also come into play during the process of reflexive qualitative interviewing (Reissner, 2017).

Certain issues also arise from multiple researcher positionalities and interpretations. This is particularly important in cross-cultural research where the researcher may be a cultural insider with respect to the researched community whilst the audience or co-researcher an outsider or vice versa, thus, requiring different cultural lenses (Crotty, 1998; Dhillon & Thomas, 2018). Reflexive academic dialogue and discussions about the interpretation of findings become more complex when different cultural lenses have been used (Etherington, 2004).

In undertaking critical research, it necessitates that researchers interrogate their own positionalities, attend to issues of power and look to unveil these relationships within the research process. The idea that knowledge is not only socially and politically constructed would therefore require that researchers are advocates and seekers of social justice and equity in the interpretation and representation of the research process (Mao et al., 2016). These issues of advocacy and representation may arise during the research process of qualitative interviewing with participants who themselves have strong perspectives and views on policy issues that are

related to challenges and concerns for a certain minority group for example, such as children with special needs.

4.6 Chapter Summary

The philosophical foundations and the postmodernist theoretical perspective are covered in the introduction of this chapter. The rationale for a mixed methods research approach is also discussed. The research methods were discussed, providing an overview of the use of semi-structured interviews approach and their relationship to the design of the survey used in phase two of the data collection. Research considerations when using secondary data was discussed and the processes of data analysis was elaborated. Finally, research considerations regarding ethics, the reliability and validity of research as well as researcher reflexivity was covered in this chapter. The next chapter presents the first of three chapters of research findings and presents findings related to mainly the first research question of curriculum enactment in diverse ECE settings in Singapore.

CHAPTER 5: CURRICULUM-IN-ACTION

The findings of this study will be presented in Chapters 5, 6 and 7. In this chapter, curriculum-in-action findings were derived from the first phase of the study, based on an ethnographic approach with participant and non-participant observations and conversations with teachers within the naturalistic settings in the centres (Geelan, 2007; Kirk & Miller, 2011). Chapter 5 provides an overall picture of curriculum enactment. Exploratory observational findings are presented, with a review of curricular activities, environments, everyday routines and transitions observed in the early childhood settings. The practical influence of cultural capital and funds of knowledge through the observing of traditions, celebrations and community involvement is also shared in this chapter. Finally, findings from visual netnography (Addeo et al., 2019; Costello et al., 2017) in the form of analysis of the social media sites of five ECE centres is presented. There was a total of nine centres visited that included a representative sample of community-based, private and corporately operated types (See Table 4.2 in section 4.2.3 Population and Sampling). In the first section, I will highlight some observational findings collated in my initial field visits and observations, together with excerpts of interviews with teacher participants.

5.1 Ethnographic Observations

In the current study, ethnographic observations within the naturalistic environment of different centres was made. A scheduled visit typically involved a walk through the centre visit and to engage as a non-participant observer in most of the centres. I was also able to engage in participant observations within centre settings when I was able to schedule sufficient time with a centre. One of the goals of the visit was also to gain a better understanding of the educational philosophy of the centre, the approaches used in their learning environments and the forms of

pedagogical documentation used. Observations were made of the interactions between the children and the teacher/s as well as the interactions between children.

Most centres had age-group classes and it was only one Montessori centre (PO-A) that had the policy of having only two main groups; those below three years and those above three (3-6 years). In general, the community-based centres (CB-A, CB-B, CB-C) adhered quite closely to the NEL curriculum framework (MOE, 2013b). The corporately owned centres (CO-A, CO-B, CO-C) usually had a shared centre philosophy, mission and vision statements, but mostly also demonstrated a degree of reliance on the national curriculum framework as licensing and accreditation requirements necessitated this. However, other educational theories and approaches were also acknowledged and endorsed by some of these centres, particularly those that have international branches elsewhere. Quite often, there were other programmes brought into the centre through external vendors, including speech and drama, music and creative movement, maths enrichment and others.

In terms of the language policy in these centres, there was a number of variations with mainly Mandarin as the second language used in the centres (Ball, 2011). The bilingual education approach varied somewhat in different centres. It was either both language teachers shared an almost equal amount of curriculum time with the class, or as in the case of other centres, there was only one Mandarin teacher that went around all the classes for 30 minutes to an hour for each class session daily. There were some variations to these two main models. However, in one particular centre from the sample, the community-based centre (CB-A), there was the alternative of all three mother tongue languages in different group sessions catering for the multicultural community.

It was difficult to illustrate the complexity of the curriculum in 'cross-sectional snapshots' of the activities within the centre. Thus, a more longitudinal overview of activities in centres was

shared through two centre documents that listed the key events and programme for each semester. This was a ‘critical case’ sample selection (Palinkas et al., 2015) for the planning of the curriculum programme in the centre. The centre document shared (Appendix G - G.1) comes from the minutes of a monthly meeting at an ECE centre. It illustrated some of the day-to-day planning in the centre included the management of health, hygiene and safety issues, routine day-to-day protocols, course attendance plan for staff, field trips planned for the semester, as well as several other concerns. These ‘processes’ rather than specific content could be said to be constitutive of the curriculum which in has been defined as the ‘sum of experiences of children’ (Ellis, 2003) in Chapter 2. Field trips that were planned for the term for the various levels included participation in an interactive Health Zone carnival, bike and small vehicle riding at the road safety community park, a trip to the zoo, as well as attendance at some of the community arts programmes. Although these activities did not take place with the centre setting itself, they would be considered as part of the curriculum experienced by the students at the centre.

In the second centre document (Appendix G – G.2), it was noted that some activities were planned as part of the objectives to nurture an ‘awareness of the local ethnic culture’ as in preparations for Racial Harmony Day and also instil ‘a sense of national identity’ through the activities prepared for the celebration of national day. The organisation of the visit to a primary school for the K2s (5-6 years) was part of their ‘school readiness’ cycle so that children are better prepared psychologically for the transition into primary school. The agenda for the new term was to set up the various learning corners that were shared by the different level groups based on the two themes for each term. For example, the theme was ‘The garden’ for the first half of term 3 and ‘The environment’ for the second half of term 3. For term 4, it was ‘Traditions and Customs’ for the first half and ‘People of the World’ for the second half of the term. The co-teachers for each class also had to set up their classrooms based on the themes for

the terms. In both these meeting minutes (Appendix G), there was a number of reminders for teachers and other staff to be observant of hygiene and health protocols in the centre, to improve communications with parents, as well as with colleagues who worked the subsequent later shift so as to facilitate the transitions from one teacher to the next during the course of the day. Ethnographic observations at the different centres, as well as some relevant centre documented provided a general picture of the approach towards curriculum delivery and enactment in the centres (See Table 4.2). The subsequent sections in this chapter provide more specific details in a few selected centres in the study sample.

5.1.1 Curricular Activities.

Within this section, several ‘snapshots’ of the way in which the curriculum was conducted in the centres that were visited for the data collection are presented. These approaches will be examined based on the six iTeach principles articulated in the NEL framework (MOE, 2013b). Several curricula approaches and models will be described through my observations at the centres. The approaches used varied somewhat centre to centre and also between different age group levels. One of the more common approaches to a lesson activity was to use the first ten minutes or so to set the focus for the lesson and follow-up activity. In the example below, the teacher used the classic story about ‘The Very Hungry Caterpillar’ (Carle, 1969) to introduce basic numeracy skills and concepts to the class of 4-year olds. The class engaged in numeracy activities such as one-to-one correspondence using counter manipulatives. These numeracy activities often integrated with other activities that included literacy and other skills. For example, on right, the children are engaging in playing a numeracy game based on the book ‘The Very Hungry Caterpillar’ (Figure 5.1). Materials that were considered ‘developmentally appropriate’ for children of the specific age group were used (Barbarin & Miller, 2009). For example, for children below three years, small counters and manipulatives were not used as there is a tendency for the child to put these into their mouths and larger blocks or manipulatives



Figure 5-1 Numeracy Activities based on the story 'The Very Hungry Caterpillar' (CO-A)

were used. As previously discussed, the use of the term 'developmentally appropriate' is controversial in that the social cultural context may also determine what is 'developmentally appropriate' and what is not (Cannella & Viruru, 2002; Rogoff, 2003b), but in this example developmental status was used in relation to safety issues.

The teacher's intention was to allow the child to engage in 'purposeful play' (Hanline, 2001; Leggett, 2017) which may be quite serious 'work' from the viewpoint of the child. The child's manipulation of the counters requires their fine manipulative motor skills and the child understands through the physical activity of one-to-one correspondence with counter on board basic number concepts. As one teacher from a community-based centre (RE CB 850-936) explained about her approach with her class on a particular topic of interest:

In my observations of the children and their conversations, the children were talking first about dinosaur names, then about which dinosaurs were bigger than us or smaller than us, then they talked about which dinosaurs ate plants and which at other animals... so these conversations are guiding our inquiry into that direction... About the diet and sizes for example. (RE CB 855-858)

Sometimes the dinosaur looks like a crocodile or a rock.... And they interact with one another socially and describe their dinosaur. Of course, if their dinosaur does not look like anything like one, we cannot tell them 'no' this doesn't look like a dinosaur. (RE CB 901-903)

I will ask them questions like 'What is this part of the dinosaur?' or 'What does your dinosaur eat?' and they will reply 'Oh, my dinosaur eats plants, it does not have sharp teeth.' (RE CB 904-905)



Figure 5-2 A Dinosaur Model with Recyclable Materials (CB-B)

In this vignette, the class worked with the Reggio Emilia-inspired inquiry learning approach (Inan et al., 2010) and the teacher worked with the children in building an emergent curriculum that was relatively child-directed (Press et al., 2012). Through this approach, knowledge construction and understanding emerges from the child's explorations and a child-centred approach and the teacher's provocations and interactions with the children (Purdon, 2016). One observation made by Rachel using this approach is that sometimes, the children get distracted or lose interest after the initial preliminary explorations. It was then the teacher's role to steer the children in an appropriate direction and to continue to provoke and stimulate the children to further investigation into their area of interest. Inquiry-based learning often extends into project-based work (Bell, 2010; Steele et al., 2016); however, this is not unique to Reggio-Emilia-inspired preschools. There is a vast potential for inquiry-based learning into areas such as environmental education, the integration of technology and the active participation and construction of knowledge by young learners about their world. (Gandini et al., 2015; Inan et al., 2010).

The next account is of a centre which had adopted the Gardner's Theory of Multiple Intelligences (Gardner, 1993) in the approach in which they planned learning experiences for the students and the use of domains of skills or 'intelligences' in the pedagogical documentation and assessment of the children's progress. A thematic approach was also



Figure 5-3 Project Approach: Local Landmarks and Icons (Centre CO-A)

used for each term and the level of challenge at each age group level was varied accordingly, which teachers said was loosely based on the (DAP) developmentally appropriate principles (Rushton & Larkin, 2001).

For the thematic unit of ‘The Environment: My Community’, the five and six-year olds had an end of term home-school project (see Figure 5.3) that got parents engaged in working with their children to build three-dimensional model representations of their neighbourhood, and other well-known local landmarks and icons using recycled materials. The thematic unit therefore evolved into project that involved parent partnerships and this also required critical thinking and problem-solving skills on an activity with authentic connections with their environment. Table 5.1 shows an example of how a thematic unit (Centre CO-A) can work across seven modalities of multiple intelligences and this particular unit was an extension based on the theme of ‘Our Community: Customs and Traditions’. The theme-based approach (Pirinen, 2009; Wu & Chang, 2015) was quite a prevalent strategy used in a number of centres in the study across all three centre types. Another thematic unit was ‘My Body – Our 5 senses’ (Centre CO-A). The class was a group of four-year olds. The sessions included shared reading and discussion of information books. There were materials provided to the children to explore these senses, such as the use of tinted goggles, magnifying glasses for the sense of sight, materials of

different textures, scent bottles and so on (See Figure 5.4 Left). The children were given a stethoscope and shown how to listen to the heartbeat and breathing sounds using the equipment and took turns to try this out (See Figure 5.4 Right). Activities were planned for each thematic unit that integrated various domains of the NEL curriculum: language and literacy, numeracy, aesthetic and creative expression, discovery of the world, physical and motor skills as well as social and emotional development (MOE, 2013b).

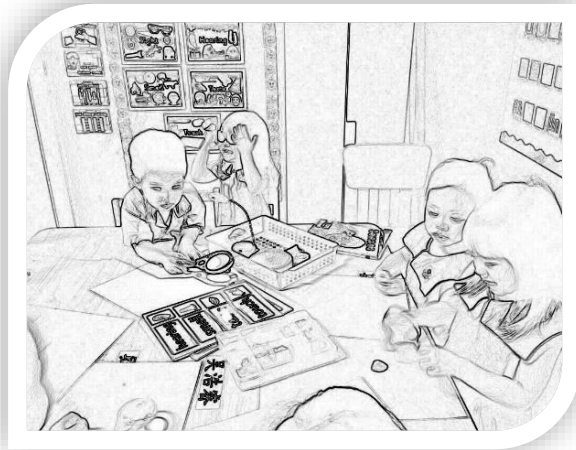


Figure 5-4 Theme Based Learning at Centre CO-A (Our Five Senses)

Table 5-1 Thematic MI approach: Our Community 'Customs and Traditions' (CO-A)

<p>Linguistic (How can spoken and written language be used to communicate and express?) Learn to use greetings and commonly used phrases in the languages of the different ethnic groups. Stories about myths and legends from the local cultures. Information books on festivals or how a tradition or custom came about. Show and tell session on something of local interest.</p>
<p>Logico-mathematical How can logic, classifications, critical thinking skills, numbers and/or calculations be used? Board games such as Chinese checkers or traditional games such as five stones Sorting picture and word cards into different groups Measuring ingredients in a recipe. Example: sushi-making</p>
<p>Naturalist How can natural phenomena, living things or ecological awareness be incorporated? Traditional herbal plants and flowers use in customs and festivals. Learn about special properties and fragrance Grow herbs in a garden or indoor pot</p>
<p>Musical How can music, environmental sounds or set key points in a rhythmic or melodic framework be brought in? Traditional music and songs Listen and identify the instruments e.g. Chinese - guzheng, pipa; Malay - gambus, komping; Indian - sitar, veena</p>
<p>Bodily-kinaesthetic How can whole body movement or hands-on fine manipulative experiences and skills be integrated? Learn to play traditional games which involve gross or fine motor skills example: chatek, hopscotch, five stones, congkak</p>
<p>Visual-Spatial How can visualizations, colour, art metaphor or visual aids be utilized? Build and create a lantern (3-dimensional structure) using angpows or Chinese red packets Weave a 'Hari Raya' Ketupat using strips of coloured paper, flat ribbon or traditional pandan leaves</p>
<p>Intrapersonal (How can personal feelings and memories be evoked and learners given choices/decisions to make?) Creating a representational self-portrait or drawings of family celebrating a local festival. Talking and sharing about personal experiences during the celebration of a local custom or tradition: 'Do you enjoy visiting relatives during the Chinese New Year holiday? What do you like best? ...Red packets and New Year goodies, visiting your relatives and cousins...</p>
<p>Interpersonal (How can learners be engaged in peer sharing, cooperative learning and/or social interactive activities?) Learn more about the customs and practices of other culture ethnic groups so as to be cultural aware and sensitive to those of other cultures. For example: dietary requirements certain groups. Learn about the traditional dress and costumes of other cultures. Play interactive traditional games.</p>

The kinds of play that a developing child engages in is argued to range from solitary play, then parallel play, and then to progress to more complex forms of make-belief and pretend play (Bateson & Martin, 2018). According to Piaget's stages (Piaget, 1972; 2001) of cognitive development, children develop symbolic and representational forms of play (Gougoulis, 2003; Lim, 1998) from approximately the second year. A principal from a community-based centre (CB-A) stressed the importance of play in the children's learning experiences as follows:

If we have them for the full day programme, we have a number of spaces for them to engage themselves.... we have our dramatic playroom where we have our speech and drama session for the children. They can also engage in play and interactions with each other. They learn about turn-taking and sharing with one another. The other space we have is the 'tinkering' room where we allow the children to tinker with all the little things and materials provided. (MO CB 458-464)

Thus, activities can integrate literacy, socio-emotional and learning in other areas with play. This finding parallels other studies which suggest that imaginative play, reading and telling stories that allow pretend and make-belief play foster creative thought (Gutiérrez, 2008; Sawyer & DeZutter, 2007). Referring to 'purposeful play', the principal, shared how 'play' can be extended into the curriculum:

Prior to the play experience, the children listened to the story about 'Sammy the Fish' who got stuck in a plastic bag when he was out with his friends to play in the sea.' The children will work together in their groups to come up with the ending to the story and assign different roles so that they also will act out their story...Facilitating the play experience is just as important as planning the process. The children learn about the importance of not polluting the environment in this unit. (MO CB 373-379)

The literacy-based play approach described above illustrates the use of dramatic role play and the particular theme of 'Care for the environment' in this setting. There appeared to be trend in the emphasis on the literacy programme and learning through an integrated approach. The next section presents findings based on the observations and visits to various early learning settings in the local context of Singapore.

5.1.2 Environments

The importance of the learning environment has been re-affirmed by frameworks such as MELE in international projects (UNESCO, 2013 pp.11-13). The learning environment is also viewed as a socialization environment, as explained by Bronfenbrenner's ecological theory (Bronfenbrenner & Morris, 1998) and supported by pragmatic constructivism (Hirsto, 2001; von Wright, 1996). The ideal learning environment encourages interactive play and reciprocity, fosters inclusion and the development of prosocial behaviours (Bagnato et al., 2011; MacDonald, 2015). There is therefore a relational aspect as well as the physical aspect of the environment that promotes collaborative activities that nurture prosocial behavioural skills that increase metacognitive knowledge and understanding of the value of these to learning and well-being (Villardón-Gallego et al., 2018). The findings of this study support this position as the data presented next illuminates.

As previously explained, nine centres were found in different geographic locations in Singapore. Figure 5.5 shows a typical indoor space within a community-based early learning setting that is designed with various learning corners including a literacy corner that caters for the appreciation of bilingual language learning. Generally, the indoor environments appeared more than adequate in terms of resources, materials and with careful consideration about the layout of the centre learning spaces and classrooms (Jechura et al., 2016). Literacy corners were usually bilingual, although sometimes the materials in each language were placed in separate sections. The relatively new MOE kindergartens also provided literacy spaces for mother tongue languages other than Chinese and included Tamil and Malay literacy materials. In Singapore, many centres are located within commercial buildings and in the converted void decks which is usually open space on the ground level of public housing apartments. The use of an outdoor space that is directly connected to the centre is sometimes unavailable. It was



Figure 5-5 Indoor Environments
(Centre CB-A)

Literacy corners and children's work samples from a community-based centre located within a primary school.



mainly the privately-operated centres that have their own garden and outdoor spaces. However, there are usually parks and recreational spaces close by in the neighbourhood, particularly those in the public housing estates. Indoor playgrounds, gyms, dance and music studios may be more commonly found in the indoor settings of centres that are located within commercial and office block buildings than outdoor playgrounds that are part of the centre setting. These were the general characteristics of the nine centres visited which were either community-based, privately- or corporately operated centres (See Table 4.2).

A common practice with many centres in Singapore is the organization and planning of field trips and excursions for the children in the centre. Sometimes, it is a small group that involves just a class of 15 children with their teachers in a trip to the neighbourhood supermarket or

taking the MRT train to Changi airport. Other times, it could involve the whole centre spending a day at the Botanic Gardens or having a field trip to the hydroponic farm. These experiences are a springboard for many other learning activities when the children get back to their classrooms and are usually organized once termly. Observations and findings with respect to everyday routines and transitions in early childhood settings are examined next.

5.1.3 Everyday Routines and Transitions

The transition between one age group setting to another within the centre itself is a planned process in most of these centres. For example, I observed an infant teacher bringing another child, who would be turning 18 months in the following month into the next age level group that was N1 (18-24 months). She spent about an hour with the child in the new age group level before bringing the child back to the 'infant room'. I spoke to Teacher Jan (JA CO 4-12) about this. She explained the process and a few of the issues involved:

We get this group at a rather precarious stage. A couple of them have transited from the infant care in our centre and a few of them are fresh enrolments. It is usually easier for the child to transit from infant care as compared to a fresh enrolment and they usually have fewer adjustment issues. (JA CO 4-7)

We do this (referring to transitional process) over a few weeks the month before the child officially turns 18 months. One of the infant care teachers accompanies the child to this class for an hour each day so that he or she get individualised attention. The child: carer ratio in infant care is 3:1, while here it is 5:1. I usually have an assistant teacher with me in this group if there are more than five children. (JA CO 8-12)

The transition involves not only new routines and new playmates and a new environment, but also the new teacher, hence the slowly progressive staged process that the child was put through before she fully joined her new class group.

The other major transition teachers described earlier is the one when kindergarteners move into primary school. In the Singapore educational context, it is the whole class or group in K2 (five-

six year olds) that moves into primary school at the start of new year. This is unlike the New Zealand education setting when children usually transition into the primary school at the time they turn five and at any time of the year, and where the decision to make the transition involves the individual child. One teacher, Lian, who teaches a K2 (five-six year olds) class talks about the type of ‘preparations’ that are made for the class to become ‘school ready’ in terms of some of the class routines and activities that are done during the months before the end of the semester. As she explained:

Some parents are concerned about whether their child will be able to move from a relatively small classroom size and school population to a much larger one in the primary school. They are usually a little anxious about whether their child will be able to meet the academic demands in a primary school setting.....Actually, we do change their routines quite a bit in Kindergarten 2 (K2), the year just prior to entry into primary school: we shorten the naptime gradually, we have more table and mat time and a little more time with language and numeracy activities. Still a lot of time for using manipulatives and also using the language experience approach, regular journal entries and towards the year end, their parents help their child prepare a short speech for their ‘graduation’ ceremony.... It is an incredibly ‘busy’ year and we usually organize a field trip to a primary school open house in the first half of the year so that they get to see what the ‘big school’ is like. (LI CO 463 - 499)

Many centres also organize a trip to a primary school sometime in the middle of the year, even though not all the children will be going to the same primary school. Some primary schools also hold open house days for families to visit with their child so parents can be involved in the process. School readiness has been described as a broad concept that involves three dimensions: the child’s readiness for school; schools’ readiness for children; as well as families’ and communities readiness for school (UNICEF, 2012a). The observance of festivals and local ethnic traditions that are celebrated by the community is a practice of many Singapore early learning centres, utilizing local ‘funds of knowledge’ (Moll, 2019) will be examined next.

5.1.4 Events, Celebrations and Community Involvement

Cultural diversity is something that has become the norm in many early childhood settings in Singapore (Goh et al., 2009). Certain events such as Racial Harmony Day is celebrated every year in order to remind people of the racial riots that occurred in the 1960s. Schools commemorate the occasion and many centres use the opportunity to teach children about the value of maintaining a cohesive and harmonious society (Gupta, 2014e; Rule & Kyle, 2009). The day is also celebrated to commemorate the uniqueness of the different cultures, not just the three major ethnic groups found in the country. Findings from this study suggest that centres often include a range of celebrations and cultural events in their curriculum. As the following excerpts show teachers value the use of local funds of knowledge in their curriculum.

Aside from these celebrations and events, I would try to bring across some topics through stories and ‘teachable’ moments. Maybe for a show and tell, I would ask each of them to bring something from home that is part of their culture or another culture to share with the class.... This can also work well if parents are involved as well when I put a short note to ask parents to help the child make the selection and talk about the significance of their item. (RA CO 169-174)

For Racial Harmony Day, we get parents to contribute to a potluck of finger food and other items that they think are relevant to the occasion. So we get nonya kueh, roti prate, satay ...for lunch and tea. (RA CO 177-180)

The teachers usually get together to plan a variety of activities from henna painting and tattoos, colouring and craft activities, jewellery beading and so on...For the mid-autumn festival for example, the Chinese dept teachers and kitchen usually prepare the ingredients so that children can make their own mini-mooncakes using moulds. It’s a bit like playdough for them. (RA CO 180-184)

The articulated vision statement in the NEL resources for Mother Tongue Languages (MOE, 2013d) is that a better appreciation of the local ethnic cultures should be nurtured through participation in culturally related practices (Harcourt, 2015), as well as an awareness of their cultural identities through experiencing their own customs and traditions (Angullia, 2017). Although these ‘celebrations may appear rather superficial to some, it is necessary to start from a point where children learn to connect and better understand the different cultures and people

around them (Derman-Sparks & Ramsey, 2005). It may still be challenging to overcome certain negative stereotypes, but these ‘shared’ festivities are one step to better harmonious relationships (Berthelsen & Karuppiah, 2011b). It is also a way to build shared identities within close-knit communities according to the curriculum document (MOE, 2013d) and this is something that teachers clearly promoted, as this quote suggests it is achieved through the provision of a range of meal types for children:

I think the community around this area is mainly ethnic Chinese. We do have a number of overseas families sending their kids here ... Japanese, Vietnamese or sometimes one of their parents is resident. The kitchen here does cater halal food and vegetarian if necessary. (RA CO 166-168)

These are thus some examples of culturally relevant practices that are sensitive to the local ethnic cultures and practices, through their customs, traditions, stories, music, languages and cuisines through authentic experiences and learning. The approach and use of various forms of pedagogical documentation is examined next.

5.1.5 Pedagogical Documentation

Based on iTEACH principles from the NEL curriculum (See Chapter 3), the cycle of plan, facilitate, observe and assess and reflect, pedagogical documentation is integrated into this process (MOE, 2013a, pp. 43-59). The role of documentation in early childhood education settings in the process of making children’s views, the processes of teaching and learning visible enables parents, practitioners and children to participate in active discussions and is an accepted approach to child-centred and sociocultural perspectives of education (Dahlberg, 2011; Dahlberg et al., 2013). Pedagogical documentation can be in the form of handwritten notes, photographs, video clips, drawings, reports, portfolios amongst other forms (Rintakorpi, 2016). However, in most of the nine centres, formal documentation for ‘parent-teacher conferences’ is usually done in a portfolio report for these twice-yearly meetings. One of the most prevalent forms used in these reports are checklists, as well as anecdotal observations of

activities taking place during the semester. Most of the checklists are in the form of ‘skills and competencies’ targets for each age group level. The domains covered usually either follow closely to the NEL framework (MOE, 2013b) learning areas or maybe adapted to include cognitive (usually numeracy and discovery of the world domains), physical motor skills, language and literacy, creativity and social emotional development. The format varies centre to centre. An example of a typical checklist assessment method is shown below in Figure 5.6. The checklist form of assessment and pedagogical documentation is largely based on a developmental perspective of curriculum and assessment of early childhood education which is considered by some to be outdated (Graue et al., 2003; McLachlan et al., 2013). However, in the context of Singapore, the use this modality of pedagogical documentation is still considered relevant and effective, particularly with the current parental expectations of wanting to see measurable/visible outcomes (Ebbeck & Chan, 2011; Yuen & Cheung, 2013).

Anecdotal records used in portfolios tend to be in a rather objective approach (See Appendix H) and not really in the narrative style used in the ‘learning story approach’ (Carr & Lee, 2012) adopted in other countries, such as New Zealand. Again, the adopted framework is usually grouped into learning domains observations. For example, in one particular centre setting (CO-A), the use of the seven multiple intelligences skills domains were observed and documented. This included verbal-linguistic, logico-mathematical, naturalistic, intrapersonal, interpersonal, musical and kinaesthetic modalities (See Table 5.1). Generally, the child’s portfolio in most centres is comprised of term or semester progress evaluations. With portfolio assessment, this is usually in the form of photo-documentation, accompanied by anecdotal observations of the child engaging in several activities over the course of the term. Quite often, these observations and documentation are categorized into several domains (see Appendix H), mostly the six NEL domains, quite often with some adaptations such as combining Numeracy and DOW domains into a ‘cognitive’ category or emphasizing certain aspects of the child’s learning experiences

and development at different stages (Booren, Downer, & Vitiello, 2012; Lynch & Streuwing, 2011). The role of pedagogical documentation therefore makes the processes of the curriculum and learning visible to parents, teachers and the children themselves.

CRITERIA (3-4 yr. old)	AE	ME	EE
Initiative, Engagement, Persistence			
<input type="checkbox"/> Makes deliberate choices and decisions.	✓		
<input type="checkbox"/> Ability to focus attention and ignore distraction and interruptions.	✓		
<input type="checkbox"/> Persists to complete longer term and tasks that are more abstract.	✓		
<input type="checkbox"/> Makes choices that are more independent and demonstrates self-reliance.	✓		
Curiosity and Eagerness to Learn			
<input type="checkbox"/> Is eager to participate in new experiences that he has observed or heard others participating in.		✓	
<input type="checkbox"/> Shows enthusiasm in learning new numbers, alphabets and shapes/forms.	✓		
<input type="checkbox"/> Ask questions including that about current and future events.	✓		
Reasoning and Problem Solving			
<input type="checkbox"/> Demonstrates flexibility and resourcefulness in solving problems	✓		
<input type="checkbox"/> Seeks help when unable to complete challenging tasks.		✓	
<input type="checkbox"/> Shows increased understanding of abstract concepts and ability to reason with concrete materials.	✓		
Invention and Imagination			
<input type="checkbox"/> Engages in complex pretend play in a sustained manner.		✓	
<input type="checkbox"/> Makes unusual suggestions and ideas on how to accomplish a task.	✓		
<input type="checkbox"/> Creates his own toys and games with available materials and resources			✓

Figure 5-6 Sample Checklist Assessment for ‘Approaches to Learning’ (PO-C)

5.1.6 Summary

The findings presented through the exploratory observations stage of the study has been presented in terms of a sample of curricular activities, learning environments, as well as a descriptive findings on the everyday curriculum, routines, transitions, celebrations and community involvement. Forms of pedagogical documentation have also been presented. Key findings from the first phase of ethnographic exploratory observations revealed several characteristics of the curriculum in ECE settings. Curriculum activities highlighted inquiry-based and project-based learning through multimodalities as exemplified by the use of Gardner’s theory of multiple intelligences in one particular centre setting. Learning

environments and quality interactions was also acknowledged as critical aspects of the curriculum. Everyday activities, routines, transitions, celebrations, as well as community participation also featured in the programmes of these centres.

These descriptions detail an overall representation of what may be defined as a ‘descriptive curriculum’ (See 2.1.1) and is what transacts and is delivered when a planned curriculum is implemented (Ellis, 2003). Some aspects of the curriculum will be shared next with the use of participant-generated data

5.2 Participant-generated Data

This section presents findings from data and material teacher participants shared. The choices teachers made about what they shared gave some insight into what they considered important in their curriculum decision-making (Drew & Guillemin, 2014; Ong, 2020; Pfister et al., 2015). The visual materials collected includes the use of images, photographs, drawings and other work samples or artefacts shared by teacher participants (Ferguson, 2013; Kortegast et al., 2019). As with researcher-generated data, participant-generated visual material can be used in a photo-elicited interview that is often relatively open-ended (Holm, 2018). Where direct field observations are not possible, work samples and artefacts from the classroom as well as participant-generated images are helpful to illuminate the processes of creation of these artefacts. The use of photographs and similar visual material in invoking memories, comments and discussion as a form of photo-elicitation (Banks, 2007; Ortega-Alcázar, 2012) is helpful in promoting discussion in interviews. These provide the basis for discussion and elaboration of the abstraction, trigger details and focus during the process of a photo-elicited conversation. The method involves a co-constructive interaction between both the teacher participant and the researcher, thus creating a dialogic practice in better understanding the curriculum decision-making process (Banks, 2011; Yamada-Rice, 2014). In the following section, several samples of participant-generated artefacts and visual material provided insights into curriculum

decision-making and the enactment of the curriculum with a focus on language learning experiences in early childhood settings in particular.

5.2.1 Journal Writing Samples from 6-year olds (K2)

Several literacy-focussed activities were shared through the works samples by 6-year olds. In one of the classrooms, the teacher, Lian (LI CO 489-499), shared various materials, work samples and artefacts; some of which were in the process of completion and a few from her earlier groups. I had also observed several classes when Lian conducted her activities with the K2 (5-6 years) children. A number of activities included strategies that encouraged phonological awareness, alphabet knowledge, emergent reading and writing skills and were used during several sessions in the week (McLachlan et al., 2012b; MOE, 2013c). Lian (LI CO 489-499) talked about the emergent writing skills and some of the strategies used:

At this level and stage, I engage them in several activities including the use of the language experience approach that connects what they experience to what they will write about. Some simple topics include: ‘What is my favourite toy/book?’ ‘What did I do during the school holidays?’ ‘What was the field trip experience to the Bird Park or Botanic Gardens like?’ I don’t expect them to write a full paragraph, just two or three sentences. They usually require some help in terms of spelling and so on but it is a good to start them writing in their journals at least once a week. (LI CO 489-499)

The language experience approach (LEA) (Ferlazzo & Hull, 2018) is used to enable the children to learn through authentic experiences and connect their literacy activities with real-life experiences as much as possible. The class had gone through progressive stages in their language and literacy sessions and the 6-year olds were to be entering primary school in January of the new year. They were given opportunities to practice their emergent literacy skills. Figure 5.7 offers some writing samples from 6-year old Hannah’s journal. These were accompanied with several drawings by Hannah. These entries were made after Lian had a discussion with the class about various topics or activities that the class had experienced together or at home. The writing prompts were given for the following writing samples:

Writing sample 1: 'What is your favourite toy?' (Show and Tell)

Writing sample 2: About the book 'Brown Bear Brown Bear, What do you see?'

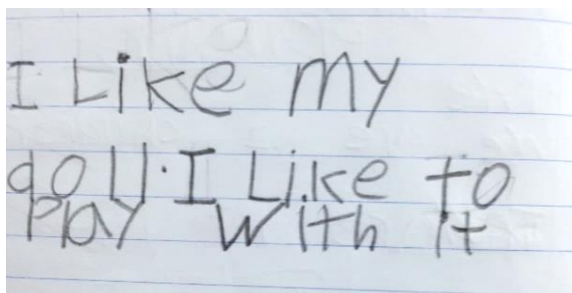
Writing sample 3: What country have you travelled to? (Holidays)

Writing sample 4: The visit to the Botanic Gardens (Field Trip)

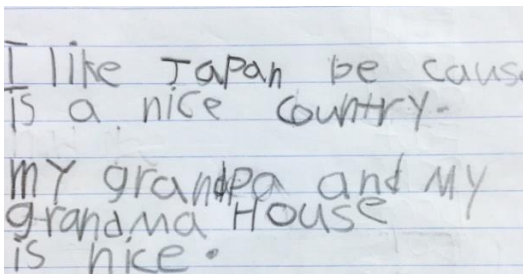
Writing sample 5: How did you celebrate Children's Day? (Celebration)

Writing sample 6: Talking about our community helpers (Thematic Unit)

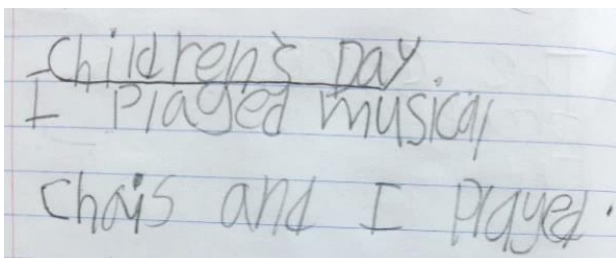
Writing Sample 1



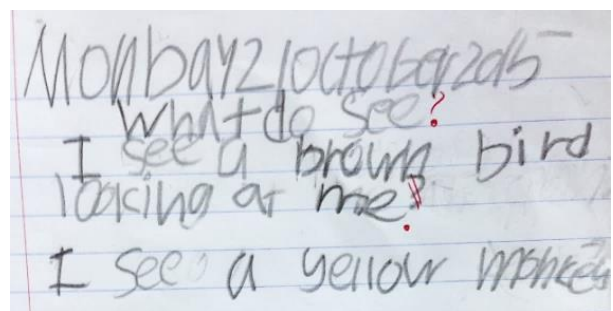
Writing Sample 3



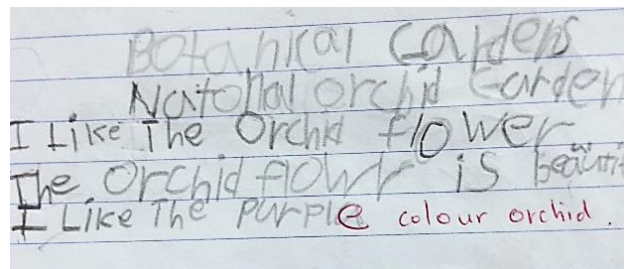
Writing Sample 5



Writing Sample 2



Writing Sample 4



Writing Sample 6

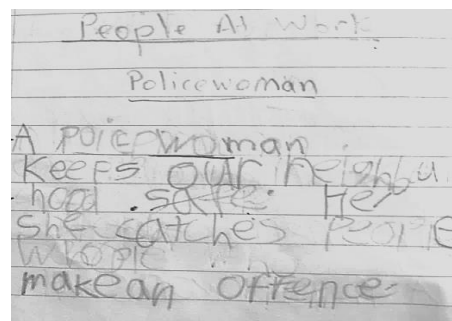


Figure 5-7 K2 Journal Writing Samples (CO-A)

These writing samples are from the child's class writing journal. The samples exemplify the emerging writing of Hannah who is 'school ready' in terms of her cognitive and literacy skills.

Hannah was also assessed in the other developmental domains as ‘competent’. Not all pupils in her group were at the same level, but the class has worked together as a group through several stages of phonological awareness in their ‘language and literacy’ sessions. In the next example, the class reflects on their learning experiences through a field trip to a children’s ‘film festival’ in the form of an interactive exhibition with animated film clips.

5.2.2 ‘Big Eyes Big Minds’

One of the important goals in the curriculum is developing social emotional competence. This encompasses acquiring and learning skills and behaviour which enable them to relate to their own peers, learning to listen to other perspectives and to build friendships. Social awareness and understanding the uniqueness in identities is an important aspect of social emotional learning (MOE, 2013e). Two of several drawing illustrations are shown in Figure 5.8 which are based on a field trip with the K1 (4-5-year olds) class to a Children’s Film Festival. After the event, there was a class discussion around the themes that the children had observed or actively interacted with through the animated and interactive stories at the film festival. The themes that were discussed with the class included ‘friendship’ and the uniqueness of each individual. The children were asked to visually represent through their drawings and in this example, they were asked to draw a representation of their friend.

This is an example of the use of the language experience approach (LEA) (Ferlazzo & Hull, 2018; Wawryk-Epp et al., 2004) to literacy and these illustrations (See Figure 5.8) were accompanied by entries into their journal with facilitation by the teacher. One of the challenges was that most of the children still found it difficult to write down their thoughts so as part of the follow-up activity, drawings as a form of reflection were encouraged (See Figure 5.8). This example illustrates an LEA approach to literacy-based activities as part of the enacted curriculum. The next example in 5.2.3 is a literacy-based approach to the covering the various

domains of the NEL curriculum that is holistic that scaffolds and extends the children's learning experiences through a universal theme story.

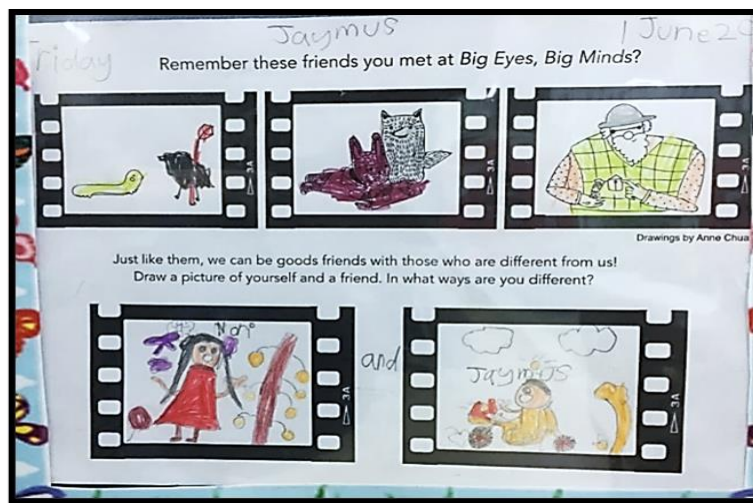
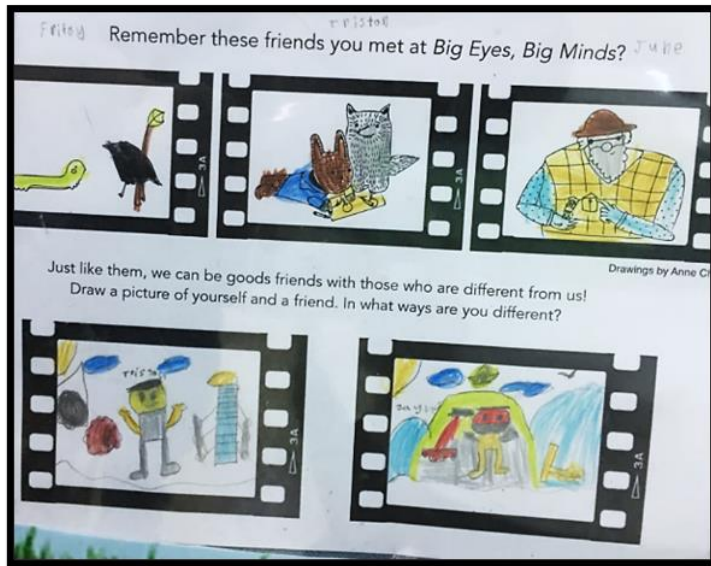


Figure 5-8 Drawing and illustrations from a LEA-based activity (CO-A)

5.2.3 Classic Stories: Literacy-based Activities

A particularly popular approach to the curriculum is the use of a story-based approach (Miller & Pennycuff, 2008). Reena (RE CB 1010-1020), a teacher in a community-based early learning centre, shared her story-based approach that was extended to learning experiences across the NEL domains:

I planned my weekly activities based on several of the classic children's stories and integrated learning activities that were related to the stories. For example, for 'The Little Gingerbread Man', I brought in a science-related activity which may be considered part of DOW (Discovery of the World), and got the class to explore what objects float and what objects sink. For 'Jack and the Beanstalk', I got them to build an imaginary beanstalk using recycled materials and practice their cutting and threading skills which is part of the fine motor skills development. I engaged the children to use their imagination and think of alternative endings for the stories. For example, what if Goldilocks decides to build a new bed and chair for little bear, how would you make these? (RE CB 1010-1020)

Thus, using a story as an initial stimulus and provocation, activities that connect to the various theme/s of the story are used to enable children's learning experiences is holistic and not just focused on the more 'academic' language and literacy aspects of learning. Figure 5.9 shows several story-book based displays that suggest a number of activities related to each children's story. Activities that crossed the six NEL domains (MOE, 2013b) were planned based on the initial classic story text that was used for the term or across Gardner's theory with multimodalities to literacy and learning. For example, in the story of 'The Ugly Duckling', the children got to learn more about different types of birds and birds that were found in the pond habitat. A walk through the Botanic Gardens gave the children the opportunity to observe the differences between ducks and swans, and so better understand the elements in the story better. They also talked about the differences and unique features found in the story characters, why one might feel different or out of place in a situation and to better understand friends or people who might be different from themselves. Thus, each story was used as a foundation for a

number of learning activities and even provide a stimulus and foundation for further inquiry-based learning.



Figure 5-9 Story-based approach across NEL domains (CB-B)

5.2.4 Thematic Approach

The thematic approach was observed to be adopted in many of the centre settings in this study. As mentioned in Section 5.1, the use of the thematic approach was first described in this chapter. Figure 5.10 shows how the thematic approach may be extend through the NEL domains (MOE, 2013b) of motor skills development (MSD), numeracy (C&N), discovery of the world (DOW), social emotional learning (S&E), aesthetics and creative expression (ACE), as well as language and literacy (L&L) based on the thematic unit of ‘INSECTS’ in a bilingual curriculum. From a constructivist perspective (Björklund & Ahlskog-björkman, 2017), the thematic approach allows the child to related to earlier experiences and to integrate new information into his current understanding of the world.

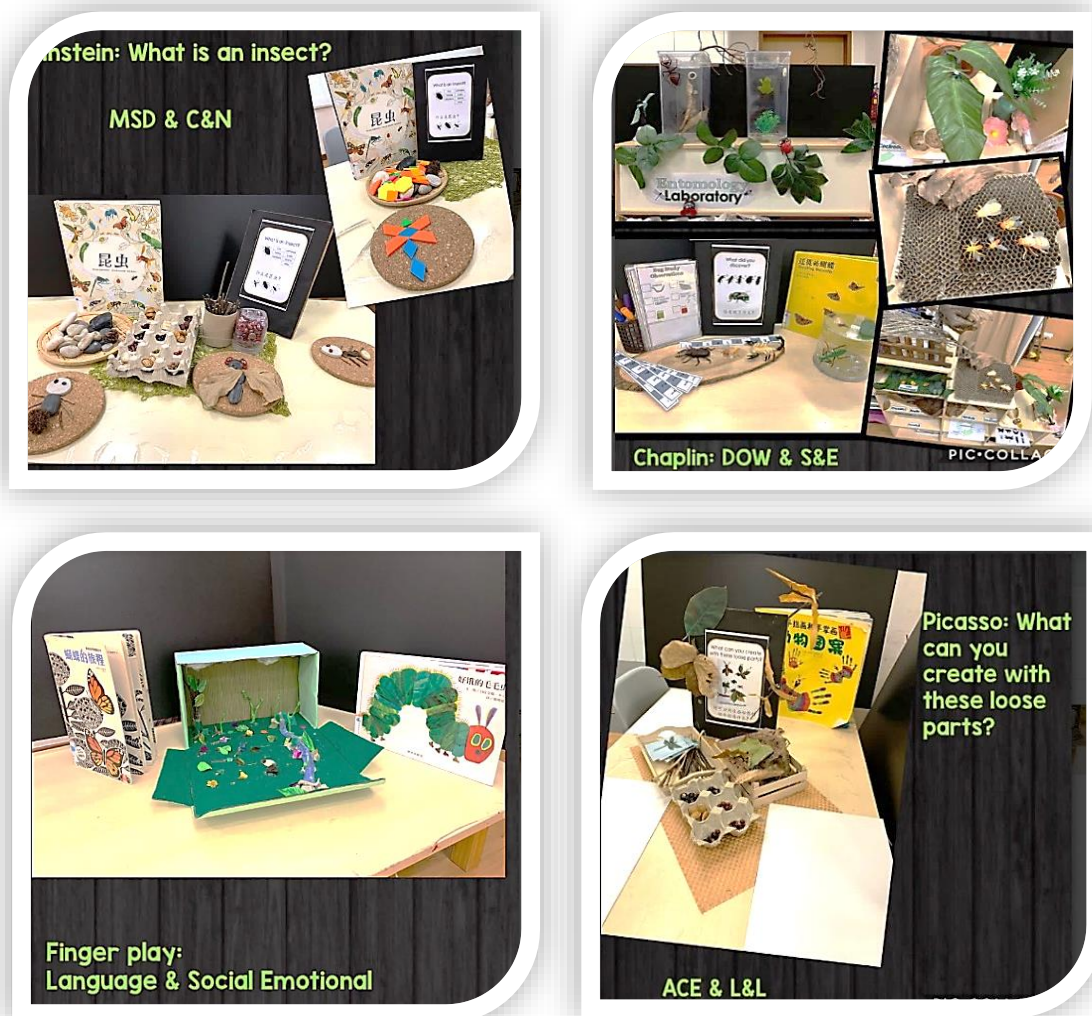


Figure 5-10 Using Thematic-based Activities (CB-B)

In this example of the thematic approach, the focus for the term was on ‘INSECTS or ‘MINIBEASTS’. During the term, information books and stories that featured on theme was displayed for the children to read and browse and the teacher read to them regularly during mat time. The literacy corner was filled with an array of books in both languages (English and Mandarin). Various activities included counting ladybird pieces and sorting sizes and colours of manipulatives were used (numeracy and logico-mathematical skills). The class learnt about life cycles of insects (DOW and naturalistic skill) and created artwork based on the symmetry and colourful patterns of butterflies (ACE and visual spatial skill). Activities and curriculum decision-making were based on the theme for the term so that the teacher planned accordingly around the NEL domains and MI skillsets.

5.2.5 Summary

Visual materials and participant-generated data (Kortegast et al., 2019; Ong, 2020), through children’s work samples, images, photographs and even video documentation of some activities was used in the teachers’ sharing of what was particularly effective and relevant to them in their curriculum decision-making (Pfister et al., 2015). Pedagogy approaches such as literacy-based, language experience approach and thematic approach have been observed to be important strategies adopted in the ECE settings in Singapore. The next section elaborates on the use of internet-generated data from social media sites to elucidate on the kinds of activities that was taking place in ECE centre settings and also showed what was particularly highlighted in five representative centre sites,

5.3 Internet-generated Data

Visual netnography (Costello et al., 2017; Kozinets, 2006) which uses internet-generated data is another approach to visual research. Internet-generated data may be regarded as a form of secondary data. The objective in this context was to obtain a visual account of how the curriculum was being enacted through the examination of activities and practices found in the

social media sites of different centre types with their learning environments. The commonalities, priority concerns and focus in the activities and curriculum programmes in these settings was also investigated through the process of visual netnography. The first stage of data generation with this method was the selection of social media posts from a selection of five centres that were judged to be generally representative and their social media posts were collated for the analysis for the purposes of this study. These centres included one community-based centre (Emerald), two privately operated centres (Topaz and Opal), and two corporately operated centres (Amber and Pearl). However, the distinction between some of the privately- and corporate-operated centres in this case was made mainly based on the enrolment numbers in this case (private-operated with enrolment <45 while corporate-operated usually with enrolment >50-100). The social media posts by these centres on Facebook over a period of up to 24 months were collected for the internet-based data analysis. The posts selected fulfilled certain criteria and included images and text that captured the following:

- i) involving the children as active participants in the learning environment or
- ii) both children, teachers and/or facilitators engaged activity or
- iii) children, teachers and parents involved in or participating in an event or activity.

It was interesting to note that the learning environment was not always within the centre itself, but often constituted of the environments that the class or school was immersed in while on field trips and excursions. The constantly transforming environment within, as well as outside the centre during celebrations, festivities could also be observed and captured in these posts over a period of time. Typically, each social media post consisted of a cluster of photographic images captured during a particular activity or event (see Appendix I i). The sample that was used in this study consisted of 125 such posts by the five representative ECE centres. Each of these posts was coded and the distribution of frequency for each thematic code is tabulated in Appendix I ii. for descriptive and comparative analysis. The coding of the visual data was

facilitated with images that were briefly explained with short, bulleted points based on the visual and caption or commentary that accompanied the image.

Table 5.2 shows the distribution of social media posts of the five centres into the thematic codes that emerged during the process of analysis and coding. The various media posts and captions represented the curriculum that was enacted by each of the five centres selected. In the selected sample of 25 consecutive posts from each centre’s social media sites, each of the posts were coded into three to five code categories.

Table 5-2 Distribution of social media posts of 5 centres into thematic codes

Thematic Codes	Amber	Emerald	Topaz	Pearl	Opal	Frequency counts	Frequency distribution
Approaches to Learning	10	3	14	12	10	49	9.4%
Authentic /Experiential Learning	10	3	4	3	11	31	5.9%
Bilingualism / Mother Tongue Learning	2	0	2	7	1	12	2.3%
Community Partnerships	5	13	5	0	10	33	6.3%
Culturally Responsive Practice	1	9	2	5	3	20	3.8%
Developmentally Appropriate Practice (DAP)	6	1	9	3	0	19	3.6%
Environmental Awareness/Sustainability	6	2	4	3	9	24	4.6%
MI Integrated	6	3	2	8	4	23	4.4%
<i>NEL Framework domains</i>							
Aesthetic and Creative Expression (ACE)	3	9	5	14	8	39	7.5%
Cognitive development/skills (CD)	3	0	7	5	8	23	4.4%
Discovery of the World (DOW)	17	10	8	14	15	64	12.3%
Language and Literacy (L&L)	5	1	2	7	7	22	4.2%
Physical Motor Skills (PMD)	7	8	8	18	11	52	9.7%
Social Emotional Learning (SEL)	9	14	14	8	12	57	10.9%
Parent Partnerships	2	11	5	2	6	26	5.0%
Performance-based learning	0	2	0	1	4	7	1.3%
Project based learning	2	1	0	3	2	8	1.5%
Technologies	3	0	0	0	1	4	0.8%
Transitions	2	2	3	1	1	9	1.7%
TOTAL	99	92	94	114	123	522	100%

If it represented an activity or event that was particularly complex in nature, up to five code categories were used for the process of coding using the NVIVO software package (Dada, 2018). The findings from each of these five centres are elaborated next.

5.3.1 Centre ‘Amber’

This social media site featured activities from more than one branch of the centre. Based on its website information, Centre Amber and its branches would be considered to have a relatively ‘state-of-the-art’ programme and curriculum, highlighting many new areas of interests including its iSTEAM programme (Appendix I iii). Centre Amber is considered a premium early learning centre. A ‘premium’ childcare centre is defined in the context of this study as one that adopts a unique pedagogical approach with a high teacher to child ratio, allowing greater individualized attention from teacher. They are usually for-profit organisations with high monthly fees.

Of the 25 consecutive posts from the centre Amber’s social media site over a period of several months, the highest frequency distribution for the thematic categorical codes was that of ‘Discovery of the World’, the next most frequent category was that of ‘Authentic-experiential learning experiences’ and ‘Approaches to learning’ (Table 5.2). In those grouped into ‘Discovery of the World’, seven of the 17 posts featured field trips to places outside the centre setting such as excursions to the local broadcasting media station, the local dairy goat farm, butterfly park, a story book exhibition ‘Alice in Wonderland’, the local neighbourhood garden, a primary school and a petting zoo or ‘Animal Resort’. Authentic and experiential learning was said to be taking place when the children were seen as active participants of their own learning experience and also engaged in ‘real-life’ contextual activities (Grisham-Brown et al., 2006; Herrington & Oliver, 2000). With approaches to learning, the children were seen engaging in various learning approaches including play-based, mini-project based, collaborative play and learning activities. With a highlight on its iSTEAM programme, the ‘Amber’ site also featured

a few clips that showed off activities such as story scripting with programming blocks and animation featured with the children presenting their animated stories products (Appendix I iii).

5.3.2 Centre ‘Emerald’

Centre Emerald is a community-based preschool centre that caters for children between 18 months to six years, although it has branches that also provide daycare services for children younger than two years. It provides subsidized childcare and kindergarten services. The social media posts by this particular centre were spread over a more prolonged period, with 25 consecutive posts obtained from a two-year period, as there were a number of posts that did not satisfy the selection criteria (e.g. announcements made by centre), as well as a relatively lower frequency and regularity of social media posts updates. The thematic categories that had the highest number of posts fell into the categories of ‘Social Emotional Learning’, ‘Community partnerships’ and ‘Parent Partnerships’. Also, relatively high in terms of frequency of distribution of posts was that of ‘Culturally Responsive Practice’(Table 5.2). This instance demonstrated that practitioners in such settings were mindful of their role in enacting culturally responsive pedagogy (Bennett et al., 2018; Chen et al., 2009).

Centre Emerald featured a greater emphasis on parent partnerships and community engagement. The majority of posts from the centre highlighted various community celebrations such as racial harmony day and national day celebrations (Appendix I-iv). Parent partnerships and involvement included having parents participate and contribute to various events and celebrations including Mothers’ Day and Teachers’ Day. Community involvement activities included its annual community donation drive where the centre collected donations and contributions from the children and their families so that these provisions were donated to the underprivileged in the community. There was also a fund-raising event when cookies and other baked products were sold to the parents and community. Centre Emerald highlighted the various activities that took place during the celebrations and it can be observed that the children

dressed in their traditional costumes, played various local games and also shared various foods from the different ethnic groups in the community (Appendix I-iv). Parent partnerships and involvement including the Parent Support group was highly visible in the different social media posts throughout the year. However, there were relatively fewer posts and information provided on the daily in-house curriculum, routines and activities taking place within the centre setting itself as compared with the other selected centres' social media posts.

5.3.3 Centre 'Topaz'

Centre Topaz is a privately-operated premium centre with a strong emphasis on the Montessori approach to early childhood learning. It provides services for both under two years, including infants, as well as children between two to six years of age. The 25 social media posts from this centre and its branches over a two-year period featured the highest frequency in the codes of 'Approaches to learning', 'Socio-emotional learning' (SEL) and 'Developmentally appropriate practice' (DAP). There was also a relatively balanced distribution in the NEL framework domains. The example demonstrates that teachers in this setting were conscious of implementing a balanced and holistic curriculum and practices were based on the developmental theories and knowledge.

Under the thematic code 'Approaches to learning', the centre highlighted various Montessori approaches including vertical learning and the uninterrupted Montessori work time cycle (Appendix I v). There was a great deal of emphasis on individualized, self-paced learning, the use of various materials in developing fine motor hand-eye coordination skills, cognitive development and facilitation of mathematical and numeracy abilities. Activities and events that were thematically coded in 'Social emotional learning' also included activities that nurtured self-regulatory behaviours and self-awareness, 'social harmony' and the ability to relate to others. It also advocated mixed-age grouping and the 'education' of parents in better understanding of the methods and approaches adopted by the school and its philosophies. With

mixed age groupings, the underlying Montessori philosophy allows vertical learning with the older children developing their leadership skills and this is supported by research literature (Crain, 2016). This also encourages cooperation, and the children learn social emotional skills such as empathy and patience. It seemed that the Montessori Method and philosophy offered practitioners and parents a ‘tried and tested’ approach to providing learning experiences in the curriculum.

Although only a relatively small frequency of posts (3 of 25 in Table 5.2) were put under the code ‘Transitions’, these featured the transition into the everyday setting and routines of the centre by a new child, the transitions into the new year and also the observation that children moving into primary school generally found the move a relatively smooth and easy one. In general, few centres focused on ‘Transitions’ in social media posts, but this particular centre highlighted the significance of the critical phase in the child’s educational process. The theme codes that appeared to be missing or deficient in representation in the social media posts was that of performance- based, project-based learning and the use of technologies within the curriculum. However, these items were relatively unrepresented in most the other centres’ posts as well.

5.3.4 Centre ‘Pearl’

Centre Pearl is a privately operated preschool and day-care service provider. The centre has a strong visible emphasis on bilingualism and social media posts had either English or Mandarin commentary that allowed translation. Through a content analysis of social media posts, it was observed that there were many theme-based activities in the curriculum and there was a relatively balanced distribution of emphasis across NEL framework domains with highest distribution in the Aesthetic and Creative Awareness (ACE), Discovery of the World (DOW) and Physical Motor Development. These posts were bilingual, having commentaries in both English and Mandarin, which acknowledge and roles that both languages and teachers played

in the teaching and learning experiences in the curriculum. The centre also featured a Japanese teacher who conducted enrichment sessions for the children so that they had the opportunity to learn a third language 'Japanese'. It was evident that the curriculum had a strong thematic and literacy basis and activities involving most of the NEL domains (MOE, 2013b). For example, thematic activities on 'Light' involved reading activities with information and story books, making 'stained glass' with ice cream sticks and coloured cellophane paper, as well shadow play and other activities that were related to the theme. A theme on 'Fish and Marine Animals' involved the children observing and studying actual live specimens of fish, learning to use shapes to draw a fish, clay work to create marine animals and engaging in other activities that were connected to the theme (Appendix I vi). These thematic activities were well documented within the social media site. Thus, it is demonstrated in this example that despite arguments to the contrary, the thematic approach to the curriculum offers cross-curricular links across domains integrating the arts, mathematics, scientific knowledge as well as more creative approaches (Björklund & Ahlskog-björkman, 2017; Pirinen, 2009). In this particular centre, there was obvious visible evidence of activities of children engaged with both English language and Mandarin teachers and commentaries in both accompanied the photo blogs.

5.3.5 Centre 'Opal'

Centre Opal is a corporately operated centre having many branches with strong community links. Through content analysis of individual social media posts, it was observed that there were many posts that were used mainly as parent information or parent education posts and did not always show activities or events occurring in the centre, the 25 posts were not consecutive posts within the social media site. The code frequencies of activities represented in these posts were well distributed through the six NEL domains (MOE, 2013b) with the highest frequency in the 'Discovery of the World' or DOW, Social Emotional Learning (SEL) and Physical motor development (PMD) domains. Outside the six domains, the most well represented thematic

code groups were 'Approaches to Learning', 'Authentic/Experiential' 'Learning and Community Partnerships'. For 'Authentic/Experiential learning', Centre Opal was the most well represented amongst the centre, slightly higher than Centre Amber. It featured many field trips and activities that were placed in the real-life context such as learning how mushrooms are cultivated in a farm, learning about their 'bodies' through a visit to a traditional Gua Sha therapy centre and so on (Appendix I vii). The centre demonstrated that it utilizes the practical and cultural resources of the community through various collaboration and community partnerships as well fund-raising and charitable activities for welfare organizations including an animal shelter. A highly place-conscious approach (Harcourt, 2015; Sobel, 2004) that utilizes local funds of knowledge and community resources appears to be in practice in this early childhood education setting.

5.3.6 Summary

The original purpose of the social media sites such as Facebook posts by various early childhood learning centres has been mainly to communicate with parents and interested members of the public the activities and events taking place within the centre. The social media posts were able to capture the constantly transforming environment within the centre itself during festivities, events and celebrations that were observed over a period between two months to over a period of two years. Each social media post cluster was coded by content analysis and the distribution of each category code is shown (Appendix J viii). Based on the overall distribution of the total of 522 counts, it can be inferred that certain category codes were better represented in these media posts (See Table 5.2). The six domains within the NEL framework were well represented in these visual social media posts with the highest distribution in the 'Discovery of the World (DOW)', 'Social Emotional Learning' (SEL) and 'Physical Motor Skills' groups.

The lack or low frequency of visual emphasis of certain thematic codes does not necessarily indicate the lack of emphasis in the curriculum of these areas. For example, although there is a relatively lower frequency distribution in the Language and Literacy (L& L) and Cognitive Development/Skills (CD) NEL framework domains compared with the other domains, this does not indicate the lack of attention in these areas in the curriculum offered, but rather less visual representation/documentation in social media posts. Moreover, the limit of the number of codes that can be attributed to one blog was between three to five category codes. Therefore, in the case when there was an overlap into the ‘Cognitive skills’ and ‘Language and Literacy’ codes for example, these were not documented as the main codes for these posts which may account for the lower frequency distribution found in these social media posts. Outside the NEL framework domains, the three highest frequency codes were ‘Approaches to Learning’ (9.4%), ‘Community Partnerships’ (6.3%) and ‘Authentic-Experiential Learning’(5.9%) (See Table 5.3). ‘Approaches to Learning’ included many instances of activities and learning experiences that were inventive and innovative, often challenging the learners to use ‘out-of-the-box’ critical thinking skills. They demonstrated many approaches and perspectives to facilitate learning experiences on the same topic or theme of learning. Four of the five centres scored relatively high in this category code group. In the Authentic /Experiential Learning group, activities coded into this category were those that facilitated experiences for the children in a real life setting or context such as visits and planned interactions with various community helpers such as the police, dentist or nurses or allowed active participation of the young learners in the setting. A limitation is that although the five centres were selected to represent ECE settings in the Singapore context, it would not be entirely accurate to say that all centres within the island are represented in these five examples. The next section presents a discussion of the chapter’s overall findings.

5.4 Chapter Summary

This chapter presented the findings of field observations, participant-generated data and social media sites of representative centres. The curriculum-in-action findings were centred mainly on exploratory observations which were grouped in several categories that included curricular activities, everyday transitions and routines, environments, events, celebrations and community involvement. The types of pedagogical documentation used in centres were also presented. With participant-generated data, the use of visual materials, work samples and artefacts shared by the teacher participants used in a few ways including photo- or artefact-elicited interview conversations instead of direct observations made at the centre. Internet-based secondary data through publicly available social media posts by five representative centres provide a clearer overall picture of the centre programmes and an analysis of these present a broader perspective and understanding of the programmes in these early childhood learning centres.

Findings in this chapter advocate a place-conscious or place-based approach within communities of practice which centres learning in local phenomena and lived experiences. Earlier research literature highlights the critical role in learning about the community and the links as a way to integrate the local into a broader context (Nicol et al., 2015; Smith, 2002). There is the challenge of providing a physical and psychologically relational environment that include aesthetics, active living, collaboration, reciprocity, encouraging exploration and investigative play whilst integrating the outdoors and natural environment into the children's learning experiences, particularly in the context of the relatively urbanized environment of Singapore (Danko-McGhee, 2009; Strong-Wilson & Ellis, 2016). The next chapter will present interview findings from five main key-informant interviews and thematic findings from all 22 interview participants in the study.

CHAPTER 6: INTERVIEWS

The first section of this chapter will profile the findings from interviews with five experienced early childhood educators in the field, while the second section will elaborate on the thematic findings collated from the interviews from the total twenty-two interview participants. There were fifteen interviews conducted that were associated with these nine centres. The remaining seven interviews were conducted with early childhood educators from ECE settings other than the nine centres visited. As far as possible, these interviews were audio recorded, while the observations in nine centres were supplemented with field notes, digital documentation, a few centre documents, children's portfolios and work samples where possible and more informal conversations with teachers.

The interviews were intended to illuminate and better understand the enactment of the curriculum in various ECE settings, the participants' roles, and the challenges and issues that they faced in closing the gap between the intended and enacted curriculum. The teacher participants came from a variety of different centre settings that were a mix of community-based, corporately operated ('franchise') branches and privately-operated centre settings. The ages of the participants ranged from mid-twenties to mid-fifties. Four played supervisory roles (either principal/director/centre manager), while the remaining participants were engaged mainly in the capacity of 'classroom teachers' within the early childhood education setting. Their years of experience ranged from three years to more than 20 years of experience within the field and all possessed a minimum of an ECCE certificate with the highest qualifications being at master's degree level for the interview participants. In the first part of this chapter, the perspectives and stories of five early childhood educators (Reena, Nuraidah, Anne, Elizabeth and Shannon) provide an overall perspective of how personal and professional identities are established and how these identities influence their practice whilst giving voice to some of the

concerns and challenges that these educators have experienced in the context of early childhood education landscape in Singapore.

6.1 Teachers' Perspectives and Stories

The processes and the way in which the curriculum is enacted is influenced by a number of factors, including the socio-cultural and physical environment, the personal, pedagogical, contextual, social and sociological domains (Goodwin, 2010). In this section, the perspectives of five interviewed early childhood educators who play different roles in the early childhood education settings that they work in are examined. The in-depth interviews with these five teacher participants provided a deeper understanding of the processes of curriculum enactment, as well as some of the issues, challenges and concerns faced by early childhood educators. In general, interviews were around forty-minutes to an hour and for a number of participants, there was an additional follow-up session to clarify some of the topics discussed, as well as to allow an opportunity for the sharing of participant-generated data. For a number of interview participants, including the five participants in this 'in-depth' category, this also involved sharing of more personalized and unique experiences rather than a scripted run-down of the centre's philosophies and approaches.

These five individuals represent critical case sampling (Omona, 2013; Palinkas et al., 2015) of early childhood educators in Singapore, whose personal, professional and lived experiences provide some insight into the diversity of ways in which the curriculum is enacted in early childhood education settings. The in-depth interviews with the five interviewed early childhood practitioners enabled a better understanding of how their beliefs influenced their pedagogical, and also their views regarding certain issues such as current educational policies, cultural diversity, equity and inclusion in the early childhood education setting. They also shared changes in the ways in which the curriculum has been delivered in their practice in early childhood education settings over the past decade or so.

These five interview participants gave phenomenological perspectives that required more in-depth conversations, requiring some inductive probing (Guest et al., 2017). A level of comparative analysis was made between the data sets of these interviewed participants in terms of personal beliefs, practice and pedagogical approaches (Appendix L). A summary of each in-depth interview is provided next.

6.1.1 Reena

The first teacher participant presented here whom I interviewed and conversed with over a number of sessions and worked with collaboratively in participatory activities is Reena (in text, RE CB). In her mid-thirties, Reena has spent almost ten years in the early childhood sector since her first child turned two. She has two young children who are currently in primary school. She attained her early childhood teaching qualifications, including the ECCE leadership diploma, whilst working part-time in the early childhood education setting. More recently, she achieved her bachelor's degree in early childhood education from an Australian University. She has worked in three different early learning settings locally, which she said had quite different educational philosophies and approaches. Reflecting on her experiences in those centres and her current work place in her local neighbourhood, Reena felt strongly that the centre philosophy, and the support of the management in the centre was essential for sustainable practice.

Reena related her experience with her child who was two at that time in her first centre. Her son, then aged two, had been diagnosed with Autistic Spectrum Disorder (ASD). Centre management was not understanding nor supportive of her when her child needed more specific attention, neither were they sympathetic when her son was bullied during his time in another class. When she moved on to her next centre, the management was much more understanding of her situation with a son having additional needs. She was given assistance in managing her class while she took short breaks to tend to her own child during the work hours.

Also, Reena was assigned additional responsibilities and was given the opportunity to expand her teaching portfolio. She organized and coordinated the year-end concerts several times during her seven years working in her second centre and mentored a few beginning early childhood teachers during that time as well. When she finally moved on to her third and current centre, Reena's children had transitioned to primary school. Her current centre is located much closer to her own neighbourhood, which meant that she did not have to spend too much time commuting back and forth from her home and workplace, as well as having to pick up her children from their schools as well. Drawing from her own experience, Reena strongly believed in the role of the centre management in supporting the early childhood educator through professional growth and overcoming some of the challenges in family and work life.

Despite having a number of years of experience as a qualified teacher, Reena found quite a number of differences in the approach and philosophy of her current centre when compared to her previous experiences at the other centres. She had moved from a corporately-operated centre situated in an office building to a centre located in a Housing and Development Board (HDB) void deck within a public residential estate. Reena referred to the centre that she is currently working in as 'an affiliated centre to an international name' (RE CB 723-725). The centre was launched as a vehicle for the original centre that was named to be Pre-school Anchor Operator (AOP) by ECDA of the Ministry of Social and Family Development (MSF) to scale up the provision of quality and affordable early childhood care and education services for the 'mass consumer' market from the local population. The objective was to make ECE services with educational philosophy and strategies that were adopted based on an 'international' approach such as Reggio Emilia, accessible and more affordable to a greater number of families within the mass population. Reena stated that there are still limitations such as that of an adequate 'outdoor environment' as the location of the centre is within the built-up area of a residential housing estate (RE CB 949-953). However, Reena feels that because of the RE-

inspired approach, the children are encouraged to become ‘confident and competent’ learners’, as she explained as follows:

What I also noticed about the difference between the children because of this difference in approach where the children’s voice is emphasized, is that the children here are very vocal and confident in speaking as compared to the centre I was prior to this where most of the activities were more teacher-directed and the approach was quite teacher-centred ... (RE CB 732-739).

I think that the approach that I was used to at my previous centre was very teacher dependent. If the teacher was up to it, she can go all the way and get the children to do very teacher-directed activities and it is very often up to the teacher to go the way. Here I feel that although they have the end objective in mind and are quite ‘fixed’ about the goals, they are open to a more flexible approach to achieving these objectives while monitoring the progress throughout the term ... (RE CB 768-774)

Reena talked about the differences in approaches within the different centre settings she has worked in. Despite all these centres following the NEL curriculum framework guidelines (MOE, 2013b), the approaches used in these centres ranged from more didactic and formalized guidelines to one that was more flexible, allowing teachers to plan and develop their own ideas and concepts based on an approach that was more directly derived from the children’s interests. This approach would allow for a more ‘transactional’ and even a ‘transformational’ curriculum rather than mere transmissive pedagogy (Christensen & Aldridge, 2013). My conversations with Reena also highlighted on how she worked within the ‘child-centred’ approach and an emergent curriculum model that is based on responding to children’s needs to create and deliver meaningful learning experiences. She stated this also means considering the child’s readiness for certain activities that are more self-paced). Thus, if a child is ‘hurried’ to use a pencil correctly at too early a stage, it may be quite stressful, and it is more appropriate to allow activities that develop fine motor skills and pincer grip with children at younger ages. She explained how the initial ‘topic of interest’ is expanded to make connections with the various NEL domains (MOE, 2013b):

In our initial observations of the children and their conversations, the children were talking first about dinosaur names, then about which dinosaurs were bigger than us or smaller than us, then they talked about which dinosaurs ate plants and which at other animals... so these conversations are guiding our inquiry into that direction... About the diet and sizes for example.... We work on how to expand on the topic. For example, when we talk about the diet of dinosaurs, we go into something about healthy diets and balanced meals. It is kind of an opportunity to bring in some real life relevance to the what the class is learning ... (RE CB 855-863)

Thus, the class is guided through an inquiry-based approach on a chosen topic which despite its 'impracticality' is made relevant to the everyday context through a group talk and discussion about diet for example. The topic is extended into the NEL domains (MOE, 2013b) such 'Discovery of the World (DOW) which is a theme that is usually related to science or the environment, as Reena explained.

It brings in some 'DOW' and we talk about earth's balance and how because of climate change and how certain earth events like a volcanic eruption, or their food chain was disrupted, or a huge asteroid hit the earth causing their extinction. When we talked about the food chain being disrupted, we also take the opportunity to discuss issues about conservation, how we need to take care of the earth's balance ... (RE CB 864-868)

The opportunity to talk about the types of diets that dinosaurs had and why they were called herbivores, carnivores or omnivores for example was brought up to bring in real world ideas. They would then expand the learning experience further into 'healthy and balanced diets' and what constituted a healthy meal for themselves (RE CB 855-863). These learning experiences would run across the six learning domains including that of language and literacy, numeracy, as well as discovery of the world (DOW) within the NEL curriculum framework.

In using the child-initiated approach, topics would be explored because of the children's interests and would be used as the platform and initial stimulus or 'provocation' for more relevant and useful topics that were pertaining to 'real life'. As her centre adopts a Reggio-Emilia inspired philosophy, the teacher can also play the role of 'researcher', observing and listening to the interactions between the children in the group Based on the children's

conversations and associated focal interest, the topic was expanded through the inquiry approach. This approach to the curriculum may be viewed as a more integrated approach as opposed to just using thematic units and allowed the teacher to bring in related issues such as climate change and conservation that would introduce the concept of sustainability (Fraser et al., 2013). This approach provided a strategy for curriculum integration across the NEL domains. Reena also described some 'sustainable' ways of creativity with her class as follows:

Right now, we are using natural and recycled materials such as wood blocks, loose parts, toilet rolls and the learning space are set up with these materials. For each learning space, we will write a question such as 'What does your dinosaur look like?' And what the children do would be to start building their own dinosaur with these materials. We take a picture of the dinosaur they have built and document it in their portfolio. Another child may add a spike or horn and they learn about parts of a dinosaur. It is only the picture that documents the child's work as these parts can be disassembled and reused ... (RE CB 892-898)

Sometimes the dinosaur looks like a crocodile or a rock.... And they interact with one another socially and describe their dinosaur. Of course, if their dinosaur does not look like anything like one, we cannot tell them 'no' this doesn't look like a dinosaur...I will ask them questions like 'What is this part of the dinosaur?' or 'What does your dinosaur eat?' and they will saying 'Oh, my dinosaur eats plants, it does not have sharp teeth.' (RE CB 901-905)

Reena described heuristic play and the use of recycled materials in creating a model of a 'dinosaur' engaging with the children's imagination and giving them opportunities to communicate and express themselves through their play and creativity (Bilewicz-ku, 2018). Just by providing opportunities for such play and also stimulating further activity and thought about the subject, the teacher facilitates the children's purposeful play and learning experience so that they are able to talk about and be active participants and co-constructors of their knowledge and understanding of the world around them (Edwards & Cutter-Mackenzie, 2013). In a full day childcare setting in Singapore, the children often have a shower after lunch and also naptime. Reena further explained why these home-like activities were included in the curriculum.

For us, what we do is that we have learning goals. So for each of the terms from 1-4, we will decide what are the goals we want to focus on. So let's say term 1, I want to focus on their self-help skills, so together with the inquiry learning, I will also need to get the children to learn self-help skills, like put on their shoes, have their own shower, wipe themselves down, stuff like that. Then term 2, my focus might be something else, like recognize their own names ... (RE CB 968-972)

The objectives specified are broad. For example, term 1 begins with 'building relationships and values like co-operation'. So, in the class session, they will focus on how they can build relationships with their classmates and in the community ... (RE CB 775-777)

She talked about integral aspects that are part of the children's learning experiences including encouraging independence and learning appropriate behaviours with their peers and others in the community: Having practical objectives such as self-help skills, for example be able to do their own toileting as well as more academic objectives such as phonemic awareness, are important in curricular goals in a full day educational setting such as the one Reena works at. These practical objectives ultimately point towards the end-objective of achieving more independent, competent, and confident learners and a better level of school readiness. Curriculum priorities are adapted usually according to the developmental age of the children in their levels and at a different age group range, priorities and learning goals will shift accordingly (Saçkes, 2013).

Reena also highlighted that another essential aspect of her work as an early childhood practitioner is the importance of partnerships with both her colleagues, as well viewing parents as partners in the care and education of their children. With colleagues, when she first came into the centre setting as a new teacher, even though she had years of experience behind her, there were many things in the centre that were done differently from her previous centre which she had to learn from her colleagues who were more experienced in the way things were run there. The importance of collaborative work relationships and partnerships that often help to lessen the stress and workload of teachers in the classroom was also highlighted during the interview. Reena and her Mandarin co-teacher engaged in what might be termed shared

sustained thinking (Brodie, 2014; Purdon, 2016) with their class over a period of 10 weeks based on the initial provocation and stimulus topic of Dinosaurs. Reena said the children are encouraged to ask their parents about the topic discussed in class and this creates greater home-school partnerships and involves parents and families in their children's learning experiences. She described this process as follows:

We observed the children during free play, particularly the school holiday period and noticed that they were very interested in dinosaurs. We then sit together (the Mandarin teacher and myself) to discuss how we would carry out our activities for the week or even term. We have to put our lesson plan on the same sheet of paper that is submitted to the office and our learning spaces are designed together so we create these learning spaces together, so everything is bilingual ... (RE CB 850-853)

There are both two teachers for the class, one English and the other Mandarin. So, if I take the class for the first half the day, she will take the class for the other half of the day. However, it is not that equally divided as there is small group time, large group time. For small group time, the Mandarin teacher may be taking the group while I may be focusing and observing another group during the same time. It is quite a flexible arrangement. We have 20 kids and six learning spaces... (RE CB 844-848)

In her current centre, Reena works with her Chinese language co-teacher to plan and coordinate the class activities and learning experiences. Here, there is almost equal emphasis on instruction and communication in both languages, so each language teacher spend almost equal amounts of time with the class. This might be different in another centre setting depending on the centre philosophy and policies, where the class may be exposed to the Chinese Language teacher for a very limited amount of time such as just one hour every day. Reena talked about the shared workload between both herself and her co-teacher for her class as follows:

We use this app called 'Little Lives' we use that to send newsletters to parents, for attendance taking, portfolio observations, our interpretations. We can write and upload our observations regularly on a day-to-day basis but when we want to share the consolidated observations and portfolio will be decided by us. For example, our first term parent teacher conference (PTC) is in March so Laoshi (老师) will take 3 domains and I will take 3 domains, another in August and the third one toward the end of year ... (RE CB 981-992)

Other than planned and scheduled meetings, as well as more informal communication with parents, Reena and her co-teacher prepare a monthly newsletter. The electronic platform and mobile app communication is still relatively new, but it does reduce the amount of paper and printing. She also found it easy to access on a regular and almost daily basis to document her observations and update parents on the progress of their child. Formal progress reports in the form of portfolios, work samples, and summarized observations of the children's progress follow closely to the NEL curriculum framework six learning domains (MOE, 2013b).

As with other centres, a scheduled PTC or parent-teacher conference is planned usually mid-year and another session towards the close of the year to update parents on the progress of their child with a more formalized report. Reena's centre policy has tried to reduce the administrative workload on the teachers by allowing the co-teachers to alternately come up with the class newsletter and also the pedagogical documentation of selected NEL domains so that both English and Mandarin are used in the newsletter and progress evaluation of the child. Regular communication with parents, as well as a special time set aside for that purpose was also an aspect that was shared, as Reena explained:

We also have a curriculum evening coming up, mine is on the end-January. I will have to invite the parents to my class and share with them my philosophy of teaching, how I do discipline with their children, talk about the learning goals and what role they can play as parents in their child's learning, how we can work in partnership ... so the three teachers, me, the Chinese language teacher and assistant teacher have some time to build rapport and talk to the parents ... (RE CB 987-992).

The curriculum evening is scheduled at the beginning of the term because the parents do not know us yet and it is mainly to introduce ourselves as the child's class teachers, give them some confidence and show them what we are doing in school. The alternative time to have a chat with parents is that we have this drop-in policy and pick-up policy where the parents can come in for 5-10 min when they are dropping off or picking up their child to see how their child is doing, how the teacher interacts with the child, see the layout and setup of the classroom. So, this is a daily thing ... (RE CB 995-1000)

Reena's centre management has the policy of scheduling an arranged time for parents to come for a 'curriculum evening' in order to better understand centre's policy and expectations and

the role which parents can play in their child's learning experiences (Lekli & Kaloti, 2015). Reena's narrative here sheds light on some of the processes of curriculum delivery and enactment in her current centre settings and highlighted the importance of collaborative partnerships with colleagues as well as the role of parents in the child's learning experience. These findings show dimensions of curriculum enactment, as well as some of supporting conditions that enable successful delivery of the ECE curriculum. Next, Nuraidah's experiences of the processes of curriculum enactment, as well as her perspectives on early childhood teacher education in Singapore, are examined.

6.1.2 Nuraidah

Nuraidah (in text, NU CO) is in her twenties and had just started her family at the time of the interview. She had started almost straight after college to work as an assistant teacher in the local early learning settings and had constantly upgraded herself through regular workshops and courses. Like Reena, she also attained her bachelor's degree in early childhood education from an Australian university after working several years in the sector. Several years earlier, she spent four years in an overseas international school setting where she worked as an early childhood educator. More recently, she returned to Singapore to accept a role in a local international school where she was currently working at the time of the interview. She summarized her views of the differences in ECE between countries as follows:

I was in an overseas international school between 2012-2015 and I would have continued working there if I hadn't got married around that time... I am quite interested in the learning environment in countries like Australia and New Zealand because I spent some time in Australia when I did my bachelor's degree, and I really enjoyed the environment there. I am also quite used to the International Baccalaureate or IB programme for the early years even though they do have certain protocols to follow. Compared to the local centres that are typical in Singapore, I find that there is a world of difference and would find it very difficult to work there if I was asked to go back to work in a very typical local setting ... (NU CO 1145-1151)

Nuraidah feels that the ECE setting she currently works in is quite different and that there is a world of difference between the typical local and an international IB preschool which is not bound by NEL curriculum framework (MOE, 2013b). She recounted her time with a local centre before the revision of the NEL curriculum in 2013:

That was quite a few years back actually before I did my degree with XX University in Australia. I did not work very long there...I think it was 'XXX' centre ...It was like I give you the plan and you follow it. If I had been a new teacher, maybe that would have worked but right now, I would not want to follow a step-by-step plan for the lessons and activities because I don't feel that that is me. I would also work on something that was directly based on the children's interests. I think back then was quite different. I did my basic training at RTRC (Regional Training Resource Centre) in 2007 as it was called back then. Now it is SEED Institute ... (NU CO 1154-1160)

Nuraidah related her time as a beginning teacher in the early childhood sector and it was just a few years after the NEL curriculum (MOE, 2013b) was first launched in 2003 and curriculum resources were also created to complement the NEL guidelines. She felt quite restricted with the almost prescribed curriculum and activities that were provided, findings that parallel other studies (Birbili & Myrovali, 2020; Wood, 2004). The educational philosophy and approach then was in the early stages of moving away from a very teacher-centred and traditional classroom approach to one where the learning environment was set up with different learning corners and spaces to allow the children some autonomy and self-direction in choosing their activities. As Nuraidah explained, the curriculum experienced in one of the centres she worked at had a very prescriptive approach which she found disempowering. Such prescriptive approaches often result in the loss of autonomy of the teacher as it does not readily allow the teacher to modify or augment the curriculum according to the learners' needs (Bauml, 2016). She related her perspective of early childhood teacher training in the Singapore context as follows:

I don't know about what the teacher training does to them here but many of the new teachers that I mentor, honestly if I am to say it, lack a certain initiative. I mentored this trainee teacher once when I was in XYZ centre... it was about the routine care and she

handed me this paper and said “Oh here Nuraidah, these are the things that I am supposed to do...” I looked at her like...don't you already know all these things by heart? (NU CO 1161-1165)

There was this kind of checklists of things that was supposed to be covered and this does not allow much reflectiveness so when these teachers graduate from their programme, I feel that they often lack the resourcefulness and initiative on their own ... And when it comes to planning, they need a certain planner which is something that doesn't work for me at all... (NU CO 1166-1169)

Having gone through the 'beginning teacher' phase before and now having mentored new teachers into the field, she argued that there is a certain lack of critical thinking skills and new early childhood teachers are not challenged enough to engage in critical pedagogy and find alternative strategies to critically reflect on teaching and learning practice. Another aspect of the early childhood education landscape in Singapore which Nuraidah commented on was on the way the sector has become commodified:

You know sometimes it is what the school branding has been created to produce that identity and the kind of 'branding' has emerged. For example, centre ABC has two arms; one that is the childcare branch which caters for the local population and the other a more international clientele ... (NU CO 1200-1203)

The one that caters to the more local population actually is larger, but the programme is such that in the first half of the day the programme is more RE-inspired or inquiry based and the other half of the day, the children do worksheets which is a more academically-directed approach. Are you surprised? I was shocked when I first started out ... (NU CO 1204-1207)

Nuraidah talked about the 'branding' and 'commodification' of ECE services and centres. She argued that a rather consumerist approach has developed regarding the way parents and the public view early learning centres, which is consistent with other recent research literature (Lim, 2015). As mentioned by Nuraidah, the decision was made to create alternative names from the original 'brand' so that because a similar approach has been adopted in these affiliated centres that would be accessible and affordable to the wider population as well. However, Nuraidah explained that this change also came with some changes and adaptation to the original 'Reggio-

Emilia inspired' curriculum in order meet the expectations and 'needs' of the masses in the local population.

You know...that depends on what kind of Reggio-Emilia inspired approach. I would say that my school is not RE-inspired even if they write it there, it is not totally RE. I feel that the learning experiences and materials that we offer are RE-inspired but in order to have a proper RE school, the environment is a big factor. For example, even the walls are not supposed to so colourful in a RE. I would not say my school is truly 100% Reggio Emilia inspired but in my experience with my previous school XXX, I would say that they follow more closely to the principles of a Reggio-Emilia inspired school in terms of the environment and the materials and resources that they use.

However, they are still in Singapore and they must use the ECDA framework and guidelines ... (NU CO 1190-1197)

Based on Nuraidah's viewpoint, the RE-inspired curriculum has been adapted in many early childhood settings in the local context adopts an inquiry-based approach. In the local international school settings which she works at, not only uses the International Baccalaureate system, it also endorse the Reggio-Emilia inspired approach which also advocates inquiry-based teaching and learning. She stated that a purely child-centred and child-directed approach is not going to work in the local context which she explained as follows:

Although in Reggio RE's philosophy, you just need to observe and document what the children are doing, this may not always work with the local setting because our culture is different, and it is not something ingrained in them to always take the initiative. Even with the IB approach, some things must be teacher-led and facilitated so a pure RE approach is not going to happen here in the local setting ... (NU CO 1309-1313)

Thus, she argued that there is a need for a combination with 'teacher intentions' when setting up learning experiences and provocations while having the children's interests in mind, keeping learning experiences to be open-ended and inquiry-based where possible. This 'open-ended and inquiry-based' approach she believes is often lacking in the approaches used in local centre settings where learning experiences tend to be very directed, leaving very little room for more 'open-ended' exploration and play).

As Nuraidah pointed out, not all local early learning centres have the same educational philosophy and approach. She describes the approach used in the international school setting as ‘Reggio-Emilia inspired’ and inquiry-based with high degree of student agency. Research literature has also found that although children’s interests are often important in directing the curriculum, the teacher’s role should not be underemphasized in guiding and directing children’s attention and maintaining high levels of engagement in inquiry based learning (Lanphear & Vandermaas-Peeler, 2017). Nuraidah confirmed this finding, as she explained:

We may need to step up our game in the sense that we do raise very intelligent kids, but we don’t raise very creative kids... or problem-solving kids... (NU CO 1293-1294)

With regards to many local settings, Nuraidah feels that greater emphasis should also be placed on nurturing critical thinking and creativity skillsets. She further explains the point:

Parents still talk about stuff like “Oh, when is my child going to do writing in K1 (4-5 yrs.)?” or even in nursery or playgroup. I remember when I was in XYZ centre, they had these level readers, and the parents would say to me “My child still cannot read...” Yeah, of course, he cannot read yet because he is 18 months! (NU CO 1256-1259)

Parental expectations of their children’s learning are often academic in nature rather than aspects of self-care or social emotional learning which Nuraidah stated should be an important priority in early years education. As she explained:

I can say that for a fact that I have children whose parents are lecturers in universities and have a chat with them and talk to them: ‘You know, he is good in that I don’t think you should worry too much of his alphabets and writing. I would be more concerned about his social skills so that he able to step up and talk to his peers and friends or every time he cannot find a solution to something, he should not be crying but learn to use his words. It would be preparation for future skills...I want this type of children to grow up confident and be able to be critical thinkers and problem-solvers ... (NU CO 1295-1300)

Thus, parental expectation and priorities for learning often differ from the teacher’s priorities and concerns as shared by Nuraidah of her experiences with parents. Thus, the teacher’s priorities may for the child to develop self-help, self-regulatory and pro-social skills, whereas

parents are often more concerned about the ‘academic’ aspects of development such as reading and writing. As she explained:

In my current international school setting, I would allow the kids play and choose what they want to do but we still need a degree of small group teacher-led and teacher-directed play. There should be a balance so that the children learn both to be independent learners and thinkers and at the same time are also responsive to instruction and have self-regulatory behaviours ... (NU CO 1289-1292)

These findings are consistent with other studies done on learning priorities in early childhood education settings (Chan, 2012; Saçkes, 2013). Nuraidah stated that one of the challenges in preparing the students to be ready for formal schooling is that there is quite a big chasm between the way preschool and primary school programme is run; a finding echoed in other studies (Woodhead & Moss, 2007).

I mean we can create the space for the learning environments for the children but that there are quite several things such as the one that I just mentioned that I do not always agree with and we get very particular parents. The teachers must think twice about bringing the children out for example otherwise they might get lots of insect and mosquito bites or the child might fall and so on... they don't bring the kids out because they don't want to have complaints from parents. That is rather sad.... I would say that the local setting is very controlled and often directed in our local setting ... (NU CO 1281-1287)

This other challenge in the system which she believes is that one of delivering an ‘effective’ early childhood curriculum when priorities and expectations differ between teachers and parents. Often, partly because of several reasons including the fact that some parents are over-protective of their child, centre management or individual teachers might impose rather limiting restrictions on the children’s play activities and environment, not allowing children to participate in risk-taking activities. This scenario with overprotective parents ready to lodge a complaint against the teacher or centre fortunately does not happen too often but is something that centres may try to take ‘precautions’ against.

Nuraidah shared her perspectives on various aspects of the early childhood curriculum, the influences of the RE-inspired and IB approach, priorities in the curriculum and a few other challenges faced by ECE teachers, which were useful in helping to answer the research questions. The next section reports on data collected in interview with Anne, who is an advocate for inclusive settings in early childhood education settings.

6.1.3 Anne

In her 40s, Anne (in text, AN CB) has been in the early childhood sector for more than 20 years. At the time of the interview, she was a principal of an early childhood centre operated by a non-profit organization. The centre is unique in that it takes up to 30% of special needs children in its enrolment, while the remaining 70% are what she termed as ‘neurotypically developing children’. Her perspective and views on inclusive education policy have also been influenced by the fact that her own child, who is now grown up, was diagnosed to be on the Autistic Spectrum when he was in his early years. In my interview with her, she talked about the approach in her centre in managing children with additional needs, alongside mainstream learners. She also shared her views on several other issues regarding the inclusion of special needs children in mainstream centres and schools, as the following excerpt suggests.

We do not allow ‘pull outs’ and all our intervention is done in the classroom itself and the processes are transparent to all involved and observing. In fact, all the children go through the processes and it is transdisciplinary involving specialists such as the SLT speech and language therapist and OT occupational therapist ... (AN CB 744-747)

According to Anne, the centre that she runs would be considered as having adopted quite a pioneering approach in an inclusive preschool because the intervention team of specialists work within the centre setting itself. This is unlike most centres in the past who may have accepted the enrolment of a child with special needs but would require the child to receive early intervention and management outside the mainstream centres. Within the centre, around 75%

of the classroom teachers have an advanced diploma in special needs education, as Anne explained:

We actually still follow ECDA's guidelines for the child: teacher ratio and there is no 'pull out' from the main class. What happens in our centre is that there is maximum of 15 children in the classroom, 30% or 4 of the 15 children may be of 'added' needs. This is still managed by 2 teachers. What we do is that we merge with the regular EC programme, so we use various strategies including differentiated instruction ... (AN CB 757-763)

The centre adopts a similar child: teacher ratios as compared to more typical mainstream centres, with two main teachers within the class throughout the year and planning for daily routines and learning activities. In addition, the special needs team members come into the class a few times a week to supplement this and this includes the speech, occupational therapists and so on. Anne described her centre's approach as follows:

There are embedded strategies and a 'personalised lesson plan' makes us different. So for each individual child, we have 'tracker' system in that we monitor and follow the progress of the child and provide opportunities and learning goals that are appropriate for each individual child for the semester. Both for typically developing and added needs children ... (AN CB 761-763)

Practical Life' in terms of normal everyday routines we go through in the centre like cleaning up and putting away materials and resources after use or after meals so we are not adopting just 'Montessori' per se, but we adopt the term and improvise the strategies for our needs ... (AN CB 766-769)

Anne also described the curricular strategies and how individual children are catered for in terms of their abilities and needs. Elaborating further on the differentiated instruction strategies, she explained that each child is individually 'looked at' and more specific learning goals and objectives may be articulated for each or an individual development plan or IDP. She emphasized the basis for the national curriculum framework (NEL) (MOE, 2013b) as a foundation to start off with and in which certain materials and strategies from other sources are embedded in. The use of Montessori materials and equipment, some methods and terms have

been adapted into the curriculum for both mixed ability groups and individualized instruction.

She described her approach in the following way.

We do not just have children on the autistic spectrum that can be mild, moderate or severe. We have children with diverse needs, with GDD Global Developmental Delay, children with cerebral palsy, Down's syndrome, chromosome deficient 9 and others. This group of children have different needs, and we use various forms of technology such as AAC or augmentative alternative communications for children with speech delay or communicative difficulties. For children with cerebral palsy for example iGAZE and low tech AAC which are visual cues, text programmes and others in aiding with their communication with others. Instead of using just visual cues, sign language and gesturing, we do use some apps in aiding these children in their communication processes... (AN CB 798-806)

We have some apps that are downloadable onto their mobile phones and these can be used so that they need not rely just on the visual cues like Pictorial Exchange Communication System (PECS) programme which uses visuals to interact with. Some of these apps have a voice and if they can key in the text like 'I want', the app will voice it out for you. These are especially useful ... (AN CB 807-810)

Anne also talked about the use of new technologies that have facilitated with the learning experiences and communication of some of these children with additional needs. For instance, she explained the use of apps that can be downloaded on the iPad for the child diagnosed with some form of dysphasia, speech delays or communicative disorders and others that may be useful with some learners on the autistic spectrum. Perhaps, not all mainstream centres would be equipped with the know-how, although according to Anne, the use of assistive technology is not something new and has been adopted by other educational settings and services, particularly those catered for learners with additional needs. Such alternative augmentative communication tools have become an important aspect of intervention and integration in such children as found in other research studies. (Withey, 2017).

Another aspect of Anne's practice that was discussed was about how the centre has similar goals to EIPIC, which is the Early Intervention Programme for Infants and Children (MSF, 2019; Poon & Yang, 2016) that is available in various government-funded and private centres and at the same time adopts the curriculum objectives from the national curriculum framework

similar to mainstream centres). However, the intervention sessions are carried out within the centre setting itself and is not conducted as an external programme from the main curriculum as she finds that her team of teachers, most of whom have qualifications in special needs education, are able to manage both the 'mainstream' learners as well as those with additional needs. As Anne clarified, the curriculum can be differentiated so that the children are able to work at an appropriate pace according to their abilities and also allow diversity in terms of interests and abilities.

The NEL framework is a requirement.... We also use project work and collaboration with the community. We had a parent volunteer from the neighbourhood to come in to teach the children how to play table tennis... we improvise, and we got the parents involved to and they came in at end of the term to the play with the children. We also got a group of young people from a carpentry firm to do some handiwork with the children over a period of a term. They went through the process of getting the children to create their own photo-frames and this involved polishing, varnishing, flower pressing and at the end of the project, each child was presented with a photo frame for their graduation ... (AN CB 777-782)

Some other aspects of the curriculum were also highlighted project learning and involvement with the community with the use of the national curriculum guidelines. Anne shared a few examples when community partnerships came into play in order to benefit the young learners.

In the 3 years we have been in operation, we have created a lot of awareness about the need for inclusive education but still, if we look at it, after 6 years of age, what is going to happen? We may present them with many opportunities and help during this time in their preschool education in KC, but what about after 6 when they are supposed to enter primary school? ...There is a lot more that can be done for this group of children ... (AN CB)

One of the objectives as an early childhood professional and principal of a school with a very inclusive policy was to create awareness and public education about supporting and living with individuals with additional needs. She stated that more could be done for this particular group of children at this age, but she also lamented that more opportunities have to be created and follow-up to be provided for children beyond the early years. She believes that the gap or lack of continuity of opportunities and support for this group in education has been a weak link in

the education system in the country, paralleling similar findings in other studies (Yeo et al., 2016). As she states:

We do need a lot more follow-up, particularly after the children turn 6 years and leave the preschool setting. Sad to say, there is not that much being offered or done from what I see....I would say that Singapore has been quite 'slow' in providing more support in this area...At this stage, I still have principals from other centres calling me up and ask 'Do you still have vacancies for children with added needs; our teachers are not trained you know'.... I am willing to send my teacher out to show them how to manage these children, but I would like to ask them 'Why isn't your centre able to manage a small percentage of children with added needs?' (AN CB 848-854)

Based on Anne's observations and perspective, the support and work in the area of provision for children with special or additional needs has been quite slow and many centres are unwilling to accept such children. She argued that many early childhood teachers in Singapore do not feel adequately prepared in managing a class with even a small percentage of learners who have additional needs. In the past, she has been approached by principals from other centres requesting assistance or passing on such children to her centre. Anne feels strongly that more should be done so that centres would feel adequately prepared to manage such special needs learners.

We have evolved over the past three years from a very transdisciplinary team approach with the early intervention team members that include the SLT (Speech and language therapist), my OT (occupational therapist) for example. They are not only there to help the children but also to transfer their skillset to the teachers. The teachers are also learning alongside so as to bridge that gap. So, in fact, my teachers are also carrying out a certain portion of the intervention. We are therefore moving out of transdisciplinary and no longer have these specialists coming in all the time. Our SLT and OT also come in to do some teaching with the teacher and they help to embed these strategies into the classroom ... (AN CB 990-997)

Anne explained that she has worked with her team closely for the past few years and mainstream classroom teachers have also benefitted from the team effort and are able to also learn from the partnerships. The idea of having the specialist team of speech and language, occupational therapists and others come into the centre, for the special needs children alongside their mainstream counterparts is something quite new in the Singapore setting. Anne said that

this approach also nurtures the spirit of empathy amongst the typically developing children who are then in the better position to understand their classmates with special needs. As she explained:

They (typically developing) are curious about their special needs counterparts. I also tell them that there is nothing ‘special’ about the classmates, just that they have additional needs, and we should help them bridge the gap. These children are like any other child with their own character and personality. Often, it is the adults who is highly influential on what their child thinks of their special needs (SN) classmates. If the parent tell their own child that his classmate cannot walk and it is because the child did not listen to his parents or when the parent tell his normal child that a visually handicapped child has acquired his or her disability through using the iPhone excessively, then we convey the misconception and ignorance about such children to our own children. Therefore, the adults and parents play an important role in how children perceive handicapped or SN children. They give very superficial and artificial reasons to explain disabilities and special needs to their typically developing children although in our centre, that is not the situation ... (AN CB 820-830)

Anne also shared her perspective on the attitudes and misconceptions about children with special needs. Children are highly influenced by those around them regarding their ideas and attitudes towards their peers with additional needs. She strongly argued that adults, in particular have a strong role in directing these attitudes and either clear up or create misconceptions about such children. Anne rejected the idea that children will be ‘slowed down’ or hindered by their neuro-atypical or special needs peers and stated that having them alongside their mainstream peers would not be a hindrance but allow greater integration and understanding. It would also help in terms of ‘school readiness’ and being in the ‘real world’, that these children learn alongside their mainstream peers. Anne also spoke about her perspective regarding the reasons why many early childhood teachers do not feel adequately prepared to deal with children with special needs, she shared her opinion that support teachers need not always be specifically trained for special needs children although it would help. Anne’s opinion is shared by data from other studies that identify teacher preparation to be an issue (Lian et al., 2008).

In an earlier study with early childhood teachers in Singapore (Lian et al., 2008), it was found that a large percentage of them stated that they felt inadequately informed or prepared to

manage children with special needs in their class, which is a finding supported by other studies in Singapore (Lian et al., 2008). This lack of preparation presents a challenge in having a more inclusive philosophy concerning the way the early childhood education settings and the curriculum is being delivered. Anne commented on the effects of this challenge as follows:

When you talk about feeling or being inadequate, a lot of it is based on their own self-perception and their mind set. If you really want to help these children, you will not see them as one of added needs. You will try to observe them as with the other children and discover their learning patterns and learning styles. You will work on the child and if you know for example, the child's interests is in trains, you will try to extend the child's learning by beginning with his interests for example, just like other typically developing children. You have to extend the child's learning from there. It does mean that you have to be early intervention (EI) or early intervention trained in order to help this group of children. I come from the usual EC background and even before I went for my EI training, all my interventions and all the knowledge that I had was derived from mainstream ECE studies and preparation and I used these approaches on my own child. Even with other children in the school, if you view them differently, you will also treat them differently. If you view them as any normal typical child, you will be able to work with them ... (AN CB 957-968)

In terms of managing a school with a special inclusive policy, Anne's personal experience with her own child and her more than twenty years of working in the sector have shaped the way she views the early childhood teacher's role with such children. Although she considered that preparation and training specifically in the area of teaching and managing children with special needs is important, she stated that a teacher's sense of self-adequacy and efficacy stems from within, as well through personal experiences and observing the learning needs of the child, paralleling findings in other studies (Bruggink et al., 2016). From her perspective, it does not always take special training to be able to help these children in their learning journeys. Anne provided some insights into the challenges in bringing about an inclusive policy in many mainstream centres with regards to learners with special needs and also delivering a differentiated curriculum to learners of diverse needs. She shared her opinions on the critical importance of a team approach in such a centre and the crucial role of attitudes towards additional needs learners in ECE settings. These factors, of collaborative partnerships and

positive attitudes towards diverse learners, appear to be a strong enabling factor in Anne's centre of practice. The next early childhood educator is Elizabeth who specializes in music education with young learners.

6.1.4 Elizabeth

Elizabeth was a little different from most other early childhood practitioners in this study in that she did not work as classroom teacher per se, but as a music enrichment programme facilitator. In her early thirties, she has three children of her own. She is also the director of her own company that runs music enrichment programmes for the early years at her own studios as well as in centres around the island. Her first degree was not in early years education, as she started off with something quite different, but her appreciation for music and her musical background provided her the foundation to start her own music programme company. After several years working in the sector, she completed a master's degree in early childhood education. She shared her views on the growth of the sector and her involvement with the music programme in several centres. Speaking of the changing attitudes of the community, Elizabeth said:

Ten to fifteen years ago, 90% of the children who were signed up for these types of programme were expatriates, but nowadays, there are many more local families that would sign up their children for this sort of programme ... (EL PO 209-211)

It was not really an issue of affordability but rather the attitudes towards more 'recreational' learning. Maybe ten years ago, the 'angmos' or expatriates could accept this approach of learning whereas local Singaporean parents are looking at it with the attitude of 'this is just play' ... (EL PO 213-215)

I think they (parents) have become more aware of what their child really needs to learn and the child's interests rather than based solely on their own point of view. They were used to having a very structured approach, having activities graded or at certain levels ... (EL PO 220-222)

Elizabeth's statements point to the changing mind-sets of families and parents in Singapore where attitudes have gradually become more open to different approaches to learning and learning through other modalities other than with an academic or purely utilitarian purpose.

Her observation was that parents were much less sceptical of a playful approach towards learning and were more accepting of learning for appreciation through music rather than with just a performance goal in mind. She elaborated on her views of the ‘typical mind-sets of some Asian parents’, as follows:

Asian and Singapore parents tend to be quite performance oriented and they want to know exactly what their child has learnt or achieved, as though they have to go through everything on a checklist of what has been done.... like have you done A, B, and C ...(EL PO 216-218)

I have observed that parents tend to have very performance orientated goals for their children at times. When they pay a little extra to have ‘extra enrichment sessions for music and creative movement, they tend to expect them to have a performance or concert at year-end ... (EL PO 231-233)

They also tend to be quite ‘assessment-orientated but I would throw out the word assessment and use the term ‘evaluation’ instead. We are a vendor, and we will serve your needs, so if you want a concert item at the year-end, we will give it to you, but we will let you know that isn’t always our priority. We have to strike a balance between what parents want and what is actually really beneficial for the child ... (EL PO 234-238)

Elizabeth’s observations and her view of the early childhood sector in terms of being a service provider has evolved over the past decade or so. She said that it is now much more common to see children from local families participating in music programmes for children from 18 months such as the one she and her company provides. Her observation was that parents nowadays are more open to have their child participate and engage in something just for the purpose of enjoying and appreciating the process, rather than viewing it as a means to an end. She said that as an ECE service provider, there is the obvious requirement of customer service in terms of meeting the expectations of the consumer. She argued that a balance needs to be struck in providing a service programme that will benefit the child, rather than running a programme just so that parents are able to watch a performance at the end of the year.

We also discussed Elizabeth’s philosophy and beliefs about her practice. The music programmes her group run cater to children from beginning of infancy until six years of age. She also conducts sessions at other centres as a vendor or external facilitator, mostly for

children between eighteen months and six years. She strongly argued for the involvement of the parent in these sessions, particularly for children below the age of three. She emphasized that her music programme was a holistic approach to supporting greater gains in early literacy and language skills, abstract reasoning, spatial and temporal reasoning, and self-control, as well as social development and overall cognitive development; a proposition supported in other research studies (Črnčec et al., 2006; Niland, 2009). Elizabeth made a strong stand for music education for young learners in that she argued it is a specialized area of practice. She talked about the use of age-appropriate materials and activities as follows:

We bring in various instruments that age-appropriate for the children. For example, the 'oldest' age group of 5-6 years are capable of instruments that require finer motor and coordination skills. It is important to use instruments that are appropriate for their age-group rather than an adult instrument... So, for example, I use the dulcimer instead of a guitar or a violin for this age group because it uses a natural movement and does not overstrain the child because it requires the child to strum something like a guitar but is less demanding so it easier for them to be achieve success in what they are doing. This would encourage them as it is easier for them to achieve the initial success in making 'good sounds' so that they will be encouraged further ... With a violin, it may not be so easy. Not all children are prodigies so the first sounds made by a violin may be horrible which may discourage the child from practising further ... (EL PO 188-197)

Elizabeth explained that facilitating music appreciation even with young learners has to be age appropriate within each age range. For example, with infants, the music-making experience allows a sensory-rich environment so that infants can explore and react to new sounds, sensations, and objects. Vocal play and recognizing the relationships between sounds and symbols are part of the process for infants according to Elizabeth. Moving through the levels at each age level progressively, she stated that the young learners at five to six years engage in activities that encourage critical thinking skills, effective communication, decision-making and self-regulatory behaviours; a proposition which is supported by research (Morin, 2001). Thus, Elizabeth ensures that activities and instruments used are age appropriate. I observed a few of the sessions that Elizabeth conducted with the children, as well as the groups with infants and

their parents. In one of the sessions, the six-year olds made their own dulcimer string instrument with a cardboard assembly kit and they started learning to strum the instrument.

Next, we also talked about the use and the need of enrichment programmes with respect to the ECDA and licensing requirements. Elizabeth was asked about how the music enrichment programme from an external vendor or facilitator was integrated into the curriculum and programme of the ECE centre and what role her music company played in the accreditation process of the centre through SPARK or the Singapore Preschool Accreditation Framework. She explained her approach in the following way:

We have to be part of the centre's 'portfolio' and provide an outline of our programme to them and a kind of a rubric to show the areas of competencies that the child will achieve through our programme. ECDA does not evaluate us directly but when we go into centres as a vendor and the schools engage us, we do have to submit our plans to them as part of the centres aesthetics curriculum which they in turn will submit for SPARK....(EL PO 241-248)

Elizabeth shared about the processes of how her music curriculum was integrated into the curriculum of the centres she conducted her music programmes at. The curriculum plan submitted by her was also evaluated using performance indicators in the SPARK evaluation framework:

Actually, honestly speaking, I feel that the current evaluation through SPARK can be a little behind in the aesthetics field as compared with the more academic components of the curriculum...I guess the SPARK framework for evaluation covers many other aspects of the centre operations including, the learning environment, safety, hygiene, leadership and not just the curriculum aspect of the centre operations.... (EL PO 250-254)

Elizabeth argued that the current evaluation framework may be considered somewhat outdated and suggested that different competencies should be looked at rather than the same ones used for more academic domains such as language and literacy or numeracy.

They want to quantify and articulate very specific components of musical learning at each level and expect to see a kind of progression of competency levels of these components at different levels. For example, I teach 'so-mi-lah' with the 2-year olds

and at the next level, they want to know that I have covered ‘so-mi-lah-do’. They want to see this progression in the plan. However, musical learning cannot always be compartmentalised like that. You cannot say ‘Today, I am only teaching ‘tempo’ but actually, I have to cover so many more aspects that have to be integrated into the lesson activity. So, the evaluation from SPARK is such that they want to kind of ‘categorise’ you or what you are doing, whereas in aesthetics and music education, it can be difficult to just compartmentalise and categorise the learning components.... (EL PO 259-267)

Music and creative movement activities and programme in this case comes under the category of ‘Aesthetic and Creative Expression’ domain in the NEL curriculum framework (MOE, 2013b). According to Elizabeth, the plans for any enrichment activity or programme conducted by an external facilitator must be submitted to the centre management which then integrate these unit plans as part of the centre’s curriculum with the other unit plans from the teachers in the centre. However, the curriculum is only one aspect of the evaluation by SPARK. From Elizabeth’s perspective, the evaluation framework used is very competency-based and specific performance criteria to assess the quality of the Aesthetics and Creative Expression component of the curriculum and there is a need for a more qualitative and appreciative evaluation of this domain. Thus, it seems that components of measures of quality care and education in the ECE sector in Singapore are more pragmatic, with outcomes that are measurable rather than based on more subtle benefits of a music appreciation programme. Another area that I talked to Elizabeth about was about her view on the entrepreneurial nature of the early childhood sector in Singapore:

For myself as a parent, I actually prefer sending my child to something that is smaller and more private but unique for an early childhood centre which does not have to go through so much ‘red-tape’ to seek formal authorization for a lot of activities. In a more private centre setting, planning and operations can be more spontaneous, and you do not have to go through so many levels of authorization to do something for example in a field trip for a curriculum unit. In a larger corporate type of centre settings, they often have lot of people above to answer to and so there are many limitations when you want to do something. (EL PO 278-290)

Elizabeth shared her view on ECCE provision in Singapore as a business activity with many brand names operating their centres as franchises, so that even though it may appear that parents

have a choice in the centre that they can enrol their child in, often it is the same operator running these centres with a different sign outside their doors. Elizabeth argued for a more personalized experience with ECE service provision and the benefits of a smaller, more individualized operation. We talked about teacher education and how new early childhood teacher entrants were prepared to enter the early childhood sector workforce. Elizabeth commented on the challenges presented by the qualifications framework in Singapore (See appendix J), and said that:

The situation and context is different in Asian countries as compared to those in Scandinavia and much of the West. What works in one context may not work in another. Having early childhood teachers coming in with just a diploma or a certificate can work in our situation because a lot of training and development takes place in on-the-job setting.... One example is our music curriculum which we bring in from the US. The curriculum may be the same in writing but when we implement it, it can be quite different because of the different cultural context.... (EL PO 294-299)

Her view regarding the qualifications of early childhood teachers in Singapore where the percentage of early childhood teachers holding a degree in the discipline is relatively lower than those in Scandinavian and many other Western countries was that what works in one country may not be necessarily the same for another. There is also an ongoing debate on the cultural appropriateness of imported curricula and educational philosophies of a Western style model (Goodall, 2014). However, with greater acceptance of such progressive Western changes, there is evidence that parents have come to accept many progressive curricula models and approaches that include play based learning and the experiential approach (Yang & Li, 2019). Elizabeth stated that much of what is transplanted or imported from the West needs to be adapted according to the cultural and social context of the environment. We also discussed the adequacy of support provided by the government for the early childhood education sector. Elizabeth commented that funding and support from the government was not the problem. As she explained:

From my point of view, there is more than adequate provision and support by the government. In fact, I think maybe too much that teachers are quite spoilt for choice. There is also this tendency that they would move from one centre to another and they are presented with many opportunities. The pay of preschool teachers in Singapore has improved quite a bit in the past decade or so and some teachers move from one centre to another and they can also ask for some flexibility in their working hours, which is not always possible in other types of work. However, I don't think this is just in the case of early childhood education situation but generally the younger generation tend to 'job hop' a bit... (EL PO 303-310)

According to Elizabeth, change has been necessary with the government doing a lot more in recent years to improve the status of early childhood educators, as well as the pay scale of teachers in the sector. Early childhood educators in the ECE sector have been given the opportunities to upgrade themselves with the assistance of some government grants and funding.

I think that expectations from early childhood educators required some change; If early childhood practitioners want to be get the respect that they think they deserve, than they should jolly well work for that and get their qualifications and upgrading so that they are not seen just as 'glorified babysitters'. They are quite well taken care of because the government has provided quite a lot of funding to centres to train their staff and quite often almost 100% of the preschool teacher's basic qualification is sponsored by the centre, together with government funding. They are also paid a salary, so they are quite 'spoilt' in a sense.....I think a lot of this funding and stepping up by the government has only taken place more recently... (EL PO 315-322)

Thus, Elizabeth asserted that challenges of training and providing basic teacher education and preparation programmes have been ongoing and supported by government funding and early childhood practitioners should utilize the opportunities offered to them so as to strengthen their professional identities as educators.

In summary, Elizabeth talked about her perspectives on the approaches used in music education and the challenges of a very performance-oriented approach to evaluating the curriculum, as well as in raising the professional status of early childhood teachers. Next, some of the processes of curriculum decision-making, challenges and enabling conditions are shared through experiences and perspectives of Shirlyn.

6.1.5 Shirlyn

Shirlyn (in text, SH CO) has been working as an early childhood educator in Singapore for about ten years. She obtained her bachelor's degree in early childhood education in the Philippines and worked there for several years before moving to Singapore. The first centre that she worked at was a community-based centre where she was for several years before moving on to a corporately owned and operated one with a number of branches around the island. She has been a K2 (5-6 years) level teacher for quite a while in her current centre with an enrolment of about 100 children. When asked about how much her practice was guided by the NEL framework, she commented:

When I first came in to work in 'MCA' centre several years back, I was quite guided by the NEL framework and I would refer to it whenever I had to do lesson planning and activities... but when I moved over to my current centre 'KV', I know that the curriculum is guided by the NEL framework but we have become more independent and developed our own programme which I would say is still based on the NEL framework because that really helps the teachers to be more focussed ... (SH CO 1364-1368)

As someone who received her initial qualifications from overseas when she first started work at the community based ECE centre (MCA), Shirlyn relied a great deal on the NEL curriculum framework (MOE, 2013b) as her guide in her day-to-day planning of the programme in her centre. As she became more experienced and familiar with the NEL framework (MOE, 2013b) she was able to adapt and develop her own ideas based on this foundation. The other reason for basing the centre programme on the NEL framework (MOE, 2013b) is that centres are able to use benchmarking criteria and indicators that align with the SPARK accreditation structure (ECWI, 2019; Harcourt, 2012). The use of the SPARK evaluation and accreditation of centre quality therefore also allows some form of monitoring and evaluation of how much the NEL curriculum framework has been used. She explained:

During the SPARK evaluation, a lot of it is based on the NEL framework for the evaluation of the curriculum and SPARK accreditation is a form of monitoring to see that the NEL framework is being implemented. So, I would say that teachers are being

guided by NEL and how they set up the learning environment of the centre is also monitored by SPARK. So I would say that even if you say that you implemented NEL but did not monitor it, then it would not happen ... (SH CO 1368-1373)

Having been a classroom teacher for the K2s (5-6 year olds) since she started working at her current centre, she further explained the curriculum priorities from her perspective:

Our centre programme has set objectives for K2 and these are what they are going to be able to achieve and be competent at. For me personally, I feel that social-emotional skills are particularly important for the child before they get to primary one. They should be encouraged to build up their confidence and learn to sufficiently manage oneself through developing conflict resolution skills ... (SH CO 1319-1423)

For some kids, if they have an issue or a problem, they would be going 'Teacher teacher teacher ...' and most of the time it is something about someone taking their things or toy. Usually, it is about small issues that they need to learn to handle themselves. For example, I would ask them 'So if Jane has taken your toy, what would you do about it?' Of course, if it is a bigger issue or challenge, the teacher would mediate and help them resolve the problem but small issues, I would expect them to learn to handle themselves (SH CO 1324-1429)

As a K2 (5-6 years) co-class teacher, like Nuraidah, Shirlyn stated that the most important component of the child's development in the centre was social-emotional competencies. As articulated in the NEL framework, socio-emotional learning (SEL) includes developing self-awareness and a positive self-concept, self-management, social awareness, responsible decision making and relationship management through communication and learning to interact with others (MOE, 2013e). Thus, despite strong parental expectations regarding the priority of literacy skills, Shirlyn's strongly supports the idea that one of the most critical elements of school readiness and a successful transition into primary school are social emotional skills.

When Shirlyn commenced her class in the beginning of the year, she communicated with their teacher from the previous year and also accessed their progress reports and portfolios although there might be some new entrants into the class (less commonly for K2 which is the graduating class for preschool). Early literacy goals in the curriculum include communication through listening and speaking and conveying meaning through print. These expectations progress in stages and children at the K2 level engage in various activities that focus on literacy acquisition

through developing phonological awareness, comprehension, shared reading and emergent writing processes, as articulated in the NEL framework (MOE, 2013c). The year prior to entering primary school, parental expectations are that their child would be able to have some basic language and literacy skills. She explained her approach in this aspect of the curriculum:

When I get the children at K2 (6 years), I would kind of do an informal evaluation about their reading abilities.... For those who are alright and able to appreciate literacy materials, I would provide them with a variety of books and reading materials, but I would pay more attention to those who are struggling and require a little more guidance. For a few children, who are really struggling and no matter what I do, they are still unable to manage, I would speak to their parents because these are the kids that might require support and outside intervention such as from the family with their literacy and reading skills. In fact, the parents may tend spend more time reading to and with the child that will help.... (SH CO 1435-1442)

Elaborating more on the use of a story-based approach for language and literacy in practice, she explained:

We do use a literacy-based programme. We use two books per term, one new book each month and we based a lot of activities on the book that is used for the month. An example, we used the book 'Julius the Baby of the World'. It is a good book for teaching 'social emotional competence'. Will ask questions such as 'What emotions was Lily feeling when her parents spent time with her baby brother, Julius?' 'What did Lily try to do with Julius when her parents were not around?' 'What changed Lily's behaviour finally?' It is about family relationships and values and there is a focus on language and literacy ... (SH CO 1449-1455)

Her centre used a literacy-based programme where one children's book was featured on for a term for the level. Of course, other reading and print materials were available in the reading corners. The focus on one title and themes found within the story of that title were explored through different learning experiences, activities, inquiry learning and teacher-led discussion.

When asked about how she viewed diversity, Shirlyn's response was that her focus would be on the mixed abilities of her group:

I think the way I look at the diversity in the classroom would be mainly in terms of their abilities. I would group them according to their abilities and if a child is particularly weak, I would spend more one-on-one time with them so that they will be able to achieve the skills that we are targeting. It also depends on the activities as well.... We

allow some self-exploration and discovery on their own as well, particularly with art activities where we provide the materials and then allow them do their own experimentation and exploration ... (SH CO 1463-1468)

Shirlyn said that she will do what she can in helping the child to 'catch up' with his or her peers but sometimes, she will have to speak to the parents so that they can become more involved in their child's learning. Less often, outside referral may be required but this may be because of other accompanying issues and/or learning disabilities. She observed that in the past, there was tendency to rely a lot on 'pencil and paper' tasks. More recently, the approach has moved towards a more hands-on experiential type of learning with less dependence on workbooks (SH 1471-1476). She elaborated:

We change the activities and learning corners termly.....For maths, we cover measurement, use a play clock and various other equipment and materials for the activities... For example, this term we are doing 'measurement', materials such as measuring tape, balance scale, clock, currency.....Writing activities such as a friendly letter to their friends, design an advertisement. We prefer to do experiential and hands-on activities rather than too many worksheets. (SH CO 1477-1481)

Although the centre and the teachers themselves may have prepared materials for the more 'academic' areas of language and literacy and numeracy, these are not only the materials used for the curriculum. Learning experiences through the experiential, inquiry and interaction between peers, as well as between the teachers and learners are also emphasized. These aspects of the curriculum learning experiences also involves authentic learning activities, such as being able to complete tasks in naturalistic everyday environments e.g., zipping/unzipping, buttoning/unbuttoning, or dressing themselves that required fine motor skills, measuring quantity using spoons or cups (e.g. three cups or five spoons of ...) involving numeracy concepts. As one of the branches in the chain of centres was known to use interactive white boards as part of their programme, I asked Shirlyn if this was used at the branch that she was currently working at and did they try to integrate the use of technology in the curriculum. She talked about the integration of technology in teaching in early childhood settings and shared:

We do introduce to the children some basic use of computers including internet, educational games and also to 'research topics of interest to them.... But not all the branches have the same facilities and we do not have the interactive whiteboard at the HC branch. (SH CO 1338-1340)

Shirlyn explained the use of technology in centres as a pedagogical tool that is becoming more prevalent and because of the rapidly evolving educational landscape, the use of technology in the more common forms of computers, iPads, apps and so on have become quite popular. This change in the use of technology has become more prevalent in some other centres and elsewhere in the world, as research has suggested (Brooker & Siraj-Blatchford, 2002; Sullivan & Bers, 2018). On the bilingual language programme, Shirlyn explained:

We have one Chinese language teacher per level and so each of them takes 2 classes like K2A and K2B. They also follow the 6 learning areas found in NEL and so they definitely spend more than 30 min each day for each class including sessions such as Mandarin Music and Movement and Chinese word skills so they do spend some time with all the classes. (SH CO 1458-1461))

Shirlyn also discussed the staffing and bilingual policy in the centre. There is one main English language teacher for each class or group of children with a ratio of 15 to 20:1 in K1 (4-5 years) and K2 (5-6 years) groups. However, one Chinese Language teacher takes sessions with two classes of the same age group levels in the centre. This staffing policy varies centre to centre with some centres having one mother tongue teacher taking the whole centre to having one mother tongue language teacher in each class with the English language teacher. We also discussed pedagogical documentation and the assessment procedures in her centre. Shirlyn described her approach as follows:

Basically, we use a lot of photos or digital images... I think the focus is on the teaching aspect rather than the focus on assessment documentation. So, we have termly portfolios with digital images and anecdotal records, we use some checklists, but we have a summary report and observation records. (SH CO 1376-1379)

The way that they did it was quite similar both at MCA (community based) and KV (corporately owned). They both used the assessment documentation similarly based on the NEL framework. Both have summary reports done on the 6 main learning areas but in observation records, for MAC centre (community-based), we had 6 domains for

observation. For KV, they reduced the number to 4: language literacy, numeracy, aesthetic and creative expression, cognitive. There is no observation documentation for social-emotional development because according to them, it is difficult to take a picture of this and they combined numeracy and discovery of the world for cognitive development...Physical motor includes gross and fine motor skills, creative expression is the music and the arts. However, the social emotional learning (SEL) documentation is done with the summary report. (SH CO 1380-1388)

Portfolios in this case is comprised of images and anecdotal observations that were categorised according to the main learning areas, the child's work samples and a summary report. The NEL framework again served as a guide for this evaluation of progress made by the child. However, instead of the formative assessment of numeracy and 'discovery of the world' as individual domains, these two were grouped into cognitive development. My observation, however, was some activities would involve more than one more domain, particularly in project work, experiential or authentic learning experiences so it would be challenging to just place the learning experience into one domain of learning. Shirlyn commented on how the learning areas are documented as part of the assessment:

Most of the documentation is with still photographs but we do use it for documentation of 'rhythm and moves'. For rhythm and moves, we use it because we want to observe that the child can sing and move with rhythm, so we use video rather than still shots to capture the movement... It all depends on the learning area that we are focusing on. Each class teacher, we can use iTime that allows the uploading of the video clips. (SH CO 1391-1395)

In our HC branch, we upload the summary reports in Little Lives, and everything is uploaded. This centre has hard copy portfolios. Our formal parent-teacher meetings are done twice a year when we go through termly observation records, but summary reports are done twice a year. (SH CO 1403-1405)

We use the Little Lives mobile app, but our centre is in some kind of transition now as to whether to fully use ePortfolios or hard copy printed out portfolios. It depends on the parents as some of them really prefer the hard copy version...For KV, there are many centres so each centre as their own practice. At NCS, we upload our observation and do the checklists online and we also have the hardcopies. The observation records and summary reports are printed out. (SH CO 1398-1402).

Having an online platform that allows the uploading of images and video clips as well as online interaction with parents is relatively new in this setting. Certain forms of pedagogical

documentation such as of music and creative movement are better captured and viewed in this mode according to Shirlyn. Again, as mentioned by Reena, Shirlyn finds the use of the online platform that syncs with mobile apps in the parents' smartphone to be quite a welcome change from just hard copy portfolios. However, there are some parents who still prefer hard copies of the child's portfolio, hence the dilemma between ePortfolios, hard copy portfolios or both. Shirlyn also shared about some initiatives in her centre and her involvement in an ECDA funded innovation project:

The branch has robotics sessions for the children. At KV, we submitted a proposal related to Science that was based on a water project, something on water conservation. As part of the project, we made a trip to the swimming pool and learnt about how to purify the water so that it can be used again. This project was carried out over a period of at least 3 to 6 months...At the centre, we had activities such as 'kiddie car wash' during which they washed their toy cars and that was used as a start of 'provocations' and from then on, we talked about how to save water.... We had to record and document all the activities and processes. (SH CO 1182-1492)

The ECDA funded Innovation Projects support innovative project proposals so that preschools could explore less conventional ideas and approaches to fulfil the objectives of enhancing learning experiences for children, promoting community engagement and home-centred partnerships and improving or facilitating the modification of existing innovations beyond the first year of project implementation (ECDA, 2019b). Finally, I asked Shirlyn what she felt about the opportunities provided by her company and the local government in providing early childhood practitioners further opportunities for professional development. She shared:

I think you know that there is limited funding for foreigners, but the government wants all early childhood practitioners and teachers to have at least 20 hours of professional development and training each year... (SH CO 1494-1496)

The training provided by my company is conducted by third party vendors and ECDA related workshops and usually not conducted by the company itself. With MCA (community-based centre), we had in-house training at the headquarters. For KV, we tend to have ECDA based workshops... I like to constantly keep myself updated and have gone for further professional development on my own time as well.... (SH CO 1506-1509)

Shirlyn elaborated on how continuing professional development was offered through the opportunities available to her and her colleagues at her centre. The scheme is outlined by the Continuing Professional Development (CPD) Masterplan 1 (Appendix J) for the early childhood sector that includes the provision of CPD courses and workshops whose objective is to raise the quality and professional experience of early childhood practitioners. These CPD courses, as well as other Professional Development (PD) programmes and initiatives are organized by ECDA. Some other modes of professional development include web-based learning, learning journeys and sharing sessions amongst peers and colleagues (ECDA, 2019a). Based on Shirlyn's report, there appears to be a positive culture of continuing education and teacher development through which early childhood educators are motivated and encouraged to update their skills and professional knowledge. This positive culture is an apparent enabler in greater professional motivation and development in the delivery of a successful curriculum programme.

In the following discussion, the key points made in these five in-depth interviews would be reviewed and summarized so that they address the key research questions of this study directly or indirectly.

6.2 Summary

Several key findings from these five in-depth interviews will be summarized. Key findings common to more than one of these participants will also be highlighted. All five teacher participants were familiar with the national curriculum framework. Apart from Nuraidah, whose ECE settings was an IB international school, all teachers acknowledged the use of NEL curriculum framework as a guide. Reena, Nuraidah, as well as Shirlyn stated that their current ECE workplace settings adopted a form of Reggio-Emilia inspired educational philosophy. Their centre types were quite different in that Reena was in a more community-based centre setting, while Nuraidah was situated in an International Baccalaureate school. Elizabeth's

practice with music education in ECE centre settings adopted an approach that had been imported from the United States. However, she conceded that the way the programme was delivered may be quite different from the way it was delivered in its country of origin because of the different cultural contexts. Similarly, Nuraidah endorsed the idea that the cultural context of the learners influenced the way they respond to curriculum instruction, particularly more international approaches such as the Reggio-Emilia inspired approach.

Nuraidah highlighted the need for a change in the way early childhood teachers are prepared so that teaching become a more reflective practice. Shirlyn talked about government initiatives such as the ECDA innovation project grant that encouraged teachers to become more innovative and reflective educators while Reena talked about the teacher in a researcher role. All five teachers shared about their personal philosophy and approach to their practice, the impact of centre policies, as well as the influence and impact that parental attitudes and expectations can have on their practice. However, they believe that one of the more important priorities in the early childhood curriculum was that of social emotional learning and nurturing critical and creative thinkers. Differences in expectation and priorities between teachers and parents may cause conflict (Lane et al., 2007). Sometimes, it seemed to them that the parents appear to be the more important and demanding consumer rather than the child as in expecting to see a measurable or observable end-product or performance as an outcome of this extra enrichment sessions. Anne was a strong advocate for an inclusive education policy using differentiated instruction and a team approach. This is supported by other research studies which supported the idea that differentiated instruction allows various levels of readiness and flexible learning arrangements in order to cater to learners of different abilities and needs (Richards, 2016; Shea, 2012).

As observed by Nuraidah and Elisabeth, much of the provision of pre-school services has become a private, marketized and even corporatized system and the recommendation was for

policy intervention and measures to be taken because of the increasing social inequities within a meritocratic environment (James et al., 2010; Lim, 2017). There is a form of hegemony by certain large consortiums and corporation allowing a monopoly of the market through their international branding and image so that they often marginalize and push out smaller, independent and more private service provider (Lim, 2017; Rodríguez, 2013). It may also create more bureaucracy and administrative processes in allowing teachers to make modifications and adaptations as to how they deliver the curriculum according to the needs to their learners. Directives given from a top-down approach do not always allow teachers the freedom and flexibility of creativity, as decisions within such an organization are often based on a system of ‘quotas’ and cost-structures (Sprimont, 2010).

Elizabeth supported the claim that the government has done a lot more in recent years to raise the standards, status, and salary scales of early childhood educators in Singapore. Teacher identities, both personal and professional are at least in part embedded in one’s personal narratives, beliefs and beliefs as well as other influences that affect their career choices, practice and teaching philosophy (Bukor, 2015; Hoyer & Steyaert, 2015; Kamenarac, 2019). The idea that teachers’ self-beliefs and self-efficacy is also influential in the way they deliver the curriculum is supported by other research studies (Gaines & Barnes, 2017; Guo et al., 2011).

In this study, during interviews with educators, there was often the elements of a story narrative. For example, how the individual experienced first-hand some of the challenges bringing up a child with special needs or the experiences in different centre settings with parents, families and the community, or talking about transitions in professional training and career and how these influenced the individual’s outlook and perspectives on early childhood education. Language and imagery were often emotive during the relating of personal experiences and at the same time the various thematic ideas could be grouped and coded into broad categories

such as ‘professional aspirations’, ‘perspectives on policies’ and so on. The next section will provide a content and thematic analysis of interview findings.

6.3 Content and Thematic Analysis of Interviews

In this section, data from interviews with the total sample of 22 teachers is presented and discussed. The thematic content analysis of the interviews and conversations with the participants were categorized into three main themes through content analysis of the interview data. Analysis of the data revealed the following three dominant themes:

- i. Curricular Decision-making
- ii. Change and transformation
- iii. Issues, Challenges and Concerns faced by ECE Practitioners

These dominant themes direct and/or indirectly address the primary research questions in this study. In reading through all the interview transcripts through several times, as well as through using NVIVO computer-assisted coding of the transcripts, certain patterns and frequently occurring phrases and themes emerged (Evans, 2017; Wengraf, 2016). The unit of analysis derived from the interview data in this study were ‘units of meaning’ that originated from direct quotes and summarised paragraphs in the transcripts that captured the meaning in the verbally expressed perspectives and narratives of the interview participants (Wengraf, 2001b). Each meaning unit is a view, or a statement made by one or more interview participants in the study. These meaning units (See Appendix K) were grouped into the three main themes that are discussed here. The first theme to be discussed is curriculum decision-making.

6.3.1 Curriculum Decision-Making

The process of curriculum decision-making is impacted by several influences that include historically dominant discourses such as play-based learning (Edwards & Cutter-Mackenzie, 2013) and notions such as the ‘image of the child’(Malaguzzi, 1994). Some better known curriculum models include the cultural model (Rogoff, 2014), as well as those such as the culturally responsive anti-bias curriculum (Derman-Sparks & Ramsey, 2005) and the emergent

curriculum model (Biermeier, 2015). Other historical and internationally established approaches include the Montessori method (Lillard, 2012) and the Reggio-Emilia inspired approach (Rinaldi, 2012).

In the context of this study and using Goodwin's (2010) framework of domains of beliefs influencing pedagogical practices, these influences will be discussed under the headings of these domains of personal, pedagogical, contextual, sociological and social. In the personal domain, factors such as the individual's family, cultural background, as well as life experiences were found to directly or indirectly impact practice and the enactment of the curriculum. These influences also provide the cultural capital and 'funds of knowledge' (Gonzales, Moll, & Amanti, 2005; Hedges, 2012; Moll, Amanti, Neff, & Gonzalez, 1992) as well as the experience that the teacher is able to impart to their students. An example would be having teachers who would be able share their own cultures and an understanding and awareness of local ethnic festivals and celebrations. For many teachers, sharing celebrations, ethnic practices, costumes and food is something expected and integral to their practice, particularly through special days set aside such as Racial Harmony Day. Another aspect of the personal domain is that of life experiences and events. Being a mother of a special needs child for example, allowed Reena and Anne greater insights and empathy about the challenges of managing a child with additional needs in an early learning setting and of being a parent of an autistic child. Other experiences such as having worked or studied abroad may provide a different perspective to their current practice as an early childhood educator, such as the experience related by Nuraidah. In the pedagogical domain, established discourses in early childhood education practice such as play-based learning) and a child-centred approach come into the picture, particularly the five teachers who worked in Reggio-Emilia inspired centre settings. Although all 22 teacher participants advocated play-based and child-centre learning experiences, as this was something that was indicated by the NEL curriculum (MOE, 2013b), this was often balanced by more

structured activities. Child development theories, as well as culturally and historically established approaches are highly influential, as these have been embedded in their pedagogical and teacher education background. In particular, the Montessori Method, Reggio Emilia inspired, and the MI theory approach have been documented to be used in practice by twelve teachers of the twenty-two teachers interviewed. These educational philosophies were integrated into their curriculum planning and decision-making that included the use of national curriculum guide (NEL).

In the contextual domains, influences on curriculum decision-making included the national curriculum framework and the individual centre's policies and practice. A large part of this finding is based on the influence of the national curriculum framework (NEL) (MOE, 2013b), and the incorporation of a number of historically and internationally established approaches by the majority of 22 teacher participants. Based on the responses for most of the interviews, unless the practitioner was an enrichment facilitator, or was based in an international school setting, the national curriculum framework (NEL) usually formed the core basis for much of the decision-making in the curriculum planning process. Much of the planning and pedagogical documentation was based on the six NEL domains. Together with the six learning domains, another important goal for teachers is supporting learning dispositions that are required for sustained effective learning (MOE, 2013b). There were however a range of responses from a very resolute adherence and agreement with the NEL framework and adoption of the six learning domains, to a more flexible approach using strategies such as an integration of theories. More flexible approaches included Gardner's multiple intelligences theory (Gardner, 1993) or the use of framework and guidelines such as the International Baccalaureate Primary Years Programme (IBO, 2012). Teachers in centres that are known to use Reggio-Emilia inspired and /or Montessori Method concurred that there was no apparent conflict in using these together with NEL guidelines as NEL integrated established child development theories and approaches.

These approaches collectively, form a kind of ‘hybrid curriculum’ and allowed practitioners to engage in a number of strategies or a blended approach, supporting the findings from other studies (Chen et al., 2017; Lin, 2014; Ong, 2019b; Williams, 2003).

When asked about what was prioritized in the curriculum in the centre, one practitioner pointed out ‘the priorities at N1/N2 (18mths-3 years) are different from K1/K2 (4-6yrs) ...’ (KI CO 388-389), with a number highlighting the importance of social-emotional learning including self-regulation and self-awareness in the curriculum as key to successful adjustment into the centre, as well as school readiness. One of the more commonly cited approaches in this study was the importance of an inquiry-based approach, as several teachers, particularly those from RE-inspired centre settings talked about this approach. Other approaches raised included a story-based literacy, play-based and environment-conscious strategies in the curriculum. These approaches were not mutually exclusive to each other. There was stress placed on quality interactions with others and with the environment. These strategies and approaches are based on a number of theories that include those of Piaget (1972; 2001), Vygotsky (1978) and Bruner (1997; 1986); a finding that is paralleled in other studies (Edwards & Cutter-Mackenzie, 2013; Piaget, 2001; Rettig, 2005).

It was noteworthy that the teachers that appeared most committed and who believed in their own practice and the approaches and strategies that they adopted concurred very closely with their centre’s philosophies and practice. The interviews suggested that the majority (15) of the 22 teachers fell into this category. Based on these interviews, it became apparent that a centre’s policies and their supported practices were highly influential on how the curriculum was enacted. Thus, often the centre or anchor operator had developed their own set of key learning outcomes and performance indicators that usually had the national curriculum as an underlying foundation, even though centre policies have their own rationale and basis for curriculum planning. This approach included the general student profile of their enrolment. For example,

a centre with a very inclusive policy for learners with additional needs may have additional personnel to assist or conduct specific skill sessions for the group. Teachers highlighted the point that the support of management is a very important factor in how they deliver their lessons and plans, including being more innovative or taking the initiative in experiential learning. For example, a participant talked about the way the management of her centre encouraged the teachers to work collaboratively to take the initiative to submit proposals for innovation projects and also others shared about the way in which the teachers are encouraged to use the community resources or to contribute according to their ethnic or cultural backgrounds. The findings in this first dominant theme indicate that contextual factors such as the local national curriculum, as well local educational policies are highly influential in the decision-making and the processes of enactment of the early childhood education curriculum in Singapore. The second dominant theme discussed next is that of the process of change and transformation experienced by practitioners working in the sector.

6.3.2 Change and Transformation

The second major theme that was identified from the interview data was that of the significance of change and transformation in relation to the curriculum. Teachers who have worked over period of more than ten years in the early childhood sector have observed some changes occurring gradually over the years. The following quote represents an opinion that was common in these interviews, particularly with teachers who had been in the sector for more than a decade: ‘When I first started working in the ECE sector here, there was a great deal more emphasis on pencil and paper tasks and children were sitting at their tables doing written tasks more...’ (SH CO 1354-1357). There was a much more traditional teacher-centred rather than a child-centred approach the years before the NEL curriculum was introduced. In recent years, teachers suggested that there has been a realization that learning experiences are better when they have a ‘real life and authentic’ context. There is a lot more inquiry-based and even project-

based learning that have allowed young learners to be active participants and co-constructors of their knowledge. Many practitioners spoke of the need to nurture learners who are creative and engage them in critical thinking, as well as the need to acquire appropriate learning dispositions that will be put them in good stead for the future. With an emphasis on supporting the ‘child’s voice’, the pedagogical axis has also shifted from transmissive to a more participatory and democratic approach; confirming other studies (Formosinho & Formosinho, 2017). In terms of evaluating the child’s progress, most centres have moved from just using a checklist of key competencies to a more portfolio-based system. More recently, there has been an increase in the use of technologies and apps that have allowed ePortfolios, mobile interactions and communication with parents, as well as its use STEM projects in ECE settings. Some of the teachers reported that there has also been an observed gradual changing of parents’ attitudes towards more non-academic and recreational learning experiences for their children including enrichment in music and the arts, computers and STEM programmes. Teachers have also commented that the government through ECDA, has also encouraged the innovation and various other projects proposals that will encourage community and home-centre partnerships while enhancing the learning experiences of children. Next, we examine some of the issues and conflicts that early childhood educators have to deal with in their workplace settings.

6.4.3 Tensions and Conflicts

One of the research questions asked in this study concerned the challenges faced by early childhood educators in Singapore. The interviews with the 22 teachers revealed a number of challenges, which can be broadly grouped under the theme of ‘tensions and conflicts’. These challenges were grouped into those arising directly and/or indirectly to the processes of curriculum enactment itself, policy and management, working conditions, parents’ expectations, as well several other factors and issues. Even though, according to the majority of interview participants, the national curriculum framework was critical in providing a

foundation and baseline for their practice, a few interviews suggested that the national curriculum framework was too restrictive, prescriptive or directive. Even if the principles were sound and as one interviewed teacher reported ‘they did not always walk the talk’ (NU CO 1273-1275).

Teachers suggested a need to create a balance between more traditional approaches to teaching and learning that were more teacher-led and the more progressive stance of child-centred approaches. They spoke about the importance of child-centred learning experiences with the child’s voice being key to an emergent curriculum approach. They also spoke of the need for the teacher as a facilitator and the importance of teacher intentions. However, as articulated by one teacher:

Our local culture is a little different and it is not ingrained in the child to always take the initiative so an entirely RE-inspired and a child-directed approach is not always going to work and some things have to be teacher-initiated and led ... (NU CO 1173-1180).

A tension was identified by a small number of participants in that the delivery of an effective curriculum had to be sensitive to the local culture and more traditionally accepted practices, and balanced with more innovative and progressive’ approaches. This issue has been found in other cultural and country contexts as well (Dunphy, 2010; Espinosa, 2005). With the advent of technological gadgets and other uses, it could be assumed that work would become easier over the years. Instead, a few of the participants (3), particularly those who have in the sector for more than a decade, remarked that the workload and demands of being an early childhood educator in Singapore has increased a great deal. As a teacher from one centre remarked:

Paper work and documentation has become more complex and challenging...different centres have different approaches and there is a need to supplement anecdotal documentation with photos, set up learning corners, prepare

for festive celebrations... sometimes you feel like it is a non-stop schedule ... (JA CO 673-687).

Thus, there is a tension and dilemma when educators and centre management have to decide on a balance or emphasis of the use of more time-consuming tools such as ‘learning stories’ (Carr & Lee, 2012; Carr et al., 2002) or comprehensive portfolios and more manageable tools of observing and documenting learning experiences such as the use of checklists. This finding supports other studies (Dunphy, 2010; Flear & Richardson, 2004). This has been in spite of the call to improve and simplify operations through the use of technology and processes to reduce administration and to provide smart solutions to support early childhood professionals (ECDA, 2018). Perhaps, not all these proposals have translated into effective reforms in some centres.

Also, with the Ministry’s policy (ECDA, 2014, 2018) of making early childhood qualifications mandatory for permanent staff in the early childhood sector, some teachers spoke of the ‘hoops’ they had to jump through in order to continue working in the sector or they knew those who opted out when things became too ‘complex’ for them. For example, the policy that made basic qualifications or in-service professional development programmes obligatory in the ECE sector in Singapore (ECDA, 2014, 2018) meant that many practitioners who had been working in the sector for many years before the introduction of the policy had to undergo basic training programmes. Also, some teachers shared about their colleagues or friends who did not continue in the profession into the long-term, giving rise to a considerable staff turnover. The teachers’ perception of these impediments is confirmed by a recent paper by the Early Childhood Workforce Initiative (ECWI, 2019), which states that about 56% of new ECCE graduates and new entrants into the field do not continue with their roles as early childhood teachers after just one year. The reasons cited include relatively low salaries, poor public perception, respect and professional prestige, as well as a lack of professional autonomy (ECWI, 2019).

In addition to making it compulsory for key personnel and permanent staff to have the necessary qualifications, the Ministry outlined an industry map so that there are now more pathways to join the sector (particularly mid-career professionals and back-to-work women) as well as better career prospects (ECDA, 2017b; ECWI, 2019). However, although there was a few stories of successful transitions by mid-career professionals in the interviews, there were also stories of those who did not find the sector a ‘good fit’ and decided not to continue or decided to take a break from the industry. One teacher stated that she was on her way out as she still preferred her work in the ‘insurance’ sector and did not particularly enjoy her role as an early childhood teacher. Conversely, another interviewee who did a mid-career switch more than a decade ago from the banking sector has not regretted her decision. One related concern articulated was that although ECDA has authorised support for early childhood practitioners to continue their professional development by encouraging workers to complete at least 20 hours of continuing professional development (CPD) every year (ECWI, 2019 p.6), many early childhood professionals felt that there was still insufficient support or time to attend the courses or programmes they were keen on. They were sometimes compelled to take unpaid leave for that purpose. Although there has been a lot funding provided by the government to get early childhood teachers to obtain their basic qualifications, there was still a tendency for staff to move from one centre to another looking for the ‘better options’ as one centre director observed (SH PO 303-310). Thus, staff turnover was said to be quite high by one centre director and another principal and there had been sometimes a challenge to keep early childhood teachers committed to their roles in their ECE settings.

With respect to their work environment, most participants had no issues with and in fact appreciated the physical environment and interactions with their colleagues. The majority spoke of positive relationships with their co-workers as they often must work collaboratively in the classroom. A few teachers raised the issues of the communication between English

language teacher and the Mandarin teacher (who might not be able to communicate in English if she was not local). On the other hand, others commented that there are English language teachers who are from an ethnic minority group, but able to understand and communicate in Mandarin. However, teachers identified that such challenges stem from inevitable workplace differences and need to be worked out carefully for the long run as collaborative partnerships and effective communication between teachers themselves in the workplace are vital in ensuring the best possible outcomes in curricular practices.

Another concern identified by participants is the inadequacy of support for the inclusion of special needs learners in the mainstream setting of the early childhood sector, as it is not mandatory for centres to take in children with additional needs, even if the disability may be mild. One principal protested that because her centre had a very inclusive policy, principals from other centre often called her to ask if her centre would take in their special needs children. She felt strongly that these other centres should learn to manage such children enrolled in their care instead of trying pass on their responsibility as there are supports and services provided by the government (MSF, 2019). In terms of self-efficacy, this principal felt that the teacher does not necessarily have to undergo preparation courses for special needs education initially although it would help. Related to this issue, at least three of the teacher participants stated that they felt insufficiently prepared to manage special needs children in their care. In one particular case, on her own accord, the teacher chose to take up a six-month diploma programme in special needs education. Since then, she reported that she now actually enjoys working with learners with additional needs although she teaches in a mainstream kindergarten setting. Thus, challenges arising from the need for a more inclusive policy are not insurmountable. Teachers should be adequately informed and prepared to be able to work with SEN learners in their classrooms and implement a differentiated curriculum in order to allow their integration.

In terms of policy changes and in the way things operate in early childhood settings, some teachers shared that it has not been an overnight change and changes had to be made gradually with teachers having to rise up to the challenges presented. As mentioned earlier, some teachers who have been in the early childhood sector for a while found that these changes have been implemented in stages over the past decade or so. In managing a centre, principals and centre managers spoke of the challenges of being a private operator in Singapore as it becomes something quite entrepreneurial and they are looking at ‘profit and loss’ considerations. One principal said that the costs of operating a centre with the rental of the premises, paying competitive wages, and maintaining quality childcare and education service can be quite high. With the Ministry setting up more community-based and affordable centres affiliated with primary schools, another centre manager felt that this would result in a decrease in enrolment numbers in the privately-operated centres.

6.4 Chapter Summary

The stories and perspectives of five early childhood educators working in the sector was shared in the first section of this this chapter. It provided an insider perspective to some of the challenges and dilemmas faced by these stakeholders from diverse parts of the sector, providing answers to research questions about some of the processes and influences on curriculum decision-making, as well as the changes and challenges faced by early childhood educators in Singapore.

In the second section, the transcripts from 22 interviews with the total sample of teachers were coded and thematically categorized using meaning units (See Appendix K). According to the majority of interview participants, the national curriculum framework was critical in providing a foundation and baseline for their practice. The key themes identified through the twenty-two interviews was categorized into these three main areas of curriculum decision-making in curriculum enactment, the changes and transformation experienced by teachers, as well as

some of the tensions and conflicts which form some of the challenges experienced by early childhood educators in Singapore.

Other smaller themes derived from the content analysis of the interviews include that of parental expectations and attitudes, language learning and the bilingual policy, partnerships and community involvement' as well as learning environments and place-based approaches. These lesser themes that were not explored in this section were also identified and discussed with the results in chapters 5 and 7 and the implications are explored in the discussion with other findings. Chapter 7 examines the findings from the survey.

CHAPTER 7: SURVEY

This chapter will begin with a discussion of the aims and objectives of the survey used in this study and a summary of key findings. It will present the demographic profile of the survey respondents, followed by the presentation of results in several areas, including the main curriculum frameworks and approaches, pedagogical documentation and use of new technologies in early childhood education settings in Singapore. This is followed by the presentation of the findings related to the perceptions of teachers in their work environments, followed by the presentation of findings related to perceived areas of need for professional development. The chapter concludes with a discussion of key findings that will provide a corroboration of results regarding the types of curriculum approaches, pedagogical documentation and some of the challenges and enablers in a successful curriculum.

7.1 Aims and Objectives of the Survey

The survey was designed based on some of the initial interview findings and the research literature which gave some indication of the areas of interest to be investigated (Creswell & Plano Clark, 2017). The overall goal of the survey was to provide corroboration of the qualitative data findings and to determine other gaps of knowledge which could be investigated further (Creswell & Plano Clark, 2017). The intention was to obtain a representative sample of the ECE teacher population in Singapore although given the relatively small sample size, the data cannot be said to represent the entire ECE sector. The survey data intended to address the primary research questions in this study, exploring dimensions of curriculum enactment, possible challenges. It also helped to provide insights into enabling factors and conditions for successful curriculum delivery in ECE settings.

The survey was conducted in the English language but was not solely restricted to English medium teachers, and therefore it may not give a fully representative picture of the ethnic and

cultural distribution of the ECE workforce in Singapore. The survey did, however, include teachers working in the range of centre types, including privately owned, corporately-operated and community based categories. The distinction between each of these centres was not specifically defined in the survey, because sometimes the distinction between corporately and privately-operated centres may not be completely clear-cut. The ECE service types were also placed in nominal categories that would be understood by most early childhood professionals working in the context of the Singapore setting.

The extent of other influences on curriculum practices such as that of the parent and caregiver, the children's interests, the uses of technology, the learning and work environment and teachers' competencies, based on self-perceptions, were also examined and quantified. The results are presented visually in graphical form and show a cross-sectional representation of these aspects of the curriculum, pedagogical documentation and other related variables found in the ECE settings. Some concerns and challenges faced by early childhood practitioners in terms of parental expectations as well as perceptions of their own work environment and the area of perceived priority need for professional development needs are also included in the findings presented. An outline of the population sample and method of sampling for the survey follows.

Population Sample and Method

The survey instrument was based on the analysis of the findings from the interviews and the review of previous research. The survey was administered through both face-to-face and online methods. The final sample consisted of all females working in the early childhood education sector in Singapore. The sample was a non-random sample of 105 early childhood practitioners; forty teacher participants were attending professional training and preparatory programmes at a local institute in Singapore and another sixty-five early childhood professionals participated through an online survey. Following checking of the returned surveys, it was discovered that

only 92 completed surveys were valid for analysis. Typically, the invalid surveys were excluded as they were insufficiently completed or did not get past the demographic profile questions. Participants came from a variety of centre settings around the island and provided a random but reasonable representation of the target population of early childhood practitioners from local centres..

The questions in the survey were mostly closed-ended in a multiple-choice format, using a drop-down menu, either with single option or with multiple option choices (See Appendix F). Two questions asked the participants to rank items on an importance scale (Ayiro, 2012). In using descriptive statistics, quantitative descriptions of the population of early childhood educators are presented in a manageable form. The decision was made to primarily present data in a summarized and visual format, so that the information may be more readily understood from different vantage points and so that numerical and visual patterns in the data that could be identified, which are not always immediately evident (Abbott, 2017).

7.2 Overview of Survey

The survey of 92 early childhood practitioners from different unspecified centre settings was conducted in the period between June to October 2019. The survey participants came from a range of community-based, private and corporately-operated centres, with respondents mainly in the age group between 18-35 years. All three main ethnic groups (Chinese, Malays, Indians) are represented in this survey, although their distribution is not completely similar to the country's national statistics of the population (MTI, 2019). This section provides an overview of key findings from the survey.

The analysis of survey data identified some current trends in ECE settings in Singapore in terms of the teacher qualifications, service types and roles, as well as the kinds of curriculum approaches and pedagogical documentation methods that were more commonly used. The

survey also provided an indication of the degree of reliance on the national curriculum frameworks and the influence of other factors such as children’s interests, the involvement of parents and primary caregivers in the planning of the early childhood curriculum and programme. Factors in the work environment such as the use of technologies and challenges faced by practitioners are also examined. Finally, the priorities for professional development as perceived by early childhood practitioners in this survey are presented.

7.3 Demographic Profile of the Sample

A general demographic profile of survey respondents was obtained in terms of age and ethnic distribution, years of experience in the ECE sector, their main role in the ECE settings and qualifications.

7.3.1 Age group distribution

Figure 7.1 provides the age group frequency distribution found in the survey sample population. Of the 92 participants who responded to the survey, 75% of them were in the age range between 18 years to 35 years. Of this group, 25% of survey participants fell within the greater than 35 years age range although the specific ages of these were not determined. The mode for age distribution was the group between 25-35 years of age forming 48.9% of the respondents.

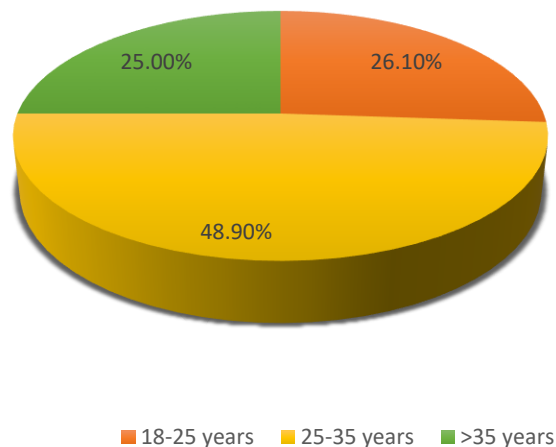


Figure 7-1 Age Distribution (n=92)

Based on the data, about three quarters of the survey participants are below the age of thirty-five years with a diverse cultural ethnic distribution. This finding is important in that this a particularly ‘mobile’ age group in terms of career aspirations, life goals and family commitments (MTI, 2019). As corroborated by interviews with teacher participants, many teachers within the age groups of 25-35 years have just started their families or have school-age children.

7.3.2 Ethnic and Workplace Diversity

The participants answered this question about their ethnic group based on their own self-identified ethnic group category. There were 48.9% (45) participants who identified themselves as Chinese, 27.2% (25) Malays, 10.9% (10) Indians, while the remaining 13% (12) placed themselves in the ‘Others’ category. When asked to specify their ethnic cultural group ‘Others’: (90.0%) 10 respondents specified Filipino (9.1%), and one respondent specified Javanese. Workplace diversity however is not limited to cultural and ethnic differences (SHRM, 2012).

Figure 7.2 presents the main ethnic groups frequency distribution in nominal categories.

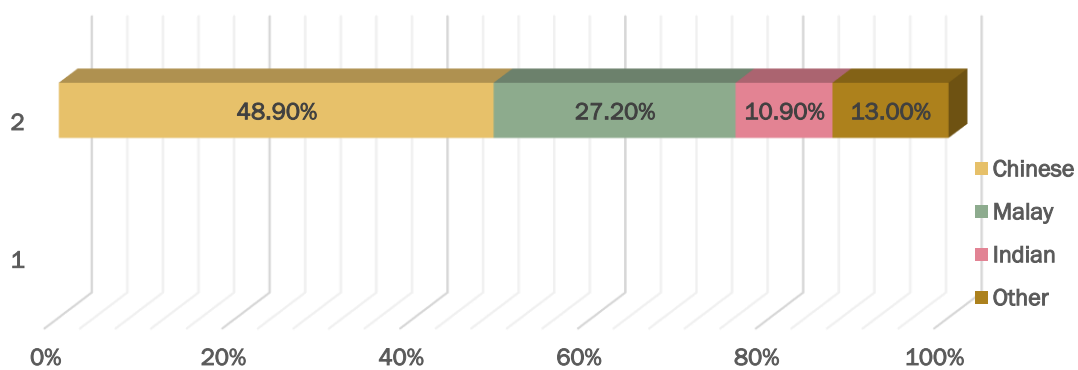


Figure 7-2 Ethnic group distribution (n=92)

7.3.3 Qualifications and Competencies

Of the 91 valid responses for this question about qualifications, 29.7% (27) had the minimum certification of an ECCE certificate, whilst the remaining possessed one or more ECCE qualifications with 29.7% (27) holding a degree in early childhood education. The most prevalent qualification was a Diploma in Teaching (ECCE), which 53.8% (49) participants possessed. Although, there was no option to be specific about their degree qualification, several participants detailed their qualification in the next follow-up questions that ask them to specify their qualification if they chose 'Others'. Figure 7.3 presents the qualification types and distribution of these qualifications. Of the 91 valid responses, seven responses indicated 'Others' for qualification type. These responses were MSc (Early Childhood Education), Diploma in Psychology, Master in Education (Early Childhood Specialization), Bachelor of Arts (Sociology), Master of Arts(Special Education) and Diploma in Teaching and Leadership.

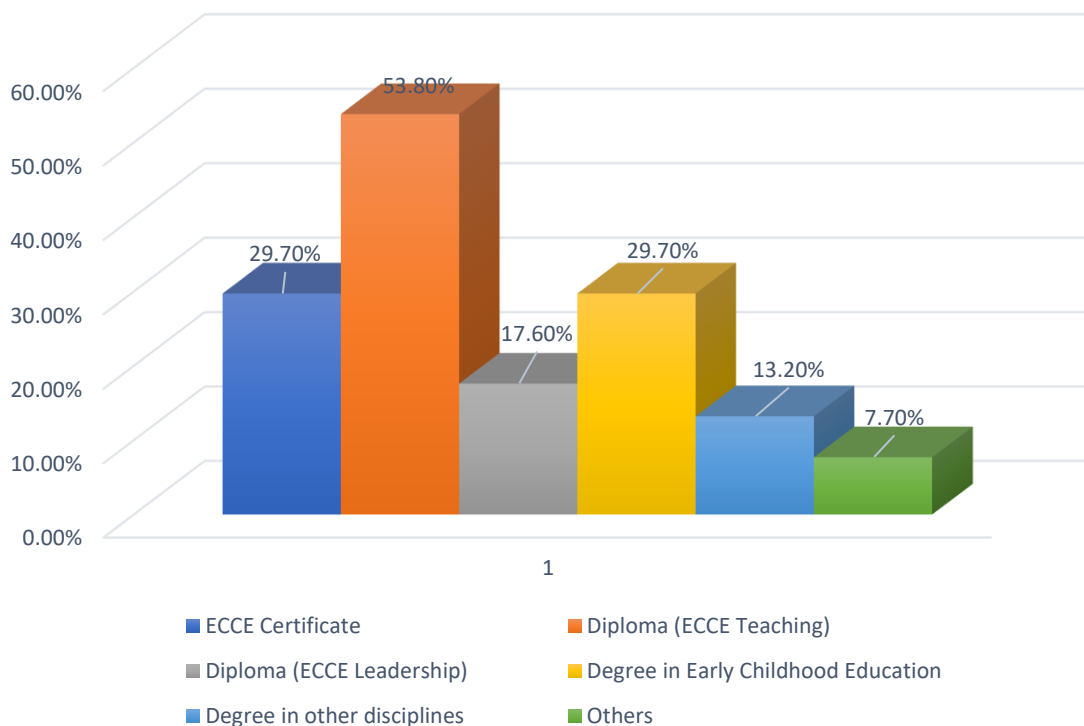


Figure 7-3 Qualifications of ECE practitioners (n=91)

The proportion of early childhood teachers in the workforce with degree qualifications appears considerably lower than teachers in compulsory schooling levels that include primary and secondary teachers (ECWI, 2019). Just less than a third of the survey participants held a degree qualification in early childhood education, while slightly more than a tenth of participants held a degree qualification in another field. A benchmark for comparison is the 89% of secondary school teachers in Singapore who receive teacher training in the areas of content, pedagogy and classroom practice in the OECD TALIS 2018 survey, whilst the OECD average was 79% (MOE, 2019)

Although the government and ECDA has laid out a ‘industry transformation map’ (Appendix J) that shows career pathways in the early childhood sector, a degree qualification is not mandatory to work in the ECCE sector in Singapore; nor is it specified in the leadership track (ECWI, 2019). Although entry qualifications of early childhood educators and leaders have been raised, the salaries do not always commensurate with the higher entry requirements and teacher-training. Teacher salaries are not often commensurate with other industry sectors who have a higher proportion of graduates in the professional workforce (Lim, 2017; Nirmala, 2014).

7.3.4 Years of Experience

The sample included early childhood practitioners with one or more years of experience in the early childhood education sector. More than half or 60% (54) of the survey respondents were relatively new to the profession having between 1-5 years of experience, whilst 28% (25) had between 6-10 years of experience (See Figure 7.4). Just 12 % (11) of the survey respondents indicated that they had more than 10 years of experience in the sector. These numbers indicate a larger proportion of teachers in this sample were considered relatively new to the sector, whilst those who have had a number of years of experience would have considerable on-the-

job practical experiences and would also have probably undergone at least some form of in-service professional development.

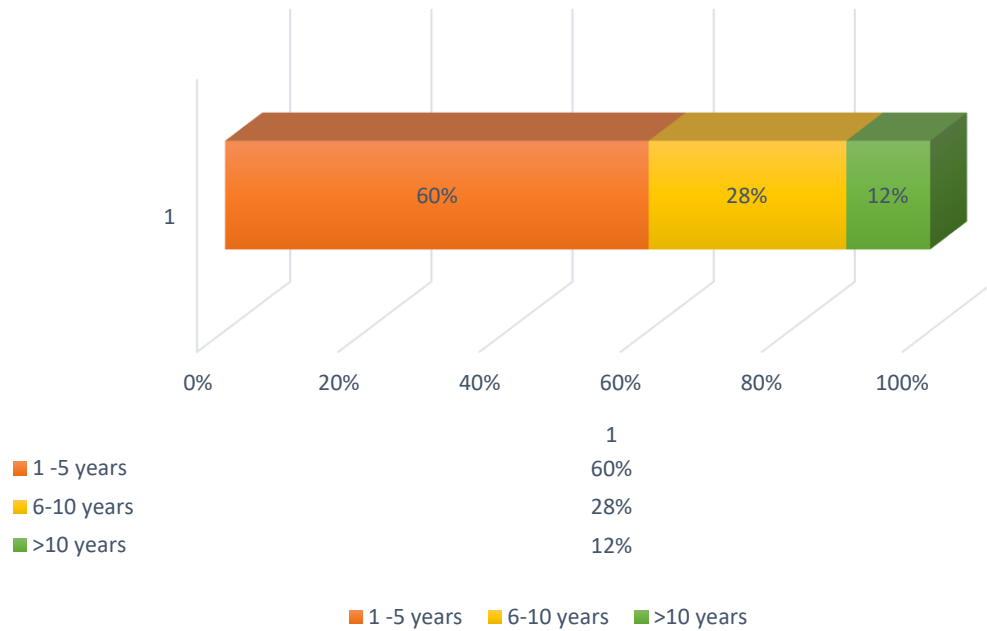


Figure 7-4 Years of experience in the ECE sector (n=90)

7.3.5 Centre, Service Type and Roles

In terms of centre types, 47.8% respondents specified that they work with privately-owned ECE service providers, 27.2% said that they were with corporately-owned ECE service

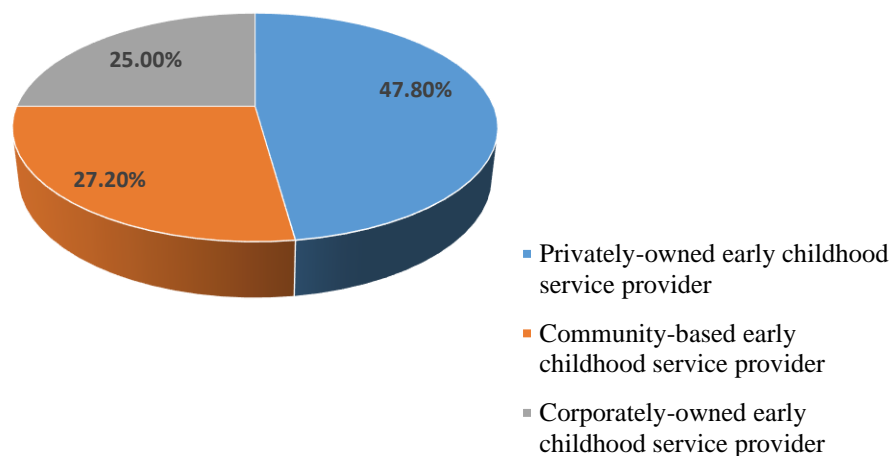


Figure 7-5 Centre types (n=92)

providers while 25% specified that they were with community-based ECE service providers (See Figure 7.5).

In terms of the types of ECE service type that they were engaged in (See Figure 7.6), the largest number of survey respondents were engaged in childcare or with early childhood service types that provide full day or half day care services. Of the sample, 72.5% of respondents indicated that they were employed within such a childcare setting, while 22% indicated that they were engaged with Kindergarten services, a number of which presumably were part of the childcare service providers (See Figure 7.6). Kindergarten (4-6 year olds) and Playgroup (18mths to 3 year olds) service types referred to service providers that catered for shorter sessions, usually 3 hour sessions, rather than full day childcare services. Of the valid responses, 8.8% were involved with Playgroups and a smaller percentage, just 2.2%, indicated that they worked as enrichment facilitators which refers to specialised ECE services such as music, dance and robotics and these were conducted just once per week for each class or level. A small number of respondents indicated more than one area of service provision such as dual service that included Kindergarten plus Daycare/Childcare.

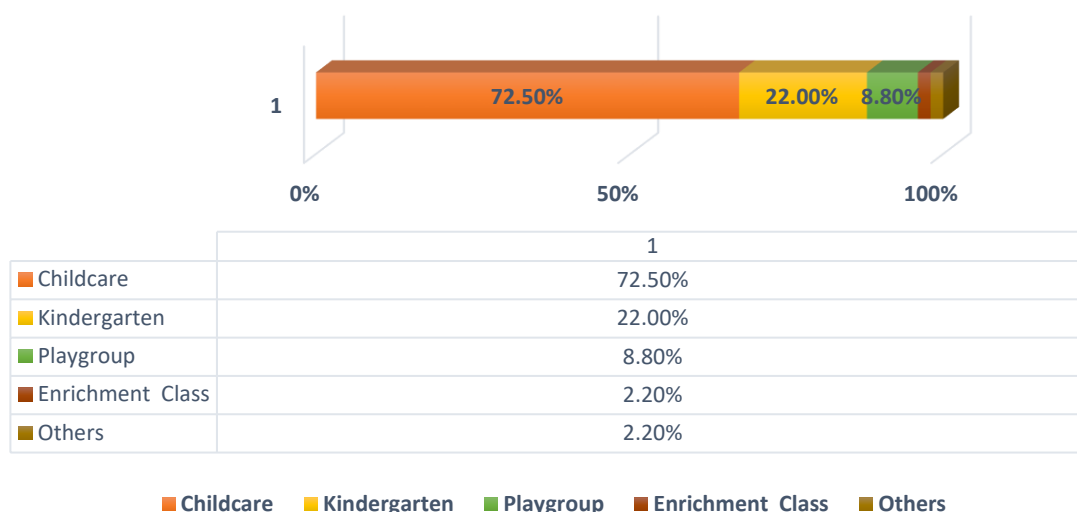


Figure 7-6 ECE service type (n=92)

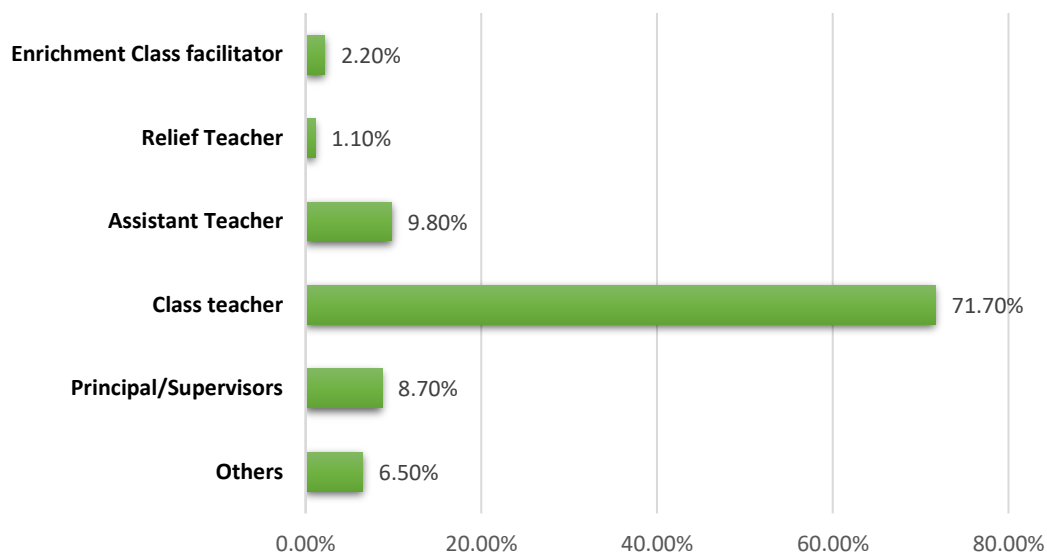


Figure 7-7 Main role in the ECE setting (n=92)

With respect to the main roles played in their ECE settings (See Figure 7.7), the majority of participants or 71.7% indicated that their main role in the ECE setting was that of a ‘class teacher’, which was not surprising as most early childhood educators in Singapore work quite specifically with a particular level or age group during the year and have to follow up with formal parent-teacher meetings.

Of the valid responses, 9.8% indicated that they play the role of ‘assistant teacher’, another 2.2% indicated that they were enrichment facilitators, while 1.1% indicated the role of ‘Relief Teacher’. Amongst the valid responses, 8.7% (8) indicated that they play a supervisory role such as a principal or centre manager within the ECE service setting, while 6.5% individuals responded in the category of ‘Others’ which they specified in the follow-up question. Those in the ‘Others’ category specified roles such as Early Childhood Advisory, Curriculum Specialist, Infant Educarer, Vice Principal, Music Teacher and Trainee Teacher.

Figure 7.8 shows the distribution of age group classes to the survey participants. In terms of age groups of the children that they were involved with in their care and education, the

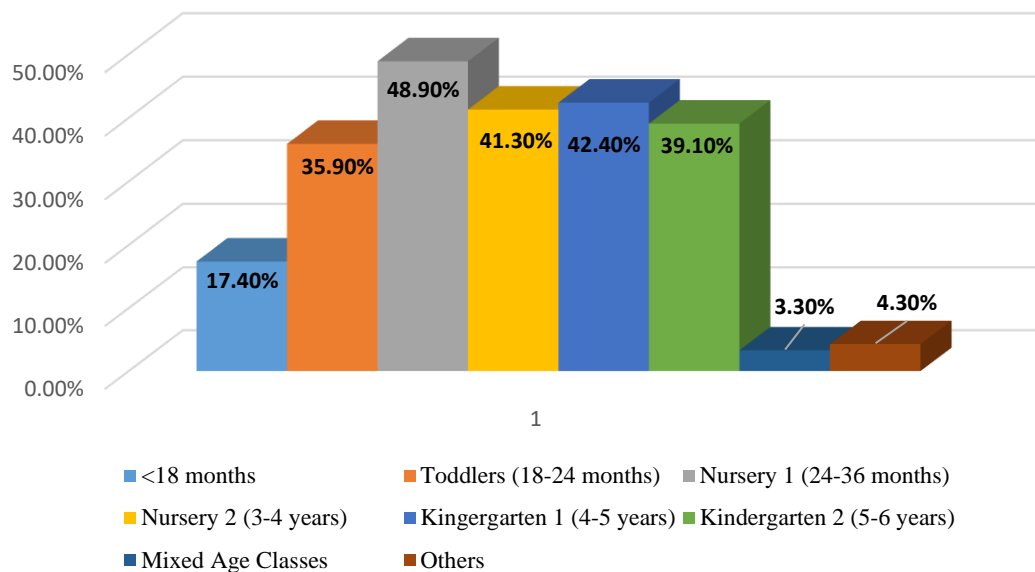


Figure 7-8 Main age groups and classes (n=92)

participants were allowed to select more than one response (See Figure 7.8). The results indicated that a large proportion of them were involved in more than one age category. Just 17.4% indicated that they were with children below the age of 18 months and many respondents indicated more than one age group level, with 35.9% in the toddler group (18-24 months), 48.9% with Nursery 1 (24-36 months), 41.3% with Nursery 2 (3-4 years), 42.4% with the Kindergarten 1(4-5 years) and 39.1% with the Kindergarten 2 (5-6 years). It can be inferred that these practitioners were involved with children of more than one age group range Only 3.3% indicated directly they were taking children of mixed-age groups.

7.4 Curriculum Framework and Approaches

The survey asked teachers about their familiarity with the national curriculum frameworks and the use of a few other approaches that have been well-documented in international research literature. These approaches included the Montessori method, Reggio-Emilia inspired approach and the use of the Multiple Intelligences theory (Biermeier, 2015; Isaacs, 2012; Krechevsky & Gardner, 2006). As the survey respondents came from community-based, privately and corporately operated settings, the survey was designed to gauge the knowledge

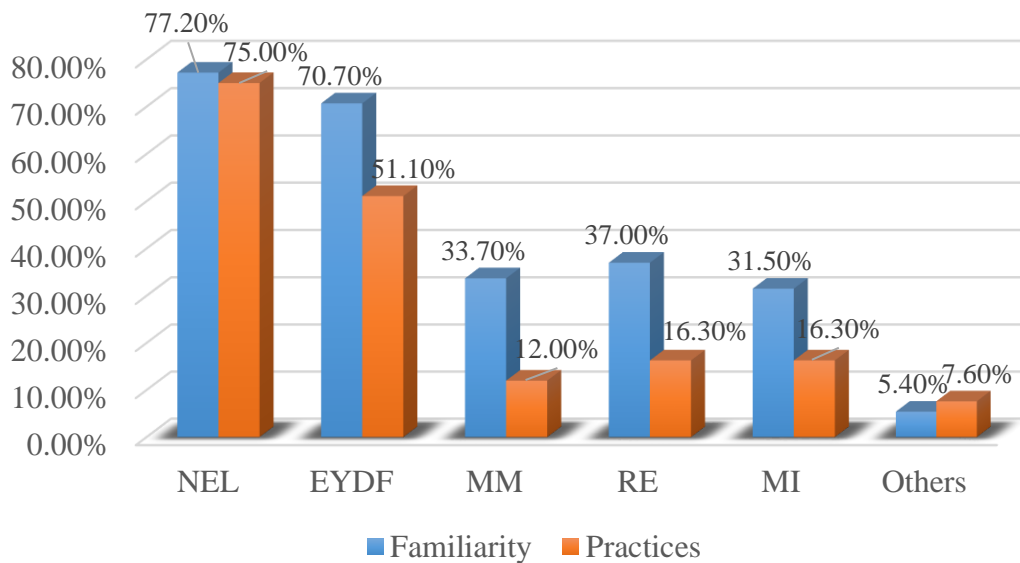


Figure 7-9 Curriculum frameworks and approaches (n=92)

of practitioners of more internationalized early childhood approaches as well. The participants were allowed to indicate more than one response. Figure 7.9 shows the distribution of familiarity and actual use of a number of curriculum frameworks and approaches in the ECE settings involved in the study. The findings from the survey suggest that most early childhood practitioners are familiar with either or both national curriculum frameworks NEL and EYDF. Of the valid responses, 77.2% (71) indicated that they were familiar with the NEL curriculum framework while 70.7% (65) indicated that they were familiar with the EYDF framework. The percentage of those implementing national frameworks was still considerably higher compared than those implementing more internationalized approaches such as the Reggio-Emilia inspired (16.3%), Montessori (12%) or Multiple Intelligences theory (16.3%). The responses in terms of just familiarity with the specific approach or framework was considerably higher for internationalized approaches with 33.7% for Montessori Method, 37% for Reggio Emilia inspired, and 31.5% for Multiple Intelligences theory. It is notable that a small number (7.6%) of early childhood educators mentioned their private or corporate centre’s own curriculum and specific approaches in certain niche areas of the curriculum specified in the follow up question for ‘Others’. Other responses were thematic-based, SMILES curriculum (centre specific),

literacy-based, IB PYP and Nordic Steiner approaches. In terms of practice, the responses listed by survey participants included thematic-based, ‘Orff, Kodaly, Dalcroze’ (music programme), literacy-based, SMILES curriculum, play-based and ‘worksheets’.

There are, therefore, a number of other approaches that participants are familiar with or which they have been adopted in their practice in ECE settings. In terms of frameworks and approaches, there is often a blended combination of a variety of theoretical and philosophical strategies guiding practice that include authentic learning experiences, project and inquiry strategies, and more specific approaches such as the language experience approach so that more active and participatory learning takes place.

Figure 7.10 shows the degree of influence the national curriculum frameworks has on the curriculum practice in ECE settings. Based on the responses to the question ‘How much do you refer to the NEL framework guide in your current practice?’(See Figure 7.10), 72.8% responded with at least a moderate amount to a great deal in their responses, while 27.1% responded ‘a little’ or ‘none at all’. Thus, we can infer that the majority of practitioners in this survey used the NEL framework guide in some form or another. The findings indicate the

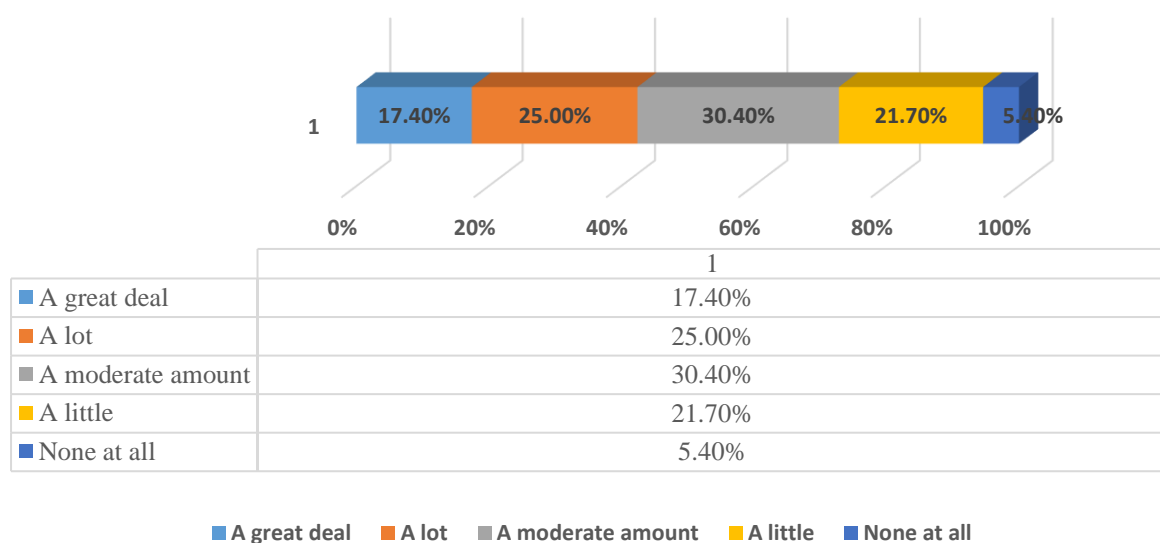


Figure 7-10 Reference to the NEL framework (n=92)

national curriculum framework forms the backbone and guide for the curriculum in more than 70% of early childhood practitioners in this survey.

With respect to the integration and taking into account of children’s interests in planning the curriculum (See Fig.7.11), 71.7%% indicated that they integrated ‘A great deal’ or ‘A lot’ of children’s interests in their delivery of daily activities and lessons. In fact, 97.8% of practitioners in the survey indicated they at least based ‘A moderate amount’ to a ‘A great deal ‘ of their curriculum planning on children’s interest. This finding corresponds closely to educational philosophies of modern early childhood education approaches which stress the importance of planning from children’s interests (Parker & Neuharth-Pritchett, 2006; “Vis. Methodol. Digit. Tools Res. with Young Child. Transform. Vis.,” 2014) and is a core construct in the NEL framework that states ‘children are active and competent learners’ (MOE, 2013b, p. 6). This approach enables children to be ‘constructors of the knowledge’ which is one of the iTEACH principles of the NEL framework (MOE, 2013b, p.6). The survey also revealed that early childhood educators place a significant emphasis on the role of the parents and primary caregiver/s in the emergent curriculum (See Figure 7.12). Of the valid responses, 71.8% of survey respondents indicated that parents and/or the primary caregivers were involved to at least a moderate extent with the progress and the way the emergent curriculum develops. This

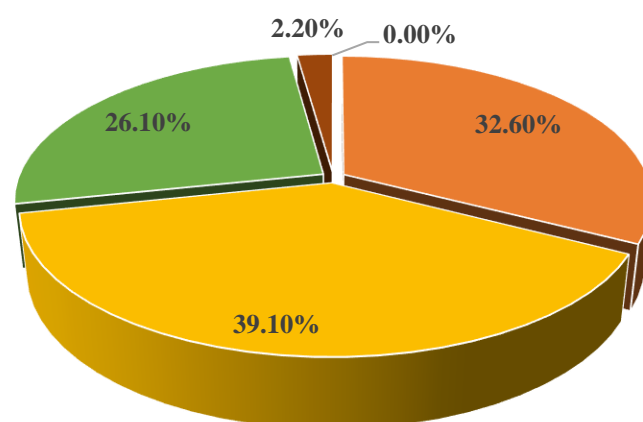


Figure 7-11 Integration of children's interests (n=92)

implies an acknowledgement of the view that the child’s development is related to the interactions with family and community and cannot be separated from their out-of-home learning experiences. This finding is consistent with Urie Bronfenbrenner’s Bioecological model of human development. By valuing practitioner-parent collaboration, curriculum implementation promotes continuity in familiar ways of being and learning while taking into account the child’s cultural backgrounds (Janssen & Vandebroek, 2018).

Of the 92 survey respondents who came from a range of different ECE settings, 73.9% indicated that formal parent-teacher meetings were scheduled twice yearly and 21.7% scheduled meetings termly (10 weeks) (See Figure 7.13). Other times that meetings were sometimes scheduled, included certain days when the centre held concurrent events for the parents and families, but these would not be considered as formal meetings between parents and teachers.

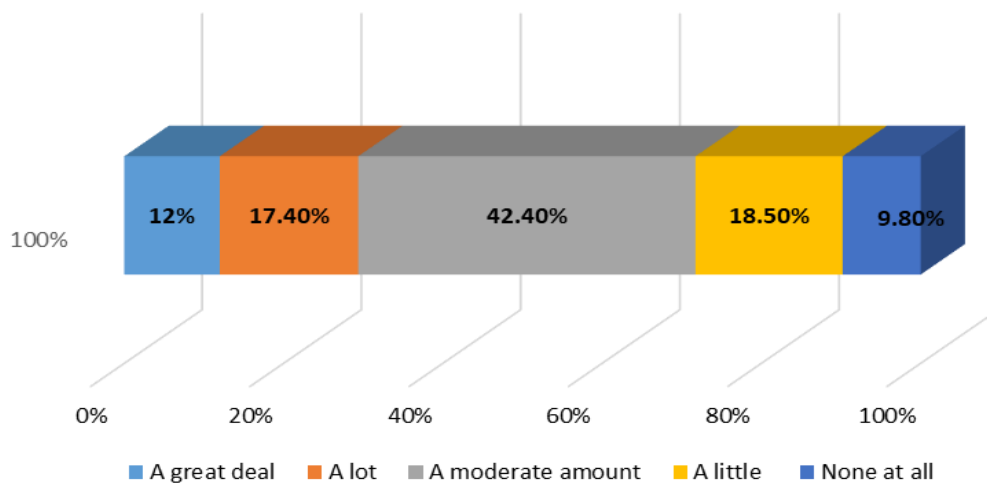


Figure 7-12 Involvement of parents and caregivers (n=92)

The interactions between teachers and parents or primary caregiver however, could be on a more frequent informal basis. Only 4.4% (4) of the respondents indicated that formal parent-teacher interactions was less than twice a year. The findings suggest that parental influences and the children’s interests play a role in determining the content and the way by which the curriculum is delivered. These findings indicate that centres and teacher practitioners are aware of the critical role of family and the parents in the child’s learning experiences and progress. This includes a better understanding of the home environment, culture and practices so that teachers are better able to plan activities in the curriculum that connect learning between the two environments; an approach that is validated by other studies (Clinton & Guilar, 2016; Frewen et al., 2015; Helling, 1996).

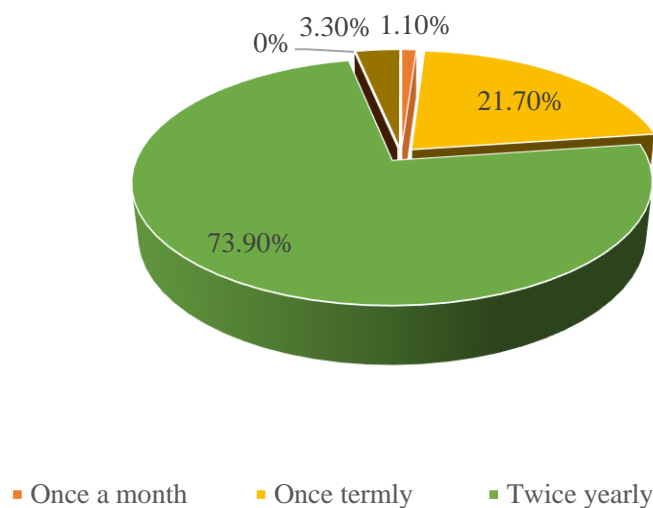


Figure 7-13 Regularity of formal parent-teacher meetings (n=92)

7.5 Pedagogical Documentation

Pedagogical documentation is a form of assessment process that is an integral aspect of the early childhood curriculum in many countries (Roth & Månsson, 2011). Figure 7.14 shows the main forms of pedagogical documentation approaches that participants were familiar with or respondents were most familiar with were the use of checklists 93.5%, anecdotal observations 90.2% and portfolios 95.7%. Correspondingly, these were also the three most commonly used

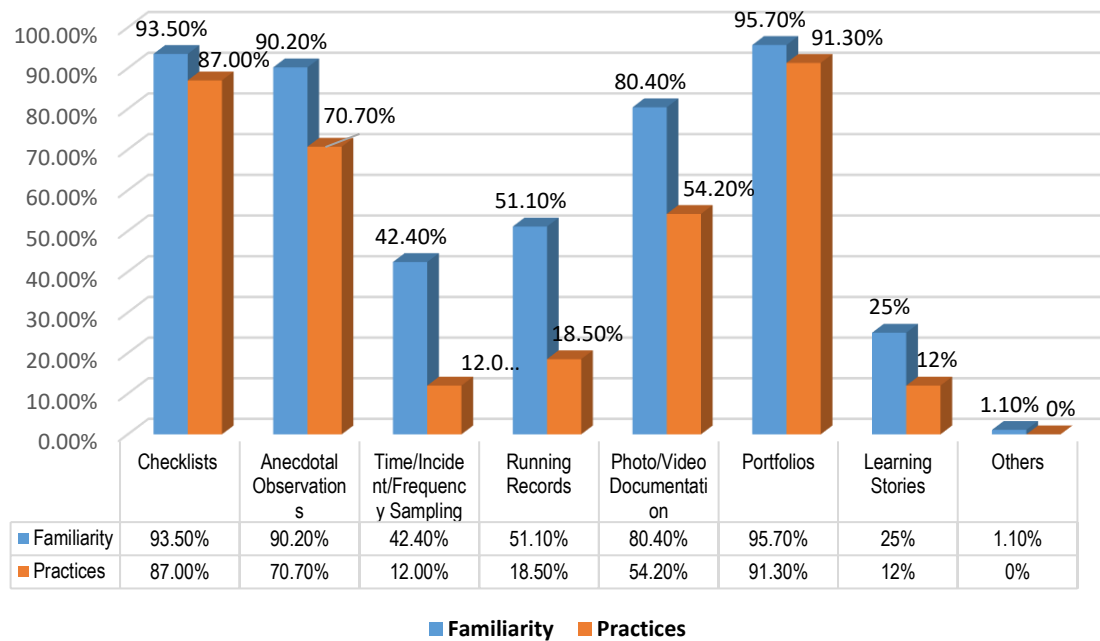


Figure 7-14 Pedagogical documentation (n=92)

using in their ECE settings. The pedagogical documentation methods that the survey methods in actual practice in their current work settings: checklists 87.0%; anecdotal observations 70.7% and portfolios 91.3%. It may be noted that portfolios can of several forms and utilize more than one type of assessment documentation method such as anecdotal observations, work samples and photo-documentation. Although 80.4% of respondents said that they were familiar with either or both photo and video documentation methods, only 54.2% indicated that they use either or both photo and video documentation methods.

Portfolios are an alternative assessment used by those who are opposed to ‘standardized testing’ and ‘pencil and paper tasks’ (Lynch & Streuwing, 2011; Plucker et al., 2007). This is an alternative assessment approach compared to the competencies-focused approach traditional assessment methods (Stockall et al., 2014). It has been demonstrated to be a useful approach and assessment instrument in an inclusive early learning setting (Lynch & Struewing, 2001). Narrative vignettes in this form of pedagogical documentation allow developmentally appropriate practice and cultural responsive approach to be integrated into the child’s learning

experiences that is made visible (Carr, 2001; Sherfinski, Jalalifard, Zhang, & Hayes, 2019). Many early childhood teachers in Singapore had not been familiarised with the use of ‘learning stories’ (Carr & Lee, 2012), only 12% of survey respondents stated that they implemented the use of the learning stories approach in their pedagogical documentation of the children’s learning.

The use of methods such as incident frequency sampling at 12% and running records at 18.5% was also significantly less than the use of checklists, anecdotal observation records and portfolios. The reason for these percentages is probably because these methods were used when writing incident reports or behavioural assessment reports of children who required referral to a specialist or special needs facility and were used on a more ad-hoc or when required basis. The type and degree of involvement of children in their own portfolios in ECE settings in the study is shown in Figure 7.15. The use of the portfolio was further investigated with a question on how children were involved in their own assessment portfolios in their practice. The use of portfolio as a form of pedagogical documentation appears to be one of the most prevalent forms

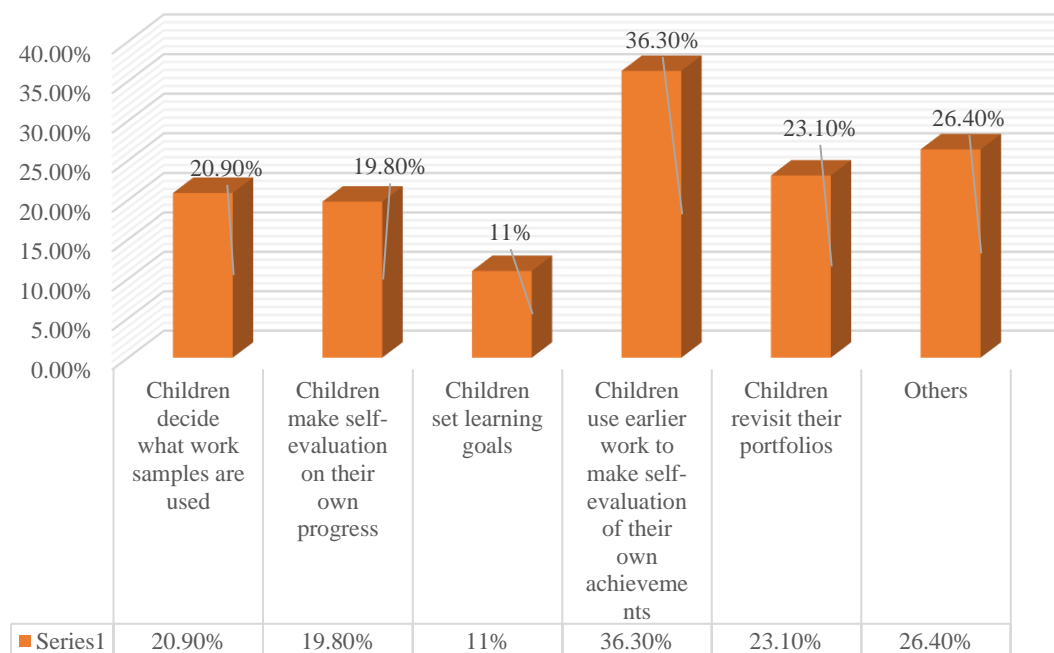


Figure 7-15 Involvement of children in their own portfolios in practice (n=92)

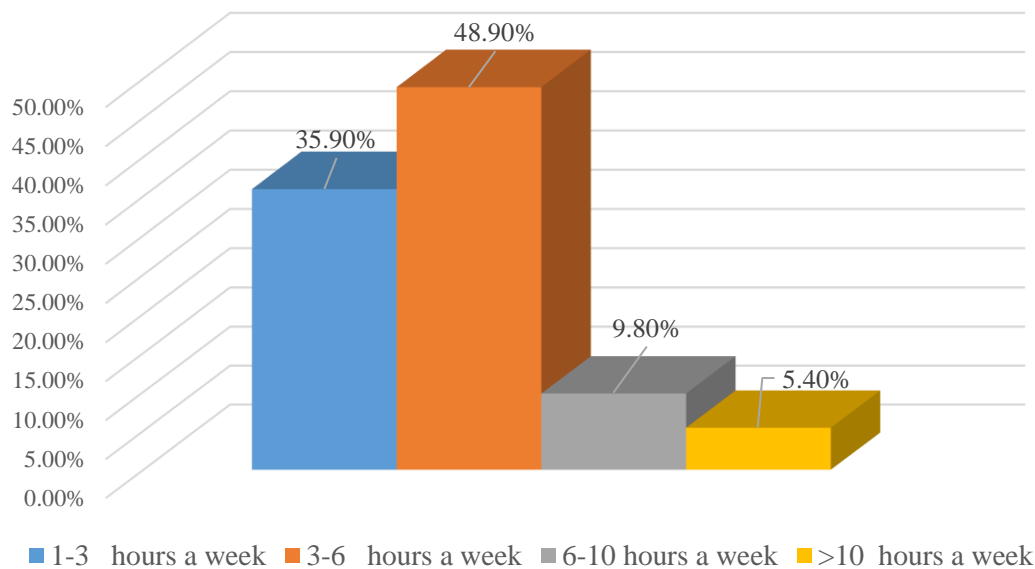


Figure 7-16 Time spent on pedagogical documentation (n=92)

used in early childhood settings in the Singapore context as well as many other OECD countries (OECD, 2011). The design and the contents of what makes up a portfolio varies centre to centre. In the context of ECE settings in Singapore, the portfolios is more likely to adopt a anecdotal or narrative assessment approach described within NEL learning domains, together with samples of work by the child.

Looking at Figure 7.15, which reports the survey data on how children were involved in their own portfolios in practice, the most commonly cited involvement was that ‘children use earlier work to make self-evaluation of their own achievements’. However, in the follow-up question that allowed respondents to make an ‘open-ended’ comment on the children’s involvement in their portfolios, there were 20 (21.7%) comments that indicated either it was ‘not applicable’ (12) or ‘children are not involved’ (8). This indicated that portfolios were put together by the teachers mainly for the purpose of informing parents about their children’s progress or as an instrument or document to refer to during formal parent-teacher meetings. The use of ePortfolios solely might also prevent the greater direct involvement of children with their portfolios. This finding suggest that one of the uses of portfolios that is to support children’s

learning or goal setting (Stockall et al., 2014) was not used by the majority of teachers who responded to the survey.

In terms of amount of time spent on pedagogical documentation (See Figure 7.16), 84.8% of survey respondents said that they spent less than 6 hours per week while only 15.2% said that they spent more than six hours a week doing pedagogical and assessment documentation of the children. Thus, it appeared that the majority of practitioners represented in this survey did not appear to spend excessive amounts of time on pedagogical documentation. This suggests that a balance is sought with the time spent on other aspects of the curriculum and work areas including planning and preparation of activities and events in the centre, communicating with and managing parent enquiries, concerns and other aspects of work in the ECE environment. One use of technology has been the streamlining and the facilitating of greater ease of various aspect of teacher's work in most instances (Donohue, 2014; Hooker, 2017b). This specific finding suggest that workplace innovations and processes are adequately sufficient in allowing practitioners to reduce the amount of time spend on these procedures and processes (ECDA, 2018). This finding is also in contrast to other studies which show that teachers struggle with the amount of time required for pedagogical documentation (Cameron et al., 2016). Interview findings with some teacher participants have also uncovered a tension between the use of more time-consuming instruments for formative assessment and more manageable tools for documentation such as the use of checklists. This is supported by research literature (Dunphy, 2010; Fler & Richardson, 2004). These forms of assessment and evaluation of children's progress suggest that parents and teachers favour a 'rapid and efficient' method of evaluation of the learners' progress, particularly with the use of 'checklist assessment' although the portfolio approach offers a more holistic strategy in early childhood education assessment. The challenges in the processes and finding the most appropriate methods and approaches in pedagogical documentation may be viewed as integral in the delivery and enactment of the

curriculum and its development. Next, the use of technologies in the curriculum or in its facilitation is examined.

7.6 Use of New Technologies

The use of technologies in the ECE settings is examined in Figure 7.17. The most common technology tools was the ePortfolios 52.2%, iPads 51.1% and mobile app platforms 55.4% . The use of mobile apps such as ‘Little Lives’ is used as a platform for parent-teacher communication, as well as to upload portfolios, reports and images. In the survey, 55.4% of respondents indicated that they used some form of mobile app technology in their ECE settings as a work tool. Apps were also used for learning purposes such as with the use of phonics and numeracy apps that allowed interactive activity.

The use of iPads as an assistive teaching tool is also common as with art technology and also literacy programmes that enable activities such as creating their own stories. In the survey, 10.9% of the respondents also stated that the interactive white board was used in their centre settings for interactive curriculum lessons integrating technology. In the survey, although the list of digital technologies and tools options was not exhaustive, there was an ‘Others’ options for

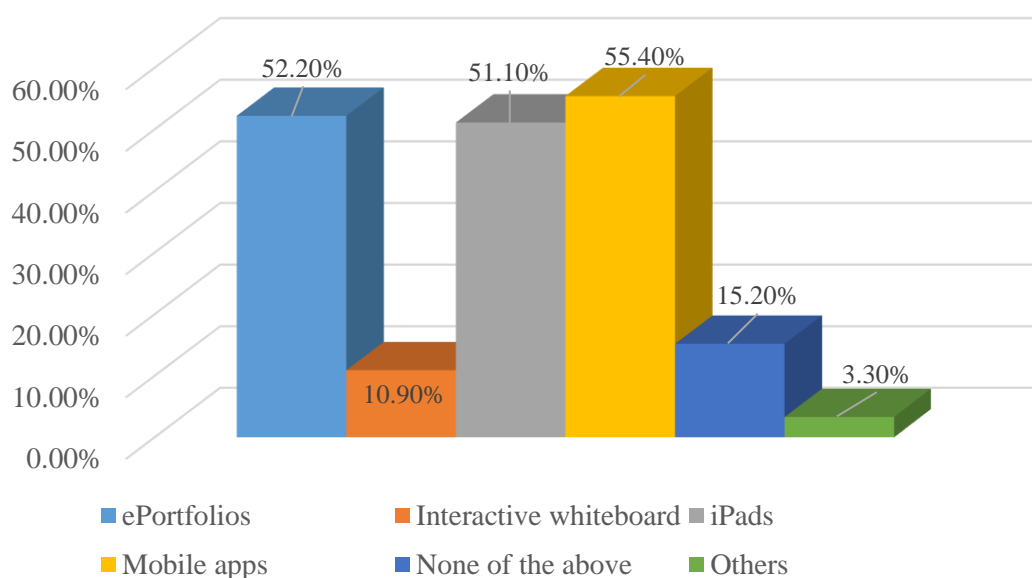


Figure 7-17 Use of technologies (n=92)

respondents to elaborate or specify any other items not already listed (See Figure 7.16). Survey respondents specified ‘Others’ as technological tools and activities used such as digital cameras and laptops, which are used routinely in pedagogical documentation by practitioners, technology-enabled toys (Sullivan & Bers, 2018) and robotics such as Kibo and Beebots and music technology. Only 15.2% of the survey respondents indicated that there was minimal use of technology with the option of ‘None of the above’.

7.7 Learning and Work Environments.

Figure 7.18 shows how survey participants ranked what they found most challenging in their ECE work environments. When asked to rank what they found most challenging in their ECE work environments, the following results were obtained: ‘Documenting learning progress’ at 28.3% and ‘Planning the weekly and daily curriculum activities’ at 28.3% are ranked equally as the most challenging aspect of their work. There were 18.5% of survey respondents who felt that ‘Meeting and talking with parents and caregivers’ was most challenging and this

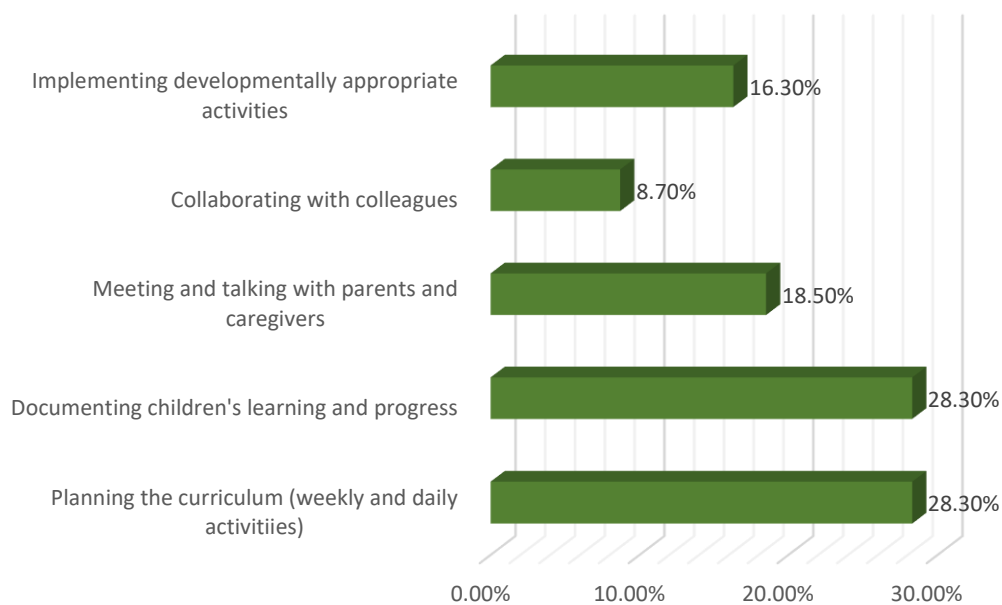


Figure 7-18 Perceptions of what is most challenging in ECE work (n=92)

presumably included how practitioners dealt with day-to-day interactions with parents and families, as well as communication between them. From the survey responses, 16.3% of respondents indicated that ‘Implementing Developmentally Appropriate Activities’ was most challenging, while 8.7% of respondents felt that ‘Collaborating with colleagues’ was most challenging. It was not indicative whether these were part of a stimulating and challenging aspect of the work or a less healthy and stressful aspect of the work.

Figure 7.19 reports the findings of the three descriptors that teachers said best described their work environment in the ECE setting. Generally, there were positive perceptions and experiences in the work environment, with 68.5% of survey respondents indicating that they felt that it was innovative and challenging, and 57.6% indicated that they experienced collaborative partnerships and work relationships within their centres. However, the third highest descriptor was ‘Overwhelming’, where 53.3% selected this descriptor in terms of their workload and/or stress levels in their ECE centre. The fourth highest score for the descriptors at 39.1% showed teachers found their work ‘Creative and Rewarding’. The remaining descriptors were less positive in their connotations: 37% found that ‘High staff turnover’

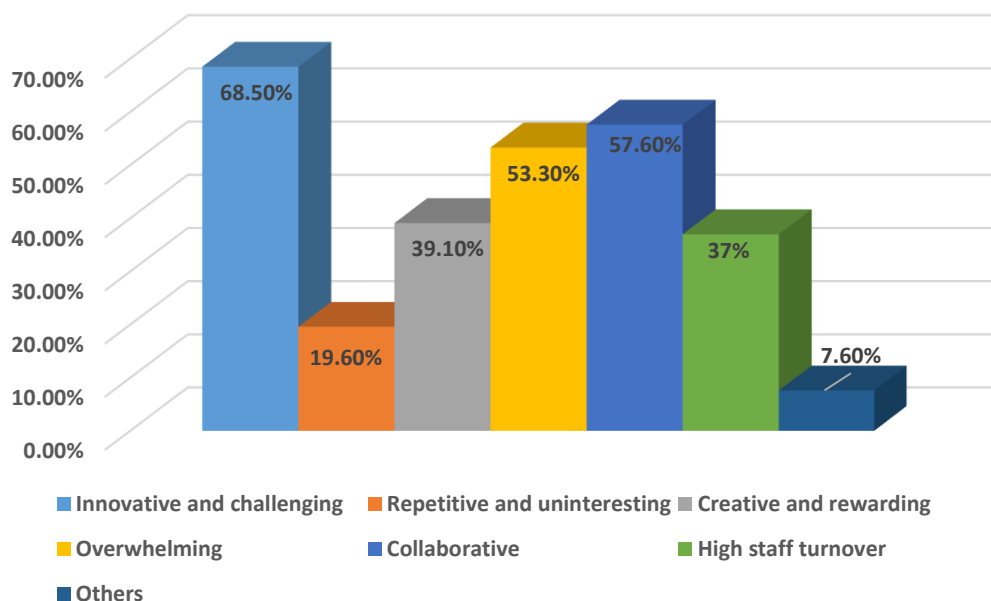


Figure 7-19 ECE work descriptors (n=92)

turnover' was experienced within their centre setting, 19.6% described ECE work as 'Repetitive and uninteresting', whilst 7.6% indicated 'Others'. When asked to elaborate their choice of 'Others', the descriptors included phrases that had less positive connotations about the work environment in the ECE settings such as lack of teamwork, lack of leadership, manpower, resource and budget constraints, and uncooperative colleagues.

The relatively higher percentage of survey participants indicating positive work descriptors suggests a positive teacher morale in their work environments, while the negative work descriptors indicates that more can be done in terms of making ECE work more challenging, interesting and innovative while streamlining and facilitating the administrative work processes that teachers have to go through. In addition, the relatively high rate of high staff turnover also implies that more should be done to improve staff commitment and incentivise teacher retention in the early child sector.

In summary, aspects of ECE work that teachers found most challenging were 'documenting children's learning and progress' and 'planning the weekly and daily curriculum'. More positive descriptors relating to work environments were 'collaborative, innovative and challenging' whilst less positive indicators were the descriptors 'overwhelming', repetitive and uninteresting, as well as a 'high staff turnover'. As teachers' perceptions of their work environments and professional development influence the quality of the curriculum (Lin & Magnuson, 2018), the area of perceived priorities for professional development will be examined next.

7.8 Perceived Areas of Need for Professional Development

The participants were asked to rank their perceived priority of professional development needs. Figure 7.20 shows the perceived priority of needs by survey participants in terms of their professional development. The highest areas of perceived need indicated were in the areas of

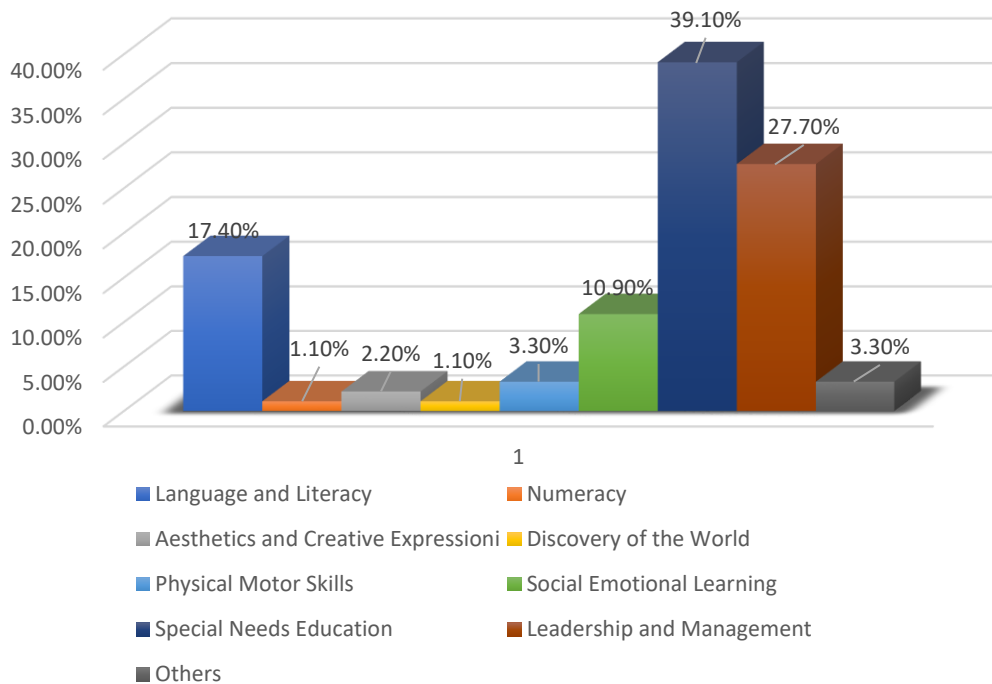


Figure 7-20 Perceived priority of professional development needs (n=92)

‘special needs education’ (39.1%) and ‘leadership and management’ (27.7%). The high level of perceived need for professional development or training in special needs education might be due to teachers wanting to carry out effective interventions for special educational needs learners. The second finding on needing PD for leadership and management may also reflect the aspirations of these early childhood practitioners in terms of career progression and may not reflect the actual sector demands and needs in reality.

Of the other valid responses, 17.4% survey respondents ranked ‘Language and Literacy’ as the highest priority for professional learning, while 10.9% indicated ‘Social and Emotional Learning’ as their highest priority. Despite parental expectations of their children to attain fundamentals in certain academic domains such as numeracy and literacy, it is noted that early

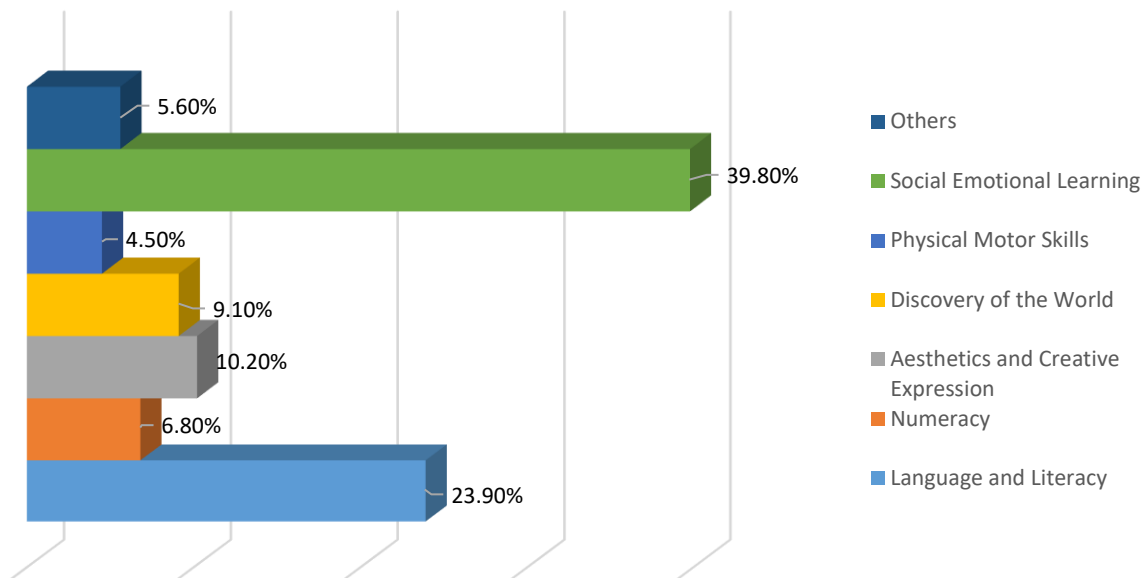


Figure 7-21 Perceived priority of professional development needs within the NEL framework (n=92)

childhood practitioners in the survey also placed a significant emphasis on the ‘social emotional learning’ of children or felt that they need to be able to play a more influential role in facilitating the learning in this area.

Figure 7.21 shows the perceived priority of needs by survey participants when the options of ‘leadership and management’ and ‘special needs education’ was taken out. The area of highest perceived level of professional development was in the domain of social emotional learning with 39.8% of the survey respondents (N=88) indicating SEL as the area that they required PD in. This was followed by the areas of language and literacy with 23.9% of respondents indicating this was the area that they felt the highest level of need in terms of professional development. The other first priorities for professional development are ‘Aesthetics and Creative Expression’ ACE 10.2%, ‘Discovery of the World’ 9.1%, ‘Numeracy’ 6.8%, ‘Physical Motor Skills’ 4.5%, ‘Others’ 5.6%.

Looking at current courses, workshops and programmes offered for professional development in the early childhood sector in Singapore, areas of professional development offered include that of family-teacher communication and collaboration, classroom management and teacher-

child interactions and building a professional digital portfolio, amongst others in a diverse number of areas in the field (NIEC, 2019). In general, findings from the survey data corroborated with a number of findings from the interview and other qualitative data. Next, a summary of key findings from the survey is presented.

7.9 Chapter Summary

The chapter elaborated on the survey findings from 92 completed survey respondents and described the sample in terms of age group distribution, ethnic distribution, qualifications and years of experience. It also provided a summary of the types of centres, and service provider types that participants were working in. These findings provided a overall representative profile of the characteristics of ECE teachers in Singapore. The main curriculum frameworks and approaches, the influence of the national curriculum and other aspects such as child's interests and parental influences give an indication of the types of influences on the curriculum implemented in ECE settings in Singapore. The trends in the types of pedagogical documentation, the types of information technology tools are also examined and these may be considered as integral to the curriculum. An indication of the perceptions of early childhood educators of their work environments and their priorities in professional development are part of the survey findings. A summary of key findings are as follows:

Early childhood practitioners in Singapore are mostly familiar with the national curriculum frameworks, NEL and EYDF. They may be also familiar with a few other educational philosophies and approaches, as well as those advocated by their centre practice. Pedagogical documentation in the form of the use of portfolio and checklists are the most prevalent types used. Photo- and video-documentation of children's progress and activities and anecdotal observations also from an important aspect of pedagogical documentation. Most practitioners estimate that they spend less than 6 hours a week on pedagogical documentation, although this is not always corroborated by interview data.

Early childhood practitioners pay a substantial amount of attention to children's interests and the involvement of parents in the planning of the curriculum and programme. Parents are an important audience with the early childhood practitioner and regular formal parent-teacher meetings are the norm, most of often it is scheduled at least twice yearly. This finding is also supported by interview and observation findings. Technologies in the forms of the use of ePortfolios, mobile app platforms, and technological tools such as iPads are relatively commonly used in ECE centre settings.

Planning and implementing weekly and daily activities and documentation of children's progress are the most challenging aspects in their ECE settings as perceived by survey respondents. A majority of early childhood practitioners have positive attitudes towards their work environments in terms of it being innovating, challenging as well as collaborative in nature. However, about half of ECE practitioners in the survey find their workload 'overwhelming'. The other negative responses is that there seems to be the possible repetitive nature of some work aspects and high staff turnover issue in ECE settings in Singapore. Early childhood practitioners feel that they need greater preparation and professional development in the areas of special needs education and in terms of leadership and management. Outside these two areas, the two main areas that appear to be prioritised by practitioners for professional development are in the NEL domains of 'Social Emotional Development' and 'Language and Literacy'. The next chapter is the discussion, in which findings from chapters 5, 6 and 7 will be integrated and synthesised to provide answers to the research questions.

CHAPTER 8: DISCUSSION

The implementation and delivery of an effective curriculum in early childhood education is dependent on sound foundational principles and policies that guide practice. Effective curriculum decision-making considers the social-cultural context, utilizes local funds of knowledge and cultural capital available and allows teachers' to build upon their own competencies and professional growth.

This chapter will present an in-depth discussion from the consolidated analysis and interpretation of the data findings from Chapter 5, 6 and 7 and how these relate to the relevant research literature. The discussion consists of three main sections that answer the following research questions:

- How is the early childhood curriculum enacted in diverse types of early childhood education and care (ECCE) services in Singapore?
- What challenges and concerns do teachers face in delivering the curriculum guided by the national curriculum framework?
- What are the enabling conditions and what further support is required for teachers to be effective in their delivery of the Singapore early years curriculum?

In answering the main research questions, the discussion is framed within these three major headings that include: i) enactment, change and transformation; ii) challenges and concerns faced by ECE practitioners and iii) support and Enablers for early childhood education. Within 'Enactment, Change and Transformation', the discussion revolves around issues and trends that include child-centred pedagogy and pedagogical documentation, the role of technological tools and the integration of sustainable practices. Pedagogical hybridity is also discussed in the context of the findings in the study. The discussion in the second section includes challenges and concerns that include personal and family concerns, maternalistic discourse, as well as the issues related to the resistance to changes in the sector, work environments, social and cultural

factors, and the differing expectations and priorities of parents and teachers. Challenges related to the professional development expectations and needs, as well as the issues related to profit-driven practice in the ECE sector is also discussed. In the third section, the discussion will revolve around the three main themes of collaborative partnerships, rethinking the roles of teacher and learner' and the finally, the work environment, as well as policy and management.

8.1 Curriculum Change and Transformation

This section will answer the first research question, which aimed to explore the enactment of the curriculum with the associated change and transformation in the early childhood sector in Singapore. A holistic and balanced curriculum integrates elements parallel to the recommended framework by UNESCO's LMTF Universal Domains (UNESCO, 2013; See Chapter 2, Figure 2.1) is outlined by NEL (MOE, 2013b). The six learning domains articulated by the NEL curriculum framework (MOE, 2013b) integrate the curricular priorities have also been examined by earlier studies and research literature (Bautista et al., 2016; Choy & Karupiah, 2016; UNICEF, 2012b). The following subsections discuss curriculum enactment and aspects of curriculum change, transformation, and reform. These include factors such as parent and community engagement, an emphasis on child-centred pedagogy and changes in the approach and attitudes towards pedagogical documentation, sustainable practices, and pedagogical hybridity.

8.1.1 Enacted vs Intended Curriculum

There is need to differentiate between the 'intended' curriculum and the actual 'enacted' curriculum. Porter and Smithson (2001) distinguishes the intended, enacted, assessed, and learned curricula. The national policy documents include the framework, guidelines, and standards which teachers are expected to implement and deliver, form the intended curriculum. Chapter 5, which examined the Curriculum-in-Action, provided glimpses of the enacted curriculum in several local ECE settings. The enacted curriculum refers to the actual

curriculum that students engage in the classroom and most learning experiences are expected to take place within the enacted curriculum (Porter & Smithson, 2001). However, the findings of this study indicate that curriculum enactment differs from centre to centre and there is no one specific prescribed approach to the curricula except for the NEL framework (MOE, 2013b) which is a policy tool for the intended curriculum.

The findings from the across the different data sets in this study demonstrate a spectrum of practices that define the enactment of the curriculum by early childhood teachers in the sector. From ethnographic observation of the enactment of the curriculum and the conversations with some of the practitioners within these early education settings, varied approaches have been adopted in order to implement the intended curriculum. It is apparent that these varied approaches form a 'blended' hybrid pedagogy that includes inquiry-based, project-based and experiential learning experiences; findings which validate and strengthen insights from previous research studies (Adriany, 2018; Lin, 2014). Current international trends in early childhood educational and critical pedagogy indicate that there has been an augmented emphasis on creativity, critical thinking and sustainability in early childhood education (Brown, 2019; MacDonald, 2015; New, 2015). The current study indicate similar parallel findings albeit not in all centres.

Experienced practitioners in the sector have expressed the need to move away from a 'prescriptive' approach to the curriculum to a more reflective and progressively evolving strategy that requires teachers to 'walk the talk', while at the same time be actively creating the emergent curriculum in their classrooms, as reported in Chapters 5 and 6. The survey findings also indicated that a large percentage of early childhood practitioners were familiar with the national curriculum frameworks while a smaller proportion were familiar with internationalized approaches. These approaches include the Reggio-Emilia inspired (Rinaldi,

2012), the Montessori Method (Guttek, 2004), the Multiple Intelligences Theory (Gardner, 1993), as well as approaches that were specific to their centres or particular discipline.

Arising initially from the use of internet-generated data from the social media sites of five selected early childhood education settings, several forms of pedagogy and practice were observed in these settings within the early childhood sector in the Singapore context. Engagement in activities that could be categorized within the six learning domains of the NEL framework (MOE, 2013b) were well-represented in these social media sites. Outside the six NEL domains, the most frequently coded practices found in these social media sites were 'Approaches to learning', 'Community partnerships' and 'Authentic-experiential learning'. Certain practices were emphasized and highlighted in each of these social media sites. Other aspects of the curriculum that were found represented in these social media sites and also found in relevant research and policy literature include 'Environmental Awareness and Sustainability' (MacDonald, 2015; MEWR/MND, 2015), 'Developmentally Appropriate Practice' (Parker & Neuharth-Pritchett, 2006), 'Parent-Teacher Partnerships' (Lekli & Kaloti, 2015), 'Performance-based learning' (McNamee et al., 2002), 'Project-based learning' (Ozdener & Ozcoban, 2004), 'Technologies' (Parette & Blum, 2015) and 'Transitions' (Peters, 2010). The social media site analysis, corroborated by survey and interview findings, indicate the integrated use of community resources and the cultural capital arising from the diverse ethnicity enrolment and workforce at a number of these centres. Survey, specific interview findings and ethnographic observations expounded on the prevalence and greater detail of some of these practices found in the initial analysis of internet-generated data from social media sites. These overall findings are supported by globally accepted trends and future-oriented practices in early childhood education settings in other countries, as well as in Singapore (Bell, 2010; S. Choo et al., 2017; PS21, 2007).

8.1.2 Parent and Community Engagement

Communal responsibility and collaboration, particularly with the parents, families and the community is a strong feature of the Reggio-Emilia approach as suggested by other studies (Dahlberg, 2011; Devjak, Bercnik, & Devjak, 2010) which was identified as a curriculum approach in many of the centres in this study. These values were found to be shared by many local centres in Singapore, particularly from social media data analysis, interview and survey findings. In Chapter 5, the internet-based data provided additional corroboration and evidence in supporting the emphasis and value of communal responsibility and collaboration. Activities in the centres often have a strong integration of the community culture into the curriculum through celebrations of local festivals and local tradition and practices. Centre practices often involve organizing various family events, activities and even workshops for parents so as to involve parents in their children's learning and progress. This is also evident in several examples from the visual data of the social media sites of the five centres sites examined in Chapter 5. From the interviews, teacher participants demonstrated a belief in the need for parental involvement and engagement with the child's learning experience although there was some indication that 'Asian' parents tend to have rather performance-oriented goals for their child. This finding is supported by the results of other studies (Deng & Gopinathan, 2016; Frewen et al., 2015).

Survey findings also corroborated findings from the other data sets in that teachers indicated that majority of them involved parents from at least 'a moderate amount' to 'a great deal' when planning and implementing the curriculum. The exact forms of parental involvement were varied according to interview findings and ranged from parents attending workshops and events that their children were engaged in to parents providing feedback and working with teachers to support the child's learning experience in home-school projects. Other studies have

demonstrated the positive impact of parental engagement with their child's learning experiences in ECE settings (Bush et al., 2017; Frewen et al., 2015).

8.1.3 Child-centred Pedagogy and Pedagogical documentation

Pedagogical documentation has also been demonstrated as a strategy that enables teachers as professionals, facilitating communication with parents and learners, as well as other educators (Rintakorpi, 2016). Early childhood education assessment in various forms of pedagogical documentation is an important process that examines the learning experiences of children (Biffi, 2019), supports reflective practice (Reed & Canning, 2013) and is an essential tool for communicating children's learning to families (Alaçam & Olgan, 2016).

Findings from this study indicated that teachers are most familiar with the NEL framework and pedagogical documentation mainly using checklists, anecdotal observations, and portfolios with digital documentation. With the several forms of pedagogical documentation, particularly in the use of the portfolios, some aspects of its purpose differ considerably from the original Reggio Emilia approach with a few of the participants and centres in this study. In 'The Hundred Languages of Children', Dahlberg (2011) highlights the use of pedagogical documentation that promotes the school as a public space where democratic political practice enables participants to engage in a variety of issues and practices and visualize and negotiate dominant discourses. The concept of constructing a more child-centred pedagogy and learner identities through pedagogical documentation has been promoted by international research literature (Biffi, 2019; Chng, 2019). In practice, the process varies in different cultural and national contexts and the NEL framework (MOE, 2013b) provides some guidelines in this process specific to the context of Singapore.

More specific findings from interview data reinforce the idea that portfolio documentation was mainly to provide parents more information and updates about what happens in the school-

centre setting and to provide a tool for dialogue between parents and teachers. It also provides a way to inform other teacher educators about what the child has ‘achieved’ and activities accomplished in the portfolio and some background for teacher when the child transitions into the following year.

With regards to the increasing use of portfolio assessment, the postmodernist viewpoint is that its use is more resistant to standardized assessment approaches, and so makes allowances for a variety of learning styles and dispositions, allowing for differentiated instruction and assessment for diverse spectrum of learners (Chitpin, 2003). Pedagogical assessment and documentation have become more participatory and inclusive in approach, emphasizing holistic development while open dialogue is encouraged between parents, practitioners and management through parent-teacher conferences. This observation is supported by other research literature (Pascal & Bertram, 2017). The concept of the teacher as researcher has been found with the Reggio Emilia philosophy of pedagogical documentation (Edwards & Gandini, 2015) and this approach could serve as a professional development tool.

8.1.4 Technological Tools

Data findings from this present study (See chapters 5 and 6) indicated that there were some limitations in the use of technological tools for teaching and learning within the classroom. The use of ePortfolios and other assistive technology for communication and collaborative partnerships through home-school projects was relatively new, but becoming more prevalent in its use. The limitation in the use of technology within the centres itself was due to one or more reasons, such as the lack of support by centre management. In these centres, the use of digital technologies with the children was not encouraged or also due to the fact that parents expressed concerns and disapproval of ‘excessive’ use of technology such as with iPads and would prefer their child to be engaged with more hands-on, real life and social interactions. This is supported by research in a similar context (Anderson & Toh-heng, 2019) and was

suggested by interview data during the first phase of the study when a small number of interviewees shared their observations and perspectives on the use of technology within their ECE centre settings. However, teachers shared on the use of certain forms of new technologies including the use of interactive whiteboards and having specified sessions or time set aside for the children to engage with ‘technology toys’ and computers, particularly with the 5-6 year olds.

The use of technology by teachers as an administrative tool and for pedagogical documentation is prevalent and is supposed to facilitate streamlining and ‘simplifying’ work processes (ECDA, 2018). The role of technology is seen to be part of the transformative change in more recent years in ECE learning environments (Yelland, Neal, & Dakich, 2008) and this integration of use of information technological tools has been guided by the relatively recent launch of an ICT curriculum guide (MOE, 2017). With the introduction of more technological tools such as mobile platforms and ePortfolios, processes have become more interactive and sustainable, incorporating the vision for 21st century education (Kehoe & Goudzwaard, 2015). Next, ECE learning environments are examined through the perspectives of early childhood educators in their work settings.

8.1.5 Sustainable Practice

In working towards achieving the Sustainable Development Goals 2030, the early childhood sector moves towards reducing its carbon footprint and finding ways to increase efficiency while reducing consumption by moving towards the use ePortfolios and mobile platforms for increasing paperless communication (Garvis et al., 2018). The findings indicate that there has been a dilemma to maintain a balance in meeting the expectations of parents who may prefer either hard copy or paperless communications in some centres.

In looking more closely at curriculum approaches within ECE settings, data from the exploratory observations, work sample and photo-elicited conversations with teachers showed that one of the approaches used was the language experience approach (LEA) where the children are encouraged to talk about and then use their emergent drawing and writing skills to express their own personal and shared practical experiences. Another growing trend that may form part of a Reggio-Emilia-inspired curriculum and also an adaptation of the 'Experiential Education' curriculum is that of the use of the Project approach (Gardner, 2006; Gencer & Gonen, 2015). Although this was not particularly highlighted in the five social media sites of the centres, it was brought up time and again by teachers when talking of 'activities' that engaged the learners in shared sustained thinking and collaborative work. This finding has been also been found in other studies (Devjak et al., 2010; Purdon, 2016).

Within this study, there were several opportunities to talk to teacher participants about their approach to project-based learning, although not all centres implement this approach at all age group levels. Most agreed that it was mainly the K1/2 (4-6 years) teachers and children who were able to better engage in this form of collaborative learning. Another class used home-school project partnership approach and got parents to become involved in helping their child create the project with re-cycled materials. These projects were usually ongoing for at least one term of the full year so the processes of the initial provocation, brainstorming, experimentation, scaffolding and coming up with a final 'product' was not hurried. From the teachers' interviews and general observations in the field, there were role models and educators who understand the value and importance of the policies, practices and educational philosophies that nurture and develop the agency of children that preserve the culture of sustainability. This concept of 'cultural sustainability' has been found in evidence-based practices in other ECE professional learning communities too (Thornton & Cherrington, 2018).

8.1.6 Hybrid Pedagogy

From the findings of both qualitative and quantitative phases, it is evident that a number of combinations of approaches and strategies have been put into practice in implementing the curriculum. Many similarities were observed that centres have strived to put into practice and adopt that are found in major curricula approaches. In the survey, the other key approaches that were listed in eliciting what early childhood teachers were familiar with and what they practiced were the Montessori Method (Guttek, 2004; Lillard, 2018) and the use of the Multiple Intelligences theory (Gardner, 1993; 1999). The findings from the survey participants corroborated with interview findings in that the NEL curriculum framework formed the core basis and foundation for most early childhood teachers in Singapore in their practice and delivery of the curriculum in their centres. To recapitulate findings, the number of a variety of other more ‘internationalized’ approaches and strategies have been brought into early childhood settings in Singapore which supports the paradigmatic shift towards more ‘hybrid’ and ‘blended’ curricula.

It is evident that these varied approaches form a ‘blended’ hybrid pedagogy that includes inquiry-based, project-based and experiential learning experiences; findings which validate and strengthen insights from previous research studies (Adriany, 2018; Lin, 2014). Following current international trends in early childhood educational and critical pedagogy, there has been an augmented emphasis on creativity, critical thinking and sustainability in early education in the country (Brown, 2019; MacDonald, 2015; New, 2015), which was also found in this study.

As mentioned earlier in this chapter, the findings based on the observations, interviews and survey indicate that teachers in Singapore are influenced by key international approaches to the early childhood curriculum. Overall, the consolidated findings in this study show that teachers often use a hybrid blend of local as well as internationalized practices in the delivery of the curriculum. The construction of a ‘hybrid pedagogy’ in the early childhood education and care

context was introduced in Chapter 2 (2.3.5). In this particular context, although the national curriculum framework provides the guidelines for learners up to the age of six, there are many influences and international models that have been ‘imported’ (Yang & Li, 2019) and also influenced practices. This is not a surprising trend that is an ongoing consequence of globalization and the exchange of information and knowledge across borders (Faas & Wasmuth, 2019; Gupta, 2015).

The findings of this study parallel previous studies, which have identified that curriculum development, teaching professionalism and educational policy are inevitably transformed in the context of globalization (Pascal et al., 2018; Zajda, 2015). The context of the study in 21st century learning was highlighted in Chapter Two. The phrase ‘21st century learning’ has connotations with future learning, of change and transformation that is visionary and future-oriented (Choo et al., 2017; Poon et al., 2017). In ‘Globalization, Transformation and Cultures in Early Childhood and Education’ (Faas & Wasmuth, 2019b), authors of different nations re-vision and reimagine early childhood education in different cultures and geographical contexts, allowing these beliefs, knowledge, new ideas and theories to be interpreted and adapted into culturally relevant and specific pedagogical approaches

With all this mind, the processes of enactment and delivery of the curriculum, educators are faced with several challenges and concerns within the context of their local settings and the findings from this study with respect to this area of interest will be discussed in the next section.

8.2 Challenges and Concerns faced by ECE Practitioners

The second research question focused on the challenges, issues and concerns faced by early childhood education practitioners in Singapore. The answer to this question came mainly from the interview and survey findings with findings across the two data sets synthesised. These concerns may also be grouped into several categories that include personal, professional

identities, management, work environments, parents and policy changes. These factors may not be directly connected to the enactment of the curriculum, but more in terms issues of personal and professional development and identities in the workplace (Le Messurier, 2019; Lee, Huang, Law, & Wang, 2013) which influence how teachers deliver the curriculum.

8.2.1 Personal and Family

Challenges that impacted the practice of the early childhood educator are related to the individual's life and professional experiences and the way in which their beliefs and values influence their practice. Data from the in-depth interviews with the five teachers, as well as the consolidated findings from the all twenty-two interview participants, was used to answer this research question regarding the challenges and concerns experienced in the course of their work and in the delivery of the curriculum. One of the themes that arose from in-depth interviews with the five early childhood educators was that how their role as a parent as well as an ECE practitioner influenced their beliefs and practices. These types of discourses have been referred to in other studies as maternalistic discourses (Ailwood, 2008; Osgood, 2011a). A maternalistic discourse is typified by its references to 'motherhood' as a central and recurring theme, although there have been those who have rejected this discourse as they believe that the naturalization of their work undermines and challenges their professional status (Osgood, 2011b). Teachers were also asked to reflect on how they came to decide to enter into work in the early childhood sector. Although a few decided to join the early childhood sector quite early because they were influenced by a mentor or a senior. Seven interview participants joined it as a mid-career choice that was influenced by their growing passion and commitment to work with children either before or soon after they started their own family. For two of the five teachers whom I had a greater in-depth interview with, the fact that they had a child with special needs also meant a greater awareness and empathy with parents who face similar issues when trying to find appropriate educational services. The challenge was that of finding suitable

education options and alternatives for such learners, as well as dealing with a system that did not always provide adequate support for such learners with additional needs. These findings parallel other studies conducted in Singapore which found that parents with SEN children were not always able to access the support that they needed (Wong et al., 2013; Yeo et al., 2016).

8.2.2 Resistance to Change

Another challenge that faced the early childhood education sector in Singapore was that of having to accept and grow with the changes and developments in the sector. As change does not involve only official policy change initiatives, it also involves changing mind-sets as well as the attitudes, values and beliefs of stakeholders, teacher and parents towards accepting new policies and practices (Hon, Bloom, & Crant, 2014). These changes include the transition from teacher-led, traditional approaches towards more creativity, critical thinking and performance. In certain contexts, transformative change may be embraced such as the case of the use of new technologies in ECE settings (Nicola Yelland & Gilbert, 2017). The process has evolved over a period of time and hence the challenge in narrowing the gap between the intended and the enacted curriculum (Bauml, 2016). Teachers' readiness to embrace change is also a significant factor in determining the successful enactment and implementation of the intended curriculum (Walsh & Gardner, 2006). For example, the use of new assistive technologies that include mobile platforms and ePortfolios were meant to streamline work processes and serve as pedagogical documentative and a communicative tool. However, this was not always the case as shared by some teachers who felt greater stress and an overwhelming workload instead.

Tensions and frustration occurred either because a few practitioners had been in the field before policy changes made it mandatory for professional qualifications and development. The experienced practitioner was used to doing things in a particular way and felt unaccustomed to the transformation of the sector that has taken place and the demands that came with it. This change has also occurred in other countries and cultural context where the conflict between

‘progressive’ approaches and long existing traditional local practices becomes a challenge (Ang, 2006; Qi & Melhuish, 2017). Conflict also arose from the clash between more progressive ideas with long-practiced traditions in the ECE setting which a few teachers felt unable to cope with. This was elaborated earlier in Chapter 6 where teachers compared the differences between early childhood education practices more than a decade ago to current practices and often felt that there was actually more administrative work and documentation required and expected than before.

8.2.3 Work environments

Challenges in the work environment were also explored. Other studies have found that ECE teachers have described the workload aspects of assessment and pedagogical documentation excessive (Cameron et al., 2016; Mitchell, 2012; Westerbeke, 2016). Here, from the survey, slightly more than half of the teacher have described the workload as ‘overwhelming’. A much smaller proportion (less than 10 percent) have described the work as ‘repetitive and uninteresting. Other typical challenges within the work environment may be described as part and parcel of the ‘job’ that include being able to work with colleagues, managing difficult parents, planning the curriculum, as well as documenting the progress of the children. Having to integrate elements of creativity and critical thinking into the curriculum have become part of the 21st century agenda for learning even as ironically, some teachers complained that the national curriculum framework can be too prescribed and directed.

8.2.4 Social-Cultural Factors

The intended curriculum may also be interpreted to be open and flexible, even if based on national curriculum guidelines. One issue regarding the type of curriculum adopted was due to variety of possibilities and a culturally responsive approach despite the influx of influences. Of the nine ECE centres visited in the study, three of these centres have attributed key elements of their curriculum approach as ‘Reggio-Emilia’ inspired, based on the principles derived from

the original approach (Edwards et al., 2012). These principles include viewing the child as an active protagonist of his or her own learning (Rinaldi, 2012) and using an inquiry-based (Lanphear & Vandermaas-Peeler, 2017), child-centred approach that integrates families and the local community (Devjak et al., 2010). However, as one local teacher commented ‘Our local cultural context is quite different and sometimes the way by which children are raised in their own homes is different, hence a totally Reggio-Emilia approach may not always work’ (NU CO 1309-1313). This appears contrary to the ideal image of the young learners as ‘curious, active and competent’ learners as articulated in the intended curriculum by the NEL framework (MOE, 2013b, p.6). The local national curriculum framework NEL provides the preliminary starting point to initial teacher education, whilst a relatively open policy allows early learning centres in Singapore to be receptive to an influx of external influences locally, regionally and globally. Private operators are permitted to ‘import’ educational philosophies and curriculum approaches and this a trend that has occurred in other parts of the world, particularly in many parts of Asia (Yang & Li, 2019). These ‘imported’ educational philosophies and approaches do not always fit neatly into the local cultural context and have to be interpreted and adapted to the local context accordingly.

8.2.5 Differing Expectation and Priorities

A number of practitioners expressed the view that there was often a difference in curriculum priorities expressed by the teachers and that communicated by parents, which parallels findings of other studies (Lane, Stanton-Chapman, Jamison, & Phillips, 2007). For example, teachers often believed that one of the more important skills that should be nurtured in early childhood education settings was that of social emotional competence, which was confirmed by 39.8% of survey respondents indicating that their highest priority for professional development was in the NEL domain of Social Emotional Learning. This appeared to present a challenge that practitioners would like to be better prepared to deal with in their classrooms. Through the in-

depth conversations with teacher participants, a commonly expressed concern was that parental expectations for the more ‘academic’ aspects of the curriculum often overshadowed their precedence for social emotional competencies which these teachers felt was a critical aspect of school readiness in a child. The social-emotional aspect of the child’s development has been cited as being as vital as cognitive development in terms of successful transitions into formal schooling (Hay et al., 2004; UNICEF, 2012b).

8.2.6 Professional and Personal Development Needs

In the areas of ‘special needs education’, several teachers expressed a sense of lack of preparedness and inadequacy when managing children with special needs within the mainstream class. There was the expressed view that self-efficacy is a self-determined attitude that should not prevent even an untrained teacher in special needs education to facilitate the learning and development of a child with additional needs. This view is supported by findings in other research literature (Guo et al., 2011).

Related to the topic of professional self-identity is that of teachers’ beliefs and self-efficacy. The interviews suggested that the concept of professional self-identity is closely intertwined with personal, cultural and lived experiences, as well as teaching and learning interactions in authentic educational settings. Based on teacher participants’ who own child was SEN, narrative accounts of their own experiences with their own children with special needs and being able to extend their personal lived experiences to that of their professional identities and capacity to better understand, empathise and provide support to students with similar needs.

Being able to utilize ‘funds of knowledge’ (Moll, 2019; Peters et al., 2009) that can be either or both personal and professional in pedagogical decision-making, also plays a significant role in shaping professional identities. This is a challenge that resists the concept of evidence-based practice and points towards a more evidence-informed approach as teachers’ life experiences

and personal knowledge is not defined as strictly research-based knowledge (Hedges, 2012). Self-perception and confidence appear to be intangible qualities that are nurtured through life and professional experiences. Also, opportunities to collaborate or mentor newer entrants into the field and to also navigate and negotiate one's own professional identity as was evidenced in the in-depth interviews. Empirical research and meta-analysis of findings from earlier studies have also shown that practitioner belief appraisals that incorporate endorsement and self-efficacy were associated with the intent to use and the adoption of various early childhood practices such as developmentally appropriate practice, pedagogical practices and curricular content (Bruggink et al., 2016; Trivette et al., 2012).

In other areas of professional development needs, survey findings indicated the two areas that teachers felt that they required better preparation was in the areas of 'Special Needs' and 'Leadership and Management' amongst eight areas. Despite the outline by ECDA on with the Industry Roadmap for continuing professional development and initiative to develop and recognize early childhood education professionals, there has been comments by a few of the participants about the lack of actual formal 'leadership and management' positions in centres because there is only one principal or centre manager in each centre (ECDA, 2014, 2017b, 2019a). This may indicate a dearth of prospects and actual career pathways within ECE settings itself and thereby diminishing extrinsic motivational reasons for further self-directed professional development and upgrading by teachers in the early childhood education sector.

8.2.7 Profit-Driven Practice

The final discussion point in this section is with regards to the type of operation in early childhood centres. Survey data indicated that about three-quarters of the respondents came from either private or corporate-owned early childhood centre services. This high proportion of profit-driven and 'commercial' types of centres may be viewed as a consequence of a market-driven, neoliberalist economy (Lim, 2017; Sims, 2017). The curriculum programme in

these centres are often run by market-driven forces and competitive corporations that are better able to market and ‘brand’ their services, even charge higher fees and so on, thus pushing out smaller independent quality childcare service providers (Lim, 2017; Sims, 2017). Curriculum frameworks and centre quality accreditation remains voluntary (Ang, 2006; Tan, 2017). Such practices have posed issues related to equity and accessibility to quality early childhood services for the vulnerable and disadvantaged children and their families. There is a need to create a balance between privately-operated centres that may provide more specialized services and community-based services. The relatively newly launched the MOE Kindergartens (MKs) which provide affordable and accessible community-based ECE services are still relatively few as compared to private- and corporately operated centres.

In summary, there are several key findings related to challenges to effective and equitable curriculum enactment. The first is that of resistance to change and overcoming static mind-sets and ways of working, partly because of prior beliefs and the adoption of traditionally accepted practices. Modern work environments have not always made work in ECE settings more manageable. Different expectations of parents and teachers and priorities in learning experiences have also created tensions and dilemmas in the delivery of the intended curriculum. Despite having a national curriculum framework in place, there is still a challenge to establish a culturally and contextually appropriate and sustainable practice. An influx of influences and internationally ‘endorsed’ practices has created a hybrid blend of practices that moves away from a one-size-fits-all approach. There is therefore the need to establish equitable, accessible, and affordable ECE services that meet the needs of a diverse population. The next section looks more closely at the conditions that support and enable the delivery of such a system.

8.3 Support and Enablers

This section will consolidate the findings and interpretations from Chapters 5, 6 and 7 in order to provide answers for the third research question ‘What are then enabling conditions and what

further support is required in order for teachers to be effective in their delivery of the Singapore early years curriculum? Looking from a broader perspective with the view to enabling the ECE workforce, a number of enabling conditions have been identified. These enabling conditions include the following: i) strong government commitment and investment; ii) unified ECCE governance to harmonize quality; and iii) National reforms (ECWI, 2019; LIEN, 2012). However, at the centre and teacher level, several enablers in enacting a curriculum that is culturally relevant and appropriate in meeting the challenges and needs of the 21st century are also identified in findings of this study. These findings will be discussed in this section in four parts that include the following: i) collaborative relationships and partnerships; ii) rethinking the roles of teacher and learner; iii) the working environment; and iv) policy changes that support the transformative change and adaptation of the curriculum.

8.3.1 Collaborative Partnerships and Relationships

The first enabler that will be discussed is that of collaborative partnerships and relationships that facilitate the delivery of a curriculum programme with shared values and vision, collective creativity and supported leadership and practices (Doolittle et al., 2008; Nitecki, 2015). Based on the visual data through the social media posts, there was a range of partnerships identified that were involved in the early childhood education settings context. These included parent-teacher, centre-community, centre-home, teacher-teacher partnerships and collaborative relationships.

Based on the internet-generated data (netnography) from the five social media sites, certain centres focussed more strongly on community and parent partnerships within the centre (see sections 5.3.2 and 5.3.5). The centres ('Emerald' and 'Opal') that featured strong community partnerships were also ranked highest with parent involvement and partnerships in the social media data. In the interviews with teachers, parent involvement and parental expectations were mentioned frequently. The majority of teachers spoke of the need for parental engagement in

facilitating learner outcomes while principals and centre managers spoke of the importance of community partnerships and involvement. Parent and family involvement and partnerships have been found by other authors and research studies to be an important dimension of the transition processes and school readiness of the child (Lekli & Kaloti, 2015; MOE, 2013b). Advocacy for children's needs instead of parents 'wants and expectations' have also been an important finding from teachers from different settings in the study. For example, reminding parents of the importance of social-cultural competence instead of a single focus emphasis on academic learning has also been something that teachers said they sometimes have to do.

In the survey, 71.8% of teachers indicated that they involve parents and families in the process of planning and progress of the curriculum to at least a moderate degree. Although 'involvement' does not equate to 'partnership', it is some indication of how much emphasis and degree of importance is placed on the parents' role in the child's learning and the centre curriculum programme. Overall, 95.6% of survey participants indicated that formal parent-teacher meetings took place at least twice yearly or once per semester, if not more frequently. This formal meeting usually involves a discussion and update on the progress of the child usually through the use of the child's assessment portfolio. Also, 52.2% of survey participants indicated ePortfolios and 55.4% indicated mobile app interactive platforms are also used in enhancing accessibility and partnerships with parents and families. However, although the use of technology increases accessibility of information and mobile interaction with parents, it does not always allow or increase shared decision-making and interdependent partnerships between the centre and families (Beaumont-Bates, 2017). Based on the interviews, many centres have adopted the use of interactive mobile platforms for ease of communication with families and parents, as well as to allow greater paperless operations, rather than as a way of increasing parental involvement in curriculum decision-making. However, many parents still prefer the use of hard copy portfolios for example, so this change has been something taking place

gradually. This is a finding that is also common to centres in countries such as New Zealand (Hooker, 2017a).

Another form of collaborative partnership and engagement identified in this study is between the centre and the community, including not-for-profit organization and community services. Community engagement was particularly featured with Centre 'Emerald' and 'Opal'. Activities that were documented in the social media sites included community engagement such as visits and talks by community helpers, including the police services or fund-raising activities for welfare homes or even an animal shelter. The children and their teachers created handmade crafts or baked goods for this purpose. Community celebration that involved the different ethnic community groups included activities such as henna painting, mooncake making or traditional dance and games. Community engagement and parent involvement such as these examples have been identified as successful strategies for raising achievement and social competence of children in disadvantaged or low income families by providing better family and community support and stability (Jacobson, 2018; Tilhou et al., 2018). Principals and centre managers also spoke of engaging children with activities and events in the community that included interactive health promotion fairs, as well as other educational, literacy and cultural events in the community. Such approaches are helpful in bridging the cultural gap between the home and school and is supported by other studies (McCauley et al., 2018; Yahya & Wood, 2017).

Collaborative partnerships and relationships in the work environment are also important in establishing a positive work climate, productivity and job satisfaction amongst the teachers themselves (Cha & Cohen-Vogel, 2011; Sugawara et al., 1998). Survey participants were asked to name three work descriptors that best describe their work environment. Of these 57.6% of survey participants indicated 'Collaborative'. In interviews, teachers also stated that collaborative work relationships play a critical role in delivering the bilingual programme in

most centres. Often, co-teachers who are the English medium and mother tongue language teacher, work together in partnerships in the classroom settings. Other responsibilities such as planning for field trips and other centre events also required teamwork and partnerships within the centre-setting. Principals and teachers also talked about some of the distinct roles for specific personnel and of the special needs therapy team working with the main teachers in the classroom setting. Enrichment facilitators and vendors who conduct sessions in different fields also have to integrate their programme and curriculum with the centre. This interdependence builds partnerships and can also provide mentorship and induction for new teachers into the workplace. These practitioners can be said to form or endeavour to form communities of practice (COP) that have a shared purpose, vision, values and/or enterprise (Barab & Duffy, 2012; Wenger, 1998). Professional learning communities also form as mutually supportive, collaborated and growth-oriented towards developing practice in order to enhance pupils' learning outcomes (Thornton & Cherrington, 2018). Often, as different centres settings have their own established values and practices, a new colleague or teacher who may have had prior experience in other establishments, would have to be 'inducted' into the new ECE setting, as in the case of Reena in this study. Individual centre or HQ professional workshops provide an understanding of shared organizational values, policies and practices. The support of the organization, as in the case of Shirlyn, in the active involvement and participation in professional development activities such as an 'innovation project' provided the push towards shared goals and key performance outcomes. Such activities may provide the impetus for establishing professional learning communities with a shared focus and research orientation, as well as providing opportunities for dialogue, teamwork and leadership as found in other studies (Thornton & Cherrington, 2018).

Data findings from the interviewed participants, as well as visual netnography of the social media sites of the five centres, indicate that agencies, organizations, and local businesses

outside the school-centre often view themselves as partners in the education of the young and help to provide learning opportunities for the young members of the community and vice versa. Teachers may have the vital role of being experienced guides, facilitators and brokers of community resources and learning opportunities (Gupta, 2014b; McLachlan et al., 2013). When an effective partnership is in operation, the relationships between the community and centre or school is reciprocal and becomes much more permeable in allowing students to play a more active role in the community while at the same time, community members are also able to play an active role in the classroom (Smith, 2002; Tilhou et al., 2018).

The interviews suggested that teachers who had the advantage of a supportive and enabling organizational environment that allowed them to develop robust professional identities were often themselves were mentors to others within their own organizational structures and networks. Collaboration and work partnerships were important to them in the development and construction of the professional and career identities, confirming other studies (Kamenarac, 2019; Meijers & Lengelle, 2012). Members of a team in a centre ideally constitute a COP and have a sense of shared responsibility and duty in their agency towards certain causes, such as getting greater support and awareness of the need for more inclusive educational policies as in Anne's centre or a strong shared vision, values and practice. Teachers such as Reena, with their co-teacher have a drive and passion to develop, plan and prepare curricular and learning materials for the young learners in their class and demonstrate the commitment to their chosen field. Supportive organizational structures that allow greater teacher professionalism and commitment are enabling through shared leadership, vision, values and collective creativity and critical practice. This is corroborated by other research literature and studies (Doolittle et al., 2008; Kamenarac, 2019; Stoll et al., 2012). The roles of teacher and learner in today's early childhood education contexts and how they may effectively become enablers and provide further support the delivery of an effective and future-oriented approach will be discussed next.

8.3.2 Rethinking the Roles of Teacher and Learner

The role of the early childhood educator may be viewed from different cultural perspectives and usually includes that of the curriculum facilitator and decision-maker and the facilitator of learning experiences (Isaacs, 2012; Lanphear & Vandermaas-Peeler, 2017; Thornton & Cherrington, 2018). The NEL framework (MOE, 2013b) proposes that the teacher is a facilitator of authentic learning experiences and quality interactions in the early childhood education environment, engaging children in purposeful play so as to ensure holistic development through an integrated approach to learning (See Figure 3.3). In this section, findings related to the changing role of teachers and learners are discussed.

From interviews with teachers, several distinct findings emerged. Through their own personal experiences in the sector over the years, teachers observed that ‘child-centred’ practices are increasingly highlighted and advocated within their professional learning communities in contrast to previously widely practiced teacher-centred traditional approaches. Teachers stated that there has been a lesser emphasis on traditional transmissive forms of pedagogy and pencil-paper tasks although this is not something that has been eliminated from current practices. The role of the teacher as someone who sets up the ‘*stimulus and provocation*’ in the words of Nuraidah, who bases her practice on Reggio-Emilia inspired philosophy, for the children’s learning rather than direct content specific teaching of subjects-based learning has also been highlighted. Teachers also reported the view of children as active constructors of their own knowledge rather than mere passive receivers have also become more prevalent in today’s early childhood settings in Singapore, reflecting similar constructivist approaches to early childhood education internationally (Leggett, 2017; New, 2015). The constructivist view of the child as an active participant and constructor of knowledge is a trend that is prevalent in international and modern day early childhood education settings (Hohmann & Weikart, 2000; Rinaldi, 2012). Similarly, critical pedagogy incorporates different theoretical positions, approaches and

ideological alignments and equates learning with nurturing critical learners rather than ‘good’ citizens (Giroux, Lankshear, McLaren, & Peters, 1996; Shpeizer, 2018).

In the survey, the majority of participants (97.8%) took children’s interests into account when planning the curriculum and in the delivery of activities and learning experiences for the students. These findings suggest that greater student agency and self-direction takes into account child’s voice into learning experiences (Robertson, 2017; Villegas & Lucas, 2002). Survey findings also suggest that teachers are also beginning to re-look at the role of students in the role of assessment in their own learning, particularly with the use of portfolios. This finding parallel other research studies such as one conducted by Peters et al. (2009). Peters et al. (2009) found that the use of portfolios during the process of transition to school facilitated learning experiences and helped foster a positive self-image and a sense of belonging.

Although most early learning centres use the portfolio as a mediating tool in parent-teacher conferences, the use of the portfolio with learners is not always acknowledged in the context of Singapore centres. The survey findings suggest that teachers are moving in the direction towards greater involvement of learners with their own assessment and learning. However, slightly more than one quarter of survey participants do not believe that learners are directly involved in constructing their own portfolios, or in the idea of using the portfolios as a means for self-evaluation, goal setting or evaluating their own achievements. The overall survey findings suggest that a greater role and participation of learners in their own formative assessment should be encouraged. Positive benefits in the active involvement of children in their own formative assessment and portfolios have been indicated by earlier studies (Peters et al., 2009; Salamon & Chng, 2019).

Moving on to the varied roles of the teacher, it is evident that teachers in a multicultural early childhood setting in Singapore also have the role of integrating culturally responsive practice

and facilitating community partnerships. Earlier studies in Singapore have suggested that teachers in local ECE settings are not adequately equipped or informed about their role in a cultural diverse setting (Alviar-Martin & Ho, 2011; Berthelsen & Karuppiah, 2011a). With several interview participants, teachers share a part of themselves such as when they explain and demonstrate their own cultural values and traditions as part of community of practice that they are in. In bringing and sharing some of their own cultural practices and traditions such as during various cultural festival celebrations, teachers bring in their own personal perspectives and cultural. It has been supported by research literature that the way in which teachers perceive themselves and their work is a form of self-expression and embodiment of their identities (Wood, 2011). This also enables young learners to become more culturally aware and better understand the multicultural and multi-ethnic society that they live in which is particularly important in a culturally diverse society like Singapore. Teachers and the curriculum that they implement may therefore be viewed as cultural brokers for a culturally responsive and relevant pedagogy (McLachlan et al., 2013; Schonleber et al., 2018).

With the introduction of new technologies and mobile apps, teachers said that parents are kept better informed and updated about their child's activities. However, many parents still prefer the face-to-face interaction with the child's teacher/s at the centre. As corroborated with other research literature (Gupta, 2015; Yahya & Wood, 2017), the findings in this study point to the teacher's role as the facilitator of learning experiences and interaction that take place so as to bridge home and centre-school experiences is also important, particularly in culturally and linguistically diverse student populations. This facilitates the process of ensuring that children of minority groups are also able to integrate with others in early childhood settings.

There are multiple roles and identities that teachers negotiate in the course of their work in the delivery of the curriculum within the ECE environment. It has been argued that postmodernist perspectives and theories allow ECE teachers to negotiate the multiple roles and

responsibilities, as well as the increasingly complex pedagogical contexts and workplace environments (Sumsion, 2005). It facilitates the agency of teacher educators and allow them to engage constructively with ambiguities, uncertainties and challenges encountered in their professional life (Sachs, 2016). The need for teacher reflexivity and the commitment to transformative change is critical for sustaining the commitment and capacity to respond to challenges, complexities and other uncertainties encountered in the professional lives early childhood educators (Bukor, 2015; Grenier, 2016; May & Perry, 2018).

The next section discusses how the work environment, policy and management are critical in providing the enabling conditions and necessary support in the effective delivery of learning experiences in the curriculum.

8.3.3 The Work Environment, Policy and Management

This section discusses the enablers in the work environment and early childhood education setting that allow successful delivery of a curriculum programme meeting the needs of its learners and also enable future-oriented practices that are sustainable (MacDonald, 2015; MEWR/MND, 2015). Work environments that provide stability and sustainability to the early childhood workforce has been found to be essential to achieving the policy goals and objectives in national contexts. Cumming (2015) elaborates on the concept of micro- and macro-politics that impact the interactions between the educator and the work environment and the limiting or enabling consequences of these interactions and exchanges.

Findings in this study tell us more about teacher's perceptions of their work environment and the conditions that enable and support teachers in their delivery of the curriculum. In the interviews, teachers describe enabling conditions in their workplace such as supportive management, collaborative relationships with their co-teachers and colleagues. Through the interviews, it was also evident that 'teamwork' and collaborative relationships were essential

in the classrooms as well at the centre level. In the survey, participants were asked to choose three descriptors in their work environments from a choice of three positive and three negative descriptors. The survey findings indicated there are certain barriers to effective delivery of the curriculum and areas that require attention to improve the working conditions. These obstacles include factors such as a lack of balance between work and their own personal time and the need for stimulus and change in their work environments. The early childhood education settings constitutes the work environment of most early childhood educators and there are complex interrelations between teachers' work environment experiences and workforce stability and sustainability (Cumming, 2015). Based on other research studies, the quality of centre-based childcare and learning experiences provided are related to teacher job satisfaction and commitment that is influenced by a multitude of factors (Lee & Quek, 2018). These factors are often related to the centre environment and related issues such as affiliation, professional interest, student support, resource adequacy, as well as psychosocial factors (Lee & Quek, 2018; Sims, 2020).

According to the Early Childhood Industry Transformation Map (ECDA, 2018), work processes are being streamlined and made more efficient by deploying IT solutions to facilitate day-to-day processes such as attendance and temperature monitoring in preschools and more recently the use of mobile interactive platforms for communication with parents. The justification is to allow educators to devote more time to teaching and caring for the children. However, this approach did not appear successful in all ECE workplace settings where more than half of survey respondents indicated that their workload was excessive, suggesting poor work and personal/family life imbalance. Other research studies indicates that the ability to maintain personal well-being and a work-life balance is important in contributing to the sustainability and commitment to continued work in the sector (Kilgallon et al., 2008b) and therefore these findings are important considerations in terms of strengthening sustainable and

balanced early childhood practices in Singapore. For example, a greater flexibility in terms of working hours and schedules may also allow more teachers with young families to continue in the sector.

Government policies and funding as well as management policies support and enable change and transformation in the early childhood sector (Adriany, 2018; Ang, 2014). As expressed by more than one centre director/manager in the interviews, the government has provided the funding and alternative pathways for early childhood educators to obtain at least their basic qualifications and go for regular professional development (ECDA, 2017b). It is often up to the individual teacher to take up the opportunities offered and acquire the necessary qualifications in order to work in the sector and this also requires the support and encouraged by centre managements. At the same time, most corporately operated centres organized workshops and professional development for their own staff. Although ECDA guidelines (ECWI, 2019) recommend that early childhood teachers should undergo at least 20 hours of professional development programmes so as to keep themselves updated, many practitioners have found this quota insufficient. From the interviews, it could be inferred that it was not uncommon to take unpaid leave or reduced working hours at least once during their careers to attend courses for professional development and/or upgrading qualifications. Therefore, greater support in the area of professional upgrading and development will encourage more teachers to remain in the sector. There is a need for sustained government attention and action, particularly remuneration and conditions that commensurate with skills, knowledge, qualifications and the value of early childhood educators in order to sustain their capability to remain in the sector (Cumming, 2015). Policy, educational and regulatory conditions and environments have therefore to be adapted in order to create and maintain conditions that support the stability and sustainability of the workforce.

8.4 Chapter Summary

In summary, this chapter addresses each of the research questions in the terms of curriculum enactment and the processes of change and transformation in the sector, the challenges and concerns faced by early childhood educators in the context and setting, as well as the supporting conditions and enablers in the delivery of an effective curriculum in various ECE settings in Singapore. These supporting conditions and enabling factors were discussed in the context of collaborative partnerships and relationships, in rethinking and negotiating the changing roles of teachers and learners, as well as the work environment, effective policy and management. The concluding chapter examines the implications for practice, teacher education and professional development, as well as the possibilities for future research.

CHAPTER 9: CONCLUSIONS

This final chapter will first summarize the interpretation and analysis of the findings in this study in the context of the research questions that were discussed mainly in Chapter 8. This chapter will conclude with the implications for practice, teacher and professional development and future research. Lastly, it will describe the limitations of the study.

In terms of curriculum enactment in the context of 21st century learning and globalization, the findings of this study point to the adoption of a spectrum of approaches that constitute a blended pedagogy and curriculum in early childhood education settings in Singapore. Community-based early learning settings were found to follow closely to the NEL curriculum framework (MOE, 2013b). Privatisation and corporatization have become prevalent in the early childhood education market sector and the door is open to many ‘Western’ and internationalized programmes and services that become integrated into their curricula. This study identified influences such as the Reggio-Emilia inspired, Montessori Method, the Experiential Education and Multiple Intelligences Theory approaches, just to name a few (Hiles, 2018; Hong et al., 2017; Vialle, 2009). One of the more positive aspects to change and transformation in the curriculum was an observable trend and increasing emphasis in inquiry-based approaches, creativity and programmes that promote critical thinking and this parallels international trends in other studies (Bell, 2010; Connor et al., 2015). The influence of a progressive paradigm in recent years has resulted in a lesser reliance on a ‘prescriptive’ approach to the curriculum, with more experienced teachers seeking to develop their knowledge and skills so as to adapt and negotiate practice towards more child-centred and critical pedagogies.

In terms of the challenges and issues faced by early childhood educators in Singapore, several of these have been identified in the areas of personal and professional identities, the work environment, parents’ expectations, as well as in the areas of management and policy changes.

The public perception of how early childhood teachers are viewed may be problematic and in need of further attention by policy makers. In the past decade, policy changes have been made to advance the status of early childhood educators and to provide pathways for further professional development and training. However, not all practitioners in the sector have adapted to these changes. Challenges in the work environment, as this study found, included feeling 'overwhelmed' or conflictingly, perceiving the work as repetitive and uninteresting, as well as concerns about understaffing, high staff turnover or being unable to work collaboratively with colleagues. Conflicting expectations and perspectives of teachers and parents also pose a challenge for teachers in the early childhood education settings in Singapore.

The enablers and support in the early childhood sector external to the study have been identified as the government's commitment and investment in the sector; an ECCE governance that ensures quality is achieved throughout the sector and national reforms, and policy changes that support the infrastructure and transformative change in the sector. On the ground level, in the context of this research study, three key enabling conditions that support transformative change and the closer alignment of the enacted curriculum to the intended curriculum were identified. First, this includes the formation of strong collaborative partnerships and relationships with parents, families and the community. The use of technology such as with ePortfolios may be seen as a tool to enhance parent-teacher partnerships (Kehoe & Goudzwaard, 2015). However, this is not always feasible and practical. Centre-community partnerships allow the utilization of community resources and local funds of knowledge as an vital component of the curriculum (Gupta, 2014b). Within the work environment, there is a need for collaborative relationships and team partnerships which are an integral component of professional learning communities (Thornton & Wansbrough, 2014).

Second, the rethinking of traditional roles of teachers and learners as well as the re-examination of 'traditional' teacher-centred practices is viewed an enabler of change and strengthening of

quality. Not only is the teacher's role in the facilitation of learning experiences, their role as a curriculum broker through the facilitation of the 'third space' of curriculum and pedagogical hybridity (McLachlan et al., 2012; Williams, 2003). This conceptual space bridges home and school-centre cultures and practices and allow learners to forge their own identities (Levy, 2008; Maniates, 2015; Yahya & Wood, 2017). The role of the educator in advocacy and in creating greater awareness of the various issues and tensions within the early childhood education setting has also become vital (Kaplan, 2003; Mevawalla & Hadley, 2018). The learner's role has become more active and participatory in nature (Hohmann & Weikart, 2000), with a greater emphasis on student agency and voice (Villegas & Lucas, 2002).

Third, a further enabler involved providing supporting conditions in the work environment that allow future-oriented practices that are sustainable (MacDonald, 2015; MEWR/MND, 2015). Supportive management practices allowing greater teacher autonomy in developing the curriculum can raise self-efficacy and greater job satisfaction levels (Ponnock, Torsney, & Lombardi, 2018; Sims, 2019). Government policies and adequate funding, together with management policies are essential in enabling and supporting positive transformative change in the early childhood sector (Adriany, 2018; Ang, 2014). The implications of these key findings and observations on practice, teacher development and future research will be examined in turn.

9.1 Implications for Practice

Arising from the earlier discussions surrounding the enactment and implementation of the early years' curriculum, there is the recognition that teachers must negotiate between the traditional teacher-centred approach and the trend towards the learner-centred ECE setting. These two opposing approaches can be reconciled by teachers allowing children more autonomy in deciding the content of learning; based on learners' interests while the teacher remains in control of the processes of learning. It has been said that teachers often have to rethink and

negotiate back and forth between the old and the new, history and the future as well as between local and global (Latta & Field, 2005; Oysler, 1996; Popkewitz, 2003).

Teacher beliefs can be identified and grouped into five categories in the context of globalization, which include: personal, pedagogical, contextual, sociological and social beliefs (Goodwin, 2010; Schultz et al., 2015; Tzuo et al., 2013). Goodwin (2010) highlighted the importance of all five domains influencing teachers' beliefs in the fast-paced and multi-faceted context of education in the age of globalization. The hypothetical assumption made here is that the five domains influence and construct teachers' beliefs in the context of globalization (See Figure 9.1). In examining these five domains of ideas, knowledge and experiences, both in the local and international context, we may better understand the factors that impact teaching practices. By examining and interpreting data findings in this context, we may be in a better position to explain the influences that impact teaching practices. Data from interviews and observations suggest that there are a number of ways early childhood teachers are influenced in the way they view and negotiate their practice. Goodwin's domains suggest that the personal,

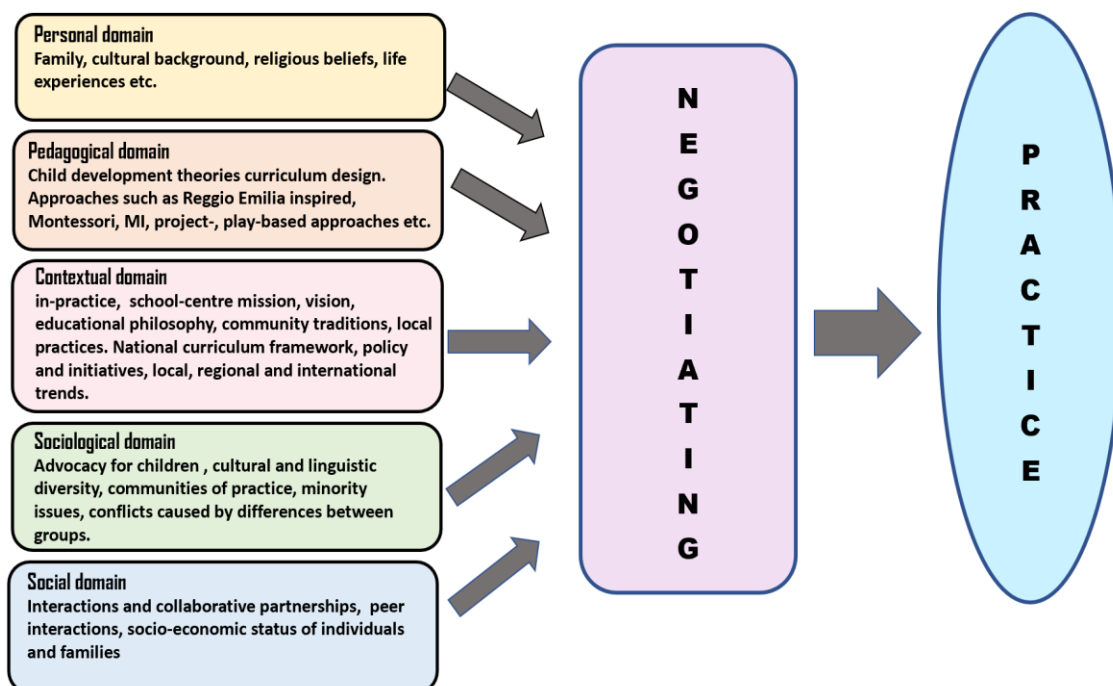


Figure 9-1 Domains of ideas, knowledge and experiences that influence practice
(Adapted from Goodwin, 2010)

pedagogical, contextual, social and sociological domains of these early childhood teachers influence the way they viewed their practice and also directly impacted their daily teaching practice. Figure 9.1 is a diagrammatical representation of the various influences that have been mapped and expanded onto Goodwin's domains of influences that impact the navigation of practice in these settings. These inferences can be corroborated by survey findings and interviews with teacher participants, particularly influences from the pedagogical contextual and social domains.

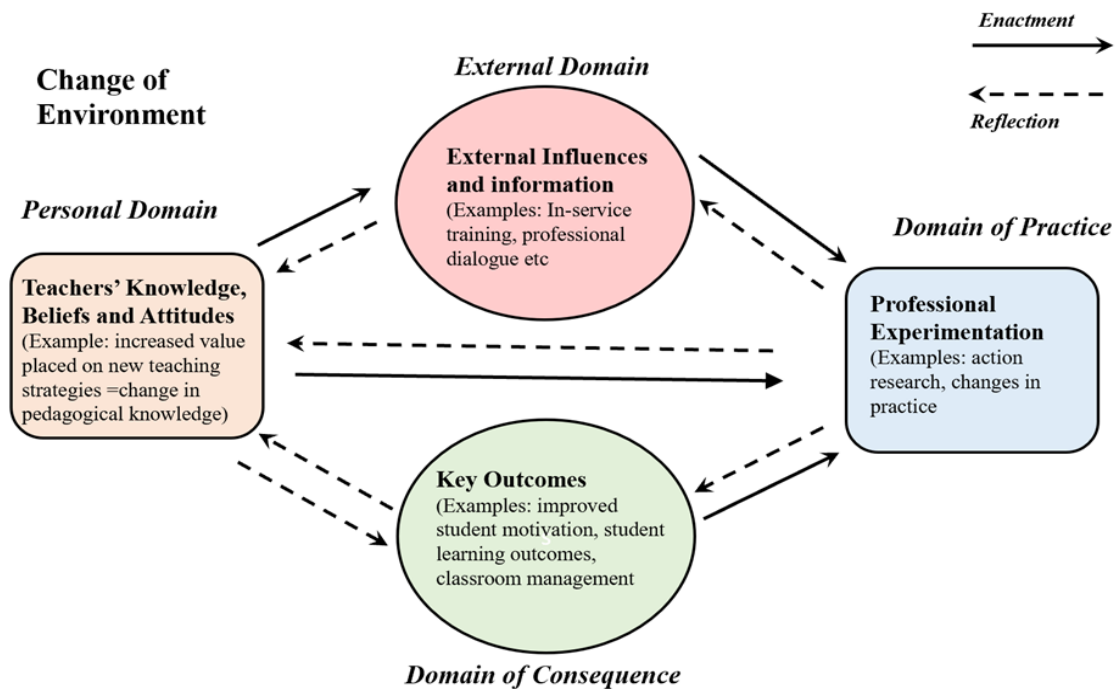
The five domains of influences (see Figure 9.1) include, firstly, the personal domain that involves family and cultural background, as well as life experiences and significant life events. Objective knowledge that includes skills and understanding attained through teacher education and preparation programmes, such as child development theories and established pedagogical approaches are situated within the pedagogical domain. The contextual domain is comprised of in-centre practice, specific to the ECE organizational work setting, mission, vision and education philosophies that are unique to the organization. Other influences within contextual settings include the local national curriculum framework, policies and initiatives, as well as local community practices and traditions. In the sociological domain, issues of advocacy for children's voices and perhaps marginalized groups may arise with cultural and linguistic diversity necessitating culturally responsive and equity pedagogical strategies. Closely related to the contextual domain are the factors that are placed within the social domain; the quality of workplace interactions, collaborative partnerships and related factors also impact the navigation of pedagogical approaches and practices.

Therefore, the negotiation of pedagogical practice in early childhood education settings can be viewed as one that is impacted by a number of complex and interacting factors and the context of the practice and globalization. The findings from this current study have expanded on several of the domains used by Goodwin (2010). Specific findings from this study illustrate the

modified model that is visually represented. Diversity and change within any of these domains impact practice within the ECE environment. Based on this array of influences from the five domains, the negotiation of future-oriented practices is a rather complex process and the consequence of which is unique to each individual early childhood educator with their own specific ECE settings and community context. Next, the implications for teacher education and professional development will be examined.

9.2 Implications for Professional Development

Several pathways for teacher education and professional development have been outlined by the Early Childhood Education Agency, Singapore (ECDA, 2019). These pathways include initial teacher education, in-service CPD and professional conversion programmes and also outlines ‘Leader’, ‘Teacher’, and ‘Educarer’ tracks within these pathways (See Appendix J). A particular model is adopted in this study to explain the dynamic and interconnected cycle for continuing professional and teacher development. The model, adapted from Clarke and Hollingsworth, (2002) here proposes a dynamic interconnected model of professional development (See Figure 9.2) with four domains that mould and change the psycho-social environment. The mediating processes between these domains are that of ‘enactment’ and ‘reflection’. Enactment here, defined as putting into practice or action of a new idea, belief or strategy. Reflection in this context, refers to careful, continued and deep consideration and thought. These four domains interact with one another as dimensions of the change environment that functions to allow or inhibit teacher and professional growth and development within this interactional model. Using this model, the four areas and domains include that of personal sphere with teachers’ beliefs, experiences, values and attitudes towards ‘change’ (OECD, 2009), the external sphere of external influences and information that impact practice, as well as teachers’ beliefs and



values. External information include the industry ‘road map’ (ECDA, 2017b), both in-service and ongoing programmes and professional dialogue and exchange (Vloet & Van Swet, 2010), funds of knowledge (Hedges, 2012; Moll, 2019) and professional learning communities (Kelly, 2013; Thornton & Cherrington, 2018) that teachers are engaged in. The third sphere/domain is that of ‘practice’ and this is the teacher reflexivity (Reed & Canning, 2013) that may be viewed as a self-reflective process in practice. The fourth and probably the most evident domain is that of key outcomes such as learner motivation, student outcomes and improved practice (Shonkoff & Fisher, 2013).

Based on the data findings of this study, there are several implications for teacher development, which can be either in initial teacher education, or in-service professional development, in the context of local and global issues of today. The implications are grouped into four main areas: i) 21st century future-oriented practice; ii) teaching for diversity; iii) development of pedagogical thinking capacities; as well as iv) addressing fast-changing realities in today’s classrooms. These may provide a direction and focus for curriculum change and reform.

In the light of the body of research and the context of this study, we are faced with the challenges and reality of teachers' work in the 21st century. Inevitably, with technological innovations being brought into diverse classroom and with increasing societal and parental expectations, there is a need for adaptation of innovative teaching practices (Bush et al., 2017; Parette & Blum, 2015). Moreover, an increase influence and influx of mass media and popular culture becomes part and parcel of everyday life (Simmons, 2014; Singer & Singer, 2013). Teachers are faced with challenges, tensions and paradoxes in their workplace settings. Early childhood education settings are often inescapably multicultural and diverse (Alviar-Martin & Ho, 2011). There is widening scope of the teachers' role and an increasing potential for learning experiences and opportunities outside the school context (Rehan Dar, 2015; Robertson, 2017).

A co-existence of different educational and curriculum models may add to the 'confusing' blend or hybridization of the possibilities (Dodge, 2004). Therefore, there is a need to give attention to the development of pedagogical thinking capacities with both new entrants and for in-service CPD as suggested by other studies (Lopes, 2019). Teacher development for early childhood education settings are therefore faced with these challenges and there is a need to address fast-evolving teacher realities. Dimensions of professional development and also initial teacher education and preparation should include the nurturing of the capacity in teaching for diversity and the sensitivity to foster democratic values (Cochran-Smith, 2004; Mitchell, 2019; Villegas & Lucas, 2002), as well as possessing an awareness on issues of equity, sustainability and social justice.

With regards to professional development for early childhood educators, a postmodern perspective puts forward the concept of critical pedagogy that integrates a variety of theoretical positions, approaches and ideological orientation, with a shift towards a transformative curriculum. This transformative curriculum brings together both modern contemporary and traditional pedagogy and ways of viewing and constructing selves and identities (Giroux,

Lankshear, McLaren, & Peters, 1996; Keddell, 2009). There has also been the argument for the need to uphold a variety of both traditional and innovative teaching knowledge and for the development of the curriculum in the context of globalization as an adaptive process. The process allows the development of cross-cultural understanding between local and 'foreign' truths and values, as well as between personal subjective and objective scientific views (Goodwin, 2010; Tzuo et al., 2014).

In the 21st century environment, an objective of teachers through the curriculum is to nurture conscientious and creative global citizens (Ebbeck, 2006). In order to do so, teachers themselves have to be informed about global issues that include human rights, social justice and environmental conservation and sustainability in education (Davis, 2010; Jean-Sigur et al., 2015; Mitchell, 2019). Thus, developing global awareness through early childhood teacher preparation programmes is another way of moulding the curriculum.

9.3 Implications for Research

This research study which has been largely exploratory and interpretative raises several possibilities for future research directions, both in terms of theory development and concept validation. While several insightful revelations and conceptual categories and themes have been raised through the interviews with the five educators and broader interviews with the remaining seventeen educators, this study cannot be readily generalized about the perspectives and works of the larger population of early childhood educators in Singapore. Although descriptive statistical analysis was used in a survey of 92 participants, the study could be extended to include more representative groups of the population of early childhood teachers so that more in-depth statistical analysis could be undertaken. Several further questions can be raised to explore the related issues further. Questions regarding learner outcomes and the kinds of practice and how approaches can be adapted and modified for different learner groups or abilities can be raised. Some findings in this exploratory study can be further researched and

developed in several areas, including the ways teacher can better support and meet the needs of diverse learners in terms of abilities, cultural and linguistic aspects through appropriate pedagogical and curriculum approaches. A more in-depth qualitative study could also examine how teachers could develop greater pedagogical thinking capacities in terms of having the ability to engage critical thinking and problem-solving skills in young learners and the most appropriate approaches to be used. Further investigation into how young learners of additional needs and diverse abilities are support through mainstream and specialized services may also elucidate how to better cater to these learners with special needs. Also, the role of community resources and local fund of knowledge and how learning experiences of children can be supported through the use of these resources can be further explored. For example, how the local museum and heritage sites can further extend the child's cultural awareness and sense of self and collective identities.

The research could be extended longitudinally and comparatively. For example, teachers may take a survey and be interviewed on entry into the sector and their views and perspectives can be examined again after a period of adjustment and working in their roles. Such longitudinal data about teachers' experiences would help determine how work experiences influence teachers' attitudes and beliefs. As the study was conducted in the context of early childhood education settings in Singapore, there are limits to the generalizability of the findings and interpretations of the study due to cross-cultural differences and variability in educational settings in other countries. In terms of comparative study, there are several possibilities. Differences in perspective, beliefs, practices and values in relatively new and more experienced teachers could be examined more closely, particularly looking for points of similarity and differences between different contexts. Comparative studies between different early childhood education systems have been undertaken by others (Bertram & Pascal, 2016b; LIEN, 2012) and could be further extended in terms of qualitative studies that reveal the adaptations within

the context of each country (Gupta, 2014c). These include examining curriculum approaches and pedagogical documentation strategies, and which are most effective with the best learner outcomes in each context.

9.4 Strengths and Limitations

In every research study, there are both strengths and limitations in both qualitative and quantitative components of the methodology. The rationale and strengths in a mixed methods study was elaborated earlier in Chapter 4, so the limitations will be briefly discussed here. The first limitation is the sample size used in this study. The use of five centre social media sites as representative of early childhood centre settings cannot be said to be fully representational of all ECE settings in Singapore. These five sites were purposively sampled as they provided ‘critical case’ samples of community-based, private and corporate-operated centres (Palinkas et al., 2015). However, the small sample sizes, with the in-depth interviews, allowed greater detail and elaboration in addressing the research questions.

In relation to the interviews that were planned, the physical access to the actual early childhood settings was sometimes not possible and interviews were conducted outside the centres. For several interviews, there was constraints to time and scheduling and not all interviews could be conducted in-depth for more than thirty minutes. On the other hand, I was able to spend a little more time with a few participants in gaining better perspectives through participant-generated material and data. Although the interviews were planned to be conducted in an exploratory sequential study (Creswell & Plano Clark, 2017; Onwuegbuzie, 2012), a few interviews were also conducted at the same time or slightly after the surveys were completed as part of the pragmatic decision-making (Christ, 2013) that was required to complete the data collection within constraints of access.

Due to the relatively small sample size and possible sample bias the results from the interviews and the survey had to be interpreted with some caution. In terms of the survey, although the actual sample size was adequate with 105 respondents to the survey (with 92 valid and completed), the process of recruitment of participants had to overcome a few obstacles. Participants were recruited via email and by using direct hard copy surveys handed out to teacher groups. As about forty surveys were conducted in a training institute with participants on an in-service course, there was some inevitable bias on the type and qualifications of the participants in this group (Etikan, 2016; Taguchi, 2008). Participation was however voluntary. The survey was kept relatively brief to facilitate participation. The language and terms used were familiar to most ECE professionals in the local Singapore setting but was still relatively open to interpretation. Finally, as mentioned earlier, because the study was conducted in the context of ECE settings in Singapore, the generalizability of the findings to other educational contexts are limited due to cross-cultural differences and variability in educational settings in other countries. This, as was discussed earlier, could be mitigated through the use of comparative and extension studies in comparative education in other educational contexts.

9.5 Concluding Remarks

The study aimed to shed light on the forms of practices within early childhood education settings in Singapore within evolving and fast-changing realities and the continued influx of influences, ideas and concepts from around the world. The issues and challenges in the delivery of a multi-faceted and multi-dimensional curriculum as well possible solutions and enablers were also reviewed. Research and evidence from this study, as well as other relevant and supporting research can contribute to a better understanding of the influences on curriculum practice and possible barriers to effective practice. The argument is for a plurality of voices and narratives in constructing a climate for a social-culturally democratic and equitable solutions for curriculum reform. The potential and possibilities of a culturally responsive,

place-conscious pedagogical practice and rethinking the roles of teacher and learner, as well as the need for collaborative partnerships and relationships within communities of practice so as to enable the delivery of a future-oriented curriculum that address issues of equity, sustainability and social justice were discussed. In conclusion, this study aimed to investigate the early childhood curriculum in different ECE settings in Singapore. The consolidated findings from the study reveal that teachers often use a hybrid pedagogical approach, blending both local and international practices and values in the delivery of the enacted curriculum.

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APPENDICES

Appendix A: Permission to Conduct Study

May 2018

Attention:

Director / Principal
Centre Address



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

RE: Seeking Permission to Conduct Research

Dear Principal,

Kia Ora! Greetings to you from New Zealand.

I would like to seek your permission to conduct fieldwork in your centre that will involve your teachers and Principal as participants. The data collected would be part of a study designed for my Doctor of Philosophy (Ph.D.) degree, for which I am enrolled in the Faculty of Education, University of Waikato, Hamilton, New Zealand. My topic area is in early childhood curriculum & assessment practices.

The first phase of the project is designed to identify the approaches to assessment that are used in a range of centres in Singapore. The case studies in each centre will be conducted within the months of June-July 2018. For the centre, participation will involve a key informant interview with the principal, interviews with teachers and a focus group discussion with the English teacher participants.

The interviews and focus group discussions will be arranged at a time that is convenient for the teachers and all information gathered will be kept in utmost confidentiality. The names of the centre and participants will not appear in the thesis or any publications resulting from this study unless prior consent and agreement is made.

After the data analysis, you will receive an executive summary and an electronic copy of the thesis will be made available to you when it is completed. If you agree to have your centre and staff as part of this research project, please sign below to acknowledge your consent and return the form in the enclosed envelope.

Your approval to conduct this study is greatly appreciated and many thanks in advance for your interest and assistance in this study.

Sincerely,

Patricia A. L. Ong Principal Investigator Phone: +65 81769496 Email: pong@waikato.ac.nz	Chief Supervisor: Professor Claire Mclachlan Head of School Te Hononga School of Curriculum and Pedagogy Faculty of Education University of Waikato Private Bag 3105 Hamilton 3204 New Zealand Phone: +64 7856 2889 Ext: 9452 Email: claire.mclachlan@waikato.ac.nz
Approved by:	
_____ (Name & Designation)	_____ (Signature & Date)

Appendix B: Information Letter

Participant Information Sheet: Interviews and Focus Groups



THE UNIVERSITY OF
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Te Whare Wānanga o Waikato

Project Title|

Curriculum and Assessment Approaches in the Early Childhood Setting

Purpose

This aim of this research study is to identify the kinds of assessment approaches adopted in a range of centers in Singapore and the rationale behind these practices.

What is this research project about?

This phase of the study will consist of interviews and focus group discussion with teacher participants and a key informant interview with the principal on the topic of assessment approaches used in the center.

What will you have to do and how long will it take?

The interview with teacher participants will take (45min-60min) while the focus group discussion (45-60 min). Teacher participants will be invited to share assessment artefacts, media or other documents to explain your assessment practices during the interview.

What will happen to the information collected?

The information will be used for the purposes of a PhD thesis and academic publications. The survey is anonymous. No participants will be named in the publications and every effort will be made to disguise any identifying information. Data collected will be safely and securely stored in a password protected computer and locked cabinet. Any hard copies of transcripts will be safely stored and then securely destroyed after a period of five years.

Declaration to participants

If you take part in the study, you have the right to:

- Ask any further questions about the study that occurs to you during your participation;
- Be given access to a summary of findings from the study when it is concluded; and
- Refuse to answer any particular question, and to withdraw from the study before analysis has commenced on the data.

Who's responsible?

If you have any questions or concerns about the project, either now or in the future, please feel free to contact:

Patricia A. L. Ong

Principal Investigator

School of Education

University of Waikato

Phone: +65 81769496 / +64 0274669099

Email: patricia.ong@waikato.ac.nz

Ethics committee reference: 1311636 (MFEDU 04/17)

Consent Form for Teachers



Teaching, learning and assessment in the early childhood setting

Consent Form for Interviews of Teachers

I have read the **Participant Information Sheet** for this study and have had the details of the study explained to me. My questions about the study have been answered to my satisfaction, and I understand that I may ask further questions at any time.

Please tick the following item.

I also understand that

- I am free to withdraw from the study before the end of the data collection or to decline to answer any questions in the study. I understand I can withdraw any information I have provided up until the researcher has commenced analysis on my data; or

I agree to provide information to the researchers under the conditions of confidentiality set out on the **Participant Information Sheet**.

I agree to participate in this study under the conditions set out in the **Participant Information Sheet**.

Signed: _____

Name: _____

Date: _____

Additional Consent as Required

I agree / do not agree to my responses to be audio-recorded.

Signed: _____

Name: _____

Date: _____

Researcher's Name and contact information:

Patricia A. L. Ong
Principal Investigator
School of Education
University of Waikato
Phone: +65 81769496 / +64 0274669099
Email: patricia.ong@waikato.ac.nz
Ethics committee reference: 1311636 (MFEDU 04/17)

Appendix C: Interview Protocol Guide

Phase 1 Interview Protocol

Question 1:

- ❖ Tell me about the assessment practices and processes that you have adopted in your centre/classroom.

Possible probes:

- Are they based on any philosophy/framework guidelines?
- Are there differences in the approaches that you use for different groups?
- Are there specific emphasis or priority domains that you focus on?
- How do you decide on the methods that you adopt?

Question 2:

- ❖ Tell me about the assessment documentation that you have selected to share.

Possible probes:

- Are these typical samples of your assessment practices?
- How is each of these used and what information does each give you about the child?
- What are some other approaches that you have used?

Question 3:

- ❖ Tell me how this assessment information is used.

Possible probes:

- Can you tell me more about how assessment information of the child/children is used?
- What are some examples?

Question 4:

- ❖ How are parents involved (if they are) in this process?

Possible probes:

- Do you get parents involved in the process of assessment documentation?
- Can you explain further?

Question 5:

- ❖ What challenges do you encounter when in your practice in assessing the children in your classroom?

Possible probes:

- How would you manage differences in abilities and skills that different children have?
- What are some differences in age-specific assessment approaches?
- What kind of support do you think that you need in order to improve processes?

Appendix D: Semi-structured and Open Ended Interview Probes (Example)

Examples of open-ended unstructured and semi-structured questions	
Semi-structured Questions	Unstructured/Open-ended Questions
<p>Tell me about the main curriculum approaches and assessment documentation practices that you have adopted in your centre/classroom.</p> <p>Possible probes: Are they based on any philosophy/framework guidelines? Are there differences in the approaches that you use for different groups? Are there specific emphasis or priority domains that you focus on?</p> <p>Tell me about the assessment documentation that you have selected to share.</p> <p>Possible probes: Are these typical samples of your assessment practices? How is each of these used and what information does each give you about the child? What are some other approaches that you have used?</p> <p>What challenges do you encounter when in your practice in assessing the children in your classroom?</p> <p>Possible probes: How would you manage differences in abilities and skills that different children have? What are some differences in age-specific assessment approaches? What kind of support do you think that you need in order to improve processes</p>	<p><i>It does seem quite different from a normal classroom and it seems quite challenging to plan for such students. What is your approach and how would you set the learning goals?</i></p> <p><i>In terms of the learning environment, how has it been designed and adjusted in a way that would help cater to children of diverse abilities and needs?</i></p> <p><i>From your perspective as a principal and a parent, how do you manage the self-efficacy perceptions of teachers in the management of children with special or added needs?</i></p>

Appendix E: Survey Preamble



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

Dear Survey Participant,

You are invited to participate in this survey and your views and feedback as an early childhood professional in Singapore will be much appreciated.

Preamble to Survey:

By agreeing to participate in this survey, you will be providing your consent to include your responses in the collective data analysis. Your participation in this survey is strictly voluntary and you may choose not to participate without any negative consequences or penalty. You may withdraw from the survey at any time and your survey response will be deleted. There will be no individually identifiable information, remarks or comments or other form of identification of you as an individual participant.

The survey will take between 5 to 10 minutes.

If you would like to know more information or have any questions about this survey or to be engaged further as a research participant in this project, please contact me through the email: pong@waikato.ac.nz

Best regards,
Patricia A. L. Ong
Faculty of Education
University of Waikato

Appendix F: Survey Questionnaire for Early Childhood Practitioners

1. Please indicate the most appropriate title that describes your main role in the ECCE setting. (tick one box)

<input type="checkbox"/>	Principal / Supervisor	<input type="checkbox"/>	Enrichment class facilitator
<input type="checkbox"/>	Head Teacher	<input type="checkbox"/>	Assistant Teacher
<input type="checkbox"/>	Class Teacher	<input type="checkbox"/>	Relief Teacher
<input type="checkbox"/>	Other		Specify: _____

2. Which form of early childhood service provision are you currently engaged in?

<input type="checkbox"/>	Kindergarten	<input type="checkbox"/>	Early Intervention
<input type="checkbox"/>	Childcare Centre	<input type="checkbox"/>	Play Group
<input type="checkbox"/>	Enrichment Class		Specify: _____
<input type="checkbox"/>	Others		

3. ECE Service provider type: (tick one box)

<input type="checkbox"/>	Community-based early childhood service provider
<input type="checkbox"/>	Corporately owned early childhood service provider
<input type="checkbox"/>	Privately owned early childhood service provider

4. Which of the curriculum approaches/frameworks are you familiar with?
(Tick one or more boxes)

<input type="checkbox"/>	Nurturing Early Learners Framework	<input type="checkbox"/>	Reggio Emilia Approach
<input type="checkbox"/>	Early Years Development Framework	<input type="checkbox"/>	Multiple Intelligences Approach
<input type="checkbox"/>	Montessori Method		
<input type="checkbox"/>	Others (Please Specify)		_____

5. Which of the following do you currently implement and use in practice?
(Tick one or more boxes)

- | | | | |
|--------------------------|------------------------------------|--------------------------|---------------------------------|
| <input type="checkbox"/> | Nurturing Early Learners Framework | <input type="checkbox"/> | Reggio Emilia Approach |
| <input type="checkbox"/> | Early Years Development Framework | <input type="checkbox"/> | Multiple Intelligences Approach |
| <input type="checkbox"/> | Montessori Method | | |
| <input type="checkbox"/> | Others (Please Specify) | | |
-

6. Which of the following assessment documentation methods are you familiar with?
(Tick one or more boxes)

- | | | | |
|--------------------------|------------------------------------|--------------------------|------------------------------|
| <input type="checkbox"/> | Checklists
(e.g. developmental) | <input type="checkbox"/> | Anecdotal observations |
| <input type="checkbox"/> | Time/Incident/Frequency Sampling | <input type="checkbox"/> | Photo / Video documentation |
| <input type="checkbox"/> | Running Records | <input type="checkbox"/> | Learning Stories |
| <input type="checkbox"/> | Portfolios | <input type="checkbox"/> | Others
(Please elaborate) |
-

7. Which of the following assessment documentation methods do you currently use?
(Tick one or more boxes)

- | | | | |
|--------------------------|------------------------------------|--------------------------|------------------------------|
| <input type="checkbox"/> | Checklists
(e.g. developmental) | <input type="checkbox"/> | Anecdotal observations |
| <input type="checkbox"/> | Time/Incident/Frequency Sampling | <input type="checkbox"/> | Photo /Video documentation |
| <input type="checkbox"/> | Running Records | <input type="checkbox"/> | Learning Stories |
| <input type="checkbox"/> | Portfolios | <input type="checkbox"/> | Others
(Please elaborate) |
-

8. Which form of IT or new technologies do you currently use in your centre?
(Tick one or more boxes)

<input type="checkbox"/>	ePortfolios
<input type="checkbox"/>	Interactive whiteboard
<input type="checkbox"/>	iPads (classroom activity)
<input type="checkbox"/>	Mobile apps (e.g. Little Lives)
<input type="checkbox"/>	None of the Above
<input type="checkbox"/>	Others: (Please elaborate) _____

9. How much time do you spend on assessment documentation in your centre?
(Tick one box only)

<input type="checkbox"/>	1-3 hours / week
<input type="checkbox"/>	3-6 hours /week
<input type="checkbox"/>	6-10 hours / week
<input type="checkbox"/>	>10 hours / week

10. How much do you refer to the NEL curriculum framework in your practice?
(Tick one box only)

<input type="checkbox"/>	A great deal	<input type="checkbox"/>	A little
<input type="checkbox"/>	A lot	<input type="checkbox"/>	None at all
<input type="checkbox"/>	A moderate amount		

11. How much do you involve parents and caregivers in the assessment of progress and planning of the curriculum? (Tick one box only)

<input type="checkbox"/>	A great deal	<input type="checkbox"/>	A little
<input type="checkbox"/>	A lot	<input type="checkbox"/>	None at all
<input type="checkbox"/>	A moderate amount		

12. How much do you integrate children's interest in your daily lesson activities?
 (Tick one box only)

<input type="checkbox"/>	A great deal	<input type="checkbox"/>	A little
<input type="checkbox"/>	A lot	<input type="checkbox"/>	None at all
<input type="checkbox"/>	A moderate amount		

13. How often do you meet with parents on a formal basis?
 (Tick one box only)

<input type="checkbox"/>	Once a month	<input type="checkbox"/>	Twice yearly
<input type="checkbox"/>	Once termly (10 weeks)	<input type="checkbox"/>	Once yearly
<input type="checkbox"/>	Other (please specify): _____		

14. How are children involved in their own assessment portfolios in practice?
 (Tick one or more boxes)

<input type="checkbox"/>	Children decide what work samples are used.
<input type="checkbox"/>	Children make self-evaluations on their achievements.
<input type="checkbox"/>	Children set goals for their learning based on current portfolio.
<input type="checkbox"/>	Children use earlier work in their portfolio to evaluate progress.
<input type="checkbox"/>	Children revisit their portfolios.
<input type="checkbox"/>	Others: (Please elaborate) _____

15. Rank the items, which you find most challenging in meeting work demands in your current setting to that which is the least challenging.
 (1= most challenging and 5 = least challenging)

<input type="checkbox"/>	Planning the curriculum including weekly and daily activities.
<input type="checkbox"/>	Documenting children's learning and progress.
<input type="checkbox"/>	Meeting and talking with parents and caregivers.
<input type="checkbox"/>	Collaborating and working with colleagues.
<input type="checkbox"/>	Implementing developmentally appropriate and stimulating activities.

16. Rank you area of perceived level of need for professional development and training.

(1 = area of greatest need and 8 = area of least need for professional development and training, use each value once only)

<input type="checkbox"/>	Language and Literacy
<input type="checkbox"/>	Numeracy
<input type="checkbox"/>	Aesthetics and Creative Expression
<input type="checkbox"/>	Discovery of the World
<input type="checkbox"/>	Physical Motor Skills
<input type="checkbox"/>	Social Emotional Learning
<input type="checkbox"/>	Special Needs
<input type="checkbox"/>	Leadership and Management

17. Select 3 items that best describes your current work environment. (Tick 3 boxes)

<input type="checkbox"/>	Innovate and challenging	<input type="checkbox"/>	Overwhelming
<input type="checkbox"/>	Repetitive and uninteresting	<input type="checkbox"/>	Collaborative
<input type="checkbox"/>	Creative and rewarding	<input type="checkbox"/>	High staff turnover
<input type="checkbox"/>	Others (please elaborate):		

18. Main class/es:

<input type="checkbox"/>	<18 months	<input type="checkbox"/>	Kindergarten (4-5 years)
<input type="checkbox"/>	Toddlers (18-24 mths)	<input type="checkbox"/>	Kindergarten (5-6 years)
<input type="checkbox"/>	Nursery 1 (24-36 mths)	<input type="checkbox"/>	Mixed age class (e.g. 18mths-3years)
<input type="checkbox"/>	Nursery 2 (3-4 years)	<input type="checkbox"/>	Other (specify)

19. Age group.

<input type="checkbox"/>	18-25 years
<input type="checkbox"/>	25-35 years
<input type="checkbox"/>	>35 years
<input type="checkbox"/>	Other (please specify) _____

20. My ethnic group is _____.

<input type="checkbox"/>	Chinese
<input type="checkbox"/>	Malay
<input type="checkbox"/>	Indian
<input type="checkbox"/>	Other (please specify) _____

21. ECCE

Qualification/s

<input type="checkbox"/>	Certificate
<input type="checkbox"/>	Diploma-trained (ECCE Teaching)
<input type="checkbox"/>	Diploma-trained (ECCE Leadership)
<input type="checkbox"/>	Degree in Early Childhood Education
<input type="checkbox"/>	Degree in other discipline.
<input type="checkbox"/>	Others: (Please elaborate) _____

22. Years of experience in the early childhood (ECCE) industry: _____ years

Feel free to make comments, suggestions or feedback:

Appendix G: Content Analysis of Centre Document (Example)

Staff meeting minutes sample A

Agenda topics		
1. Programme and Curriculum Planning		
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
1. HFMD Outbreak Response Protocol	Principal	Immediate
2. Use of New Template for documents	Teachers	asap (By semester1)
3. Field Trips / Teachers on course	Principal	Ongoing
4. Administrative Matters.	Principal/Office	Ongoing
2. Centre Administration / Operations		
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
1. HFMD outbreak confirmed 3/3/2016 affecting Tod C & N1 -Reinforcement of hygiene practices at all times :Wash hands after health check : Upon arrival, there should be no combining of classes at dining area and children will be sent to their own classes for breakfast. :Soiled diapers to be placed in separate trash bag and tied up before disposal. :Stack cots wiped daily. : Store toothbrushes correctly. :Air purifier turned on during day. :Reinforce healthy habits of handwashing after toilet use and before meals. MOH advice: Wash hands hourly. : Temperature taking for visitors and logged into log book.	All class teacher/health check teachers	Immediate
2. New template for weekly lesson plan and logo (Newsletter & PTC)	All class teachers	Semester 1
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
3. Field trips confirmed :11 th April Health Promotion Board Health Zone Carnival (N2-K2) :25 th April Road Safety Community Park (N1 onwards) 29 th April Singapore Chinese Orchestra (Nursery Ones) 13 th May Playtime I @ The Esplanade (All Levels) 23 rd May Trip to the Zoo Teachers on course : Mandy on course (14 th -15 th March) : Letterland Course (1 st -2 nd April) Adrienne/Peng/Jita	Principal	Ongoing
4. Administrative Matters : Sufficient notice to be given for Annual Leave/Childcare Leave Central attendance : reminder to return folder to proper place/	All Staff/Class Teachers	Ongoing
5. AOB : Feedback to improve communication with parents/ : Handover of children to evening staff with necessary updates and communication (e.g. medicine given, etc) :HQ Branding Launch 18 th March 2016		

Content analysis of centre document

Action item:

1. Infection protocol

2. Administrative support for teachers so as to facilitate improved communication with parents.

3 i) Place-based approach to the curriculum so that opportunities and activities for experiential learning in various NEL domains.

ii) Teacher Development courses – familiarity with approaches to phonemic awareness etc.

4. Administrative matters procedures

5 i) Improve communication between teachers and with parents

ii) 'Branding' and marketing to build enrolment.

Figure 5.2 Staff meeting minutes sample B

1. Programme and Curriculum Planning		
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
1. Implementation of new curriculum and feedback.	Class teachers	Termly
2. Parent Teacher Conference	Class Teachers	Semester 1 completed
3. Return and collection of Portfolio and Report Books asap	Class Teachers	ASAP
4. Return portfolio & report book log and parent feedback to office.	Class Teachers	After PTC
2. Centre Administration / Operations		
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
1. 21 st July Racial Harmony Day (include Hari Raya Celebrations)	Jane & all Teachers	15 th / 21 st July
2. -4 Ethnic group corners in gym by 15 th July -Kinderdance classes cancelled.		
3. K2 Primary School Visit	Kathy	22 nd July
4. National Day Celebrations (Parents will be invited) -Playground will be used for National Day Project. -All children participating with individual projects will receive a token, -NDP craft by class teachers. -Individual class teachers. -NDP theme song practice by Kavita during assembly.	Karen & all Teachers	5 th August
5. Setting up of Theme Learning Corner	Plants Jane/Peng/Anne (T3.1) Environment Kathy/ Helen/Ching (T3.2) Traditions & Customs Helen/Shirley/Jean (T4.1) People of the World Lorna & Yu (T4.2)	Semester 2
6. Attendance of Chinese Workshop	Ching & Yu	16 th July
ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE
7. Central Attendance/Class Register/Health Check - Attendance taking and register keeping reminders - Trs please note temporary withdrawals , postponed admissions	Class Teachers/ Health Check Trs	Ongoing
8. Liang on leave (11 th -29 th July) -Pan taking Chinese lesson in the morning - New Chinese teacher (11 th - 21th July) for Nursery 2.	-	
9. Haze and HFMD SOP management :tr read and acknowledge	ECDA	7 th July
10. Staff Activity @ Planet Bowl Civil Service Club	Shanti	15 th July (6-9pm)

Content analysis of centre document

Action Item:

- 1&2 Celebrations of traditional ethnic festivals and designated day for observing and respecting ethnic diversity and multicultural dimensions.
=>Culturally responsive approach.
3. Planned visit to Primary school open house to facilitate transition for K2s to Primary 1
4. National day celebrations, fostering community identity and cohesion.
5. Thematic learning corners with two themes each term,
6. Professional development workshop for Chinese language teachers
- 7&8 Administrative procedures
9. Health, hygiene and safety protocols.
10. Staff welfare and well-being activity.

Appendix H: Pedagogical Documentation (Sample)

OBSERVATIONS

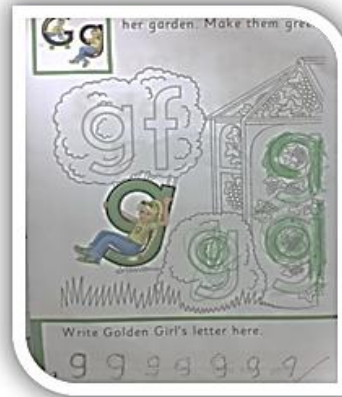
I LANGUAGE DEVELOPMENT (EMERGENT LITERACY)



Comments

Yue Jin has a relatively short attention span. He tends to rush through his work quite carelessly. He is expressive through his spoken language although he is still unable to pronounce certain consonants clearly and sometimes appears to have difficulty finding the appropriate vocabulary in his spoken language.

- Knows the sounds for letters in the alphabet.
- Able to name words beginning with the letter given.
- Shows interests in books if adult-initiated.
- Able to pronounce certain consonants clearly.
- Speaks in short sentences.



- Recognizes basic letters of the alphabet.
- Tells story in sequence from pictures in his own words.
- Recognizes his own name.
- Holds pencil correctly.
- Writes with guidance or following dotted line.
- Uses the pronouns 'I', 'You', 'He', 'She' correctly.
- Uses appropriate verb tenses.



II PHYSICAL & MOTOR DEVELOPMENT

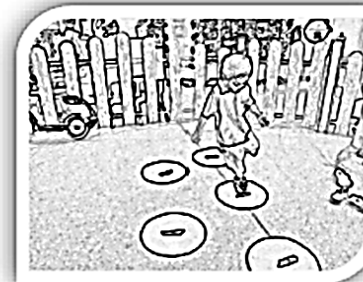
Comments:

Yue Jin's gross motor skills are meeting expectations. He is able to hop and stand on one foot. He is able to a kick or roll a ball forward and throws a ball overhead. He is able to move forward and backward with agility.

His fine motor and hand-eye coordination milestones are developmentally appropriate. He is able to hold a paper scissors correctly and cut short strips of paper. He differentiates between drawing and writing and is able to represent a figure using geometric shapes.

GROSS MOTOR SKILLS

- Balances on one foot
- Walks in a straight line forward and backward.
- Climbs steps with alternate feet without support.
- Throws catches and bounces a large ball.
- Builds creative structures with blocks and other manipulatives.

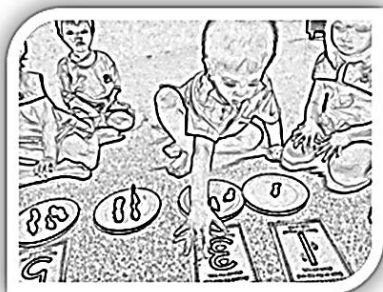


FINE MOTOR SKILLS

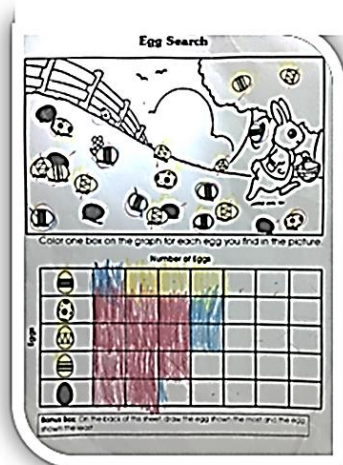
- Puts together a 5-10 pieces puzzle.
- Holds and uses a scissors correctly.
- Holds and manipulates pencils, crayons and bushes.
- Uses toilet independently.
- Dresses and undresses independently.



III. COGNITIVE & INTELLECTUAL DEVELOPMENT



- Sorts objects by size, shape and color.
- Name objects by shape, color, size.
- Count by rote to 20.
- Count 10 objects accurately.



Comments:

Yue Jin displays a vivid imagination and enjoys dramatic and role-playing. He is inquisitive and curious and is beginning to understand cause-effect relationships. He demonstrates basic concepts of numbers and he is able to follow simple instructions



- Predicts simple patterns ABABAB. (Line up blocks, red, blue, red, blue: Which is next?)
- Locates and point to parts of the body: eye, ear, elbow, knee, wrist, forehead.
- Explores cause and effect with simple experiments.
- Shows perceptual awareness of space and form.

IV. SOCIAL AND EMOTIONAL DEVELOPMENT

Comments:

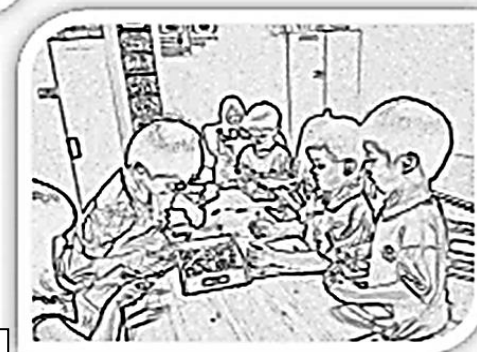
Yue Jin is developing friendships. He is learning to share but needs to learn self-regulation of his own behavior. He needs to also learn to manage his frustrations and unhappiness verbally and not act it out physically. He tries to be helpful and is learning to play cooperatively with other children. He shows progress in expressing his own feelings, needs and opinions in difficult situations or when there are conflicts without causing harm to self, others and property.



- Correctly states his gender and age.
- Enjoys being with other children.
- Shares toys and materials with other children.
- Develops friendships and communicates with others.
- Listens while others are talking.

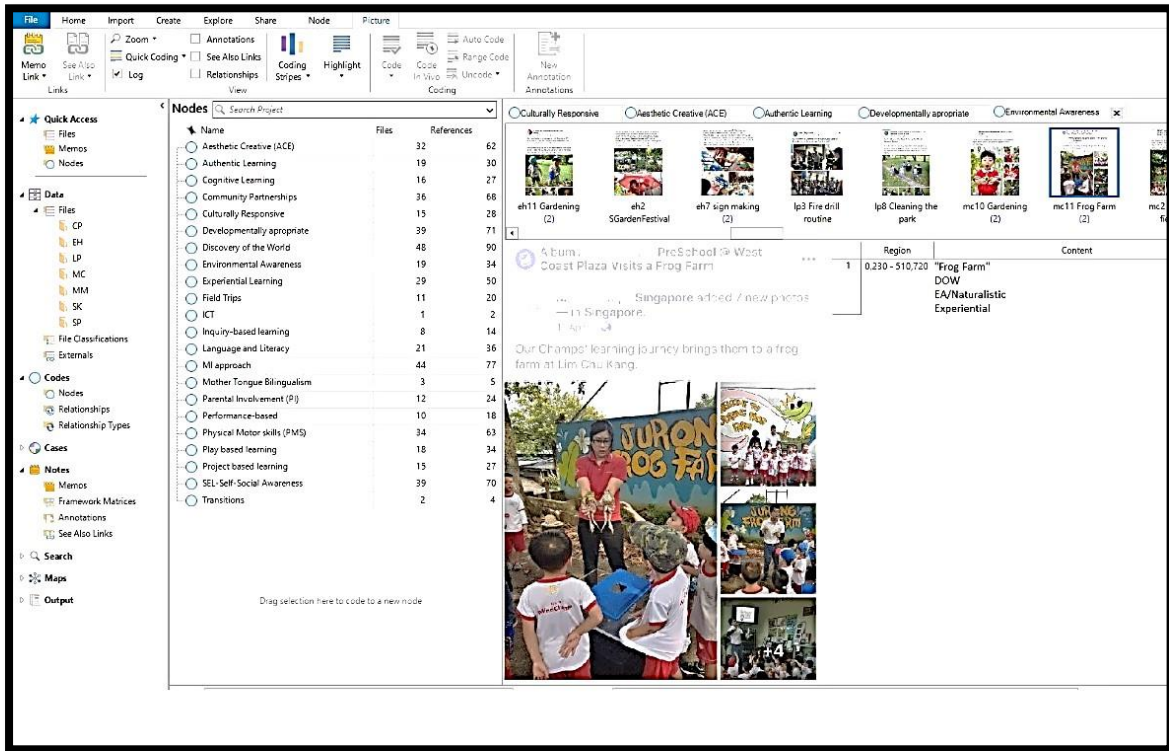


- Has a sense of humour.
- Knows how to take turns, share and cooperate.
- Aware of others feelings and moods.
- Adjusts readily to new situations.
- Expresses anger with words and not acting out physically.

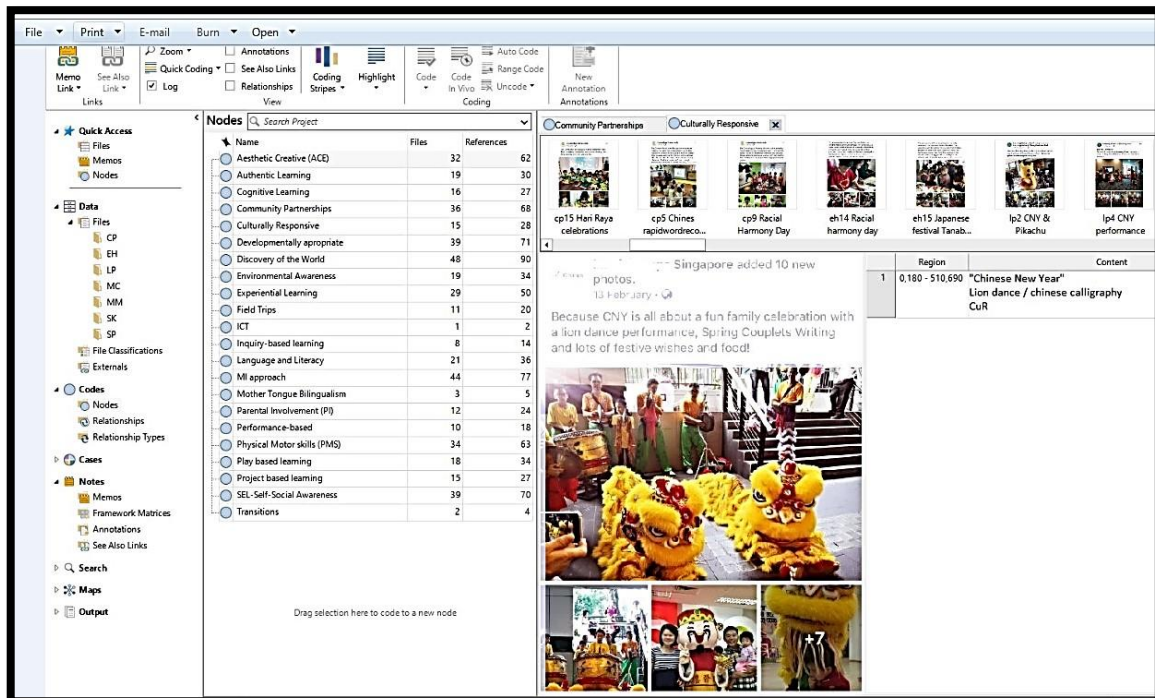


Sample progress report: Due to privacy and copyright issues, this is an adapted version of original report.

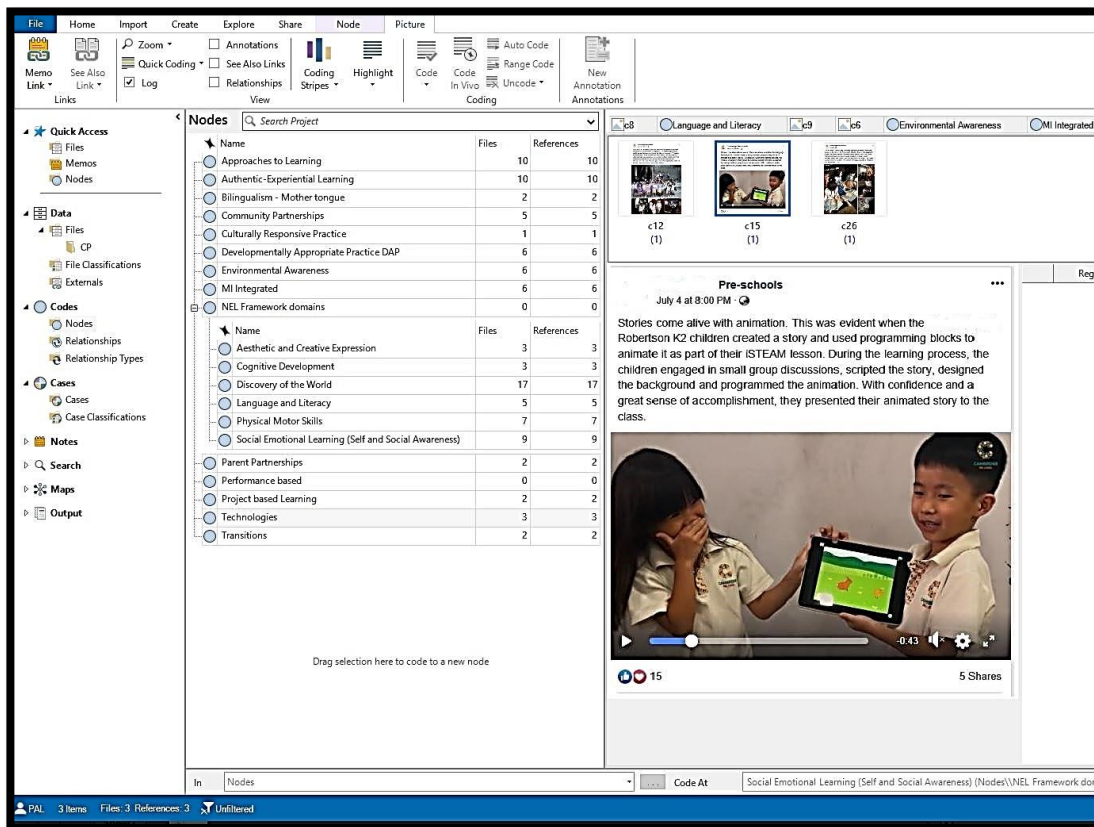
Appendix I: NVIVO Screenshots of Social Media Sites Analysis



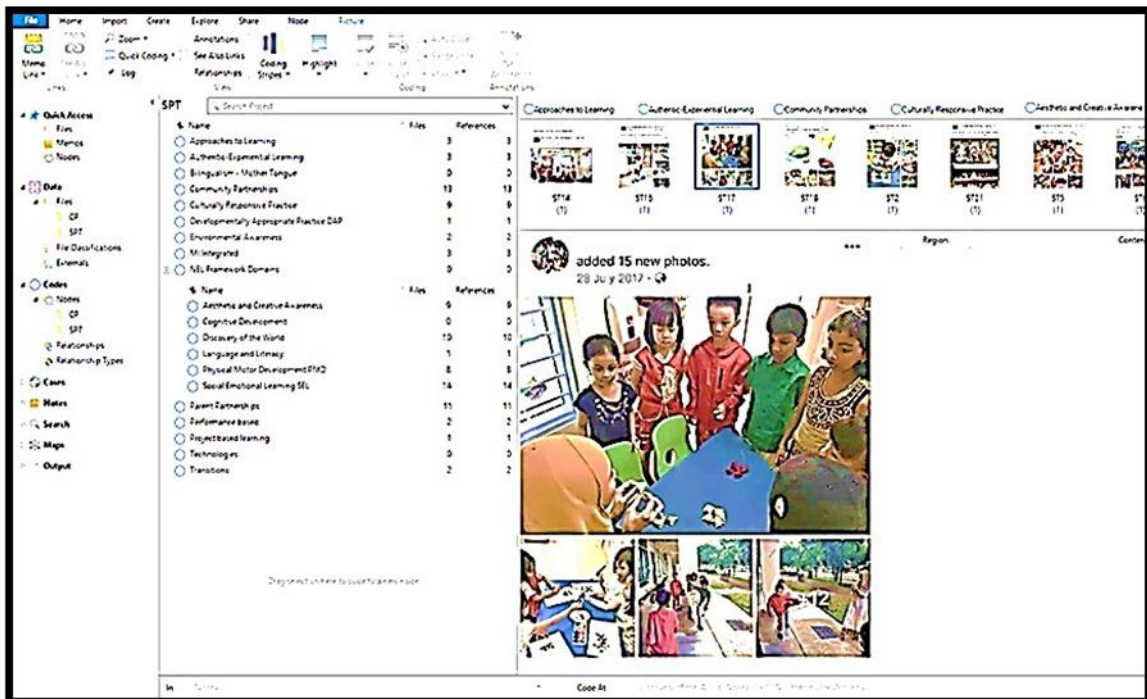
i) NVIVO analysis of visual internet data – Main image: Visit to a frog farm



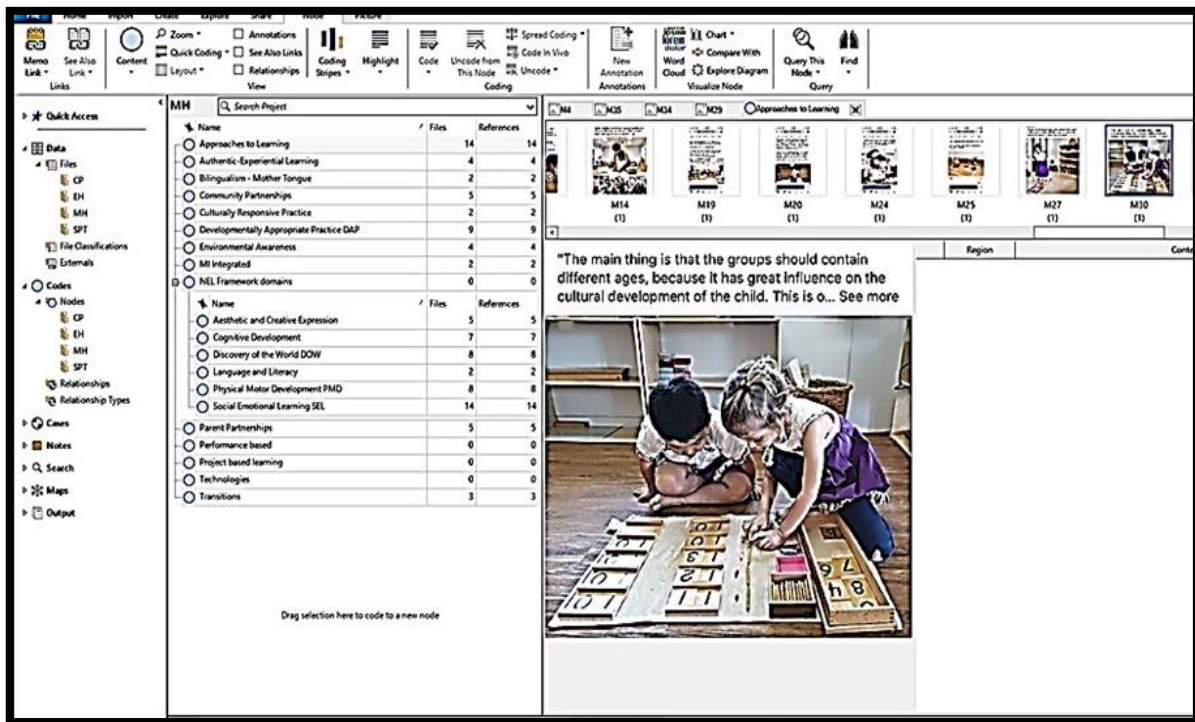
ii) NVIVO analysis of social media visual data – Main image: Lunar New Year Celebrations



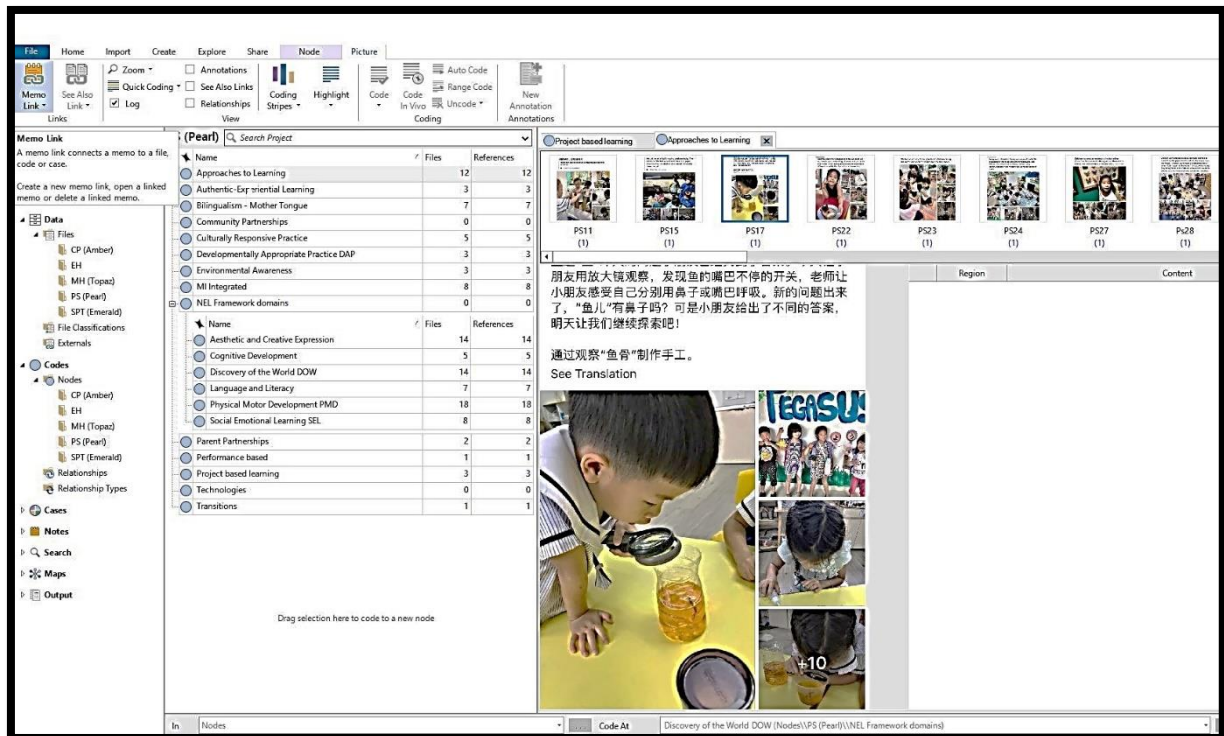
iii) NVIVO analysis of social media visual data – Main image: Animated story with iSTEAM (Centre ‘Amber’)



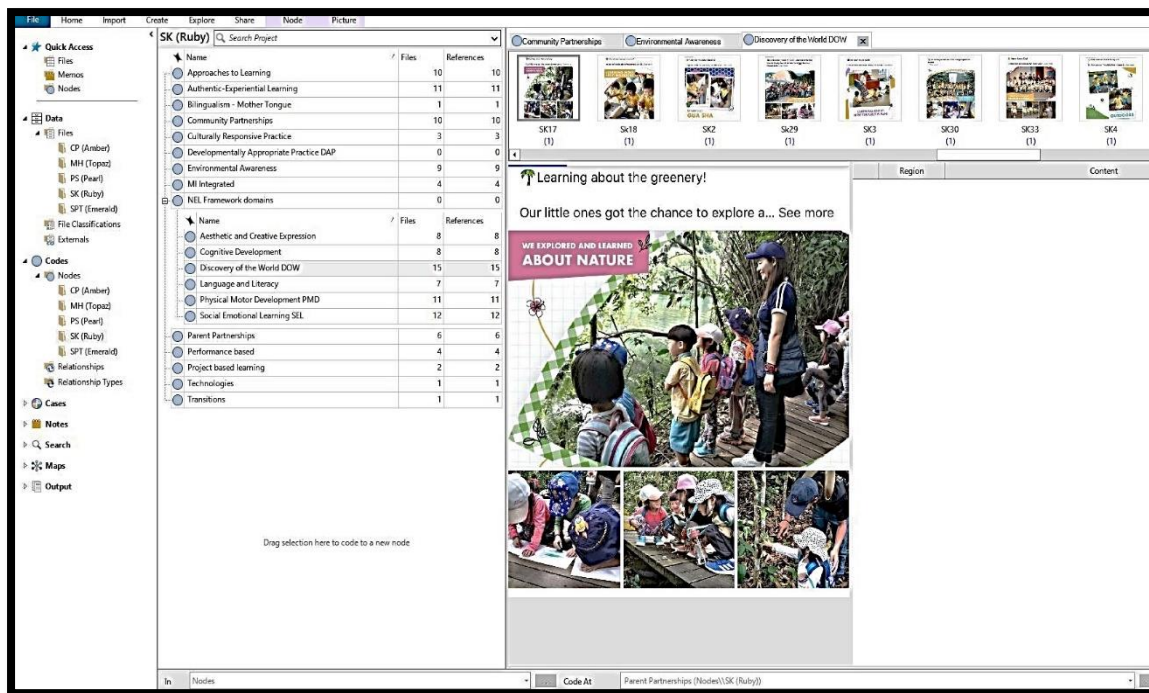
iv) NVIVO analysis of social media visual data – Main image: Racial Harmony Day (Centre ‘Emerald’).



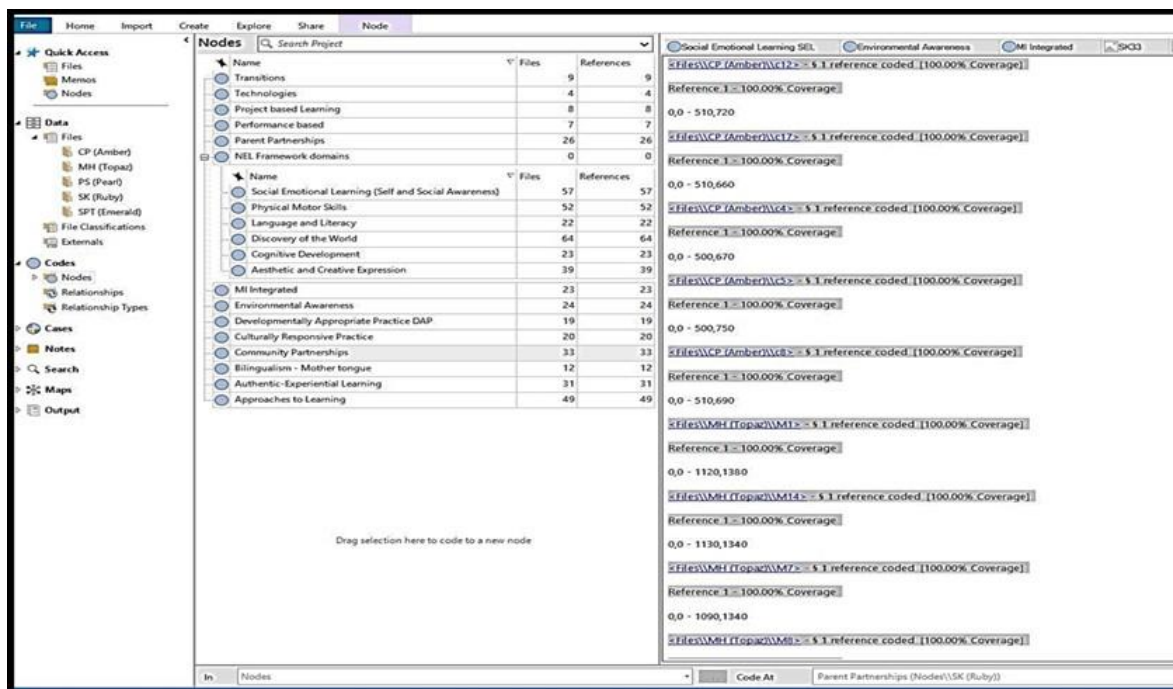
v) NVIVO analysis of social media data – Main image: Montessori Approach (Centre 'Topaz').



vi) NVIVO analysis of social media data - Main image: Thematic Curriculum (Centre 'Pearl')

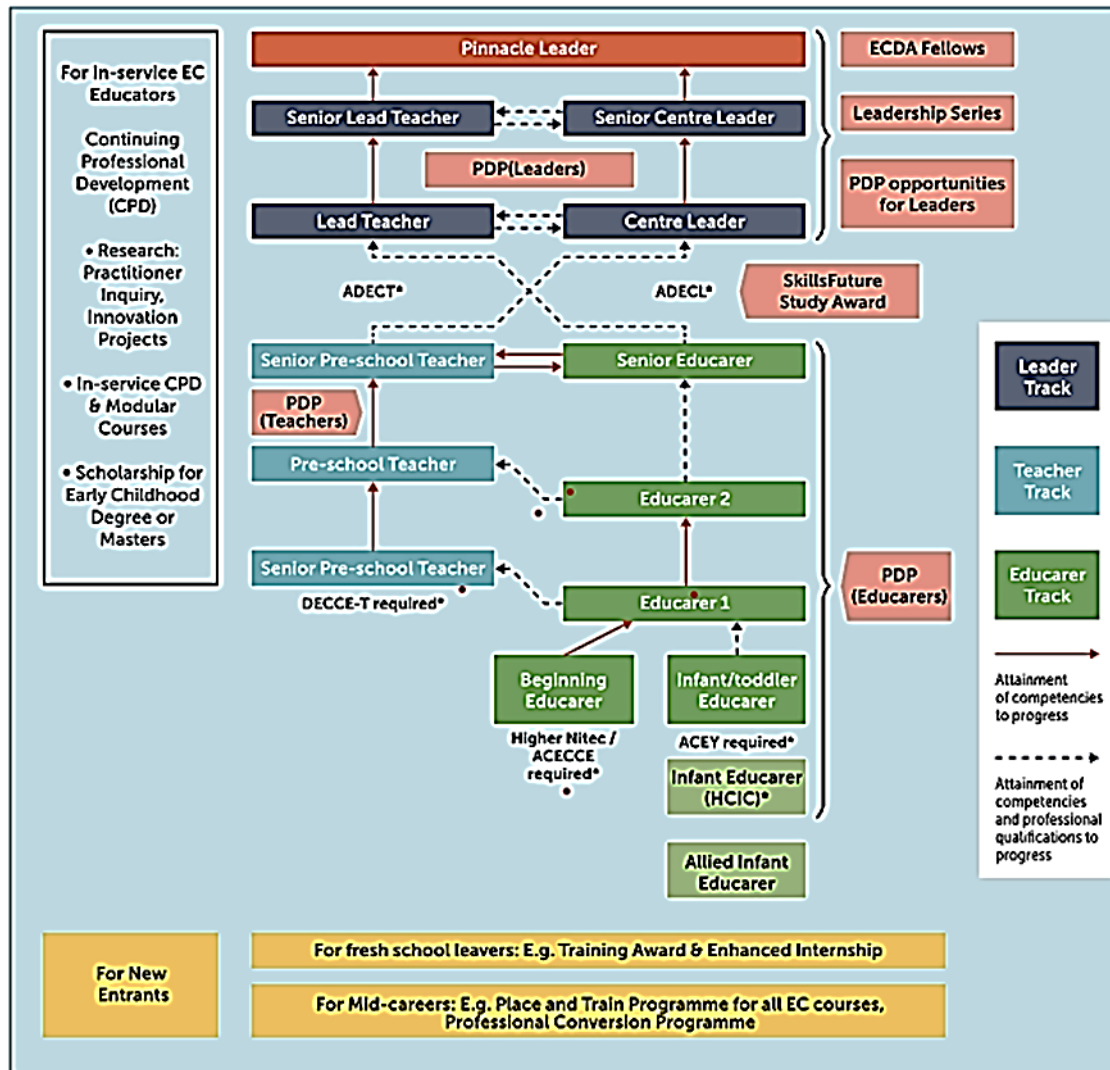


vii) NVIVO analysis of social media data – Main image: Nature walk (Centre ‘Opal’)



viii) Open coding and grounded theory with NVIVO

Appendix J: Pathways for Early Childhood Educators (ECDA 2019)



Appendix K: Content and Thematic Analysis (Interviews)

Curriculum Decision-Making	
Units of Meaning (Condensation)	Codes / Categories
<p><i>I started off following very closely to the NEL framework but over the years have been able to adapt and modify the ideas and approaches....</i></p> <p><i>Children's interests and their 'voice' are key to the emergent curriculum.</i></p> <p><i>My centre does not use the six NEL domains directly but we use the MI or multiple Intelligences skill domains in our documentation.</i></p> <p><i>We do plan for at least a field trip a term or at least a walk through the neighbourhood supermarket for example so that the children are able to connect with experiences outside the classroom.</i></p> <p><i>The NEL framework is a must for us and is the reference point for much our planning</i></p> <p><i>.Although you need to have the children's interests in mind, it still requires 'teacher intentions' as you set up the learning experiences and provocations...</i></p> <p><i>The support of the principal or management is quite important when you want to do something a little different...</i></p> <p><i>Our local culture is such that it is not ingrained in the child to take the initiative so an entirely RE inspired and child-directed approach is not always going to work and some things have to be teacher-led.</i></p> <p><i>Our centre has out own set key learning outcomes for each level group although we use the SPARK evaluation framework.</i></p> <p><i>As an international IB school, we do not need to adhere to certain prescribed guidelines as in the NEL curriculum.</i></p> <p><i>The priorities at the NI /N2 (18mth-3yrs) level is a little different from the K1/K2 (5-6 yrs.) level.</i></p> <p><i>Proper planning to set up the resources and environment that is required so that 'play situations' meet the learning objectives.</i></p> <p><i>We use a variety of approaches including story-based, inquiry, environment and play-based approaches</i></p> <p><i>We have a few specialised programmes; for example one is focussed on literacy and language learning in both English and mother tongue languages and another that is an integrated approach.</i></p> <p><i>There is different focus between our kindergarten and day-care programmes</i></p> <p><i>My centre programme policy is based on a Montessori approach and I also believe that this approach helps children to work independently and at a pace comfortable for themselves.</i></p> <p><i>We are encouraged to contribute with cultural backgrounds as well. For example, during Deepavali celebrations, I will prepare the materials required for henna painting or rangoli creation, some of the Chinese teachers who are able to make dumplings or mooncakes will also prepare the ingredients and materials for the celebrating the festivals at the centre.</i></p> <p><i>Our school uses the Montessori approach and also follow the NEL framework</i></p> <p><i>Our centre adopts a child-centred and inquiry-based approach</i></p> <p><i>The approach is towards child directed learning with the teacher as the facilitator</i></p> <p><i>We have our in-house team that conduct sessions in partnership with the main teachers in the age group level.</i></p>	<p>NEL / Teacher</p> <p>Child Theories / NEL</p> <p>Community</p> <p>NEL</p> <p>Teacher</p> <p>Management</p> <p>Local culture / Teacher</p> <p>Centre Policy</p> <p>School / Centre Policy</p> <p>Child/theories</p> <p>Centre / Teacher</p> <p>Theories</p> <p>Centre Policy</p> <p>Centre Policy</p> <p>Centre Policy / Theories / Centre-Teacher</p> <p>Teacher/Management</p> <p>NEL / Centre Policy</p> <p>Centre Policy</p> <p>Theories</p> <p>Centre Policy / Management</p>

Transformation and change	
Units of Meaning (Condensation)	Codes / Categories
<i>When I first started working in the ECE sector, there was a great deal more emphasis on pencil and paper tasks and children were sitting at the tables doing written tasks.</i>	Pedagogical approach
<i>Parents are much more open now to new approaches as compared to the past.</i>	Parent attitudes
<i>The use of mobile apps and technology has become commonplace within the last couple of years...</i>	Technology / Pedagogical approach
<i>We use the inquiry-based approach quite a lot and this makes the class think and find answers...</i>	Pedagogical approach
<i>The work has become progressively more complex and the type of pedagogical documentation more demanding over the past decade</i>	Teacher work conditions
<i>The approach has moved from a more teacher-led authoritarian approach to a more student-centred approach.</i>	Pedagogical approach
<i>We use a combination of approaches and strategies...for example both Montessori and Reggio-Emilia inspired philosophies are in practice</i>	Pedagogical approach
<i>To allow children experiences that are in real life context and authentic.</i>	Pedagogical approach
<i>We changed from using just checklists to a more portfolio-based assessment.</i>	Pedagogical documentation
<i>We need to nurture kids who are creative and have critical thinking skills and not those that are unable to think independently.</i>	Teacher beliefs and philosophy
<i>Children are encouraged and made to contribute their ideas to a project</i>	Pedagogical approach
<i>We look at learning through quality interactions and purposeful play</i>	Pedagogical approach
<i>The community project has made the children much more aware of their environment beyond their home and school settings</i>	Pedagogical approach
<i>Although they say that there is change implemented, sometimes they don't always walk the talk.</i>	Policy
<i>There is quite a lot funding and grants from the government to allow practitioners to obtain or upgrade their qualifications.</i>	Support
<i>We have STEM projects and robotics enrichment sessions in some of our branches.</i>	Pedagogical approach
<i>I observe that parents are more open to a variety of learning experiences including music and the arts, computers and STEM programmes.</i>	Parent attitudes
<i>Our centre management also supports innovation grant proposals.</i>	Support

Challenges and Concerns	
Units of Meaning (Condensation)	Codes / Categories
<i>There has been a great change over the past two decades or so. When I first started, it seemed much simpler and it was quite optional whether one wanted to take up formal early childcare education qualifications.</i>	Work conditions
<i>The paper work and documentation has become more complex and challenging. Different centres have slightly different ways and we need to supplement the written aspect with photo-documentation, set up learning corners, together with organization of event celebrations etc. It's quite a non-stop schedule.</i>	Work conditions
<i>Parents can be very demanding and have certain expectations. In some centres, teachers are afraid to bring children outdoors and into the playground because of the possibility of accidents and mosquito bites.</i>	Parents
<i>We are entitled to at least 14 days of annual leave with an additional day for every year working with the centre. However, it is challenging if I want to take up a course and I have used up all my paid leave so I ended up taking unpaid leave to attend some courses. It all depends how supportive the management is.</i>	Work conditions
<i>Parents may have unrealistic expectations. I believe that there is a need for 'parent education' and information so that they are better able to be involved in their child's learning without undue expectations.</i>	Parents
<i>I did not feel adequate or prepared in dealing with special needs children placed in my class.</i>	Teacher
<i>It is not always so simple to implement curriculum changes and initiatives and it is not an overnight change.</i>	Teacher
<i>Sometimes, parents are in denial when their child requires additional assistance as they are afraid that the child will be denied opportunities if they are diagnosed with special needs.</i>	Parents
<i>I have centres principals calling me and asking me if my centre (which has a very inclusive policy) has spaces for special needs children. They feel unprepared and inadequate managing children with additional needs.</i>	Colleagues
<i>There are some communication issues if the Mandarin Teacher is not local and is unable to communicate with the English language teacher as they often have to work together in planning and implementing the unit for the term.</i>	Colleagues
<i>In the eyes of the parents, we are often seen as doing a 'nanny's' job so there is sometimes not much respect for childcare and kindergarten teachers.</i>	Parents
<i>Being a private operator in Singapore is quite challenging: the rental of premises is one thing, teacher's wages must remain competitive and maintaining quality of education and childcare is another key factor. In the private sector, you ultimately have to look at the P&L.</i>	Management
<i>There is a tendency for some of our facilitator and teachers to 'job hop' from one centre to another. I would say these workers are actually spoiled for choice.</i>	Management

Parental involvement, expectations and attitudes	
Units of Meaning (Condensation)	Codes / Categories
<i>We would like to involve the parents more, we have a 'meet the parents' curriculum evening in the beginning of the year.</i>	Involvement
<i>The parent may be in denial even if the child requires additional assistance as in a special needs child.</i>	Attitudes
<i>The parent is the child's first teacher and I will get the parent's involved as much as possible in my enrichment programme especially those under 3s</i>	Involvement
<i>We believe in strong partnerships with parents and families so we conduct workshops and family events</i>	Involvement
<i>We want to get in touch with parents so that they are not too distant from their child's learning</i>	Involvement
<i>Some Asian parents have very performance-oriented goals for their child and they want to know exactly what their child has learnt or achieved</i>	Attitudes
<i>If the parent want the child to be doing more 'written' work or practice, the centre will provide the worksheets.</i>	Expectations
<i>In the eyes of some parents, we are often seen as doing a 'nanny's' job and sometimes there is not enough respect for childcare teachers.</i>	Attitudes
<i>Parents can be overly demanding and the centre will try to cater to parents expectations.</i>	Expectations
<i>Parents are now open to other forms of learning, not just the academic aspects of a child's development.</i>	Attitudes
<i>Parents are sometimes in denial about their child's learning disability.</i>	Attitudes
<i>They are worried that their child will be rejected or denied certain opportunities if he gets diagnosed as special needs.</i>	Attitudes
<i>Parents often still prefer the face to face and more direct communication with the teacher</i>	Attitudes
<i>I will tell the parents to think more about getting the child 'school ready' by learning to be more independent and socially competent, it's not just about being able to read or count.</i>	Attitudes
<i>Informal interactions with parents and the child main caregiver may occur on a daily basis but our formal parent-teacher meetings take place twice a year.</i>	Involvement
<i>I believe in striking a balance between parent expectations and demands with what actually is beneficial for the children.</i>	Attitudes / Expectations

Appendix L: Comparative analysis of Interview Participants

Primary Categories	Reena	Shannon	Anne	Felicia
Profile				
Role	*Preschool teacher	* Enrichment class facilitator	* Principal	*Special needs educator
Age group	* In her 30s	* In her 30s	*In her 40s.	*In her 20s
Years of experience	* 10 years	* 12 years	*>20 years	*7 years
Family/Children	*Married with 2 children	* Married with 3 children.	* Married with a grown up child.	*Single
Qualifications	*Diploma in ECCE Teaching & Leadership* Bachelor's in Early childhood education	* Master Degree (ECE) * Centre director * Enrichment class Facilitator	* Bachelor's Degree in Early childhood ed. With qualifications in Special needs education.	*Diploma in Special Needs Education *Currently pursuing her Bachelor's Degree in Psychology
Personal Beliefs & Experiences				
Background and Work Experiences	. *Spent several years in Norway with husband.	*Music experience and training.	*Started as an early childhood educator more than 20 years	*Worked as an allied educator or learning support officer at different levels.
Personal experiences	*Started as a preschool teacher	*Basic degree in another unrelated discipline as no local degree programme in ECE at that time.	*Took her degree from an Australian University Degree programme.	*First qualification was a polytechnic computer engineering diploma.
Aspirations	*Very involved with own children development. *Worked in 3 different centres each for a number of years.	*Conducted music sessions on the side. *Feels that more can be done for music and aesthetic awareness and appreciation.	*Own child was diagnosed with ASD. *Feels that much more can be done to support added needs children.	* Experienced working with learning and multiple disability, working with a therapy team.
Curriculum Perspective				
Personal Philosophy	*Has practical understanding and knowledge of the RE-inspired, MI or multiple intelligences and the NEL approach.	*Music education programme from US (infants to 6 years.)	*Both mainstream and additional needs learners.	*Play-based approach.
Pedagogical	*Takes pride in creating learning spaces and materials for class.	*Holistic approach and believes in parental role at a young age in the child's learning.	*NEL framework and individualised EP.	*Age and ability-appropriate
Practical		*Equipment and approaches are age-appropriate.	*School provides in-house support for special needs learners	*Children with multiple disabilities and cognitive handicap respond to very simple short instructions.
Influences on strategies			*Use of AAC or augmentative alternative communication apps	*provide appropriate sensorial experiences