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**TRAINEES VOICES: AN EXPLORATION OF THE
IMPORTANCE OF CHILD DEVELOPMENT, THE
THEORIES OF CHILDHOOD AND PLAY-BASED
LEARNING FOR ANY ADULT WHO WORKS WITH
YOUNG CHILDREN FROM BIRTH TO PRESCHOOL
YEARS**

By
Sepalika Hylinee Kumarasinghe
M.Ed

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Doctorate of Education (Ed.D) of the University of
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TRAINEES VOICES: AN EXPLORATION OF THE IMPORTANCE OF UNDERSTANDING CHILD DEVELOPMENT, THE THEORIES OF CHILDHOOD AND PLAY-BASED LEARNING FOR ANY ADULT WHO WORKS WITH YOUNG CHILDREN FROM BIRTH TO PRE-SCHOOL YEARS.

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ABSTRACT

In January 2001, the Singapore Ministry of Education (MOE) and Ministry of Community Development, Youth and Sports (MCYS) jointly set up Pre-School Qualification Accreditation Committee (PQAS) to oversee the standards and quality of pre-school teacher training for both kindergarten and Childcare sectors. The MOE and the MCYS introduced an integrated Pre-School Education (PSE) framework for teacher training and accreditation applicable to pre-school personnel. The training route for pre-school teachers came into effect in January 2001. Teacher training and the qualifications offer high leverage opportunities for enhancing standards of training and expanding career opportunities for pre-school professionals in Singapore. The various levels of training are planned to cater to the different needs of the teachers and prepare them for leadership in the sector. This will ensure that pre-school professionals are well equipped to provide our young children with an enriched learning environment, to nurture their social skills and values, and prepare them for lifelong learning (www1.moe.edu.sg/preschooleducation).

The majority of teacher trainees involved in this research have been working as caregivers in most Child Care Centres in Singapore without relevant knowledge of the child. The study is underpinned by the contemporary argument that any adult who works with children needs to know about Child Development, Theories of Childhood and Play-based Learning Environment, which actively challenge the traditional stereotypical notions that experiences alone would be sufficient.

Understanding the growing child would no doubt help to focus on appropriate tasks for the child. Central to the focus of the study is to gain an understanding of the existing knowledge of the teacher trainees (both who are working with children and otherwise) before and after the study sessions and how such an increase of knowledge could empower and enfranchise the teachers to make informed decisions in the child's life. At the completion of the course they were able to comprehend the most important factors of the growing child that they were considerably unaware of and better manage behavioural situations with the child.

The teachers' final records of Observation and Evaluation, Professional Journals of the children combined with a final powerful public presentation of the Child Study Making Learning Visible no doubt heighten the educational process as a learning discipline, a vital link that provides a powerful medium to interact with the growing child.

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CHAPTER ONE

Introduction

Preamble

In the last decade, the issue of 'Child Development' has become a much debated, often complex, and certainly contentious subject of educational academic inquiry. A new focus on the powerful influence of the necessity to 'learn about the growing child' especially for those dealing with children from birth to five years has meant in particular, a challenge to traditional pedagogic approaches that experience alone would be sufficient.

Before the twentieth century, most adults did not feel there was anything special to be known about young children (Charlesworth, 2004). Spurred by researchers and educationists, understanding child development became a central issue in 1920s and 1930s for parents, teachers in training and teachers in service. During the early twentieth century, however, most of the understanding of psychological development could still not have been described as 'scientific' knowledge; much was still at the level of anecdote and opinion. In 1920s and 1930s the knowledge was organized through both observational and experimental studies of the child. Child development research got seriously underway in USA during this period with the Institute of Child Study or child welfare in university centres such as Iowa and Minnesota (Cowie, 1991). The study of how children grow and learn developed into an area that stands on its own merit.

Over the years a new awareness of child development reveals the consistent balance of the child's physical, intellectual, social and emotional development. In education this is a relatively new phenomenon. The study of child development helps adults understand the general ages and stages of development of young children. Most importantly adults' positive interaction play an important role. Social learning theorists such as Albert Bandura (1977) argued that through continued interaction with the social world, both the adult and the child construct and maintain socially appropriate specific behaviours and attitudes. Adult mediation is also recognized as an important component in the child's



learning. Children become active learners in the company of adults in a nurturing and positive environment.

The Researcher's Voice

In Singapore the need for quality care became a central issue and the development of early childhood teacher education in childcare and kindergarten preschools became the focus point. Science and technology have played a major role in changing lifestyles, enhancing productivity, and propelling people ahead of their time. Many societies have been quick to adopt the findings of other's research and development and, with their earned foreign exchange reserves, bought themselves a place in the global village, a seat on the information exchanges of the world. Singapore too has been transformed into a complex society which has in turn, impacted on the decisions regarding education and the curriculum. Education has played a very vital role in this development. With the development of a knowledge-based economy in Singapore, education will continue to take a center stage in national and regional development.

During the last five years as a lecturer in early childhood education, I have had the privilege to meet number of trainee preschool teachers in Singapore. In my role as the child development lecturer for trainee teachers, I have interacted with them and have observed and understood their knowledge of child development before and after the training sessions.

My argument is that most of the teacher trainees had been in the child care services for many years not knowing the background to the child's physical, intellectual, social and emotional development, major theories of the growing child and how to create a play-based learning and teaching environment.

At the completion of the course they were able to comprehend the most important theoretical ideas and views of the growing child that they were previously unaware of and were better able to handle behavioral situations with the child.

The argument of the research is that understanding child development, theories of childhood and play based learning environment are crucial to anybody who deals with

children. Without understanding adults may not be able to be 'successful practical' teachers of children. Regarding the term 'understanding' as cited in Newton (2001) Zazkis (1998) argues that 'to understand something better mean to assimilate it in richer and more abstract schema.'

If so, prior to the training the majority of the trainee teachers who were involved with children weren't aware of the developing child, theories and play. How could they have facilitated learning according the child's ability?

Some teacher trainees had bachelors' and masters' degrees in subjects like English Literature, Information Technology and Nutrition. Without a clear knowledge of the child, how could such adults facilitate a holistic approach to development and learning. In recent years it is strongly advised that the knowledge of child development is necessary to understand, interact with, and plan for children (Charlesworth, 2004).

- If so, my argument is how did those without such knowledge deal with the child for many years?
- What is their image of the child?
- How do they relate to children's thinking?
- How would the teacher apply programmes appropriate to the child's development?

Newton (2001) argued that understanding is both a mental process and a mental product. Nickerson (1985) described it as 'the weaving of the bits of knowledge into a coherent whole.' Further English (2001) voiced that 'knowledge of child development should be the driving force in delivering that curriculum.'

Teachers' overall knowledge of how children grow and develop, how they think, play and develop physically, intellectually, socially and emotionally are the key factors of early childhood education.

My argument is that within the period of the study of child development trainees' gradual realization would be reflected in a marked difference in their documentation and presentation of the child's attitudes and thinking. The trainees' own significantly increased understanding should be apparent in the same Questionnaire Responses **before** and **after** the study session. In their documentation of the **Observation and Evaluation of the Child**, the **Professional Journal**, and the final presentation of '**Making Learning**

Visible' as part of the **Child Study Module** which had presented the acquired knowledge. Newton (2001: 191) described understanding as being about 'getting a handle on things', about being able to make connections between facts and ideas, and being able to see relationships and patterns. In the training school the teacher trainees were absorbed in 'getting a handle on things' (Newton, 2001).

From the very beginning I was fascinated by the interest of the teacher trainees to acquire the knowledge of the developing child and their eagerness to acquire the theoretical view of the child. I noted that their eagerness, enthusiasm and interest to learn about the child, was a deep rooted commitment and desire to know and understand. However, it is this growing interest, and the interaction and attitudes within the classroom that ultimately became the driving force for my research study. From the point of view of an educator, I was passionately interested in the way trainees developed a keen interest within the first few lectures socially, personally and academically, in the classroom context. I was curious about what was actually happening in the classroom when the teacher trainees were busily involved in voicing their regrets for not knowing the process of child development before they started work with children or when their own children were young. Gradually, I sensed their frustrations of not being aware of the nature and temperament of the child.

What sub-text was at work in their behaviour and attitudes – what was not actually being seen or heard? What dynamics were active in the interpersonal relationships of the trainees during their lesson time?

As a result, I made a choice to discuss, observe, and document, the classroom lives of a group of teacher trainees over a period of 5 years in order to find out about how their 'realization, understanding of the realities of the child' informed, or were informed by, the work, discussions, readings and their experiences they created within the classroom. In choosing to observe and record classroom activities, thoughts and ideas from the beginning of the sessions I felt a clearer picture would be revealed and authenticated more acutely. I considered it important that the 'voices' of the trainees be free from restrictions, which may have altered their natural relationships with each other.

A firmly held desire to capture the teacher trainees' existing knowledge was my prime target in this educational study. The significant underlying assumption for this research is

what they know. Both their traditional and contemporary ideas and views gave impetus to my assertion that the educational lives of trainees need urgent investigation and reassessment. This study is grounded in an assumption of their existing knowledge.

In my lectures I promoted child centered educational practice, which challenged the traditional and stereotypical notions of teacher centered learning and development in pre schools, which is quiet common in Singapore. I acknowledged teacher trainees' current thinking, I focused their minds to think otherwise through analysis of the child's stages of development. Whilst trainees had their own stories to tell, it was the voices of trainees that I was privileged to hear in this study in a hope that their educational profile may be raised where it had long been in the shadows of their superiors.

I encouraged them to think realistically, and believe that the child's voice and reactions are important in the eyes of adults. I also encouraged them to recognise and value their own talents and strengths, in celebrating their differences in a way which is proactive and empowering. I believed that research grounded in child centered ideology would allow the ever changing multivocal experiences of teacher trainees, and should not prescribe to academic rhetoric which cannot be transferred and applied to everyday pedagogical practice. In short, my aim here was to conduct research, which would allow the trainees themselves to be confident of future changes in practice and planning in children's classrooms, and to work with others in their quest for the right attitude towards the child. Indeed, throughout the journey their realities shaped the research narrative, and their voices weaved the stories.

As these 'stories' unravelled over time, the study encompassed not only the 'classroom' stories of the children, but also those stories associated with the trainees' own personal life when dealing with their children. Slowly, a sociological profile began to emerge which was important for me not only in order to understand the teacher trainees' themselves as individuals, but also for the opportunity it afforded me to gradually deconstruct and consider some of the motivations behind their choices and interactions in their weekly classroom activities. Interestingly, it was not only the stories of the trainees' regrettable experiences they had encountered with children which gave substance to the study, but also the emergence of my own story and the realization of the importance of my research. As the weeks unravelled, my researcher position was challenged and shaped

by the teacher trainees changing responses to me, as well as those changes, which occurred often quite unexpectedly, inside me. My relationship with the teacher trainees and their changing responses to my role in the classroom, form a complete chapter in this research narrative. My stories, juxtaposed with those provided by the teacher trainees, reveals a journey, which was at worst, frustratingly demanding, and at best, a most enlightening and satisfying experience! It was for me, in the words of Adrienne Rich, (1980) the act of looking back, of seeing with fresh eyes, of entering an old text from a new critical direction (p.35).

Organisation of the Study

This **Chapter One** has outlined the educational and sociological philosophy in which this study is grounded. It has established the conceptual framework, which underpinned my research journey, and highlighted the essential foci of the study.

Chapter Two emphasises the Societal and Parental influences, Curriculum Organization, Assessment Arrangements, Teacher Training and Qualifications of Early Childhood Education in Singapore

Chapter Three provides an overview of the **Positive Environment and the Developing Child** which focuses on the necessity for any adult who wishes to be involved with children to acquire a sound knowledge of child development and the vitality of understanding the child's critical years and the need to have a consistent and predictable care-giving environment with opportunities for discovery and exploration.

Chapter Four discusses the **Review of Theories of Childhood**. Child Development Theories have been the foundation of educational and child-rearing practices. Theoretical ideas are designed to show a plan or set of rules that explains, describes, or predicts what happens and what will happen when children grow and learn. Piaget's Cognitive theory, Vygotsky's Sociocultural theory, Erik Erikson's Psychosocial theory, Skinner's Theory of Behaviourism, Bandura's Social Learning theory and the

Information Processing Approaches are discussed extensively examining the crucial role adults play in children's learning. The major issue discussed is the degree to which adults serve as guides, or facilitators who possess the capacity to shape the child's thinking, communication, learning and behaviour.

Chapter Five argues the role of the educator in merging play and constructivist views so that learning through play and teaching through play becomes one unified whole. Discussion emphasizes the importance of the adult's role as a facilitator of children's play. Adults provide scaffolding, space, and materials.

Chapter Six explores the epistemological and methodological frameworks of the study itself, and provides an overview of the research context and participants. It comprehensively describes the research process, examining the implementation of ethnographic case study methodology, analysis and synthesis.

Chapter Seven analyses the ethnographic research journey through a narrative representation of the study period. It values the voices of the teacher trainees and their experiences with the outside child care supervisors and relationships within the classroom. It specifically documents the journey in terms of their recorded attitudes, behaviours and responses, over the research period.

Chapter Eight recognizes the researcher's voice, in an analysis of the ethnographic journey and the related experiences of the participants and the researcher. This chapter is concerned with the changes in both my own and the trainees' responses, from the first day I began work as a researcher in the classroom, to the final Presentation of 'Making Learning Visible' in the Child Study module and work documentation. This chapter will also summarise and critically discuss the experiences and responses of the teacher trainees and the researcher, highlighting important findings and implications of understanding child development for teachers in training and for those wishing to work with children.

Possible directions for further study into this area will be considered, with questions posed for future investigation into developing extensive teacher training facilities, and participation in child advocacy, especially the crucial adult role in child development that is listening closely to children. Adults dealing with children need to be observant and attentive. Similarly the general public need to understand that well trained early childhood educators and quality care centres could make a difference not only in the child's immediate life but for generations to come as the positive formative years could eventual result in creating a positive, happy self-confident human beings.

CHAPTER TWO

Societal and Parental influences, Curriculum Organization, Assessment Arrangements, Teacher Training and Qualifications of Early Childhood Education in Singapore.

The Background

In November 1999, the Ministry of Education (MOE) set up a Pre-school Education Steering Committee to study how the quality of preschool education in Singapore could be improved. This Committee has defined a new set of desired outcomes for pre-school education - issued in March 2000 - and has contributed to the development of a new framework for pre-school teacher training and accreditation. The Government is keen to emphasise that it did not set up the pre-school education Steering Committee with a view to enabling central government to take over preschool education provision, as it believes that private sector and community involvement in preschool education allows for diversity of ethos and teaching methods. The Committee is concentrating its efforts on several crucial areas such as defining outcomes, designing curriculum, training teachers, improving the regulatory framework, and conducting research.

Singapore is a small island state in South East Asia where education is highly valued by its multi-racial populace who are the nation's only natural resource. The highly competitive education system based on meritocracy rewards industry and achievement. Over the years since Singapore gained independence in 1965, the country's education system has evolved from an initial concern with economic survival and nation-building to a very rigorous system committed to nurturing talent and, of late, encouraging a spirit of enterprise and innovation. In such a system, academic qualifications are highly valued, and the typical school-going child in Singapore is tested regularly with examinations at least twice a year from the age of seven when he or she starts school. Preschool education in Singapore, established since the 1960s, ranges from full- and half-day childcare centres to two- to four-hour kindergarten programs for children aged two to six. Although

preschool education is not mandatory, the majority of children below the age of seven attend some kind of preschool facility.

With the increased need over the past two decades for non-parental care for young children in Singapore, as in many other countries, there has been a tremendous growth in the number of childcare centres and preschools (Ministry of Community Development and Sports, 2003). With easier access to information through the various information technologies, parents have become better informed about the latest developments in the fields of early childhood development and education. Parents are now questioning teaching and caring practices more than before and taking more time to find the most suitable type of care for their children (Shape 2000). Parental expectations are influenced by their cultural and social expectations, which shape their views when they are looking for appropriate childcare centres (Tobin et al, 1989).

The cultural context is central to all aspects of child rearing, parenting styles, and to parent–parent and parent–child interaction (Mikulus & Suvannathat, 1985; Swick, 1985; Banks, 1993; Hujala-Huttunen, 1996; Brown, 1997; Thomas, 1998; Wang & Phinney, 1998; Ojala, 2000). Culture has a pervasive influence on all domains of a person's life. Cultural beliefs and values are an 'internalised script' that parents follow whether they are in their native or an adoptive environment (Foss, 1996). There is a body of literature that examines the significance of social and cultural influences and the effects of parents' involvement in and expectations of their children's development and learning (Ebbeck, 1995, 1996; Ebbeck & Wei, 1996; Hujala-Huttunen, 1996; Clarke-Steward, 1998; Dencik, 1998; Ebbeck & Glover, 1998; Roer-Strier, 1998; Wang & Phinney, 1998; Liang et al, 2000; Ojala, 2000). One of the most notable theorists to recognise the influences of immediate and wider environments on human development is Bronfenbrenner (1979), who proposed that an individual does not grow in isolation but grows as a result of interaction with his or her environment and that this environment consists of multiple, interconnected layers. For example, LeVine (1974) stated that the differences in parenting patterns evolve as a response to environmental risks threatening a child's survival and self-maintenance. In an early publication Kohn (1969) maintained that occupational roles affect adults' attitudes and values, and ultimately influence their parental role.

There is not a large amount of documented evidence of studies which have been undertaken on aspects of socio-cultural influences on child rearing in Singapore. However, there have been a number of interesting studies and writings on the expectations and aspirations of Singaporean families for their children's future, and on the types of preschools they look for to support the beginnings of their children's formal education (Hoon & Lazar, 1992; Sharpe, 1993; Hoon, 1994; Raban & Ure, 1999; Fan-Eng & Sharpe, 2000; Retas & Kwan, 2000). Most of the studies which have been done reflect the influences of the Chinese culture, which is the majority culture of Singapore. Confucian ideals, which include respect for elders, deferred gratification, and discipline, have a strong influence on the Chinese culture (Feng, 1994). According to King & Bond (1985) and Chao (1994), Confucian principles require that the elders must assume the responsibility to teach, discipline, and govern their children. These values are visible in the parental expectations of formal, teacher-directed education, which parents see as being desirable for their children. Super & Harkness (1986) present a view that cross-cultural differences in parenting are a result of adult beliefs about the nature of children and about the world in general. They identified obedience, responsibility, nurturing, achievement, self-reliance, and general independence as the central dimensions of child rearing. These traits are believed to be common to all societies. However, the degree to which these are achieved and which traits are given the most emphasis will vary for each society. Child rearing in Singapore would add to the existing bank of knowledge about early childhood education and care in that country.

In addition, the parents' play an important role in selecting suitable childcare centres for their children. In the research done on Child-Rearing Practices in Singapore by Ebbeck and Gokhala (2004), reflected the parents' thoughts as important elements in their children's development. Their study was based on the belief that children benefit greatly when the expectations of behaviour and self-help skills are consistent between the environments of the home and the childcare centre. The analysis of the results of the parents' interviews, discussions with teachers, and the observation visits confirm that, in spite of some similar views shared by parents and staff at the centre, actual practices in the two environments varied greatly. Specific differences were identified in the areas of discipline (behaviour management) and in self-help skills. Although physical punishment

was used neither at the centre nor at home, the centre used consistent forms of discipline, where reasons and explanations were always given for unacceptable behaviour. This was not the case in the home environment, as only 14 % of parents believed in reasoning and explanations.

According to Ebbeck and Gokhala (2004), another significant difference was that some 60 % of parents stated that threatening children was an effective method of discipline. This again was not a strategy used in the centre. With regard to self-help skills, they were, as mentioned earlier, consistently encouraged in the childcare centre.

However, the parents' responses show that only 10% expected their children to use self-help skills at home. The fact that such a large number of parents supplement the centre's program with private tutoring for their children shows a concern on the part of most parents for academic achievement in their children at this early age. This finding confirms those of Hoon (1994) and, more recently, of Raban & Ure (1999) that Singaporean parents want an academically oriented program for their young children. As Hoon states (1994, p. 2): 'the choice of preschool presents to parents their first major educational decision for their children'. It would seem that not much has changed in the minds and hearts of the Singaporean parents who, in deciding what they want as best for their children, believe that this will be attained via an academically focused curriculum rather than one with a play-based orientation. In terms of traditional Confucian ideals, where children are celebrated in extended families, whose belief is that 'the beginning decides the end' and that childhood is a special time, it can be stated that this belief is not widely visible in Singapore. This change in cultural emphasis is probably linked to the merit oriented and highly competitive education system and work ethos of Singaporeans (Ebbeck and Gokhala 2004).

As childhood is regarded as an important brief period, in a child's life providing a nurturing environment, by trained preschool teachers is crucial to the development of the whole child.

Teacher Training and Early Childhood Education in Singapore

The training of the teachers became the focal point of the Singapore government. The Teachers' Training College and, thereafter, the Institute of Education took over the training in 1977 and 1981 respectively. With increasing demand for trained staff following the Education Act of 1985 and corresponding Childcare Legislation Act of 1988, there was a marked increase in the number and the level of training courses available as well as training facilities (Sharpe, 2000). Currently, besides the National Institute of Education, established in 1991, a number of training agencies also provide training, including the Singapore Institute of Management (now established as an Open University), KinderLand Learning Center, Advent Links-SAUC, Ngee Ann Polytechnic, Regional Training and Resource Center and the International Centre for Early Childhood Education (Lim, Gan and Sharpe, 1997). There are many other teacher training centres approved and accredited by the Ministry of Education (MOE) and Ministry of Community Development Youth and Sports (MCYS) to develop a more play based learning environment.

Early Childhood Curriculum Organisation in Singapore

Define early years settings, to include all providers of funded places

Early years education in Singapore caters for children from the ages of three to six years in kindergartens, or from babies to six years of age in childcare centres. Although early years education is not compulsory, as parents in Singapore place a premium on education in general, almost 99 per cent of children experience between one and three years of early years education.

Kindergartens (for three- to six-year-olds)

Kindergartens are run by various groups, including community foundations, social groups, religious bodies and private businesses. Fees are payable, and those run by foundations, religious bodies and social groups may receive financial subsidies or grants from their parent organisations.

Childcare Centres (for babies to six-year-olds)

Childcare Centres offer full-day or half-day programmes for children who are not yet in schooling. The centres, which come under the jurisdiction of the Ministry of Community Development and Sports (MCYS), also offer pre-school education activities to children placed under their care. Working mothers are provided with a government subsidy per child for children attending half-day care. Parents usually enrol their children in childcare centres or kindergartens which will meet the language needs of their children. Malay, Chinese (Mandarin), Tamil and English are the official languages.

How long are the funded sessions?

Kindergartens function every day, five days a week (Monday to Friday), for sessions of between two-and-a-half and four hours a day. Most offer at least two sessions per day. Kindergartens follow the academic year observed by schools in the formal education system. This consists of four 10-week terms beginning on 2 January each year. There is a one-week vacation after the first and third term, a four-week vacation mid-year, and six weeks at year-end.

Is there an Early Years curriculum?

The Ministry of Education (MOE) publishes pre-school curriculum guidelines and desired outcomes for pre-school education (for children aged three to six years). On the basis of these, kindergartens and childcare centres are expected to build and plan their curriculum to cater for the needs of the children in their charge. The desired outcomes are:

At the end of pre-school education, children will:

- know what is right and what is wrong;
- be willing to share and take turns with others;
- be able to relate to others;
- be curious and able to explore;
- be able to listen and speak with understanding;
- be comfortable and happy with themselves;
- have developed physical coordination and healthy habits; and

- love their family, friends, teachers and kindergarten.

The Ministry of Education is currently in the process of reviewing the guidelines for the early years curriculum, based on new desired outcomes for pre-school education. The new desired outcomes for pre-school education aim to guide early years teaching in Singapore by encouraging learning processes that are aimed at an all-round holistic development of the child. The goal is to capitalise on a child's curiosity and activity level, based on their developmental stage, ensuring that he/she learns in fun ways, and that his/her motivation and interest in learning are stimulated through exploration and discovery.

If so, what are the principles underpinning this curriculum?

The kindergarten programme places emphasis on the overall development of the child, namely his or her intellectual, emotional, physical, social and moral development, so as to lay a good foundation for formal education and lifelong learning.

Kindergartens and childcare centres aim to provide graded instructional programmes which will enhance the overall development of pre-school children, and provide a good foundation for formal education. To this end, most offer a programme of daily activities for three- to six-year-olds which includes:

- exposure to two languages – usually English and mother tongue (Malay, Chinese (Mandarin) or Tamil);
- pre-number concepts;
- simple science concepts;
- art;
- indoor free choice activities;
- outdoor play;
- story/rhyme time;
- music and movement; and
- social skills activities.

The pilot new curriculum

The pilot new curriculum, based on the new desired outcomes for pre-school education, aims to be balanced. It is not given to any single school of thought or model, but aims to be suited to Singapore's local and historical context. This has traditionally involved an over-emphasis on academic and rote learning, whereas the new curriculum guidelines being piloted incorporate information on how children learn, and on how to provide learning environments in order to capitalise on children's curiosity and activity level, based on their developmental stage. The revised desired outcomes for pre-school education focus on values, attitudes and skills, but make no mention of specific competencies in reading, writing and arithmetic. This is deliberate, with a view to preparing children for lifelong learning, rather than for entry to primary education.

Are children grouped in any particular way during each session?

The three years of kindergarten, children aged three to six years, are divided into three groups, by age, one for each year: nursery (three- to four-year-olds), kindergarten 1 (K1) (four- to five-year-olds), and kindergarten 2 (K2) (five- to six-year-olds).

At what age do children transfer to compulsory education?

Children aged six on 1 January of the year of admission are admitted to Primary 1. The school year commences on 2 January. There is an average of ten years of formal general education, commencing at age six and comprising six years of primary school education, followed by four years or more in the secondary sector. This education is universal, but not compulsory. The Government has, however, recently accepted the recommendation of a review panel that these ten years of formal education should become compulsory.

Assessment Arrangements

Quality Assurance

What systems and procedures are in place for funded settings?

Although early years education is not publicly-funded, strict guidelines and supervision are provided by the Ministry of Community Development Youth and Sports (MCYS) for the running of childcare centres, and by the Ministry of Education (MOE) with regard to kindergartens.

Kindergartens (for three- to six-year-olds) and childcare centres (for babies to sixyear-olds) are registered only when their programmes and curricula, teacher qualifications, and premises meet the minimum standards set by the MOE and the MCYS respectively.

Each of the Ministries has its own standards and criteria for staff qualification, training, and performance according to the objectives of the programs. Nationally accredited courses are now available for both kindergarten and child care teachers. There are three levels, including the advanced course or Certificate in preschool management and administration; the intermediate course or Certificate in Preschool teaching; and the basic course. The content of these three levels is geared to providing teachers / principals /supervisors with knowledge, skills and strategies in sequential order.

- Aspects of child development and management and the teaching of language, mathematics and creative activities are covered in the basic course.
- At the second or intermediate level, the emphasis is on the provision of developmentally appropriate experiences for children from eighteen months to six years of age. Aspects such as observation, planning, presentation and evaluation are covered.
- Intermediate course participants design, prepare and present teaching materials and resources across the curriculum areas. Management and supervision of staff, children and their parents, administration of the programs following the guidelines provided by both the ministries and based on each center's philosophy

and goals. Kindergartens require a fixed ratio of qualified staff based on its operating capacity. The Childcare Legislative Act also stipulates trained staff based on this criterion (Sharpe, 2000).

In November 2000, the two ministries jointly put together a document on accreditation guidelines for preschool teacher training/education courses. This is based on the research rationale that quality of preschool provision depends greatly on the quality of training received by preschool teachers. Teachers with specialized training in child development contribute to positive classroom climate, and are able to promote more sociable and co-operative behavior in children. These teachers are also able to encourage children to persist in their tasks and develop their thinking and problem solving skills. Studies (Berk, 1997; Arnett, 1989) have also revealed that teachers with specialized training in child development understand children's behavior better, are more positive in their interaction with children, less punitive in behavior management, and more willing to spend quality time with them. They are also found to be more likely to encourage and motivate children to learn, to provide more indirect guidance, to encourage initiative and verbal expression and are less restrictive (Honig & Hirallal, 1998).

Teacher Qualifications

Do all staff have an early years qualification?

Kindergarten teachers are usually expected to possess appropriate academic and preschool teacher training qualifications, such as the Certificate in Pre-School Teaching awarded by the National Institute of Education (NIE). A person deemed to have the appropriate minimum academic qualifications, but who does not have any specific pre-school training may be considered for approval as a temporary teacher for a two year period, pending enrolment on a pre-school teacher training programme.

Recent changes

In January 2001, following recommendations from the Pre-school Education Steering Committee a new Pre-school Education, Teacher Training and Accreditation Framework

was introduced by the Ministry of Education (MOE) and the Ministry of Community Development Youth and Sports (MCYS). This framework seeks to accredit training courses for supervisors and teachers in childcare centres and kindergartens, and to ensure that there is a clear, common training route for those who intend to acquire qualifications at the certificate and diploma levels. A Pre-school Qualifications Accreditation Committee has also been formed to accredit all local, pre-school training programmes provided by training agencies, and to approve other pre-school teacher qualifications. Under the new framework, there will be two key levels of training for pre-school professionals.

- The first, called the Certificate in Pre-school Teaching (CPT), is for those intending to be teachers.
- The second, the Diploma in Pre-school Education (DPE) is available in two tiers. The Diploma in Pre-school Education – Teaching (DPE-T) is the first tier of the qualification, and is primarily for those intending to be teachers. The second, the Diploma in Pre-school Education - Leadership (DPE-L) is for those intending to be teachers *or* supervisors.
- Pre-school teachers with a minimum of three O-levels will be eligible to take the CPT.
- Those with a minimum of five O-levels will be able to proceed to take the DPE. All pre-school supervisors will be required to be trained to DPE-L level in four to five years from now. (Appendix A).

A qualification accreditation committee was set up to monitor and approve proposed training courses by different training agencies. It was designed to provide a structure to assess and maintain quality, and to delineate the steps in the appraisal of the minimum standards expected from any agency concerned with the training of quality preschool teachers (www.moe.edu.sg/preschooleducation).

It is with the content of such training programme that I am particularly interested, especially the extent to which trainees' knowledge and understanding of early childhood and child development is significant.

CHAPTER THREE

Positive Environment and the Developing Child.

Introduction

Overall focus of this research project is to explore the necessity for any adult who wishes to be involved with children in an educative way to acquire a sound knowledge of child development. It is vital for early childhood educators' to understand the child's critical years, the need to have consistent and predictable care-giving environment with opportunities for discovery and exploration (Myers, 1992).

This chapter attempts to investigate the impact the environment has on the development of infants, toddlers and preschoolers in the three domains.

The Developing Child

Scientists have had a long-standing fascination with the complexities of the process of child development. Parents and early educators have been amazed by the rapid growth and development that characterized the early years of children. Child development is the study of how children grow and develop over time from infancy to adolescence. The main aim of child development study is that it emphasizes how, when, why, and in what order these changes occur.

Theories define developmental changes as transformations that are universal, regular, and orderly, with one change building upon another. Infants regardless of race, all over the world learn to walk at about the same age and in much the same sequence (Berger, 2000). For example first, they learn to slowly roll over and crawl. Next, they learn to pull themselves upright and to take a step while holding on to a person or an object. Finally, they balance and walk without holding on to anything. Each of these actions is a developmental stage that can be predicted, observed, measured, and recorded. Research studies can determine an average age at which each stage occurs and then measure the progress of individuals against that average, various aspects of child development help

adults understand children and care for them more effectively. Such knowledge could help childcare professionals to develop an awareness of certain abnormalities in children. Biologically, a development is a lifelong process that begins at conception and continues through the life span. Most development involves growth and decay (as in death and dying). The pattern of a child's development is complex because it is the product of the interaction of several processes - biological, cognitive and socio-emotional (Stantrock, 2001).

Those who deal with children tend to learn child development in three areas or domains: physical, intellectual and emotional and social development.

- Physical development signifies all the changes that take place in the body including growth, muscle development, the development of the senses, and the development of motor skills.
- Intellectual development refers to the development of mental processes such as imagination, memory, learning and perception (Santrock, 2001).
- Emotional development is the evolution of emotions, personality, identity, moral judgment, and social skills. It is sometimes defined as psychosocial development because it combines psychological and social development.

Early childhood educators generally identify each step of development and categorize it as physical, intellectual and social and emotional development.

However, as children grow, dramatic changes occur in all three areas simultaneously and that changes in one area affect each of the others as well. If, for example, an infant is not cared for and is insecure and neglected, his physical growth can be slowed.

As a consequence, his intellectual development may be delayed, and he may be emotionally traumatized. All three domains play an important role at every age. For instance, understanding an infant involves studying his or her health (biosocial), curiosity (cognitive), and temperament (psychosocial), as well as dozens of other aspects of development from all three domains (Berger, 2000).

To put it very simply, child development is the study of growth and change in children from birth to maturity. Definitions of the word 'development' in The Concise Oxford Dictionary include 'a gradual unfolding; a fuller working out of the details of anything', and 'growth from within'. To develop is, in the same dictionary, explained as 'to unfold more fully, to bring out all that is contained in.'

There are two important points to be noted about these definitions:

- Firstly, one of the essential features of development is change. The study of child development is, above all, the study of change (Overton, 1998). In the first few years of life, what children can do, say and understand changes very rapidly.
- Secondly, these definitions do not include any value judgements at all. Just because one child may be physically more competent than another does not make him 'better' than the other.

What is important is whether each child is developing herself or himself. Concerns arise, of course, when an individual child is not moving along a course of development over time, but hasty judgements in comparing children need to be avoided. An understanding of factors of the environment that affect such development is, therefore, important.

The Environment and the Child

The early years of a child's life, when very rapid growth is observed, are very important for the development of the child. Evidence from various fields has shown that intelligence; personality and social behaviour are formed in these critical early years (Myers 1992; Young, 1996). Therefore, it is argued "The type and nature of early experience to which young children from birth are subjected will make a measurable and permanent difference in their developmental course as children and adults" (Upshur, 1990, p.633). The child is considered as an organism developing in interaction with the caregiver and the environment. The immediate environment has a significant role in the care and development of the child. This brings about controversial issues of "*Nature versus Nurture.*"

From time immemorial, the "*Nature- Nurture*" debate has been going on. The pendulum swings with plenty of momentum. Both psychologists and theorists have spent a lot of

time arguing about whether a child's intelligence is genetic or socially learned. Also referred to as "*Heredity versus Environment*" it is that branch of Developmental Psychology, which talks about how children grow and develop from the moment of conception until maturity. It takes into account all aspects of a child's development such as emotional, social, personality, and the development of the intellect. Very simply stated, this debate asks:

"Is it what we inherit that makes us who we are, or is it the influences within environment in which we grow up?" What we inherit is referred to as our nature, the environment as our nurture. Over the years, the thinking has changed and while the overall development of a child is the interaction between both nature and nurture, recent research tends to lean towards nurture playing the more important role (Bee, 1995).

'*Nature*' is genetic; it is hereditary and is not influenced by the environment. It is simply genetic material passed from parents to their children. Nature can be defined as the "hardware" that a child is born with. Plato and later Descartes maintained that ideas and behaviours are innate. There are certain pre-existing conditions and skills that are innate and bestowed on a child by his parents through their genes. A child born with the same coloured eyes or hair as one of his parents is simply a recipient of his parents' genes (Berks, 2000).

Nurture on the other hand has everything to do with the environment. To nurture means to "look after" or "to care for". Empiricists such as John Locke, a British philosopher, insisted that at birth, a child's mind is a blank slate – in Latin, a "tabula rasa". All knowledge is created by experience or "nurturing" (Bee, 1995). While there is no doubt about the importance of nurturing in a child's development, there are certain inherited attributes that a child is born with. There are certain characteristics that are innate. Temperament is one of them. Every child is born with a different temperament. Some are naturally more gentle and shy while others are more aggressive and boisterous. These temperaments can be moderated and modified through nurturing later but the basic temperament remains the same. It is important however to note that a child's temperament affects how others in the environment perceive him, and consequently behave towards him. This in turn affects his development.

Another biological influence upon us is the rate at which we mature. Maturation is the process of physical growth and starts with conception. It is genetically determined. Maturation has three qualities – it is universal, appearing in all children, across cultural boundaries; it is sequential; and it is relatively impervious to environmental influence (Bee, 1995). While maturation is a function of inheritance, it can to some degree be affected by environment. Both the environment and the caregivers play important functions for the healthy development and socialisation of the child (Maccoby, 1992). Minimal environmental support, such as an adequate diet and opportunity for movement and experimentation influence growth (Bee, 1995).

Genetics is the study of the transmission of hereditary characteristics to living organisms. Progress in genetic study is increasing the capability to identify the genetic predisposition to abnormalities or to disease before or shortly after conception (Charlesworth, 2004). This can also help to understand how nature contributes to the development of the child. Behaviour Genetics. Behaviour Genetics is the study of genetic contributions to individual behaviour and recently a lot of research has been done to explore this area in more detail. For example, children born to parents with good IQ scores are likely to inherit the same high IQ genes and also benefit from a more positive and stimulating environment that is created for them (Bee, 1995). In the same way, children who inherit a tendency towards aggression and hostility from their parents are likely to live in a family environment that is higher in criticism and negativity because these are expressions of the parents own genetic tendencies towards aggressiveness or hostility (Reiss 1998).

It can thus be said that all children are born with certain biased constraints. Certain characteristics are genetic and are not influenced by the environment whilst others can be moderated to a certain extent through nurturing.

However in light of more recent research, there has been a major shift from nature to nurture. '*Nurture*' is the software in a child's development. While the hardware cannot be changed, one can definitely pick and choose the software. Every child is born with a certain amount of genetic potential. However, in order to realise this potential, positive environmental influences are needed. Channelling this potential in the right way is what nurturing is all about.

Theorist such as Piaget believed that a child's intelligence is not fixed at birth. His theory of cognition talks about how children learn differently from adults and it is the use of the right language and stimulation from the environment that develops the child's intellectual abilities. The child acts upon his environment and in turn is acted upon it.

A child's personality can also be developed through nurturing. Temperament is genetic but through stimulation at home or in school, a child's temperament can be moderated by certain factors such as the people he meets or different experiences in life.

As the child's early years are important the type of stimulation that a child receives from the moment he is born can shape the child's social, emotional and intellectual development. Parents, other members of the family, as well as teachers play a crucial role in making sure that the environment is conducive to learning – be it social, emotional or intellectual skills. Maria Montessori laid great emphasis on the environment. She felt that all children have potential; it is through nurturing the potential in the right way that results can be achieved (Mooney 2000).

Bruce and Meggitt (1996) argues that according to the Behaviourist theory, the Socialisation theory and the Social Learning theory most social behaviors are learnt from experience and the environment.

The *Behaviourist Theory*, which suggested that adults regulated children's behaviour, was influential till the mid-1980s. Skinner thought that adults shape children's behaviour through negative and positive reinforcement, so that children conform to the conventions, behaviours and expectations of the society they live in (Berks, 2000).

The *Theory of Socialisation*, which developed out of behaviourism, found favour in the 1960s. According to this theory, children learn the rules of the society they live in. These will vary from society to society and from culture to culture. Socialisation is the process by which children learn the expected behaviour for their culture and society Papalia (2002).

The *Social Learning Theory* emphasizes that young children learn about social behaviour by watching and imitating other people in their environment. Bandura, (1989), found that children tend to imitate people in their lives who they believe hold status, especially if those people are warm, powerful personalities. Thus people who work with young

children are very important status figures for the child's social learning (Papalia & Olds 2002).

Present day developmental psychologists acknowledge that development is a result of interaction between nature and nurture. The innate characteristics of a child can affect the environment around them, which in turn affects their development. The environment supports, encourages or discourages certain innate behaviours and skills. Unless a conducive environment is provided, some skills and behaviours may never have the opportunity to develop. The child may not have the opportunity to develop his potential.

Theories which involve both nature and nurture include the *Social Evolution Theory* propounded by Dawkins and which concentrates on the whole human race, and the *Social Constructivist Theory* by Trevarthen, Dunn and Vygotsky (1978) which sees how adults and children relate to each other in a two-way process. These theories concentrate on the two-way process of feelings and relationships between children and people who are close to them. Children seem to influence adults as much as adults influence children (Papalia 2002). These theories are the most recent and influential for early childhood workers. According to this approach, children and adults are constantly adjusting to each other and learning from each other (Bruce and Meggitt 1996).

Having seen briefly how the environment is crucial to a child's development, I will now dwell on how and why a positive environment can affect the child's development in the three domains of development – physical, social and emotional, and intellectual. It is however to be kept in mind that development of the child in each of these domains is not distinct but inter-related. Development in one domain affects the other. But first, what is a positive environment?

What is a Positive Environment?

Synonyms for the word 'environment' in the Oxford Thesaurus are 'atmosphere', 'surroundings', 'conditions' and 'settings', amongst others. The early years' environment of the child has many parts, each part affecting the learning experience and development

of the child within it. It is made up of the three domains physical, social, emotional and intellectual environments. Montessori refers also to the 'spiritual' environment (Mooney 2002).

The physical environment of the child consists of the accommodation, the activities, materials and resources available, the outdoor space, the furniture and the decoration. The provider of this physical environment needs to ensure that physical needs are met without imposing too many constraints. A positive physical environment would be one where the child is allowed maximum freedom and opportunity to move around and explore the materials around him. Safety of course must always be of concern, but too safe or restricting an environment would also not allow the child to move around. Children in early childhood learn most through their senses and by exploring the environment around them (Barrett 1999).

The social and emotional environment of the child includes the people (parents, family, staff and children at school, society and culture at large), the child's relationship and interactions with these people, the general emotional atmosphere (e.g. a happy environment or one of imposed discipline) as well as the expectations of the people around him.

A positive environment for the child here is one which is warm and inviting, and which gives the child a sense of belonging. The child must feel secure in his relationship with the people around him. The attitude of his caregivers and the strength of his relationship with them are important for his learning and development. A child needs to have a sense of approval, needs to know what is expected of him and needs to know that he can rely and trust on the caregiver. Such positive environment should allow the child to express and be himself, encouraging him to explore, ask questions and develop, and supporting him along the way (Berks 2000).

The child's intellectual environment is also related to the people around him. They provide the stimulation needed for the child to explore and actively satisfy his curiosity. It is the caregiver who chooses and provides the materials around a child. Activities that

interest the child and intrinsically motivate him are more likely to lead to learning for the child. (In a Montessori classroom, the child is allowed to spontaneously choose which activity he would like to do.) The curriculum and teaching methods also contribute to the intellectual environment.

It is important to note that the different parts of the environment are not distinct and separate yet would be different in structure and purpose. Each one affects the other. Adults surrounding the child influence his intellectual environment, which in turn affects his physical environment, being reflected in the materials and activities made available to the child. At the same time, physical constraints of space would determine the activities and materials available for the child to choose from, which in turn would determine the intellectual environment.

A Child's Home Environment

I have singled out a child's home environment for special mention, as it is one of the strongest influences on a child's learning and development, especially in the early years. This is for a number of reasons:

- The quality of language experience is pivotal and affects not only the child's intellectual development, but also his ability to communicate, ask questions and learn.
- The quality of caring – the diet, the amount of rest and sleep – will affect his physical development, which in turn, affects his intellectual development.
- The child's self-image.
- Family size and the child's position in the family have been shown in various research studies done, to influence the amount of adult care and time available.
- Parental attitudes, their expectations and support, are an important factor affecting the child's learning and development.
- Social class also affects the child's ability to learn and develop, impacting the quality and quantity of opportunities made available to the child.
- Minority ethnic backgrounds also affect a child because of language inferiority and different cultural norms.
- The gender of a child also has implications. The preference of gender.

Montessori's Ideas on the Environment

“From this we can see that the special circumstances surrounding the children were a suitable environment, a humble teacher, and material objects adapted to their need”

(Montessori, *The Secret of Childhood*, Chp. 20)

This statement encapsulates all the most important aspects of a Montessori school. Montessori felt that the child learns mainly through the environment – he creates himself through activity in the environment. Hence the environment has to be prepared for him – the ‘prepared’ environment. This *prepared environment* is to be constructed especially for him and must be designed to meet his needs. Montessori recommended that the objects surrounding the child be child-sized, within his easy reach, and an aid to the child. By providing him with a suitably scaled down environment, we give the child physical and intellectual freedom. Montessori believed that children passed through a series of sensitive periods during which they are more capable of learning certain cognitive skills. The role of the teacher is to observe when these periods occur and then provide the appropriate environment for learning (Barrett, 1999).

In Montessori's view, the child adapts to the environment, but at the same time the converse is also true. The influence of the environment is so great on the child that his personality is shaped by it. Acknowledging that man has to adapt himself to all kinds of conditions and environments in the world in which he lives, she points out that this flexibility in his nature and ability to adapt is most powerful during early childhood, when the influence of the social and emotional environments are particularly strong. Montessori advises caregivers to think carefully about the experiences we give a child at this stage of his life, as they become a part of the child, incarnated in his personality, and lay the foundations of his future life (Mooney, 2000).

An important principle of Montessori's philosophy is that the child can only follow his natural course of development if he can do real work with his hands. The child's intellectual development is affected by the richness and variety of objects in the

environment for the child to touch, manipulate and use. She hence placed great importance of the environment around the child and the materials and activities available to the child (Cowie, 1998).

In writings, Montessori also refers to the '*spiritual environment*' or atmosphere pervading the classroom. The atmosphere in a Montessori system is one of calm and order (Mooney 2000). The fact that the materials in a Montessori classroom are always kept in the same place is comforting to the children as they are then in control. As a result, the most often-such atmosphere is productive and peaceful. The Montessori principle of having children of different ages in the classroom created a natural social structure among the children. Younger children will look up and admire the older children, with the latter helping the former. This creates a cohesive social unit, fostering attitudes of caring and awareness of others (Mooney, 2000).

The spontaneous impulse of the child to be a social animal is fostered by the freedom of interaction. Co-operation is encouraged, not competition. Montessori's interactive environment is one where the child feels comfortable, one that helps the child's psyche and personality to expand. There is no pressure, no criticism and no rush. The child does not always need to be engaged in activity – there is freedom for him to do nothing or whatever he chooses to do, so long as he is not dangerous, destructive, or disruptive.

The five areas of the Montessori curriculum, namely Practical Life, Sensorial, Language, Mathematics, and Cultural Subjects are presented to the child through concrete learning materials that provide the basis for intellectual development.

The Wider Environment

The Ecological Approach examines how different environmental elements affect a child's growth and development. It studies the interactions between children and all of the places, people and processes that make up the environment (Barrett, 1999). Bronfenbrenner (1979), who developed the ecological systems theory, believes that children are influenced by four concentric systems or rings of environmental factors, ranging from the most influential to the most remote. This approach is very useful for

studying complex social issues that affect children, such as public education, the welfare system or rural poverty.

- The innermost ring, the 'microsystem', is made up of all the factors that have the deepest and most immediate impact on a child's development and daily life – such as family, school, religion, health services, and peers.
- The next ring, the 'mesosystem', is where members of the microsystem interact with one another, parent-teacher, playmate-playmate etc.
- The 'exosystem' is the next ring, where community institutions such as neighbours, the news medias, and social agencies interact with the child.
- The fourth and last ring, the 'macrosystem', is where all the other elements of the child's environment, such as cultural traditions and attitudes, politics, economics, laws, regulations, rules, customs, and values, come into play (Bronfenbrenner, 1979).

According to Bronfenbrenner (1979), the transactional interpretation of development views the family as the most important component in the child's life. The transactional approach describes the developmental outcomes as interplay of both the individual and the experiential context (Sameroff & Fiese, 1990).

The importance of the care-giving environment is further emphasised by Bronfenbrenner's view Simeonsson & Bailey (1990) which sees the family or the caregiver as a unit operating within a larger ecological framework of systems. It is within the immediate environment that the child develops and lays the seeds for his/her future adult's life, being influenced by and also influencing his/her environment.

Minuchin (1985) supports the use of family systems/caregiver theory in interventions, stating that the functions of interactions among various parts of the child's family system/caregiver may lead to a change in family triads over time. This idea, which accepts that the child's growth and development is affected by his/her environmental, resulted in a shift from child-centred to an ecological approach in programmes that aim at contributing to early childhood development (Bekman, 1990). Therefore, many programmes adopted an approach where the importance of the associations between the child, the family, caregiver and the social support systems were underlined (Zigler & Berman, 1983).

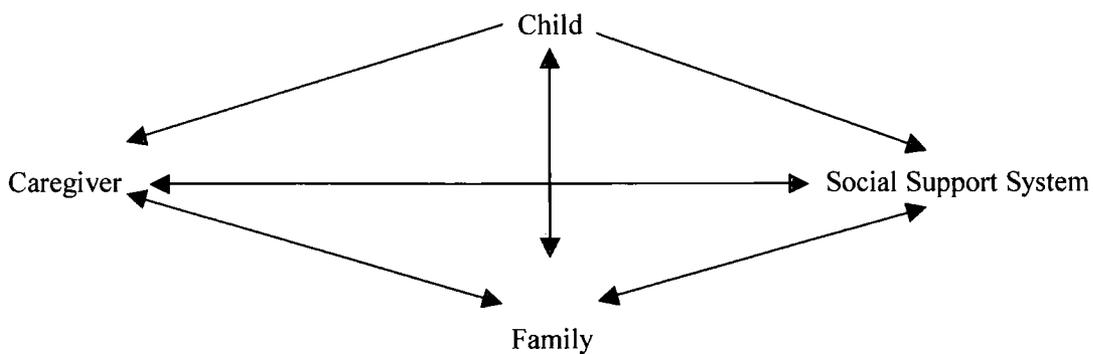


Figure A: Intervention programme in summary.

It is known that when the environmental support systems to maintain children's positive attitudes and behaviour are inadequate, the initial positive effects of early interventions decrease overtime (Kagitcibasi 1997; Ramey & Ramey, 1998). To achieve long lasting positive development of children those dealing with children should be given social support as well as adequate knowledge of ways and methods of dealing with children's needs (Upshur, 1990). Clarke and Campbell (1998) concluded that all the programmes that assist to build positive behavioural outcome in young children should be provided to caregivers to support them in positively interacting with their children and in managing children's behaviour development.

Knowledge of child development and intervention programmes may help to build an ongoing responsibility to understand each child's individual differences (Bricker&Veltman, 1990; Meisels & Schonkiff, 1990). Besides, caregivers' relationships with their children have a cumulative effect on children, taking into consideration priority, duration, continuity, amounts intensity and consistency (Schaefer, 1972, cited in Honig, 1979).

Understanding the development of the child promotes physical, cognitive, social and emotional development and to support 'the intellectual stimulus value and developmental appropriateness of the early environment' (Campbell & Ramey, 1994). Gomby, Culross and Behrman (1999) pointed out that child development programmes have shared focus on the importance of early years and on the crucial role of the adults have in shaping children's lives. These programmes aim at changing adults' behaviour to some extent so as to produce changes in children's health and developmental needs.

There is evidence now that child development programmes have positive effects on not only the short term development of the child but also on the long-term healthy adjustment and positive outcomes (Ramey, Yeats & Short, 1984). When children are provided with better care and understanding they will be better prepared for school and this will enable them to be more successful later, both in school and in life (Campbell & Ramey, 1994; Myers, 1992). As Kagitcibasi (1996) reported, a successful early enrichment can have long-term impacts, overcoming the negative effects children could otherwise encounter. For the implementation of successful early childhood programmes understanding the developing child play a major role. Early childhood educators' sound knowledge of the developing child would act as the cornerstone for a wonderful, stimulating relationship with the child.

The Environment and Physical Development of the Infant, Toddler and the Preschooler.

Infants' Physical Growth and Development

As discussed earlier in the chapter, variations in the rate of growth and development are largely hereditary, the environment and culture also play a role (Barrett, 1999).

His emotional environment also determines a child's physical growth and development. In a study done by Spitz and referred to by Barrett (1999), infants who had not been 'mothered' (when adequate physical care is given, but not enough affection and attention) were physically, emotionally and intellectually impaired. Spitz called this condition 'failure to thrive' (Spitz, 1965). Recent research also suggests that lack of emotional interaction with caregivers is an important factor in an infant's 'failure to thrive'.

Growth of the infant's brain requires sensory stimulation. The brain has the capacity to be shaped by experience and an enriched environment enhances development and growth of the brain. The more the stimulation provided to the child by the environment around him, the more connections that are made and created in the brain (Belsky, 1988).

The infant requires a stimulating environment where he can experience a variety of sights, sounds, smells, and textures. Care however needs to be taken to avoid over-stimulation.

Both environment and heredity factors such as size and rate of maturation determine motor development to a large extent; environmental factors such as birth order, nutrition and family environment also contribute to a great extent. The bones and muscles of undernourished infants do not develop at normal rates and this consequently delays the acquisition of motor skills. Under-nourishment can also damage the central nervous system and affect the infant's ability to coordinate and control his movements (Barrett, 1999). On the other hand, overweight infants may also suffer developmental delays due to their extra weight. It has also been seen that first-born children tend to develop motor skills at an earlier age than their younger siblings. This may be due to the high degree of parental involvement and attention with the first-born. Infant rates of development are also affected by the environment, which promotes motor development by providing infants with opportunities to explore and practise (Berks, 2003).

Thus it can be said that at this stage, that of infancy (birth to 12-18 months), caregivers need to give infants attention and affection combined with an environment where they can practise their motor skills and safely explore the world around them. The environment should provide a wide variety of toys and infant equipment to promote development (Cobb, 1996).

Toddlers' Physical Growth and Development

Toddlerhood (from 1 year to 3 years of age) is an exciting stage of development, characterized by numerous changes (Barrett, 1999). Walking is one of the first milestones of toddler motor development, and as they acquire greater control of their legs and feet, they begin to run, climb and jump. Together with a maturing sensory system, toddlers delight in exploring the world around them. They benefit from an environment that gives them a variety of hands-on sensory experiences as they enjoy using their senses to explore their world.

Toddlers are naturally curious and are eager to explore their environment. They begin to do things by themselves and delight in learning and practising new skills. This entails the provision of an environment that is healthy and free of hazards. At the same time, there must be ample opportunities for the toddler to move about and to explore, and to practise his new skills (Barrett, 1999). According to Berk (2003), toddlerhood is marked by an

increase in activity and hence toddlers need adequate rest and a balanced, nutritious diet to provide the fuel they need to keep their energy level high.

Preschoolers' Physical Development

The *preschool* years (from 3 to 6 years of age) are the play years in a child's life. They are usually quite busy, both indoors and outdoors, where they use their physical skills. Motor skills emerge as more muscle tissue develops and the brain matures. A stimulating environment and opportunities to practice nurture these motor skills. No fancy equipment is needed; just a few basics such as space to run, a few things on which to climb, and a safe place to fall. At this stage, adults need to ensure that playgrounds are safe and free from environmental hazards, which could increase the risk of injury (Schickedanz, Forsyth, & Forsyth, 2001, 1998).

To sum up, the role of the environment is to prepare the child physically with the maximum safety, the maximum opportunities for movement and exploration, together with maximum encouragement, affection and attention from the adult.

The Environment and Intellectual Development of the Infant, Toddler and the Preschooler

Infants' Intellectual Development

Various studies have shown that genetic factors play a significant role in intelligence. This becomes more apparent with age (Scarr & McCartney, 1983; Wilson, 1983). The cognitive development of a child is also affected by his temperament and personality. Children are born with individual personality traits that affect how the people around them respond to them. In addition, these inborn characteristics affect how each child acquires and processes information (Berger, 2000).

However the environment plays a key role in a child's intellectual and cognitive development, beginning with *infancy*. A child's environment consists of his physical surroundings, the people around him, and his interactions with them (Barrett, 1999).

Physical surroundings are important to the child as these provide the opportunity to explore and learn through this sensory exploration. The child requires materials to

examine and manipulate, and opportunities to gain a great deal of visual, verbal, and sensory information from his surroundings.

Intellectual development and learning occur primarily through the child's senses at this stage, insufficient interaction with adults and consequently, inadequate sensory stimulation can have drastic consequences on his intellectual development (Dennis, 1973). Intellectual stimulation can be provided to the infant in different ways, and through a variety of backgrounds and experiences in a warm nurturing atmosphere. Nurturing includes the looking after of an infant's basic physical needs such as feeding him, and keeping him warm and dry. Talking softly to the infant, crooning to him, playing with him, carrying him around etc all contribute to establishing a warm secure environment for the infant.

Berks (2003) notes that physical surroundings and the way children are treated vary from culture to culture. Hence infants' experiences vary accordingly. For example, in some cultures where babies are carried around all the time, the children have less incentive to learn how to communicate through language, as compared to babies who spend most of their time physically separated from their caregiver. This is because they can use body language and signals to convey their message.

Toddlers' Intellectual Development

Toddlerhood marks the change from helpless infants to little people capable of walking, running, climbing, holding conversations, working out problems, and understanding a great deal of information. According to Cobb (1996), toddlers are bold and tireless explorers, who are becoming aware of themselves as separate individuals who can have an impact on the people and objects around them.

A toddler is capable of speaking in simple sentences and works towards acquiring other language skills. He has mastered many skills, including the ability to think clearly about a problem and rehearse simple solutions mentally. He can also pretend and imitate actions that he has seen in the past. Compared to infants, who use their motor skills and senses to gain mastery over their environment, toddlerhood marks the transition from sensorimotor learning to symbolic thought. These mental images help a toddler learn. They learn new causal relationships and become aware of themselves as individuals. Their expanded

thinking skills help them learn language and this contributes to increased social interaction (Cobb, 1996).

Caregivers need to expose toddlers to new and varied environments, they should go for different outings, which provide new physical surroundings to explore and more fodder for thought. Caregivers also need to provide emotional support and must strive to be warm, patient, and ready to provide encouragement, comfort and assistance when required to do so. Toddlers are increasingly becoming aware of themselves – developing a concept of ‘self’, and that this ‘self’ is distinct from others. By providing love and emotional support, and by praising their accomplishments, caregivers help to build the toddler’s self-esteem and self-confidence they need to keep on exploring and learning (Berks 2003).

One of the most important developments in toddlerhood is the acquisition and development of language skills. Children expand their language skills by hearing the people around them speak and then trying to speak themselves. According to Barrett (1999), these verbal exchanges are language lessons for the toddler and they provide the child with a wealth of information and encourage him to ask more questions, enabling them to gather further information. No formal teaching needs to take place during the toddler years – toddlers just need to have the opportunity to converse with the people around them and have adult examples to imitate. Vygotsky (1978) believed that first comes language, and then comes cognitive development.

Play is very important for the cognitive development of the child, especially at the toddler stage (Berger, 2001). Although discussed in more detail in the next essay, it gives children the opportunity to explore their environment, form mental representations and think symbolically, be creative, and develop social skills, to put it very briefly. By stimulating the imagination, play allows them to create unique works and many toys and games help children to solve problems, use symbols, classify objects and perform other tasks that stimulate cognitive development. It is the work of toddlers and prepares them for their future life. Play is intrinsic to the child, and the desire to play must come from within him. Hence the environment must be conducive to fostering play, by being warm, attractive and inviting enough for the child to want to play. An environment that

promotes and encourages play in a safe and secure setting thus goes a long way to the development of the child.

Studies conducted by people such as Skeels (1966) have shown that intervention in the form of sensory stimulation and affection can positively influence and change the course of development, even at 2-3 years of age. In his study, toddlers deprived of love and affection was placed in the loving care of a new environment. They showed a marked increase in their IQ as opposed to those left behind in the old environment, where the IQ of toddlers actually declined.

Preschoolers' Intellectual Development

Preschoolers are able to sit at a desk, pay attention to various tasks, and respond to questions. They have also mastered the fundamentals of language and have developed counting, classification, and memory skills (Barrett, 1999).

Apart from considerably increased representational skills, the stage of pre-school is marked by a 'language explosion'. Pre-schoolers learn new words at an alarmingly new rate and by the time they are 6 years old, their vocabulary has expanded to between 8000 and 14000 words. Their speech becomes much more complex than that of toddlers and they speak in longer sentences, having acquired most of the basic elements of grammar. Children learn language mainly to communicate with adults and other pre-school children. Pre-schoolers are very proficient in their ability to communicate. They also use speech to talk to themselves. Vygotsky (1978) described this speech as 'private speech' – according to him, children use this to order their thoughts and control their actions (Berks, 2001).

Language development also plays a crucial role in the development of literacy and the readiness to read. This development and learning of pre-schoolers comes mainly from the environment. They are motivated to learn by their own curiosity and like to experiment with new concepts and objects. Piaget believed that early childhood educators should provide a rich environment from which the children can learn naturally. According to him, the role of adults and older children is to provide information and support as the children experiment with their environment, think about the processes and results and

learn about cause and effect relationships. Through this process, children perceive and construct their own knowledge (Berger, 2000).

The environment plays a critical role in the language development of children. Given that at this stage, language is a primary medium of learning for the children, the most important thing adults can do now is to provide a safe, supportive atmosphere where the children feel comfortable speaking to others and expressing their feelings. Enough opportunities for verbal interactions and exchanges are a must. It is through these exchanges that new information is acquired, the child then builds his skills on this.

The NAEYC recommends that adults act as guides to facilitate learning in children, by providing a stimulating environment that offers a wide variety of learning opportunities. There should be a wide variety of materials and activities for the child to choose from (Bredekamp, 1987).

As with toddlers, play is one of the most important activities of pre-schoolers, fostering in them creativity, imagination, social skills, and cognitive skills. The NAEYC also proposes that children have many opportunities every day for them to play, and to express themselves artistically and creatively.

Parents play a special role in their child's intellectual development and can play their part by being warm, loving, and supportive; by encouraging children to explore their environment; and by fostering curiosity, speech, self-expression, and creativity (Berks, 2003).

Pre-school programmes such as Head Start, have been seen to improve the cognitive development of children of normal backgrounds as well as of those coming from disadvantaged backgrounds such as poverty or stimulus deprived backgrounds. By compensating with a conducive environment, these programmes are seen as a means of early intervention that can improve the cognitive skills of disadvantaged children (Barrett, 1999).

As seen from the above discussion, children should be given the opportunities for exploring materials and making discoveries on their own. The more a child experiences at this stage, the more he is likely to learn. If these experiences are encouraged by a loving and supportive adult, and appropriate language, cognitive development is likely to occur at a higher rate.

The Environment and Social & Emotional Development of the Infant, Toddler and the Preschooler

Infants' Social and Emotional Development

The *infant's* social and emotional development is closely linked to his attachment to his primary caregiver. According to Schickedanz, Forsyth, et.al (2001-1998), attachment is the relationship a baby and his primary caregiver develop. Babies must be able to explore safely if they are to learn about their environment and become independent.

This environment of safety and security that the primary caregiver provides to the child is of great importance. Studies have shown that the quality of this early attachment is correlated to the child's later social and cognitive development (Lamb et al, 1999; Magai & McFadden, 1995). Children who were securely attached, as infants tend to grow into toddlers and preschoolers who are more positive and curious during free play, and who are determined and confident in their approach to solving problems. They show greater competence in their social interactions and are more compliant with adults, suggesting an ability to trust. Overall, they are more competent and well adjusted than those less securely attached. Children with insecure attachment histories are at a higher risk of becoming emotionally dependent, aggressive, non-compliant, inattentive, overactive, and easily frustrated when faced with challenging tasks.

In social interactions with their peers, toddlers with secure attachment histories are more positive towards peers than are toddlers with insecure attachment histories (Santrock 2001). They engage in more planning during pretend play, sustain their play episodes for longer periods of time, and tend to be neither bully nor victims in later social interaction (Schickedanz, Forsyth, et.al 2001).

Toddlers' Social and Emotional Development

The stage of *toddlerhood* is marked by a desire for independence, development of a sense of self and that of other, and increased social interaction with peers (Barrett, 1999). Development of a sense of self involves an awareness of one's own feelings, visual recognition of oneself, an awareness of one's own abilities, a desire to do things for oneself, and an awareness of standards of behaviour. Development of a sense of other

involves an increased awareness of the feeling of others, a visual recognition of others, and an awareness of gender differences. This growing understanding of others contributes to the development of prosocial behaviour, which is behaviour aimed at helping others. They enjoy interacting with their peer group at this stage. Social referencing or looking at other people's reactions to guide his own behaviour, helps a toddler to learn 'social' emotions, such as shame, guilt, embarrassment, and provide. This helps them develop a sense of right and wrong (Berks, 2001).

In dealing with toddlers, caregivers must consider all the above – the toddler's desire for autonomy, their prosocial behaviours, and their ability to understand standards of behaviour. The environment should be supportive and encourage the toddler to express his emotions and feelings. The consequences of negative behaviour, together with rules and expected standards of behaviour can be explained to a toddler. This would have more meaning to him, as opposed to punishment. As toddlers are able to develop prosocial behaviour, the environment should encourage and support this, and model prosocial solutions to problems in order to encourage prosocial skills. The environment must be conducive to the toddler trying to do things for himself. Instead of giving a direct order and then creating a power struggle, it is best to create an environment where they are gently led to do the required task. As toddlers love play, different kinds of play situations and activities can be created, thus allowing toddlers to express different emotions, and learn in the process (Cobb, 1996).

Preschoolers' Social and Emotional Development

During the *pre-school* years, children develop emotionally and socially in a number of ways. They establish a self-concept and sexual identity, learn new social skills, and begin to develop a basic sense of morality. Their emotional responses are well developed, and his language skills allow them to clearly express their full range of feelings and desires. At the same time, new fears and anxieties cause them great distress (Cobb, 1996).

Pre-schoolers need opportunities to try things on their own and do things for themselves, as these years are crucial in forming his self-concept. Caregivers need to provide an environment of support and tolerance, and be nurturing at all times. Positive reinforcement helps to build the child's self-esteem at this stage. The child needs to be

surrounded by positive role models in order to develop his self-concept and strong sexual identity. At this stage, a child tends to develop many fears and anxieties, as he is yet unable to differentiate between fantasy and reality. They are subject to stress and tension just as adults are (Barrett, 1999).

The environment should be such as to encourage and allow the child to express these fears and anxieties. By being aware of these stress-inducing factors, and by providing a safe, secure and loving environment, the caregiver can ensure that the child works through his feelings of stress, and is able to cope with it. Increased social interaction and the ability to make friends are very important in the pre-school years. By providing opportunities to develop their social skills, caregivers can help them become more socially competent.

Play, and consequently encouraging play, helps the child to learn social and gender roles, besides providing opportunities to develop and practise his social skills. In order to curb aggressive behaviour, and to encourage altruistic and prosocial behaviour, adults need to act as positive role models for the child (Berger, 2001).

In these early years, the greatest impact of the environment is probably in social influences. The role models of adults and the observed interaction of peers and sibling are critical. The role of the adult is to offer a model from which the child can absorb acceptable social behaviour and the norms of his culture. The way a child is treated and handled emotionally in the first six years is critical to his emotional development. Attachment behaviour appears very early, and the level of security, which develops consequently, is largely a result of all the experiences encountered by the child.

Conclusion

Development, in any domain, does not occur in isolation. As children's mental abilities develop, so do their bodies, motor skills, emotions, sense of self, and their ability to socialize with others. It is the responsibility of the caregivers to provide child's basic physical needs, and to establish a safe and secure environment in which he can develop socially, emotionally and intellectually (Barrett 1999).

I would like to end with a quote from Maria Montessori (Mooney 2000).

“It is true we cannot make a genius. We can only give each individual the chance to fulfill his potential to become an independent, secure and balanced human being.”

(The Absorbent Mind).

CHAPTER FOUR

Review of Theories of Childhood.

Introduction

When discussing children everybody has a theory. Some theories of childhood focus on growth, some on how learning takes place, and some on both. **Growth** emphasises ages and stages of development and the influence of heredity. **Learning** on the other hand focuses on behavioural changes caused by the environmental influences (Charlesworth, 2004). Parents and early childhood educators follow their own theories or theories of child psychologists to understand the child or the child's behaviour. Theories help early childhood educators to organise and plan programmes based on the development of the individual child or a best possible developmental theory to deal with children. Being an early childhood educator and teaching in early childhood is a complex activity requiring a myriad of knowledge, skills, and capabilities. This study describes developmental theories that help to extend children's learning when utilised by thinking teachers who reflectively appraise their teaching of young children.

According to Berger (2000), theories are based on people's knowledge of human behaviour and their cultural context, and are practical in three ways:

- They offer insight and guidance for everyday concerns by providing a coherent view of the complex and varied influences of human development;
- They form the basis for hypotheses about behaviour and development that can be tested by research and that add to developmental knowledge if confirmed;
- They are constantly modified by new research findings and thus summarize our current knowledge about development, enabling us to communicate that knowledge in a way that makes sense (Macadam, 1997).

Humans, have the ability to develop in the span of a few years after birth into a remarkable social being interacting, communicating, engaging in flexible cooperative actions with others, to profit from the experience and inventions of their ancestors, to

teach and learn from others, and to plan future events (Roof, 1990). Thus, understanding developmental theories of humans would no doubt be significant for early childhood educators.

What is meant by a developmental theory?

A developmental theory usually explains changes in the child that result from interaction between growth and learning (Charlesworth 2004). It is a systematic set of principles and generalizations that provides a coherent framework for studying and explaining development. A developmental theory is not a collection of facts; it connects facts and observations, putting details of life into a meaningful whole (Berger, 2000).

With a clear understanding of the significance of a positive environment and the developing child as discussed in Chapter Three, let us discuss and analyse various theories of

Child development and their importance to the early childhood educator.

According to Berger (2000), the theories can be broadly divided into Grand theories, Mini theories and Emergent theories. Grand Theories are broad and comprehensive theories that have inspired and directed thinking about development for decades. These are the Psychoanalytic Theory (propounded by Freud and then Erikson), the Learning Theory originally called Behaviourism, introduced by Watson and extended by B.F. Skinner, the Cognitive theory by Piaget and Sociocultural theory by Vygotsky (Barrett 1999). The first half of the twentieth century was dominated by the first two opposing theories and was joined mid-century by the third.

Mini-theories are those theories that explain a specific area of development and are not as general or comprehensive as the Grand Theories. Mini-theories relate to only a particular group of people, rather than to explain everything, everywhere, for everyone (Parke et al., 1994). And some are called Emergent Theories, because they arise from the accumulated mini-theories and may become the new systematic and comprehensive theories of the future (Berger, 2000). There are relatively new comprehensive theories formulated within the past 30 years that bring together information from many disciplines but are not yet a coherent, comprehensive whole. A number of people have been influential in the study of

child development. These theorists, through the models that they have built and the ideas that they have investigated, have contributed a great deal to our understanding of how babies and young children grow. This essay attempts to focus mainly on the following theorists and their theories Jean Piaget, Lev Vygotsky, Erik Erikson and Sigmund Freud, B.F. Skinner, Albert Bandura and Information Processing Approach.

Jean Piaget's Theory

Underlying Features of Piaget's Cognitive Theory

The Cognitive Theory of development focuses primarily on the structure and development of the individual's thought processes and how those processes affect the person's understanding of the world. The theory holds that the way people think and understand the world shapes their perceptions, attitudes and actions (Berger, 2000).

Piaget (1980) was the major pioneer of the cognitive theory. A Swiss biologist, he has been one of the most influential people in the field of cognitive development. Piaget became interested in how his own children were developing and through this interest, began work on how humans acquire knowledge.

Piaget has been labelled as interactionist as well as a constructivist. His interest in cognitive development came from his training in the natural sciences and his interest in epistemology. Piaget's theory of cognitive development is based on the idea of stages of development and on the importance of children being actively involved in their environment in order to develop soundly. He developed his cognitive theory by actually observing children (some of whom were his own children). Using a standard question or set of questions as a starting point, he followed the child's train of thought and allowed the questioning to be flexible. Piaget thought that children's spontaneous comments provided valuable clues to understanding their thinking. He was not interested in a right or wrong answer, but rather what forms of logic and reasoning the child used (Singer, 1978).

Programmes in early childhood education settings have often been based on a 'developmental play curriculum' following Piagetian theories of children's cognition.

Normative, sequenced and predictable descriptions of development made application to educational practice easy to identify, interpret, and plan for. This approach was typified as the child constructing his/her own knowledge in interaction with the environment. As a result, studies of child development and play were seen as the basis of teacher preparation for working in early childhood education. The influential North American model of 'developmentally appropriate practice' (Bredekamp, 1978) became the basis of and justification for what were seen as appropriate programmes for young children.

Piaget's ideas centred on the child. He put forward the notion that the ways in which a child learns are radically different from the ways in which an adult learns. This went against the previous grain of thought that children learned in the same way as adults do, but less efficiently. Piaget noted that children of the same age shared similar mistaken concepts, which suggested a developmental sequence to intellectual growth. He concluded that how children think and reason is much more important, and more revealing of their mental ability than what they know (Santrock, 2000).

Piaget's model of development depends on the child being actively involved in his environment. Previous models of development considered the child to be an empty vessel, waiting to be passively filled with knowledge. Piaget maintained that a child learns through initiating activity, making order in his environment, adapting to it and adapting his environment to himself. In the early years, this active involvement is with real things or concrete objects.

The notions of *concept formation and concept development* are central to Piaget's work. We all depend on the complex and inter-linked set of concepts, which we have developed through our own experience in order to make sense of our world.

Much of what babies do, from a very early age, concerns making sense and order out of the experiences that they have – they begin to form concepts, which are essentially ideas about things and people. Piaget used the term '*schema*' to describe the concepts that babies and young children form. A schema is a coordinated and systematic pattern of action or way of reasoning (Bukatco, Marvin and Wdiehler, 2000).

It is a kind of intelligence, a way of knowing and structuring reality. The infant's schemes are limited to patterns of action applied to objects. As the child grows older, his schemes will often involve mental processes and be far more complex as he reasons about things. At all levels of development, individuals apply schema as a means of interaction with the environment. The notion of schema covers not only an idea about something, but also involves action – what Nutbrown (1994) calls a 'consistent pattern of action'. Bruce and Meggitt (1996) identify some schemas such as rotation (turning things), transportation (carrying things from one place to another), enclosure (interest in covering things, putting objects inside containers, wrapping objects up), orientation (looking at objects upside down as well as the right way up, hanging upside down), trajectory (a focus on things moving through the air, throwing and kicking) and diagonality (a fascination with slides, ramps and drawing diagonals).

How does Cognitive Development take place?

Two important processes are in action during concept formation and development. Piaget called these the processes of Assimilation and Accommodation. Both these processes occur as children explore and make sense of their world. They are the two ways a person's understanding can adapt to new experiences (Berks, 2003).

Assimilation is the term used to describe the process of fitting new information into an existing framework of concepts. The new experiences are reinterpreted to fit into or assimilate with the old ideas.

Accommodation describes a different process – here the existing conceptual framework is adapted to accommodate new information. The old ideas are revamped to accommodate the new. "Through accommodation, we reorganise our thoughts, improve our skills, and change our strategies."(Bee,1995). Assimilation is easier but accommodation is sometimes necessary and produces significant intellectual growth.

Interaction between the processes of assimilation and accommodation create *Adaptation* – changes in a child's concepts and schemas that produce a closer fit between his experiences and those concepts and schemas. Piaget maintained that in order for cognition to be developed effectively, there needed to be a balance between assimilation and accommodation. This is the notion of Equilibrium.

According to Piaget, cognitive development is a process that follows universal patterns. It is driven by the human need for *Cognitive Equilibrium*, which is a state of mental balance in which a person's thoughts and assumptions about the world seem not to clash with each other or with that person's experiences. Each person needs to, and continually tries to make sense of new experiences by reconciling them with his existing understanding (Berks, 2000). When a new experience does not seem to fit existing understanding, the individual falls into a state of Cognitive Disequilibrium – a kind of imbalance that initially produces confusion and then leads to cognitive growth as the person modifies old concepts and constructs better ones to fit the new experience. This is done via the processes of Assimilation and Accommodation (Barrett, 1999).

According to Berger (2000), periods of disequilibrium are disconcerting to a child or an adult who suspects that his accepted ideas no longer hold good. But these are the periods of mental growth and are one reason why people of all ages seek cognitively challenging experiences. The cognitive theory holds that children are especially motivated to seek out novel experiences to put their current understanding to the test and they grow as a result. This is done by babies constantly poking and tasting everything they can touch, children reading and asking questions, amongst other things. Recognition of this active searching is the very essence of Piaget's theory of human cognitive development. Unlike psychoanalytic and learning theories which depict children as buffeted and shaped by influences beyond their control, cognitive theory portrays a much more active child, who is seeking ways to comprehend the world (Berk and Winsler, 1995).

Piaget's stages of Cognitive Development

Piaget maintained that babies and children moved through four stages of development. These stages occurred in a given order. Movement from one stage to the next depended on significant changes in the way the child managed new experiences. According to Piaget, these changes happen within the child and are not influenced by interaction between children or between adults and children. Movement between stages occurs a result of the child's active involvement with his environment (Berks, 2003).

The four stages in Piaget's stage model of development are well documented given below (Mooney, 2000). For the purposes of this study, we shall concentrate only on the first two stages that are significant for early childhood educators.

Piaget's Stages of Cognitive Development

Age	Stage	Behaviour
Birth – 18 Months	Sensorimotor	Learns through senses Learns through reflexes Manipulates materials
18 – Months 6 Years	Preoperational	Forms ideas based on their perceptions Can only focus on one variable at a time Overgeneralise based on limited experience
6 Years –12 Years	Concrete Operational	From ideas based on reasoning Limited thinking to objects and familiar events
12 Years and Older	Formal Operational	Think conceptually Think hypothetically

Jean Piaget. *The Child and Reality*. New York: Penguin Books, 1976 (Mooney, 2000).

1. **The Sensori-Motor Stage** – A significant development during this sensori-motor stage is that of *Object Permanence*. Piaget used this term to describe a young child's realisation that something continues to exist even when he cannot see it. Babies and toddlers are fascinated by the disappearance and re-appearance of people and toys. Towards the end of this period, children begin to be able to invent play activities and to make objects stand for other things. The child is now moving towards being able to symbolise and hence away from the sensori-motor period. A symbol is something that stands for something else and we use symbols in all areas of our life. *Deferred imitation* also begins to appear - this is the duplication of an action hours or days after it occurred (Stantrock, 2000).
2. **The Pre-Operational Period** – In this stage, language and symbols become increasingly important. The child uses *symbolic thinking*, including language, to understand the world. The imagination flourishes and language becomes a significant

means of self-expression (Berger,2000). Symbolic thought and action is demonstrated by the child as when he uses a brick as if it were a plane or car.

Criticisms of Piaget's Theory

During the 1970s and 80s there had been 'a gradual lessening ... in acceptance of Piaget's view of cognitive development. 'Children are not at any stage as egocentric ... nor so limited in ability to reason deductively as Piaget and others have claimed' (Donaldson 1978). Margert Donaldson's **Children's Minds** was published in 1978, she is highly critical of Piaget's assertions of the superiority of the child's abstract thinking and the progressive stages of development. Donaldson strongly argued of the importance of **social context** in which the child learns and understands his or her world.

Some of the criticisms levelled at it are as follows:

1. Piaget's model tends to emphasize what children cannot do at any stage as opposed to what they can do. This has implications for the way in which a child's self-esteem develops. We must look at a child's cognitive development in a positive manner and celebrate his achievements at any given stage as opposed to looking at what he cannot do.
2. This view of young children not being able to understand certain key ideas at any given stage may well lead to offering those children restricted experiences and a limited curriculum. Piaget may have underestimated the cognitive ability of pre-school children in regard to his concept of conservation (Barrett 1999).
3. Piaget believed that the adult had a very specific role – that of providing the environment and equipment for the child to explore himself. He did not consider social interaction as a means of contribution to the child's cognitive development. According to Berger (2000), many people thought that Piaget was so absorbed by the individual's active search for knowledge that he underestimated the importance of instruction and consequently that of society, school and family in fostering cognitive development and the nature of task where then the adult's contribution becomes closely equal to child's learning. (Bjorklund, 1997; Gardner, 1987).
4. Berger (2000), in his article, writes that critics complain that Piaget paid little attention to individual differences in ability, heredity or motivation.

5. Piaget's experimental work was done with his own children. His model of cognitive development needs to be considered in this context. Though Piaget argued that his stages are universal, Sutherland (1992) mentions research that indicated that the rate at which children move through Piaget's developmental stages is related to the kind of environmental stimulation available in different cultures (Berks, 2000).

However, recent studies question whether or not child development knowledge and programmes and programmes based on Piagetian views of cognitive development were a sufficient base for early childhood education programmes and pedagogy. While Piaget emphasised a stimulating child-centred environment few would disagree with, the underlying developmental theory did not make explicit links to processes of teaching and learning teachers and children could engage in.

Meadows & Cashdan (1988, p.39), found that in such programmes 'children were contented and busy, but that three things were rare: sustained conservation or play activities, and lively, purposeful involvement leading to creative, exciting discovery.' According to Piaget in his book *To Understand Is to Invent* he argued the basic principle of active methods can be expressed as follows: 'to understand is to discover, or reconstruct by rediscovery, and such conditions must be complied with if in the future individuals are to be formed who are capable of production and creativity and most simply repetition' (p.20). In active learning, the teacher must have confidence in the child's ability to learn on his own.

However, critics argue that Piaget's emphasis on the accumulating evidence is that *schema* is too rigid; many children manage concrete operations early than he thought, and some people never attain formal operation at least in their daily activities.

Piaget's approach is central to the school of cognition theory known as cognitive constructivism. Others known as 'social constructivists' such as Vygotsky and Bruner have laid more emphasis on the part played by language and other people in enabling to learn. Constructivists feel that every one brings different ideas and concepts to a learning situation. Therefore, it can be concluded that everyone takes away different ideas and concepts from the same learning situation (Mooney, 2000).

A conflict occurs, for example, when new knowledge is introduced that is not consistent with already known knowledge. In order to bring about resolution, new learning must occur. Reflection is used to construct or transform the learner's presentation to reality. This restructuring of information must occur through self-regulation (Flake, et.al.1990). On the other hand Piaget contends that the development of the child's knowledge of the world and reality is not a copy of the real world. Each individual over a course of his or her development construct knowledge and reality through assimilation and accommodation. Knowledge is not transmitted directly, but it is constructed (Wadsworth, 1971).

Piaget divided the sensorimotor period, into six substages. These phases describe the infant's growing intellectual competence; he called them the reflexive stage, the first acquired adaptations stage, the make interesting things last stage, the co-ordination of secondary schemes stage, the tertiary circular reactions stage, and the invention of new means through mental combination stage (Santrock, 2001).

An important milestone in Piaget's developmental sequence occurs in substage 4, when infants develop the concept of object permanence. This means that objects and people continue to exist for the infant even when they are out of her sight.

Piaget's critics say that he overestimated the age at which infants develop certain abilities and that he placed too much emphasis on motor rather than sensory development. Intellectual development refers to the process of acquiring, comprehending, and using information; it is affected by a wide variety of environmental and hereditary factors (Papalia, 2002).

Infants spend their first year listening to human speech and learning how to communicate in a variety of ways. Rogoff (1990) argues that the relationship between social interaction (or adult 'input') and children's language development has received a great deal of attention. Many early studies correlated some features of maternal language with children's language skills, often indicating variables without predicting on a conceptual basis which one should correlate. Rapid correlation studies yield inconsistent results.

As cited in Rogoff (1990), (Hoff-Ginsberg & Shantz, 1982, and Snow, 1984, for reviews) some critics disagree about what to make of the pattern of negative and positive correlations between linguistic input and children's language development.

Some conclude from research that fails to document the relationship between linguistic input and child language acquisition that social interaction has little impact on language development (e.g., Bates, Bretherton, Beehly-Smith, & McNew, 1982).

John –Steiner and Tatter (1983) point out that approaches that assume that the social and individual aspects of development are separable rend apart the inherent unity of social and individual contributions. They believe that language development occurs within a system in which the primary goal is a functional one – achieving understanding between child and caregiver. With communication as the goal, child and caregiver together structure their interaction and advance their understanding of each other, with adjustments in adults speech and progress in language development (Rogoff, 1990).

Further research on neural substrate for recognizing faces and facial expressions highlights those babies' brain changes as they learn their native language (Neville et al., 1998). It is therefore obvious that to develop normally, children need warm, accepting, responsive interaction with their caregivers, a stimulating and safe environment, objects and toys that enable them to learn about their world, and the sound of human voices.

Lev Vygotsky's Theory

This emergent theory arises from recognition of the importance of the social context. It draws on research from education, sociology, history and anthropology. It seeks to explain individual knowledge, development and competencies in terms of the guidance, support and structure provided by the society and to explain social change over time in terms of the cumulative effect of individual choices. People are affected by society, but people also change society (Berger, 2000). Development is dynamic – a never-ending transaction involving continuing, reciprocal exchanges.

Vygotsky was particularly interested in how culture is transmitted. He considered it very important to understand the ways in which a child acquired his cultural tools – language, concepts and thought. Although he knew of and respected Piaget's work, he thought that Piaget had not allowed any space for the effect of culture on the development of an individual. Vygotsky believed that interactions between adults and children and between

children themselves were important parts of a child's cultural inheritance and were essential for cognitive development to occur.

He built on Piaget's model and introduced the idea of social interaction as being important. He also emphasized the active teaching role of the adult in a child's development by putting forward the notion of the Zone of Proximal Development. Also from Vygotsky's perspective 'the role of the teacher includes both designing an educative environment and collaboration with children by scaffolding their efforts to master new skills (Berk & Winsler, 1995).

The Sociocultural theory holds that human development results from the dynamic interaction between developing persons and the surrounding culture, primarily as expressed by the parents and teachers who transmit it (Papalia, 2002). Also referred to as the Sociohistorical Theory, it emphasizes the unique collective wisdom compiled by a culture and transmitted to the child through ongoing, daily interactions with the more knowledgeable members of that culture (Bukatco, Marvin and Wdiehler, 2000). Vygotsky believed that language is an especially important tool in these interactions.

Sociocultural theorists argue that the beliefs and goals of the community shape instruction and learning. They also look at the ways in which such learning affects all later development of the individual, the family and the ethnic group (Hoffnug, 2000).

Guided Participation

Vygotsky theorized that children construct new knowledge through social interactions with adults or more advanced children. His theory, called the Social Construction of Knowledge, characterizes development as an "apprenticeship in thinking" (Rogoff, 1990). Competencies in children develop from interactions between novices and more skilled members of the society, acting as tutors or mentors. The implicit goal of this apprenticeship is to provide the instruction and support novice's need for acquiring the knowledge and capabilities that are valued by culture. The best way to accomplish this goal is through *Guided Participation* – in which the tutor engages the learner in joint activities, offering the learner not only instruction but also direct involvement in the learning process (Rogoff, Malkin, & Gilbride, 1984).

Berger (2000), in his article, writes that children in every culture learn practical skills, social skills and intellectual skills. These competencies are developed by the children during a '*social apprenticeship*' – either formally, through explicit instruction, or informally, through observation of everyday life. This apprenticeship depends on social interaction. One person learns from another, through the words and activities that they engage in together (Karpov & Haywood, 1998). This is one crucial difference between sociocultural theory and the grand theories of the past (Poe, 1982). Together, child and adult actively shape the knowledge in their culture, by participating in the learning process rather than receiving or transmitting existing knowledge (Rogoff, 1997). Social interaction between teacher and learner not only imparts specific skills but also provides the context for mastering the culture's tools for further learning.

The Importance of Language

Vygotsky believed that universally, language is the most important learning tool. This is because learning provides a powerful means of learning through the exchange of ideas and facts between one person and another (Berger 2000). As people master their language, they can express thoughts and ideas to social partners, and can in turn absorb the ideas of others and of the culture at large into their thinking (Vygotsky, 1987).

As a child learns a new cognitive skill, the external language of the adult teacher becomes transformed into a form of internal speech in the child. Young children often talk to themselves when carrying out a task in order to coordinate their thinking and their actions (Vygotsky, 1978). It is a cognitive process, in which the idea was at first only in the adult's mind and then it is transferred into the child's mind, or...a process which at first a child does spontaneously and unselfconsciously, under the control of an adult, come under the child's own personal agency (Shotter, 1993).

Certainly it would seem that Leont'ev (cited in Wertsh & Stone, 1985), makes a significant contribution to this debate when he states that 'the process of internalization is not the transferral of an external activity to a pre-existing internal 'plane of consciousness'; it is the process in which plane is formed'. A generous reading of Vygotsky suggests that internalisation refers to the appropriation of social/public practices as personal /private practices. However, we should not define 'appropriation' as

simply 'adoption'. Vygotsky goes to great lengths to describe the complexity of the process by which children come to regulate their own behaviour through the development of the inner speech. This is clearly highlighted in Vygotsky & Luria's (1930:1994) paper that greatest development occurs when this socialized speech, previously addressed to the adult, is turned to himself, when instead of appealing to the experimentalist with a plan for the solution of the problem, the child appeals to himself. This redirection of the speech function is not direct imitation, but appropriation regulatory and problem solving functions of language as they have occurred in the social context, as a form of creative self-regulation.

The Zone of Proximal Development

When a mentor senses that the learner is ready for a new challenge, the mentor arranges social interactions that will push the learner's skills to new levels. To do so, the mentor draws the learner into the Zone of Proximal Development (ZPD), which is the range of skills that the learner can exercise with assistance but cannot perform independently. Through sensitive assessment of the learner's abilities and capacity for growth, the mentor then offers guidance that engages the learner's participation and gradually facilitates the learner's transition from assisted performance to independent performance (Berger, 2000).

Vygotsky's important contribution was to point out that the child's own knowledge develops through experience of adults guiding the child towards a more sophisticated solution to a task (Butterworth and Harris, 1994). In Vygotsky's model, guidance and active support from an adult or more expert peer plays an essential role in a child's cognitive development. It is to be remembered that adult help does not mean that the adult tells the child what to do. It means that the adult supports and encourages the child through questions and examples. The motivation to learn within the zone must come from the children, who need to be actively involved, to lead and direct the activity.

Berger (2000) writes that it is not instruction by rote. The instruction process is modified for the particular learner from the start. The adult needs to listen and sense exactly whether more support or more freedom is needed at each moment, so the process is constantly modified to fit as it is used. The skills cannot be transmitted by the adult

unless he has mastered them himself. Excursions into and through the zone of proximal development occur throughout life. Ideally, the learning process follows the same general pattern in all instances. The mentor, sensitively attuned to the learner's ever-shifting abilities and motivation, continually urges the learner on to new levels of competence, while the learner asks questions and shows signs of progress that guide and inspire the mentor (Berger, 2000).

The ZPD hypothesis allowed Vygotsky (1978) to claim that 'when we determine a child's mental age by using tests, we are almost always dealing with the actual development level' (p.85), that is with completed potential development; and that good instruction is predicated on working within a child's ZPD, the field of potential 'awakened' through their interaction with others.

Scaffolding

Like Vygotsky, Bruner (1975) who is an educational psychologist, believes that the adult has an important role to play in helping a child to develop cognitively. Agreeing with Piaget in the notion that the child is an active learner, he differed from him in his view of the role of the teacher. Whereas Piaget considered the child's cognitive development to be rooted in his innate potential, Bruner believes that the role of the teacher is very important.

Bruner used the term '*Scaffolding*' to describe what an effective teacher does. The word is a metaphor describing a process of assisting children in learning. Scaffolding includes ideas, techniques, and methods provided by the teachers or peers that help children learn within the zone of proximal development and that are eventually internalized by the children. Like the scaffolding around a building, the existence of the scaffolding not only supports the existing structure but enables further building works to take place. A teacher needs to be able to support the child at his present stage of understanding and provide, through appropriate language, behaviour and explanation, the opportunity for further development.

Scaffolding can be linked to Vygotsky's zone of proximal development. To scaffold learning, teachers should help children stay within the zone of proximal development, provide less assistance and support as children move toward doing the activity

independently and promote self – regulation. In other words, teachers should provide strategies so that children can ‘scaffold’ their own learning.

According to Essa (1999), other ways the teacher can scaffold activities include:

- Setting the parameters of an activity - eg. a child uses one colour to paint then gradually adds other colours.
- Urging children to progress to the next stage when ready – eg. a child is ready to take the training wheels off the bike when he appears ready.
- Controlling the setting – e.g. limiting the toddlers to activities that use bigger toys, where it is safe and yet challenging for them.
- Arranging activities to show the child an effective sequence. Teaching children a sequence can be done by telling them the sequence, by modelling it, or both. A teacher can break down large, confusing activities into smaller, manageable parts. But if the task is too easy, the teacher should add complexity, change the goals, and expand the zone.

Vygotsky’s scaffolding occurs through private speech (Van den Veer, and Valsiner, 1991). To maximum the use of private speech, teachers need to ask questions, provide statements that help a child see scaffolding, and solicit questions – “What happen if...?” Teacher-directed instruction does not help children develop their own private speech to further use in directing their further learning (Essa, 1999).

Importance of Play

Vygotsky believed that play leads to development. He claimed “While imitating their elders in culturally patterned activities, children generate opportunities for intellectual development.” Therefore, Vygotsky believed that it is through play and project work that a child learns from the environment and his peers (Van den Veer, and Valsiner, 1991). According to this perspective, teachers need to provide young children with numerous opportunities to play. Through play and imagination, a child’s conceptual abilities are stretched (Bennett, Wood & Rogers, 1977).

Children’s play provides a rich context for learning; it must also provide a rich context for teaching. Social constructivist theories are based on both child-initiated and teacher-initiated learning experiences and interaction. Play is a valuable learning environment in

early childhood settings, recommended by such bodies as the National Association for Education of Young Children (Bredekamp, 1977). Recent studies (Lewis & Boucher, 1977; Stagnitti, Unsworth & Rodger, in press) also suggest that play ability in preschool children.

Criticisms of Vygotsky's Theory

A teachers' role in facilitating children's learning have been influenced by sociocultural paradigm which responds to criticism of writers such as Lubeck (1996) in offering a wider perspective on cognitive development within the constructivists' approach and the opportunity of cross-cultural studies. This view sees learning as social in origin and transformed through the mediation of cultural tools (e.g. language, books, symbols) to the individual where the learning is internalised in thought.

According to Rogoff (1990), scholars who are working on Piaget's approach have taken seriously what Piaget had to say about the cognitive conflict induced by peer social interaction. They have argued that it is effective in bringing about cognitive growth in children's understanding of conservation problems when children are asked to come to a joint decision about the equality of some material after it has been reshaped (Bearison, in Press; Sigel & Cocking, 1977). On the other hand it can also bring about cognitive conflicts when children bring different perspectives to bear on a problem, interaction between conservers and nonconservers is not really interaction with peers (Tudge & Rogoff 1989).

Cole and Wertsch (1996), identify cultural mediation as the distinguishing factor rather than individual versus social processes in learning. It is clear that Vygotsky saw the process of development as resulting from dialectical or formative encounters between the self and other/s. In *The genesis of higher mental functions*, Vygotsky (1981) insists that 'it is through others that we develop into ourselves' (p. 161). Valsiner and Van Der Veer (1988, 2000) have thoroughly documented Vygotsky's indebtedness to thinkers such as Baldwin, who Vygotsky (cited in Valsiner & Van Der Veer, 1988) says 'was right to note that the child's concept of 'I' develops out of the concept of others.' Further, Wertsch's (1991, 1998) important work linking Vygotsky with his contemporary, Bakhtin, has gone a long way to showing the importance of the social in the emergence of 'mind'. Clearly,

the relationship between self and other forms an important aspect of Vygotsky's conceptualization of learning and development.

Shepel (1995) supports the view that the relationship between the self and the other underpins Vygotsky's work when he depicts the ZPD as a tension between the real (a person's actual developmental level) and the ideal (their desired developmental level). Litowitz (1997, p.482) echoes such sentiments, arguing that 'the motivation cannot be mastery of the other's skill but to be the other by means of mastery of the skill' (Parkes2004). In each of these cases ZPD is generated within a relationship constituted by the real and the ideal, by individual's desire to be a 'head taller' than they are now (Vygotsky, 1934:1997).

However it is also possible simply treating people as if they are other than what they are now awakens a ZPD from the outside. This seems to be the case that Hozman (1995) is concerned with, when she asserts that the paradigmatic ZPD is one in which a parent (Significant other) responds to a baby's babbles as being meaningful, thus constructing them as a speaking subject. Although many interpretations restrict themselves to discussions of parent-child, teacher-student or peer-peer interactions, can the effects of broadening the definition of participants in the zone be considered?

Just as a the child can appropriate the more sophisticated strategies of an adult as a result of their interaction, so too can their encounter with literature, film or art have consequences for their behaviour, subjectivity or identity that could be considered developmental. Although in some passages Vygotsky may have seemed to have limited 'the other' to more capable peers or adults, this surely must be read as a consequence of his attempting to deal with the very specific problematic of the relationship between instruction (involving a teacher) and development.

On the other hand, if the interpretation of the 'other' in the ZPD is done rather broadly, as not only a physical other, but as a textual or conceptual other, as well as non-physical ideal other, implicit in Vygotsky's discussions of the role of play in creating a ZPD, then the range of developmental opportunities increases. This would be clear if the term 'difference' or 'alterity' is used as a synonym for 'other'. While the meaning of 'difference' may appear transparent, its everyday and specific sociological connotations are both implied. Likewise, derived from the same root as 'alternative,' the word alterity

not only implies 'the other,' but also 'alternatives.' Thus, any encounter with difference or alterity offers at least the *opportunity* for developmental change, particularly where 'development' is conceptualised as a rhizoid process (Deleuze & Guattari, 1980) as having the potential to veer off in a multitude of directions (Charlesworth 2004). Certainly there is possibility to inform a sociologically sensitive Vygotskian pedagogy, that sees the other not as simply a more capable mind in society, but recognises the other, difference and alterity as providing and opportunity for development.

Erik Erikson's Theory

Erikson's Psychosocial and Sigmund Freud's Psychoanalytic Theory

When discussing Erikson's Psychosocial theory it is impossible not to understand Freud's Psychoanalytic Theory as Erikson followed in the footsteps of Freud to some extent, but the stages of development that he put forward focus more on the influence society has on a child's development.

Freud's (1939), Psychoanalytic Theory interprets human development in terms of intrinsic drives and motives, many of which are irrational and unconscious and hidden from awareness. It holds that irrational, unconscious forces, many of them from childhood, underlie human behaviour (Berger, 2000). Originally propounded by Freud (1939), it was expanded by Erikson (1994), who formulated the Psychosocial view.

Freud is considered to be the father of **Psychoanalytic Theory**. He believed that our behaviour is controlled not only consciously but also unconsciously. Freud's model of personality centres on what he calls the 'libido', which is a fundamental unconscious source of energy driving our behaviour. An individual has three parts to his personality – *the id, the ego and the superego*. The id is the centre of the libido, unconscious and concerning itself with the person's fundamental wants (Papalia 2002).

The superego is the individual's conscience, unconsciously mirroring the moral, social and ethical demands of the family and the society. The ego is the mediator between the id and the superego and is the more conscious element of personality. Freud believed that at birth, a baby is all id, focusing on his own personal wants and needs, with the ego and superego playing very little part at all. According to Freud, a child's ego begins to take

shape from about two years of age and the superego develops later as the child begins to internalize the social demands of the family and society (Barrett 1999).

Freud's theory of development charts the movement of the libido through five psychosexual stages from birth to maturity, each stage centring on a different part of the body. Successful progress through the stages depends on the satisfactory resolution of tensions at each stage as well as physical maturation. Freud believed that if an individual has difficulties at any stage, he would show certain personality characteristics in adulthood.

Freud's Psychoanalytic Theory interprets human development in the following stages (Bruce and Meggitt, 1996; Bee, 1995 and Berger, 2000):

Freud's Original Theories about Stages in Development:

Approximate Age	Characteristics of Stage	Tasks: Possible Personality Effects
Birth to 1 year	Oral Stage – the child focuses on pleasurable sensations from the mouth	Weaning: if this doesn't take place satisfactorily, child may develop 'oral personality', becoming clinging, demanding, and dependent throughout life
1 year to 3 years	Anal Stage – the child finds pleasure in sensing and controlling bowel movements	Toilet training: if this doesn't take place satisfactorily, child may become very messy and aggressive or very stingy, compulsive, and overorganized. Freud described these as: anal personalities
3 years to 5 years	Phallic Stage – the child discovers pleasure in sensations of the sex organs	Mastering attraction for opposite-sex parent and in process developing superego; if this doesn't take place satisfactorily, child may become selfish, bragging, even psychopathic –what Freud called a 'phallic personality'
5 years to puberty	Latency Stage – sensual pleasures are under control, child is able to learn about world	Personality is fully formed
From puberty on	Genital Stage – adult sexuality starts	Personality problems from earlier stages may emerge.

Papalia D.E. 2002, A Child's World: Infancy Through Adolescence, McGraw-Hill Higher Education

Berger (2000) believes that one of Freud's most influential ideas was that each stage arrives with its own potential conflicts between child and parent. How the child experiences and resolves the conflicts that occur in the oral, anal and phallic stage, especially those relating to weaning, toilet training and childhood sexual curiosity, influences personality growth and determines the person's lifelong patterns of behaviour. Freud's model is a developmental model in that he emphasizes stages through which individuals develop as well as recognising that interaction is important (Bee, 1995). What Freud considered to be 'normal' development depends not only on physical maturation but also on the sensitivity and quality of interactions that the baby and the child has with his caregivers. At any stage, Freud saw the possibility that clumsy and inappropriate behaviour from a caregiver would result in that individual having problems in later life.

According to Berks (2003), Eriksson developed a stage theory to explain a person's development within the context of family, peers, society, and culture – called a **Psychosocial Theory**. It assigns society a more critical role in shaping and forming reality for the child. Cultures differ in the requirements imposed on the child, yet each child must adapt to his own culture's regulations. Essentially, Erikson recognized that people are social beings who must develop, thrive, and live within a variety of social settings. In Erikson's view, personality development is a psychosocial process, meaning internal psychological factors and external social factors are both very important. According to his theory, personality develops through eight stages of adaptive functioning to meet the demands framed by society.

Erikson proposed that development occurs in a series of eight stages, beginning with infancy and ending with old age. Each stage is named for the particular psychosocial crisis or challenge that every child must resolve to be able to move on to the next. Successful mastery of the psychosocial crisis at a particular stage results in a personality strength, or virtue, that will help the individual meet future developmental challenges (Seifert & Hoffnung, 1997).

Like Freud, Erikson believed that unsuccessful resolution of conflict at any stage would affect a person's ability to cope satisfactorily with subsequent stages. The resolution of each developmental crisis depends on the interactions between the individual's characteristics and whatever support is provided by the social environment (Berger, 2000).

Erikson's stages are as follows (Bruce and Meggitt, 1996; Bee, 1995 and Berger, 2000):

Erikson's Stages of Psychosocial Development:

Age	Characteristic of Stage	Emotions and Personality Outcomes
Birth to 12 months	Total dependency of child on caregivers	Trust vs. mistrust security and hope or tendency to mistrust
12 months to 3 years	Child becoming able to control self and environment	Autonomy vs. shame autonomy and effective willpower or tendency to shame and self-doubt
3 years to 6 years	Child becomes initiative, interested, energetic and is ready to learn	Initiative vs. guilt sense of purpose or tendency toward feelings of guilt
Elementary years (6 to puberty)	Child develops a sense of pride in his or her accomplishments	Industry vs. inferiority: feelings of competency and skill or tendency to feel inferior or inadequate
Adolescence (12 to 18 years)	Child searches for self-identity and role in adult life	Identity vs. role confusion: firm feelings of self or role confusion
Young adulthood (20s)	Person seeks to establish intimate relationship	Intimacy vs. isolation: closeness and commitment to others or tendency toward self-absorption and loneliness
Adulthood (30 to 45 years)	Person strives to reach social and professional acceptance	Generativity vs. stagnation: feelings of contribution to world and next generation or tendency toward stagnation, self-indulgence, and hanging on to the past
Maturity (Old age: 50s and beyond)	Person strives to make sense of own life as meaningful	Ego integrity vs. despair: feelings of integrity and satisfaction or tendency toward hopelessness and fear to death

Papalia D.E. 2002, A Child's World: Infancy Through Adolescence, McGraw-Hill Higher Education

Criticisms of the Psychoanalytic/Psychosocial Theory

Psychoanalytic and Psychosocial theorists such as Freud and Erikson have had a major impact on many aspects of 20th-century life, not least on early childcare practices.

The main criticism of the psychoanalytic theory focuses on what adults did or did not do to the child. The emphasis is on the parents' behaviour and not on the child's innate temperament, cognitive capacity or cultural context (Berks, 2000).

Freud's observation that psychological problems often derive from childhood experiences has led people to focus far more on how they care for and nurture their children.

Erikson's idea that children grow up in stages influenced by physical development and personal relationships is also a key to current thinking about early childcare. Other psychoanalytic observations—such as the power of unconscious thought, the existence of defense mechanisms, and the sexual nature of children—are also very much accepted today. However, psychoanalytic theory has been criticized on a number of grounds. One is that it is based on personal impressions of patients and on their reports of childhood memories, which may be distorted. One is that it is based on personal impressions of patients and on their reports of childhood memories, which may be distorted.

This makes it highly subjective: one must rely on the insights of the theorist rather than the logic of science.

Furthermore, psychoanalytic theory is based on relatively few observations. Insight gained from studying clinical cases do not always apply to mentally healthy individuals. In addition, psychoanalytic theory is criticized as being largely unverifiable. It discusses personality structures of the mind (id, ego, superego) that cannot be observed. It also offers alternative ideas (the two opposite outcomes of the anal stage, for example) that make testing some aspects of the theory almost impossible (Barett, 1999).

Erikson's view of development as a psychosocial process seems more directly relevant to childcare and education. His theory has important implications because of the key role others play in the child's personality growth. As children progress from one stage to the next, they depend on their caregivers for types treatment that will encourage positive growth. Infants are very dependent and need care that is loving, responsive and consistent.

Toddlers will thrive if their caregivers help them do things for themselves, neither overprotecting them nor expecting too much. According to Erikson, excessive expectations from children would result in low-self esteem.

If those dealing with children are unaware of Erikson's psychosocial stages of development their actions would hinder the development of the child especially their self-concept (Santrock, 1992). However, the supporting evidence of his theories are not obtained by any large-scale surveys, they in fact only based on his own observations, and his clinical practice. Therefore they require the evidence and support of empirical findings to discover when a sense of identity is actually achieved. The most thorough attempt to do this was made by (Marcia, 1966), after he developed an interview technique to assess 'identity status' (Stevens 1983). Studies using this particular methodology found that identity development is not so strongly focused in adolescence as Erikson believes (O'Connell 1976).

In conclusion, Erikson's work is a direct descendent of Freudian theory. He does not try to redefine the fundamentals of psychoanalysis but instead enrich, clarify and extend it by taking into account the importance of culture and historical contexts. Erikson was also able to illustrate the nature of their influence on individual identity. He recognised that his conceptualization of identity and the life cycle were centred in modern Western society, he still used them in situations where they may not have been applicable in the same (Stevens 1983). So what is it then, that Erikson has produced? Is it that he refers to in his own word as a 'tool to think with' rather than a 'prescription to abide by?' (Stevens 1983).

The Theory of Behaviourism

Charles Darwin's *Origin of Species*, which outlined his theory of evolution based on natural selection - the proud father began keeping a diary of observations of his newborn son. It is these notes, published in 1877,¹ that first called scientific attention to the development nature of infant behaviour (Papalia, 2002).

¹ The source for analysis of Darwin's diary was Keegan and Gruber (1985).

- What abilities are babies born with? How do they learn about their world?
- How do they communicate, first nonverbally and then through language?

These were among the questions Darwin set out to answer – questions still central to the study of cognitive development. Darwin's keen eye illuminates how coordination of physical and mental activity helps an infant adapt to the world. Darwin made observations on his son Doddy more than 160 years ago, at a time when infants' cognitive abilities were widely underestimated. His research highlights that normal infants are born with the ability to learn and remember and with a capacity for acquiring and using speech. They use their growing sensory and cognitive capacities to exert control over their behaviour and their world (Papalia, 2002).

Originally called Behaviourism, the Learning Theory was propounded as a reaction to Freud's psychosocial theory. It was introduced by Watson (2000), who argued that if psychology was to be a true science, psychologists should study only what they could see and measure. He directly opposed Freud's emphasis on unconscious factors that patients might be able to recall only years later under psychoanalytic probing or might never remember at all (Papalia, 2002). Actual behaviour, by contrast, could be studied far more objectively and scientifically. Behaviourism gave rise to the Learning Theory, which focuses on the sequences and processes by which behaviour is learnt (Berger, 2000).

According to Watson, (2000), anything can be learned. He believed that learning mechanisms could be exploited to create virtually any type of person. Learning theorists study how principles of learning cause the individual to change and develop.

Learning is the relatively permanent change in behaviour that results from experiences such as exploration, observation and practice (Bukatko/Marvin Wdihler, 2000).

Basic Laws of Behaviour – Conditioning

Learning theorists formulated laws of behaviour that according to them, apply to every individual at every stage. In their view, all development involves a process of learning and therefore does not occur in specific stages that are dependent only on age and maturation (Berks, 2003). The basic laws of learning theory explore the relationship between a stimulus (an action or event) and a response (the behavioural reaction with

which the stimulus is associated). Learning theorists emphasize that life is a continual learning process – new events and experiences evoke new behaviour patterns, while old, unused and unproductive responses tend to fade away. This learning occurs through *Conditioning*, by which a particular response comes to be triggered by a particular stimulus (Berger, 2000).

There are two types of conditioning – Classical and Operant.

<u>Classical Conditioning or Respondent Conditioning</u>	<u>Associative Learning</u>	<u>Operant Conditioning or Instrumental Conditioning</u>
<p>A living organism comes to associate a neutral stimulus with a meaningful one and then responds to the former stimulus as if it were the latter (Berger, 2000).</p> <p>Classical conditioning is a type of learning in which a neutral stimulus repeatedly paired with another stimulus that elicits a reflexive response eventually begins to elicit the reflex like response by itself.</p>	<p>“Perhaps the simplest form of learning is associative learning, (where)...the organism makes a simple association between something it becomes aware of (a stimulus), and some reaction it must make (a response)” (Davenport, 1994).</p> <p>In the case of human learning, the organism is the person.</p>	<p>In operant conditioning the organism learns that a particular behaviour produces a particular consequence.</p> <p>If the consequence is useful or pleasurable, the organism will tend to repeat the behaviour to achieve that consequence again. If the consequence is unpleasant, the organism will tend not to repeat the behaviour.</p>

Papalia D.E. 2002, *A Child’s World: Infancy Through Adolescence*, McGraw-Hill Higher Education

As a result of classical conditioning we learn certain behaviours (Skinner 1990). Operant conditioning relates to a situation in which a specific kind of behaviour is either encouraged by giving a reward, or discouraged by punishment. Skinner, through the study of animal behaviour established the notion of reinforcement. He argued that reinforcement can be used to shape behaviour and can be either positive or negative. Positive reinforcement involves making a response that is pleasurable to the subject in order to encourage repetition of a particular behaviour, while negative reinforcement uses a response that is unpleasant to discourage certain behaviours (Barrett 2000). An example

of positive reinforcement would be giving sweets to a child when he has behaved well. The sweets act as encouragement to behave well in the future, as the child will associate getting the sweets with his good behaviour. Not being allowed to watch television might be used as negative reinforcement if the child has not behaved acceptably.

Proponents of this theory would argue that because the child wants to watch the programme, he would be more likely to modify his behaviour in the future in order to do so. In fact the ideas of Skinner and some other psychologists have led to the development of ways of dealing with what is known as 'problem behaviour' through behaviour therapy and behaviour modification (Davenport, 1994).

Reinforcement is the process in operant conditioning, whereby a particular behaviour is strengthened, making it more likely that the behaviour will be repeated (Skinner, 1953). A consequence that increases the likelihood that a behaviour will be repeated is therefore called a reinforcer. There are two kinds of reinforcers that work to shape behaviours: primary and secondary. Primary reinforcers are those that meet basic human needs, like food, water, warmth, physical affection, attention and love. Secondary reinforcers are those that children have learned, through association, to be rewarding: praise, stickers, candy and etc. For positive and negative reinforcement to work, immediate reinforcement is vital. When this is not possible, teachers should let students know immediately after the behaviour, what type and when the reinforcement should be given (Essa, 1999).

Punishment is distinctly different from positive and negative reinforcement. While positive and negative reinforcement increase the likelihood and frequency of the behaviour, punishment like scolding and time-out are designed to reduce and eliminate certain behaviour. Punishment is also the removal of something pleasant in the goal of reducing or eliminating a negative behaviour. Punishment must occur immediately after the negative behaviour (Essa, 1999).

Criticisms of the Learning Theory or The Theory of Behaviourism

Like the psychoanalytic theory, the learning theory is focused on what adults did or did not do to the child. It sees the child as a malleable organism that can be taught to do anything. The emphasis here is on the behaviour of the adults around the child and not on

the child's innate temperament, cognitive capacity, or cultural context. More specifically, learning theory is often criticized for being unable to explain complex cognitive, emotional and perceptual dimensions of human development (Grusec, 1992).

Critics point out that development is influenced not just by stimuli from the environment but also by genetic tendencies, biological maturation, internal thought processes, and the developing person's own efforts to comprehend new experiences (Berger, 2000). The dismissal of the internal workings of human beings leads to one problem opponents have with the behavioural theory. This, along with its incapability of explaining the human phenomenon of language and memory, build a convincing case against behaviourism as a comprehensive theory. Yet although these criticisms indicate its comprehensive failure, they do not deny that behaviourism and its ideas have much to teach the world about the particular behaviours expressed by humankind (Wyrwicka, 1984).

When discussing the validity of behaviourism contradictions occur with the ideas of Darwin's natural selection. Whereas Darwin's theory has been widely accepted by most scientists, behaviourism is constantly coming under fire from critics. Indeed, this may be why Skinner chose to align his theory with Darwin's, to give credibility to his own.

However, as Dahlbom (1984) points out, some ideas of Darwinism contradict Skinner's operant conditioning. Darwin believes humans are constantly improving themselves to gain better self-control. Yet, 'to increase self-control means to increase liberty' or free will, something Skinner's very theory denies exists (Dahlbom, 1984). Thus, the very base on which Skinner has formed his theory is a direct contradiction of Darwin's ideas (Dahlbom, 1984). At the same time, as Wyrwicka (1984) shows, Skinner compares the positive reinforcement drive inherent in operant conditioning with Darwin's proposal of the natural selection drive inherent in nature. According to Wyrwicka, the natural selection drive is dependent on what is necessary to the survival of the species, and 'the consequences of operant behaviour are not so much survival as sensory gratification' (Wyrwicka, 1984). Darwin's ideas are more accepted than operant conditioning. By contradicting Darwin's ideas, Skinner's operant conditioning theory loses much of the support Skinner hoped to gain with his parallels (Wyrwicka, 1984).

Failure to show adequate generalizability in human behaviour is obvious in both Pavlovian conditioning and operant conditioning. All of these experiments have been based on animals and their behaviour. Boulding (1984), questions Skinner's application of principles of animal behaviour to the much more complex human behaviour. In using animals as substitutes for humans in the exploration of human behaviour, Skinner is making the biggest assumption that general laws relating to the behaviour of animals can be applied to describe the complex relations in the human world. If this assumption proves false, then the entire foundation upon which behaviour rests will come crashing down. More experiments with human participants must be done to prove the validity of this theory (Boulding, 1984).

Inability to explain the development of human language is clear. Although Skinner's ideas on operant conditioning are able to explain phobias and neurosis, they are sadly lacking in applicability to the more complex human behaviour of language and memory. The inability to explain the language phenomenon has in fact drawn a large number of critics to dismiss the theory. Even though Skinner has responded to the criticism he has not strongly defended the language phenomenon so it is relatively unproven. In spite of the weaknesses, there can be no doubt as to the usefulness of research done in the field of behaviourism. One cannot totally dismiss the effect of the environment has on behaviour nor the role it plays in developing personality as shown through research. Indeed, when the theory of behaviourism is applied to combat certain disorders, the results have shown it to be remarkably effective. Therefore, behaviourism and its ideas cannot be ignored when applied to certain situations.

The Social Learning Theory

Originally, learning theorists explained behaviour primarily as arising from the organism's direct experience with classical or operant conditioning. More recent learning theorists focus on less direct, though equally potent, forms of learning. They emphasize that humans can learn new behaviours merely by observing the behaviours of others,

without personally experiencing any conditioning. These theorists have developed an extension of learning theory called Social Learning Theory (Berger, 2000).

Albert Bandura (1976), worked with people, (unlike Skinner, who worked with animals) and formulated the Social Learning Theory. While he did not rule out the significance of reinforcement, he found that *observational learning and modelling* are important factors. The former means learning by watching others whereas the latter means behaving in the same way as someone you have been watching.

Modelling is an integral part of social learning and is the process whereby a person tries to imitate the behaviour of someone else. People model only certain behaviours of certain individuals in certain contexts (Berks, 2003). It occurs with minor actions eg. What someone wears or how someone laughs but can also occur in powerful ways as when a male child identifies with his father as a role model. Generally modelling of a particular behaviour is most likely to occur when the observer is uncertain or inexperienced and when the behaviour has been enacted by someone considered admirable, powerful or similar to the observer (Bandura, 1977). Role models are likely to be those who care for the child, and may also include those who the child sees as having power and influence, who are most like the child, or who the child most wants to be like. This in itself creates enormous implications for the caregiver. Being likely to be 'picked' as a role model by the child, the caregiver must be careful to exhibit desirable behaviour.

Social learning involves much more than just observing and modelling behaviour. The learner must be motivated to pay attention to the modelled behaviour, to store information in memory and later to retrieve that information when opportunities to use the modelled behavior arise (Bandura, 1989). People's susceptibility to modelling change as they mature. With age, children become more discriminating in their observations of other people. They also become better able to extract general rules from the specific behaviours they observe. Social learning is also affected by our self-understanding and by the standards we set for ourselves (Berger, 2000).

Bandura in the Bobo doll experiment believed that aggression should be defied in three aspects. First how the aggressive patterns of behaviour are developed, second what provokes people to behave aggressively, and third, what determines whether they are going to continue to resort to an aggressive behaviour pattern on further occasions

(Evans, 1989). The children imitate aggressive behaviour through observation or modelling. There are four component processes influenced by the observer's behaviour following exposure to models. Three components include: attention, retention, motor reproduction and motivation (Bandura 1977).

Criticisms of the Social Learning Theory

The social learning theory advocates that individuals, especially children, imitate or copy modelled from personally observing others, the environment, and the mass media. Biological theorists argue that social learning theory completely ignores individuals' biological state. Also they say that the social learning theory rejects the differences of individual genetic, brain, and learning differences (Jeffery, 1985). For example if a person witnessed a violent incident he or she might respond in different ways. Biological theorists believed that the responses would be normal and come from the autonomic nervous system.

In the autonomic nervous system, the heart rate, increase blood pressure, nausea, and fainting would be normal symptoms of the responses that individuals might express in a particular situation. Therefore, the symptoms and behaviour are not learnt, but partially inherited. In addition, the social learning theory rejects the classical and operant conditioning processes. The biological preparedness of the individual to learn as well as the role of the brain in processing information from the social environment, are critical to learning theory, but they are ignored by the social learning theory. Social reinforcement is conditioned reinforcement based on the relationship of the conditioned stimulus to an unconditioned stimulus (Jeffery, 1985: p.239).

Regarding Bandura's (1973) Bobo doll experiment critics have argued that the children were manipulated into becoming aggressive. The experiment aroused the children's anger and then they responded to violent behaviour (Worthman and Loftus 1985). There have been many debates over whether or not violence on television causes aggressive behaviour in children. According to Feshban (1971), television helps to decrease the amount of aggression in children.

The study done on juvenile boys and the violent movies proved that they were able to relate to the characters involved in the violent act and in doing so the viewer was able to

release all aggressive thoughts and feelings. This theory that viewing violence on television leads to decrease in aggressive behaviour is called Catharsis effect (Gerbner, Gross, 1971). Despite these criticisms, Albert Bandura's Social Learning Theory has maintained an important place in the study of aggression and criminal behaviour. In order to control aggression, he believed family members and the mass media should provide positive role models for their children and general public (Bandura, 1976).

Other Theories and Approaches

Bukatco and Marvin Wdihler (2000), in their article, refer briefly to other theories that have influenced the study of child development.

Information Processing Approaches

This is the theoretical approach that views humans as having a limited ability to process information, much like computers. The human mind is said to possess cognitive structures (e.g. short-term and long-term memory) and processes (strategies, rules and plans that influence attention, decision-making, remembering). Information-processing models often rely on measures such as time to complete a task, kinds of responses, or errors made to evaluate what is involved in reasoning, problem solving, or some other activity.

Learning Styles and Information Processing

In education the research into learning styles has been concerned with cognition, information processing, and affective (social, emotional and cultural) influences on learning, motivation, and achievement. Various theoretical models have evolved to consider learning styles including locus of control, concrete versus abstract reasoning, reflective versus active engagement, domain specific preferences, modalities (auditory, visual, kinesthetic), cerebral processing (right versus left brain), metacognition, global/analytical versus impulsive/reflective, field dependence/field independence, simultaneous/sequential processing physical, environmental. The term of 'learning styles'

has different meanings to people; for some, it is synonymous with 'cognitive styles,' and for others it refers to preferred approaches to learning based on modality strengths, and others believe it means hemispheric functioning, i.e. whether one is right-brained or left-brained (Marsh, 1992).

A number of classroom strategies have been used to match learning style with instructional style, including small group activities, cooperative learning, mastery learning, performance-based assessment, and computers. Thus, there are many concepts and terms such as Witkind's field dependence/field independence, Kirby's simultaneous/sequential processing, innovative learners, analytic learners, dynamic learners, and many others.

The Mayers-Briggs Type Indicator (MBTI) uses preferences based on Carl Jung's theory of psychological types to form 16 different learning style types (Cox, 1981).

- Extraverts
- Sensors
- Thinkers
- Judgers

Kolb's Learning Style Model, Herrmann Brain Dominance Instrument (HBDI), The Felder-Silverman Learning Style Model and Curtis Carver and Richard Howard have experimented by conducting different presentations of materials to appeal to different learning styles. These suggestions provide fertile ground for future research with multimedia.

Criticisms of the Information Processing Approaches

While most educators accept the premise that there are learning styles, there really is limited research in this area to support many of the basic assumptions. While there has been considerable attention to cognition or information processing, the basis for learning styles may not be so much a matter of brain wiring as it is cumulative effects of cultural values, socialisation, and peer influence. While many educators tend to believe that family values influence learning, and cultural differences in learning style and preferences develop through children's early learning experiences (Cox & Ramirez, 1981). Peer group too plays an important role in shaping attitudes towards schooling.

As students have different learning styles, the strengths and preferences for how information is processed may be more cultural or learned than wired in. For example teaching and learning strategies in preschools especially in Asian countries may be different to that of in the West. Play based child-centered approaches in learning and teaching are rare in Asian culture as the importance of formal education is embedded in parents' attitudes and expectations. Hence the learning and teaching styles of children can be strongly influenced by the expectations of both the culture and the society.

However, individual learners have different learning styles, gifted children typically have no preferred style and use all forms of input (auditory, visual and so forth), so personality and social variables may be more important in learning than just a particular method of presentation. The brain deals with information and works best in authentic context. The fact that some students have problem learning in school environments may have more to do with the nature of instruction than with the nature of instruction than with the method of processing information, and information processing may be a fall back position of each student in attempts to make sense of instruction.

According to the Information Processing Approach the learners become more proficient in their learning styles due to the influence of the environment and also their particular individual style. As a result they change their learning styles due to their competences. This particular change in students can also be categorised under the Dynamic Systems Theory which is also known as contextual theory are based on the importance of many interacting levels of systems that account for development. The dynamic systems theory captures this idea and at the same time, stresses the emergence over time of more advanced, complex behaviours from these many interactions. According to this theory, development reflects more than an accumulation of past events; it is, instead, the product of reorganisations that arise from the interactions of various levels of the system that could not be observed or expected from each component level by itself. It is said to be dynamic because of its stress on the new, emergent capacities that arise from the interaction of many competing processes over time. The transformation of the students' overtime takes place via a complex, multidirectional system of influences (Gottlieb,

1991; Gottlieb, Wahlsten, & Lickliter, 1998). Contextual models, also referred to as 'systems views', are concerned with understanding this broad range of biological, physical, and sociocultural settings and how they affect development.

Important implication of all these theories is that development is not controlled by any one particular factor, is it the brain, genes, child-rearing practices, or any specific experience. Instead, the contributions from these various components are parts of a process that induces behaviours or ways of thinking that become more organised and advanced. This brings us to Ethological Theory, which holds that development is influenced by yet one broader context – the biological history and constraints that have been a part of human evolution. It makes use of Darwin's study of evolution and adaptive traits. The ethological theory surfaced in the 1930's and takes into account the mutual interchange between the inherited, biological bases of behaviour and the environment in which that behaviour was exhibited (Hinde, 1989). Hence, the Information Processing Approaches can be the influence of variety of factors that contribute to the unique individuality of each child.

Conclusion

Children live in vastly different circumstances. These differences can have a dramatic influence on development. Some of these circumstances will be more supportive of development than others. There are a number of contexts in which a child lives – physical, sociocultural and biological.

As discussed in Chapter Three the *Ecological Systems Theory* – Proposed by Urie Bronfenbrenner, stresses the need to understand development in terms of the everyday environment in which children are reared. Development must be studied, according to Bronfenbrenner, not only in the home but also in the schools, neighbourhoods and communities where it takes place. One of his major contributions is his comprehensive portrait of the environment – the ecological forces and systems that exist at several different but interrelated levels. These levels and systems do not remain constant over time – change is always taking place and these time-linked shifts and transitions may have greater or lesser impact depending on where they occur.

Any adult, who wants to interact with young children, be it as a parent or as a teacher, needs to understand how children grow and develop. A child's early years are crucial in forming his personality, attitudes, values, beliefs and self-esteem for the rest of his life. These years are often called the formative years in recognition of their importance in moulding the person the child will become. Adults are in a position of enormous power and influence over the children in their care. They need to know how to use this wisely to provide a safe and happy environment for their children to grow and thrive.

Studying theories of child development provides valuable insights, information and guidelines (Barrett, 1999). Theories that describe human growth and development, and the different ways, in which children learn, are very helpful to early childhood educators. Having knowledge of the major learning theories will help a teacher to understand what behaviour to expect from children at each age of stage of their development. Given the fact that children think and behave differently from adults and that their understanding is limited (Berks, 2003), knowledge of the learning theories help to guide and support adults in providing the best possible care and education for the children. Understanding theories of childhood would help early childhood educators to provide a rich stimulation environment where they could explore and discover.

All the theories discussed above would no doubt help early childhood educators achieve their fullest potential in implementing a rich environment where children could happily explore, discover and learn.

CHAPTER FIVE

Training early childhood educators in Singapore: Encouraging Learning and Teaching through Play.

Introduction

In Singapore since 1999, both the MOE and MCYS have looked into the improvement of pre-schools by focusing on high leverage areas. These leverages are delineating desired outcomes for pre-school education, developing a frame work, conducting research to study the benefits of quality pre-schools by raising the standards of teacher training and qualifications. Teaching in early childhood setting is complex activity requiring a myriad of knowledge, skills and capabilities. When looking at the role of the teacher in the development of child's physical, cognitive and social & emotional development we need to consider variety of factors that are interrelated in the larger scope of teaching.

Therefore it is argued that early childhood educators need to understand the changes children go through in their development in and learning process in order to be able to provide for them nurturing, learning environment. Appropriate play based learning would provide children the opportunity to be active constructors of knowledge through experiences of observing, and participating in activities that include everyone, children and teachers (Bredekamp & Copple, 1997).

An important feature of healthy development is that children learn in all ways through active involvement with their environment in contexts that make sense to them and that are safe, both physically and psychologically. One medium through which this active development takes place is through the medium of play. Many writers on child development have emphasized the importance of play in a child's life e.g. Bruce (1991) and Guha (1996). Play based environment creates children with ample opportunities to play, learn and develop. Play is a means by which children's development and learning are initiated and through which development is achieved and learning is mastered (Bergen, 1998). The importance of play to contribute to nearly all aspects of a child's development cannot be over-stated. It is the 'work' of children and prepares them for life.

This chapter focuses on teachers' role in understanding the nature of play followed by the theoretical views of cognitive development through the mediation of play, which have implications for teaching and learning in early childhood education. These can extend children's learning when utilized by thinking teachers who reflectively appraise their teaching of young children. It is necessary therefore, to derive a clear explanation of teachers' role in understanding the significance of play and constructivist views in implementing an environment where learning through play equals teaching through play. In this chapter, first a definition of play will be provided. Then the role of the teacher in merging play and constructivist views so learning through play equals teaching through play will be explored.

Definition of Play

What really is Play?

Defining play has been a challenge to all who have researched and written about it. There is no satisfactory definition of play. A layman's definition of play would probably include a reference to enjoying himself and might even include a contrast to work. The former emphasizes one of the features of play that most people would identify with, namely that it is usually pleasurable, while the latter distinguishes between things that we need to do, but perhaps do not want to (work) and things that we choose to do (play).

According to Santrock (1993), play is a pleasurable activity that is engaged in for its own sake. Mari Guha (1996) says that "there are no easily identifiable sets of actions which could reliably be called play.... The starting point is that play exists, we know it when we see it, we know it when we do it." Catherine Garvey (1977) refers to play as a spontaneous, pleasurable activity that has no practical objective or goal (Barrett, 1999).

Play brings together the ideas, feelings, relationships and physical life of the child (Bergen, 1998). It co-ordinates a child's life and makes it whole.

According to Bruce and Meggitt (1996), children learn to play, although they are also predisposed to it. It's a bit of both, nature and nurture. However not all children play. There may be a variety of reasons for this – a sick, unhappy or over-occupied child may not play. Play may or may not have been encouraged by the culture in which the child has

grown up. Play takes great energy and commitment on the part of the child. They put their whole selves into it and a child who has played has concentrated, thought, felt, related to others in deep ways and will be physically tired. Children who are held back in these ways need great sensitivity to be shown by adults. It is interesting to note that recent research suggests that children, especially boys who do not play, are more likely to bring personal and social tragedies on themselves and their communities. The researcher Pellis believes that play and laughter actually 'fertilise' the brain (Caruso, 1998).

Berks (2003), emphasizes the importance of realizing that any child can be taught to play. The way children develop in their play should not be seen as progress through a prescribed sequence or hierarchy but as a web that the child weaves. This is especially important for early childhood workers working with disabled children.

Play is central to a child's learning and is essential to the young child's health. As it is, however, one of the most complicated concepts to study and understand, it might be easier if we attempt to explain it by analysing its features and functions.

Functions of Play

The Charter of Children's Rights (1989) states that every child in the world should have the right to play. Why is play assigned to so much importance?

Play is central to a child's learning. It contributes a great deal to their development and to learning about ideas, feelings, relationships, the physical self, and the moral and spiritual self.

Together with what Caruso (1988) and Kane (1993), call, the 'network of learning', play brings together, coordinates and makes everything that a child learns whole.

It is an activity that children engage in because they want to and even though it may not be goal-oriented, it provides many real benefits (Barrett, 1999). Play gives children the *opportunity to explore* their environment, manipulate objects and practice new motor skills (both gross and fine). Garvey (1977) notes that play often involve four steps – exploration, manipulation, practice and repetition.

Play contributes a great deal to their *cognitive development*. It provides opportunities for children to think symbolically and form mental representations when they indulge in

pretend or symbolic play. Pretend or socio-dramatic play allows children to rehearse speech, communicate with one another and develop language competency (Cobb, 2002).

An important aspect of play is that it is creative and stimulates the imagination. Children can create their own unique works while at the same time use toys and games to build on their experiences, solve problems, use symbols, classify objects, construct scripts, and perform other tasks that stimulate cognitive development. Studies have shown that the ability to shift between fantasy and reality helps children develop cognitive, language and social skills (Garvey, 1977; Rubin, 1980).

It is interesting to note that Piaget (1962) saw play as a medium that advances children's cognitive development while at the same time believing that a child's level of cognitive development constrains the way they play. He felt that cognitive structures need to be exercised and play provides a relaxed and pleasurable way to do so. Vygotsky (1962), believes that play is an excellent setting for cognitive development. He was especially interested in the symbolic and make-believe aspects of play (Berks, 2003). It also has an important opportunity for *socialization*. It provides many opportunities for children to learn and practise social skills, such as sharing, taking turns and cooperating (Furth, 1993).

When children play together, they talk to one another and this gives them a chance to practise and improve both their language and social skills. They learn social and gender roles through the medium of play. It also has an extremely *therapeutic* role and is viewed as a great stress-reliever (Burt & Sugawara 1988). Freud and Erikson believed that play was an especially useful form of human adjustment as it helped the child master anxieties and conflicts. Through the medium of play, the child can relieve his tensions and cope with life's problems (Papalia, 2002). Play permits the child to work off excess physical energy and to release pent-up tensions. Play therapy allows the child to work off frustrations and is a medium through which the therapist can analyse the child's conflicts and ways of coping with them. Children may feel less threatened and be more likely to express their true feelings in the context of play (Santrock, 1993).

Daniel Berlyne (1960) described play as exciting and pleasurable in itself as it *satisfies the exploratory drive* in each individual. It does this by offering children the possibilities of novelty, complexity, uncertainty, surprise, and incongruity (Santrock, 1993).

To sum up, play is essential to a child's health. It becomes even more crucial given the world and context that we live in today – with all its pressures and advancements (Christie & Wardle, 1992). Play increases affiliation with peers, releases tension, advances cognitive development, increases exploration, and provides a haven in which to engage in potentially dangerous behavior. It provides opportunities for conversations and interactions during which children practice the roles they will assume later in life (Klein 1992).

Views on Play

Programmes in early childhood education settings have often been based on a 'developmental play curriculum.' Theories of play seek to clarify its nature. They fall into two broad categories – those which separate work from play, and those, which make play a central part of development and education.

The first category – those, which separate work from, play – talks about children 'exploding' into the playground when school is done (Garvey 1977).

- There is a feeling of '*letting off steam*' and there is a clear contrast between the work that has just been done and the play that is now possible. It goes back to the eighteenth and nineteenth centuries and the writings of Herbert Spencer who thought that boisterous activity demonstrated by children at play indicated a need to get rid of excess energy that was bottled up inside them
- Another model in the first category is the '*recreation*' model. Here play is seen as a rest from work, and as a way of restoring the energy that work has used up. This model presents the idea that children in a learning environment need both academic and non-academic content in order to be given a balanced education. In many respects, the structure of the school day in most countries reflects this 'work versus. play' approach. There are periods when children are expected to work,

and times when they can let off steam and/or replenish their energies. The structure of the working week for adults also reflects the same model of contrasting work with recreational periods.

The second category of theories makes play a central part of the child's development and education (Garvey 1977).

- It views play as a serious matter for children. It is not just something that they do in between other activities. Play matters to children and they work hard at it, often creating complex stories and play situations, and becoming totally absorbed for long periods of time.
- *Social Constructivist Theories* emphasize the child as an active learner. Children use props, materials, other people and concepts in their play. Piaget saw play as the way in which a child's learning becomes whole. He put the child at the centre and emphasized that active involvement with his environment is a prerequisite for the child's healthy cognitive development. A child becomes actively involved in his environment through all types of play and playing is the way in which a child learns. Piaget's stages of play are – babyhood (0-18 months, involving sensori-motor behaviour), the early years of symbolic play (18 months-5 years, making something stand for something else), and the school years (5-8 years, children move from play to taking part in games with rules, children play more cooperatively (Berks 2003).
- Vygotsky sees play as the means by which children not only develop cognitively, but also learn about socially appropriate behaviours and about the culture in which they live. He emphasized that other people are important to children as they play. He believed that play helps children do things in advance of what they can manage in real life (Berk and Winsler, 1995).

- *Psychodynamic Theories* emphasized children's feelings, both positive and negative. Freud saw play as a medium through which a child could express wishes and feelings that were expected to be suppressed in other contexts. He thought that repeating unpleasant situations in play was important as repetition reduced the level of anxiety and disturbance. Actively initiating a disturbing event could help a child to cope with the difficult feeling better than being helpless or passive. Children use play to face up to and cope with their lives. As they play, they try out things as they are, as they were, as they might be and as they want them to be. Through play, children begin to gain a sense of control over what happens to them. Play therapists use psychodynamic theories in their work. They help children come to terms with strong emotions by providing carefully structured play environments where the child can safely explore his feelings with expert adult support (Berks, 2003).

Parten's Classic Study of Play

Children play in different ways at different times. The nature of their play changes as they grow and develop. Parten's Classic Study of Play helps early childhood educators to understand the child's behaviour, characteristics and special qualities which brings out the individuality of young children.

Santrock (1993) argued that in the 1930, Mildred Parten observed children at play and identified six categories of play. According to Barrett (1999), each category is characterized by a different degree of social interaction. Parten also found that there was a developmental sequence to her play categories, the younger children being more likely to take part in solitary and parallel play, and the older children more likely to become involved in associative play and cooperative play (Bergin, 1988). Though other theorists have made their own analysis, Parten's categories are still used and provide an elementary structure to analyse play.

1. *Unoccupied Play* – This occurs when the child is not engaging in play as the term is commonly understood, but is standing around in one spot, looking around the room, or

performing random movements that do not seem to have a goal. This is less frequent than other forms of play.

2. *Solitary Play* – A child plays on his own alone and independently of others. He is engrossed in his activity, without taking notice of or taking part in the play of others around him. Two and 3 year olds engage more frequently in this kind of play than older preschoolers.

3. *Onlooker Play* – This occurs when the child watches other children play, he might talk and ask questions. This active interest in other children's play differentiates this play from unoccupied play.

4. *Parallel Play* – The child plays alongside other children, perhaps using the same toys, but is involved in his own play rather than taking notice of what other children are doing. He plays in similar ways as another child and with similar toys but does not interact with the other child (Barrett, 1999). The child plays separately and the older children are, the less frequently they engage in this type of play, although even older preschool children engage in parallel play quite often.

5. *Associative Play* – This occurs when play involves social interaction with little or no organization. Children play with other children but each child acts according to his own play agenda; they do not negotiate common rules for play nor play within a common framework e.g. a group of children riding their bikes in the playground. Members of the group come and go from the activity as they choose. Children seem to be more interested in each other than in the tasks they are performing e.g. borrowing or lending toys.

6. *Cooperative Play* – This involves social interaction in a group with a sense of group identity and organised activity. This is the form of games in middle childhood and is seen little in the preschool years. Children clearly belong to a group and the play is organised by the members of the group who establish the rules and the roles that each child plays. There is an interdependence of roles and play can continue only if each child takes his place with the others in the activity. Examples of this are formal games, competitions and role-plays in a group. Sociodramatic play is seen as an important element in development. Children must cooperate, make compromises and arrive at joint decisions.

Although Parten found that there seemed to be a developmental pattern to the types of play, all six types have an important contribution to make to a child's development. Researchers used to believe that, as children grew older and more socially adept, they engaged in progressively higher levels of play involving more social interaction (Mooney, 2000). However studies have shown that while this is generally true, children at various ages frequently engage in several levels of play (Papalia, 2002). Children will choose their play according to their needs at any given time, but also according to the situation they find themselves in. So a six-year old may play cooperatively at one time but then may indulge in solitary play another time. An only child may have fewer opportunities at home to play cooperatively.

Santrock (1993) draws attention to Keith Barnes' (1971) study of Parten's categories of play. Barnes observed a group of preschoolers at play and found that children in the 1970s did not engage in as much associative and cooperative play as they did in the 1930s. These changes probably occurred because children have become more passive due to television and the abundance of toys.

However, the teacher could make vast difference in the classroom by implementing a play based learning environment through the mediation of constructivist views.

Early childhood educators need to be knowledgeable of the importance of a play based curriculum, the modes of teaching children through sociocultural paradigm, scaffolding, guided participation and co-construction where learning through play equal to teaching through play.

The role of the teacher in merging play and constructivist views so that both learning and teaching involve play

How important is knowledge of play and child development for the early childhood educator?

As has been seen and discussed in the previous sections, nobody can make a child play. His desire to play has to come from within him. One of the features of true play is that it is intrinsically motivated and hence the best thing an adult can do is to provide the right environment and climate for the child to play. The environment, physical, social, emotional and intellectual must be attractive and stimulating enough for the child to want to play. And it is the responsibility of the adult to provide this conducive environment.

According to Piagetian theories it is clearly obvious that children construct their own knowledge interacting with the environment. Piaget saw the child as an explorative learner. The task of the adults is to provide a suitable environment (Bee, 1995).

Piaget's Model of Play

Bee (1995) observes that Piaget saw play developing through three stages:

- *Mastery Play* – Linked with the sensori-motor stage, this is solitary play where a child is "...exploring and manipulating objects using all the sensori-motor schemes in her repertoire. She put things in her mouth, shakes them, and moves them along the floor (Bee 1995)."
- *Play Stage* – This stage is linked to the pre-operational stage. Children begin to use objects symbolically but play remains largely solitary or parallel, as children are believed to be still egocentric at this stage.
- *Game Stage* – This is reached when egocentrism begins to fade. Children start to take turns, play cooperatively and follow rules (Bee, 1995).

In order to be able to provide an idealistic environment the study of child development and play are seen as basis of teacher preparation for those working in early childhood education. The influence of North American model of 'developmentally appropriate practice (Bredekamp, 1987) becomes the basis of and justification for what are seen as appropriate programmes for young children. Recently the question was raised of whether or not child development knowledge and programmes based on Piagetian views of cognitive development was a sufficient base for early childhood education programmes and pedagogy. While Piagetian practice emphasized a stimulating child-centred environment few would disagree with, the underlying developmental theory did not make explicit links to processes of teaching and learning teachers and children could engage in. Meadow & Cashdan (1988), found that in such programmes 'children were content, active and busy, but that three things were rare:

- sustained interactive conversation or play with an adult,
- high complexity of play activities,
- lively, purposeful involvement leading to creative, exciting discovery.'

The influence of the sociocultural paradigm

Teachers' role in facilitating children's learning have been influenced by sociocultural paradigm which responds to the criticism of writers such as Lubeck (1996) in offering wider perspective on cognition within the constructivist discourse and opportunity of cross-cultural studies. This view sees learning as social in origin and transferred through the mediation of cultural tools (e.g. language, books, symbols) to the individual where the learning is internalized in thought. On the other hand Bruce and Meggitt (1996) offer some helpful guidelines by outlining the role of the teacher in play. The best thing adults can do for children's play is to support and extend their play with sensitivity and skill.

The best way for a teacher to define his role in encouraging and supporting the play of children is for him to think back to his own childhood memories of play (Mooney, 2000). Remembering what he did as a child and what he enjoyed provides a good starting point to help children play. The teacher also needs to observe the children (in his care) as they play. This will help the adult to tune into the child's play agenda and will help play along.

Vygotsky's (1978), ZPD is the most simply defined as mutual or shared understanding; a sharing of purpose or focus among individuals. This process involves cognitive, social and emotional interchanges (Mooney 2000). Both the ZPD and intersubjectivity have implications for an active role for a teacher in children's learning. The sociocultural view of 'the role of the teacher includes both designing an educative environment ...higher mental functions originate in the activities and social dialogues between adults and peers in which children participate' (Berk & Winsler, 1995, p.153)' (Berk & Winsler, 1995).

According to Lobman, (2001) 'teachers as able to support children learning through play activities by participating with them in the creation of a playful environment. Through ongoing improvisational activity the children and teachers created something new together...playful environment is a strong environment.' Cole and Wertsch (1996) identify cultural mediation as the distinguishing factor rather than individual versus social processes in learning. According to Cole and Wertsch both Piaget and Vygotsky identify the relationship between the individual and the social as necessarily relational but that each has a different emphasis. There is therefore more complementarity in these major paradigms than has perhaps been traditionally explored. Such complementarity also reduces the distinction and contrasts once seen between children's play and work (Bennett, Wood & Rogers, 1997).

What is meant by scaffolding in early childhood teachers' practice?

Vygotsky introduced the idea of teachers scaffolding children's learning. The term 'scaffolding' is explained in Chapter Four. Rogoff (1998) argues such criticism of scaffolding due to its weighting of control to the adult and focus on individuals as the unit of analysis. Stone (1993) describes scaffolding as 'a much more subtle phenomenon, one that involves a complex set of social and communicative dynamics'.

What are the most suitable play based teaching techniques teachers use to scaffold children's in the classroom learning?

Teachers in the classroom need to take a broader look at the best possible scaffolding they could provide for children with varied abilities and weaknesses. Providing equality of opportunity and gender issues also play an important role. Some children may be left

out of the play when they want to join in. As regards the latter, boys and girls need to experience a broad range of play. Children with special educational needs might require extra help or teacher scaffolding in developing their learning through play. It is a good idea to have children of mixed ages play together. This encourages play as the older children will help the younger children and teach them how to play. It is important for the teacher to remember that when children play, they can learn at a very high level (Caruso, 1988; Kane & Furth, 1993; Packer 1994).

As teaching techniques, scaffolding describes the process of providing temporary guidance and support to children as they increase competence in areas of development and learning. Teachers need to be able to judge when children are ready to move from one level of competence to another, by process of careful, sustained observation and interactions with the children (Caruso, 1988). Teachers need time to support, guide, and assist children's growing competences as individuals and in small groups by processes such as joint attention. Catering for this learning means providing the right kind of setting and making the conditions for play as good as one can (Mooney, 2000). It is the adult who must provide the right setting and environment in order to encourage children to play and learn. It is important to make play a high priority for this reason.

Lobman, (2001) argues that one cannot make a child play, the setting must be attractive enough for the child to want to play.

This can be done by:

- Free choice of activities – Children need a wide variety and free choice of activities.
- Making time to play – Children need plenty of uninterrupted time to play. Play cannot flow if a child is stretched for time. Flexible timetabling of the day is a must.
- Making space for play – Children need spaces for play, both indoors and outdoors. The adult should develop spaces (in both these spheres), which encourage children to develop their own play.
- Freedom of movement – Children should be allowed to move freely between

indoor and outdoor spaces.

- Material provision – Children need things to play with, they need play props.

They do not need expensive things to play with. They can play with all sorts of things.

It is important that the teacher chooses these materials very carefully, as children will play with whatever they find in the physical environment. Materials should be open-ended and flexible in the ways that children can use them for e.g. wooden blocks, clay, and dough. These materials encourage them to think, feel, socialise or concentrate, and use a range of fine and gross motor skills.

Props and equipment should not be pre-structured so that there is only one way to use them e.g. cookie-cutters for dough (Lobman, 2001). Pre-structured materials, more often than not, hold children back from free-flow play as if there is only one way of doing things, children cannot develop in their imaginative play, dwell on their feelings, or sort out their relationships with each other. It is also important for children to play using items they use in daily life, rather than to do exercises that are split off from daily life.

Teachers also need to have strategies to facilitate and extend children's learning such as questioning, prompting, praising confirming, giving feedback, expanding repeating back, joint problem solving, and modeling (MacNaughton & Williams, 1998). It is essential that learning takes place within a meaningful context.

The teacher also needs to be involved in maintaining the materials provided. Such maintenance involves safety and also keeping the children's interest alive in the materials. This can be done by observing their play and adding provisions that might extend and help their play to progress further.

Importance of guided participation where children become 'apprentices in thinking'

Rogoff (1999) considers children as 'apprentices in thinking, active in their efforts to learn from observing and participating with peers and more skilled members of their society, developing skills to handle culturally defined problems with available cultural tools, and building from these givens to construct new solutions within the context of sociocultural activity'. She develops the concept of guided participation as essential to the collaborative processes in this apprenticeship and says that intersubjectivity underlies

these processes. Papousek & Papousek, (1983) argued that guided participation is presented as a process in which caregivers and children's roles are entwined, with tacit as well as explicit learning opportunities in the routine arrangements and interactions between caregivers and children.

Teachers' involved with children use variety of methods to organize and plan play environment to derive the best possible interactive situation where children learn happily

In 'Structured Play' the adult interacts with children to play and guide them. Here the adults' guidance of children through what is involved in play helps them to develop their own play (Bruce and Meggitt, 1996).

However, in the Oxford Studies done in the (1980s), it was found that children who were involved in adult-led structured play were less involved in what they were doing than children who were given more opportunities for free-flow play.

Sometimes there is the necessity for some sessions to be led by adults where children are introduced to the materials first through real experience e.g. using them in cooking and then in the home area. Children would then gradually incorporate these experiences in their own free-flow play in a safe and creative manner.

In this concept Rogoff (1990) extends the concept of ZPD by 'stressing the interrelatedness of the roles of children and their caregivers and other companions, and the importance of tacit and distal as well as explicit face-to-face social interaction in guided participation'.

Though having to complete adult guided tasks, 'work', before being allowed to play undermines play, and play is also undervalued when adults leave children without any help in play. In these cases, play becomes repetitive and superficial. We, as teachers, can help children play by 'tutoring' them in a way – however, this is not play itself but a way of helping children take a step towards playing (Suppal, 1997).

Free-flow play occurs, as the name suggests, when the play begins to flow with quality. It shows the child as using a very high level of knowledge and understanding, as well as a great deal of sensitivity. However, it can fade and vanish in a moment. The teacher needs to observe and watch out for the features of play listed earlier so that he can see what the child is doing and can help accordingly (Pavia & Da Ros, 1997).

The teacher can be a great help to children to keep the free-flow play going. He can enter into the spirit of the play and join the children in their play. By catching whatever it is about, the teacher can help it along. If children are making up a play story, the teacher can help the children to stay in character and can also help them to keep the story line in mind. But he must not invade, dominate or change the direction of the children's play. The child must always be in control. The teacher must be constantly sensitive to this and must allow the children to set the play agenda so that they can take their chosen route through play (Berks, 2003).

So, while consistent with the Vygotskyian view of ZPD, guided participation provides more focus on the role of children as active agents and communicators in their own learning and development, an extension of Piaget's view of the child's role in learning (Papalia 2002). Where Vygotsky saw verbal language as the tool of thinking and communicating, Rogoff, (1990) views communication more broadly to encompass the non-verbal. Instead of the individual and the social environment working as separate, Rogoff, (1990) argued that they become interacting forces, individual efforts, social interaction, and the cultural context are inextricably linked to enable children to become skilled participants in society.

Rogoff's work on guided apprenticeship and participation opens up other possible approaches to learning and teaching processes. She sees the roles of adults and children as being engaged in independent goal-directed activity.

Similarly, Bruce and Meggitts' (1996) in 'Structured Play' teachers act independently as part of a whole network of learning (Bruce and Meggitt, 1996). It is important for the teacher to provide for this network by scaffolding, Rogoff (1990) sees guided participation as a gradual release of responsibility to the learner.

According to Bruce (1996) encouraging children to have quality first-hand experiences through carefully chosen provisions both indoors and outdoors and helping children to represent and keep hold of their experiences by using a wide range of materials and activities. Organising games one of is one of the teacher's tasks.

However, guided participation implies more than the explicit act of breaking something down into components parts for children to progress through – it also refers to the

implicit elements of the of the interactions which bridge the familiar and new concepts (Dockett & Fleer, 1999). The more skilled and knowledgeable teachers often gain understanding of the teaching process they facilitate for the learner too.

Importance of co-construction – shared meaning making which helps to identify the cultural and social forces

What is meant by co-construction? Another response to the view of the active individual and active environment is co-construction (Valsiner, 1993). In this construct, development and learning are seen as occurring through complex and dynamic exchanges between children and their actions to make sense of the world, and social and cultural processes in everyday activities. These two aspects are both dependent on each other and also part of each other, hence the term ‘co-construction’ (Mc Naughton, 1995).

Co-construction also more explicitly acknowledges Piagetian concepts than guided participation and scaffolding. The teachers do not get involved with the child but their setting of play-based environment give children ample opportunities to play and develop. Through play children’s development and learning are initiated and through which development is achieved and learning is mastered. There are various kinds of provisions made for play for young children, both at home and in schools. A high quality care setting offers children opportunities to develop socially, emotionally, cognitively, physically and linguistically. A variety of play opportunities is important. Children need a wide range of play situations and may at any given time choose to be in a quiet area, a place where they can be messy, a space to engage in physical play etc. The child is the active constructor of knowledge; learning takes place as children solve problems; and how problem is seen and the means of solving it must be understood from the child’s perspective (McNaughton, 1995).

As stated in the Open College pack ‘Working with Children’ (Open College, 1994) different contexts of play children involve in exploration and learning is clearly identified.

- In *Creative Play* children eagerly involve in “activities in which children use their imagination to paint, draw or make things.” There is no limit to the number of things

that can be used creatively. The adult must however always bear in mind that very often a child will focus on the process rather than the end product.

- In *Physical Play* with large equipment children explore their gross motor skills, sometimes in outdoor play and sometimes indoors. Agility, coordination, balance and confidence can all be fostered. Specially designed play equipment is not essential as children can indulge in pulling, jumping, rolling etc even in a park or garden.
- In *Manipulative Play* children "...use their hands and often giving close visual attention to what they are doing." Children use their hands in many different ways every day and almost every activity offers opportunities for manipulative play. E.g. using small construction materials, jigsaw puzzles, working with play dough, drawing, writing etc. It is important to offer a child some activities that help him to focus on how they use their hands within the context of something they have chosen to do.
- In *Role Play* – Play needs to offer children chances to rehearse for roles that they may play in their future lives, to explore their feelings in a safe environment, and to become creatures of fantasy. Children do not always need props for role-play, but sometimes props can spark off a sustained period of play.

Play helps young children to learn and understand themselves and their world; to affect their environment and shape their world; and to master important skills and concepts (physical, intellectual and social); (Caruso, 1988; Kane & Furth, 1993; Packer, 1994; Stevenson, 1989, Strandell, 1997).

By also acknowledging cultural and social forces, co-construction becomes a contemporary social-construction becomes a contemporary social – constructivist theory, which has also developed from earlier Piagetian concepts.

The process of co-construction holds a potentially empowering approach to encouraging both adults and children to have an active role in the teaching and learning process. This

approach sees development as occurring as a result of socially provided platforms for learning and the child's active participation in these.

Three general types of activities mediate the child's actions:

- joint,
- personal
- ambient activities.

This approach is consistent with the main tenets of both Piagetian and Vygotskian theory, seeing the learner as central to learning. Cole and Wertsch (1996) identify that, as well as the child and environment, a third factor is essential in the process of co-construction- 'the accumulated products of prior generations, culture. This is the medium within which the two active parties to development interact.'

Verba (1994) notes that research on concepts such as scaffolding and guided participation within sociocultural and guided participation sociocultural framework have not focused on the child's contribution to the learning process. Rogoff (1990), argues that it is within social exchanges that we should look for the advances in individuals' ways of thinking and acting that build on cultural history through the practices of individuals with their social partners. In words of Wertsch and Stone (1979), 'the process is the product.' Verba (1994) feels it is important that the notion of partnership goes beyond the ZPD idea that the child is interacting with more skilled people. The relative equality of partners with respect to competence and social power in peer interaction allows process of co-construction to emerge that differ from those characteristics adult-child interaction. It can be then considered that co-construction then appears to be less outcome driven than do scaffolding and guided participation as there is more equality in the efforts of learners to develop shared meaning. Where co-construction is outcome driven, the outcomes or goals are shared.

So what do guided participation and co-construction mean in early childhood teachers' role?

Both guided participation and co-construction involve teachers and children in working and interacting on meaningful shared tasks that involve shared values. However, guided participation tends to be seen as adult-child dyads working on tasks which lead to an outcome or endpoint which the more expert participant is guiding the novice towards; co-construction implies a more shared approach to meaning-making as a learning process where participants combine knowledge together in new ways reach a learning endpoint.

Successful guided participation and co-construction therefore involve the elements of scaffolding discussed earlier, but co-construction also involves teachers constructing knowledge with children. Both emphasise the study of meaning rather than the acquisition of facts (McNaughton & Williams, 1998).

Co-construction is supported by a negotiated curriculum children contribute to. Co-constructing meaning helps children learn to problem-pose as well as problem-solve with others. Therefore it is relevant teaching technique for extending children's learning and development in any area.

In co-constructing teachers need to provide stimulating environment for children, to be willing to be co-learners in the acquisition of meaning and knowledge, and to be actively involved with children as children express meaning verbally. Teachers need to be actively involved in the exploration, discovery, and learning processes, and to provide many different ways for children to think about the same and different things the concept of spiral curriculum. Teachers, however, also need to reflect on the type and quality of their interactions and planning with children. Social interaction in itself is not sufficient for learning to occur. Also from a Vygotskyian perspective 'the role of the teacher includes both designing an educative environment and collaborating with children by scaffolding their efforts to master new skills' (Berks & Winsler 1995).

These constructs are evidence that the approach of didactic teaching is clearly inappropriate for young children, it is not so much what the child is taught but what the child brings to the learning situation that is crucial to for their learning. Planning for children's learning must start from what children already know. Teachers also need to

have a range of flexible and dynamic teaching strategies at their fingertips to respond to children's changing interests, abilities, and needs.

What are the other implications for early childhood teachers', education programmes and practices?

The group sizes of the children's classrooms play an important role. One of the main difficulties in facilitating and extending children's learning in early childhood centres is the size and composition of the group. According to Flee, (1992) possible solutions include the use of smaller groups and concepts such as community of learners (Brown, 1994). Hatano, (1993) and Brown, (1994) discuss teaching strategies such as reciprocal teaching and cooperative learning and their applicability are new approaches to social constructivism. Such learning and teaching processes within dyads and groups can be informed by constructs such as scaffolding, guided participation, and co-construction but need teasing out in future research.

Brown, (1994) outlines five key principles of learning and teaching based on current theoretical perspectives. These are individual contributions, collaborative learning, adult assistance and guidance, children's voices and dialogue, and active strategic purposeful learning. To these, Cullen, (1998) has added a sixth principle: physical settings as vehicles of thought. Teachers are responsible for providing an environment for learning, an environment for play that provides children for guiding discovery and learning through play, for providing many different ways for children to think about the same and different things, for encouraging peer and adult-child dialogue, and for valuing the input of all children. In order to maintain such environment the class ratio and the teachers' knowledge of the contemporary perspective of play and its contribution to all three domains of child's physical, intellectual and social & emotional development is vital (Bergin 1988).

Further, Balaban, (1992) mentions a set of characteristics, special qualities that professional caregivers should have; these qualities can relate to the caregiver's actions in relation to children's play. Balaban says that caregivers should be 'providers of an interesting play environment' (P.68) an environment that provides children with the props

to create play, be humorous and learn and develop. Also caregivers should be 'elicitors of language, of problem solving and playing' (p68). Bergin (1988) argues the importance of caregivers' understanding of play from infancy.

Santrock, (1993) describes child's play and from infancy:

- *Sensorimotor/Practice Play* – Sensorimotor play is behaviour engaged in by infants to derive pleasure from exercising their existing sensorimotor schemes. Pleasure is derived from exploratory, visual and motor transactions that infants indulge in during the first year of life. In their second year, infants begin to understand the social meaning of objects and their play reflects this. Practice Play involves the repetition of behaviour when new skills are being learnt or when physical or mental mastery and coordination of skills is required for games or sports. This can be engaged in throughout life. *Practice play* contributes to the development of coordinated motor skills needed for later game playing e.g. running, throwing balls.
- *Pretense/Symbolic Play* – This occurs when the child transforms the physical environment into symbolic play. Between 9 and 30 months of age, children increase their use of objects in symbolic play. They substitute objects in the environment into symbolic thinking and act towards them in pretend play. Simply they repeat the actions of adults with the objects around them or what they have previously seen. The preschool years are considered the 'golden age' of symbolic play (Bergin, 1988). It appears at about 18 months and reaches a peak at 4 to 5 years, after which it gradually declines. Garvey (1977) indicates three elements found in almost all the pretend play she observed – props, plots and roles.
- *Social Play* – This play involves social interaction with peers and increases dramatically during the preschool years. In addition to sociodramatic play, social play also takes another form – rough-and-tumble play. In rough and tumble play, movement patterns are often similar to those of hostile behaviour but in the play, these behaviours are accompanied by signals such as laughter, exaggerated movement, and active hand movements, which indicates this is play (Bateson, 1956).
- *Constructive Play* – This combines sensorimotor/practice repetitive activity with symbolic representation of ideas. It occurs when children engage in self-regulated



creation or when they solve a problem. It increases in the preschool years as symbolic play increases and sensorimotor play decreases. Some researchers have found that constructive play is the most common type of play in the preschool years (Hetherington, Cox, & Cox, 1979) and is one of the few play like activities found in a work-centred classroom e.g. having children create a play about a social studies topic. Whether such activities are considered play or not depends on if they get to choose whether to do it or not, and also whether it is enjoyable or not. Constructive play can also be used in elementary school years to foster academic skills, thinking skills and problem solving through humour, playing with ideas and promoting creativity (Bergin, 1988).

- *Game Play* – Games are activities engaged in for pleasure that include rules and often competition with one or more individuals. They take on a more prominent role in the elementary school years. Eiferman (1971) found that the highest incidence of game playing occurred between the ages of 10 and 12. Games feature the meaningfulness of a challenge – this challenge occurs if two or more children have the skills required to play and understand the rules of the games.

Understanding these different aspects of play is critical for teachers according to Vygotskian perspective ‘the role of the teacher includes both designing an educative environment and collaborating with children by scaffolding their efforts to master new skill’ (Berks & Winsler 1995 p.151). This can occur only when ratio and group size support opportunities for sustained interaction between teachers and children.

Mainly because of teacher-child ratios in most early childhood classroom, peer interactions are more prominent than adult interactions as children do get easily connected to their peers as termed by Vygotsky (1962), influence of ‘more learned peer’ Mooney (2000), would help to build a stronger learning environment much more stronger than adult-child interactions (Kontos & Wilcox –Herzog, 1997). Studies and literature on peer interactions suggest children’s independent self-chosen pairs and groups are most effective for interactions and learning. Opportunities in such settings for sustained, uninterrupted interactions and verbal discourse to promote reasoning, problem- solving

and metacognitive strategies are needed. Literature that suggests the heterogeneous pairs work together is evidence for the promotion of mixed age rather than similar age groupings of children in early years. Whether interactions are with teachers or peers, routines in early childhood centres must be flexible enough to accommodate the need for concentrated, sustained interactions that facilitate deep learning.

Pramling (1991) suggests the child-centered and environment-rich approach to early year's education alongside the reciprocal and responsive relationship of an adult attuned to the child's world. However, it may also be timely to reflect critically on the quality of the environment provided for the child and examine the value of complementary approaches to early childhood curriculum (Singer, 1996).

Bruce and Meggitt's (1996) in their research on 'Stages of Play' have defined stages of play going from babyhood to adult life. They emphasize however that these stages are not to be viewed like a ladder or hierarchy going from simple baby play to complex adult play. The stages of play are more like a network or a web that becomes increasingly elaborate. The importance of interaction and relationship development from infancy to adolescence is the prominent in Bruce and Meggitts' argument.

- *The first year* – Babies and toddlers play with their own hands. They begin to find out what play is through their senses, movements and relationships with other people.
- *1-5 years* – Children begin to pretend and use symbolic behaviour. This is one of the most important stages of human development. Interaction with peers as well as adults plays a vital role. In symbolic play, toys also become actors in a child's fantasies. This is Piaget's notion of mental combination.
- *5-8 years* – Play becomes more elaborate with pretend themes and uses more people, props and ideas. There are more sustained characters and stories, more expression of feeling and more skill. Free-flow play is very important for a child's development and learning at this stage. Group activities are fun and children become involved in metacognitive thinking.

- *8-12 years* – Play consolidates and becomes more sophisticated. It divided into hobbies, games and leisure pursuits, or into creative directions e.g. drama, dancing etc.
- *Adolescence and Adulthood* – Play continues to be important for adults who are creative, imaginative and innovative. There is also participation in leisure pursuits at this stage. People who play are less likely to become stressed, depressed, bored or narrow.

The predominance of a play-based curriculum is questioned by these constructs. While uninterrupted free-flow play has capacity to promote depth of learning in children, teachers must be actively involved in the play in order for this to occur. Bruce and Meggitt's (1996) different types of play would no doubt inspire teachers to be realistic when promoting uninterrupted play or organizing the required environment for child play. Meggitt (1996) state that all types of play can be catered for through setting up the room with great care. The material provision and the way in which the space is used are very important and determining factors in encouraging free-flow play.

Other approaches, once criticized as teacher-directed, also have the capacity to reflect the changed emphasis towards promoting cognitive development in children. Programmes such as the project approach, thematic curriculum, Reggio Emilia, and emergent curriculum also allow children to see teachers as enthusiastic role models and learners also passionate about learning. The view of the teacher as a collaborative learner and action-oriented researcher contributes to appropriate programmes and practices with young children.

It is an important consideration in this discussion to make a distinction between child-centered and child initiated play-based curriculum (Tinworth 1997). Tinworth describes child-centered play-based curriculum as 'based on an estimation of children's needs and interests whereas in child-initiated play-based curriculum the child has an active role in the initiation of interests, questions, and hypotheses and becomes collaborator in explorations and inquiry processes.

In both child-centered and child initiated play-based curriculum, early childhood educators' presence is important. Both Bruce (1991, 1996) in their study on play have

identified the importance of the early childhood educators understanding of important features of play. The knowledge of how, when and why children involve in child-centered and child-initiated play.

Further, Bruce (1991) discusses teacher's recognition of the child's 'free-flow' play. Free-flow play refers to play as "...an integrating mechanism, through which knowledge and understanding, feelings and relationships are used and applied..." (Bruce, 1991).

- In order to play, children must have had *previous first-hand experiences* of people, objects and materials, which they can then use in their play. Some of these will have been enjoyable while others might have been frightening or painful.
- When children play, they make up their *own rules*. There is no obligation to fit in with existing rules and the rules can be made up as they go along. This gives them a feeling of control, which is an important part of play.
- Play is *intrinsically motivated* and true play is something that the child himself chooses to indulge in. Nobody can make a child play – the child has to want to play.
- Very often play becomes a way in which children can *rehearse future roles*. This is called role-play wherein they pretend to be other people and take on adult roles. When children play, they are aware of the fact that they are not really any of the people whose role they may be playing, but they use the safe context of play to try out what the role feels like. Through role-play, the child begins to de-centre and starts looking at life through another person's point of view.
- Children can *pretend* when they play. It is about being *imaginative* and creating their own world and rules. It is a safe way to explore and celebrate the improbable and the impossible.

- Children can become absorbed in high quality play *either alone or with others*. They sometimes play in a pair, in parallel or in a group with other children. They will choose the type of play they wish to become involved in at any given time.
- Children are active when they play and are not primarily concerned about producing an end result or product. *What is important is the process* and it is the doing of the activity that is important. Children can spend long periods of time doing something with little regard to whether anything is produced at the end.
- When children play, they *try out what they have been learning*. They show their skills and competencies, use their own experiences and consolidate what they know and can do. They do this in situations where they are in charge and in control.
- Play helps children to coordinate what they learn. It brings together all the different aspects of a child's development and is thus a '*holistic*' kind of learning.
- Children are deeply involved in their play and *wallow in their feelings, ideas and relationships*. There may be situations where a young child may use play to explore feelings and thoughts that may not be positive. Play can be a safe situation in which to explore such powerful feelings. Specialist training is needed however to be able to use play to help young children come to terms with difficult and traumatic events in their lives.
- Sometimes children use *play props* in their play.
- Each person playing has their own *play ideas*, sometimes referred to as *play agendas* or *play scripts*. Adults who join children in their play need to remember this and not try to impose their own ideas on the child.

Meggitt (1996) use these features as performance indicators or desirable outcomes for quality play. If most of these features are present when children are observed in their play, then they are probably involved in quality play. However, if only a few are present, then the child is probably doing something other than play – he might be representing things, or be involved in a game with rules, or then might be enjoying a ‘first-hand’ experience (real and everyday experiences). It is useful to know what play is and what play is not in order to become clear about the kind of learning the child is involved in. However, in a child-centered play curriculum the teachers make the decisions where as in a child- initiated play curriculum the children contribute to investigate relevant and meaningful issues. Both are similar to scaffolding /guided participation and co-construction.

Conclusion

It is significantly clear that an environment where learning through play equals teaching through play signifies that the children’s play provides a rich context for learning; therefore, it must also provide a rich context for teaching. Social constructivist theories are based on a complex model of teaching and learning values both child-initiated and teacher-initiated learning experiences and interactions. These theories and the teaching techniques which accompany the constructs of scaffolding, guided participation, and co-construction imply a pro-active role for teachers in creating challenging learning environments and providing the appropriate teaching assistance at the right time to move children forward in their learning.

Teachers’ understanding of play, the importance of play in the child’s life, defining what play is can be complex. It is a multidimensional and complex concept, which ranges from an infant’s simple exercise of a sensorimotor talent to a pre-schooler’s riding a bike to an older child’s participation in organized games (Santrock, 1993). It is a major part of a whole network of learning and is important because it brings together, coordinates and makes everything a child does whole (Bruce, 1996).

Play brings together the ideas, feelings, relationships and physical life of the child. It helps children to use what they know in a safe environment and to understand things

about the world and the people they meet. When they play, children can rearrange their lives, rehearse the future, reflect on the past, and get their thoughts, feelings, relationships and physical bodies under their own control. The act of playing gives them a sense of mastery and competence, which helps them to face the world and to cope with it. This is crucial for the development of good self-esteem and for becoming a rounded personality. Play coordinates a child's learning (Meggitt, 1996). Teaching through play could be a new idea to match balance the old cliché 'learning through play' as teachers claim pedagogical expertise appropriate to early childhood education and state its complexity.

Play matters to children. They put their whole heart and soul into it. If we weave together the cognitive and emotional elements in play, we can see it as a means by which children use their skills, knowledge, abilities and feelings to explore and experiment with their environment. By doing this, they can develop not only cognitively and emotionally, but also physically, socially and linguistically for their future life. According to Erikson, not only is play a prime mode of learning, but it is an expression and vehicle for the broader issues of development.

Given the central contribution that play has in a child's learning, adults need to support and extend children's play with great sensitivity and skill. The prior childhood experience of both adults and children is important where play is concerned. Knowledge of child development and observation of children engrossed in their play is a good starting point in reminding us adults, of the magic of developing child in play.

The literature review suggests the importance of having an environment with specific characteristics such flexible, individualized, play-based curriculum, with the combination of interactive, flexible and accepting early childhood educators can have an impact on the development of young children.

Cullen (1994) notes 'that concept of teaching is no longer taboo in early childhood philosophy'. Early childhood teachers must be aware of their role in facilitating and extending children's learning and be knowledgeable about pedagogical practices. In addition they must be prepared to be enthusiastic learners, including a willingness to add to their own knowledge, and have the capacity of to reflect on their teaching. Understanding child development would no doubt assist them in balancing 'learning

through play' by 'teaching through play'. It allows current social constructivist constructs of learning and teaching promoted by the sociocultural paradigm such as scaffolding, guided participation, and co-construction to be implemented by teachers to maximize children's learning in early childhood education.

Cullen (1994) argues that early childhood programmes need to incorporate developmental, cultural, and knowledge dimensions. So, while research on cognitive perspective in early childhood education has extended the constructs of social constructivism to make teaching and learning approaches appropriate to development, learning and culture more explicit, the question of content of knowledge has yet to be resolved. However, writers such as Cullen (1999) and Sternberg (1998) are certain that teachers' subject knowledge must be enhanced to support children's domain learning during interactions which support shared meaning-making. Continued research and discussion of this aspect will add further to teachers' ability to extend children's learning.

CHAPTER SIX

The Research Process

Like scientific research, research on the importance of understanding child development demands careful observation, generalization, and the expression of results in a community of early childhood educators. Like science, the study of child development requires detail and precision and will emphasise certain fundamental processes. Thinking theoretically, creatively, practically and critically, solving problems, constructing knowledge, 'reading' results and developing productive theories, are as essential for development in the child as in the sciences. (O'Neill 1996).

An Epistemological Perspective

This study is concerned with the experiences of 100 teacher trainees undergoing teacher education and professional development in pre-school education at the International Centre for Early Childhood (ICEC). The following courses are offered at ICEC:

- Specialist Diploma in Pre-school Education Teaching and Leadership
- Diploma in Pre-School Education – Leadership
- Diploma in Pre-School Education – Teaching
- Certificate in Pre-School Teaching

As stated in Chapter Two the majority of the trainees were employed as early childhood educators in preschools in Singapore without any prior knowledge of the early childhood education until it was made mandatory for all teachers to be qualified early childhood educators by the (MOE) and (MCYS) in Singapore.

The Focus of the Study

The study seeks to explore the existing knowledge of child development and the theories of childhood of the teachers by helping them to 'voice' (adapted from Maher & Thompson Tetreault 1994) or describe their own perceptions and understandings of the

child they interact with within the preschool. It is a study driven by an assumption that adults who work with young children have become more aware in recent years of the need to know how children develop. Adults now realize that knowledge of child development is necessary to understand, interact with, and plan for children (Fabes *et al*, 2000). However, this has not always been the case. In fact, only during the latter twentieth century did the study of how children grow and learn develop into an area that stands on its own merit. Before the twentieth century, most adults did not feel there was anything special to be known about young children (Aubrey *et al*, 2000).

A Brief History of Child Study

Child development researchers study a host of questions and problems to find answers that will help those who work with young children. Prior to the twentieth century, there was interest in child growth and development but little research. People proposed ideas about how a child grows and learns. They did little, if anything, though, to check if their ideas were supported in the real world of children and adults with whom they interact (Morss, 1996). Examples of concerns relevant to child study in the twentieth century in Singapore include the effect of child care experience on children's development, the effects of early formal education on children and their families, the influence of technology on the child's behaviour and development, the characteristics of infants, the rate of brain growth, the effects of prenatal substance abuse on children, literacy development, and the role of the father in the lives of young children (Trevvarthen 1992).

Some questions that have been reflected upon include:

- What do children already know when they are born, and what do they learn?
- What capacity do they have for learning?
- Are children born 'good' or 'bad'?
- Is childhood a stage in and of itself, or are children miniature adults?
- Should children be free to learn and grow on their own, or should adults use control through habit training and drill? (Beilin, 1989).

In the late 1800s, baby biographies began to appear. These biographies were the first kinds of recorded child research. Parents kept diary records of interesting things their children did each day. These diaries inspired research on child development (Aubrey *et al.*, 2000). As the twentieth century approached, Stanley Hall performed the first organized research project on a large group of children in United States. He asked parents to fill out questionnaires about their children. This project was the beginning of child development as the field of study we know of today (Field, 1991).

It is important to understand the child completely for those dealing with children. Bronfenbrenner's (1979, 1989, 1992) ecological research model as described in Chapter Three, stresses the importance of viewing children in all their roles in areas of their environment.

Methods of Child Study

Each adult who works with children needs to study those children in much the same way a researcher does. Adults need to know as much as possible about each child to plan appropriate learning environments. It is important that what is learned from a child development course is checked against and applied to children whom the adult knows. From the study of the children in their care, adults can obtain valuable information to use in planning for children.

Child-Study methods fall into two main categories: experimental and naturalistic (Pellegrini, 1991).

- The experimental approach sets up environments designed to control and elicit specific types of behaviour. Experiments are designed to look at a specific cause-and-effect relationships.
- The naturalistic approach looks at children in their everyday environments (Barrett, 1999). Currently, the naturalistic approach is gaining popularity. Various types of descriptive studies of children's everyday activities are increasing. Descriptive studies offer a broader and more in depth picture of what is happening in the child's life. For this type of study, the researcher takes on a role like of an anthropologist visiting a

new and unknown culture. The researcher takes detailed notes, makes audio and videotapes, and interviews those persons under study. The researcher either stays in the background or becomes an active participant within the classroom. This type of descriptive information supplements information from more structured observations in either naturalistic or laboratory settings. Naturalistic studies afford increasing opportunities for teachers to be researchers in their own classrooms.

Methodology of the Research Study

Choosing a Paradigm

In research you must be a good listener to the 'voices' – to hear the text and the resonances made, even if at the time they don't seem to make sense...(Cecily O'Neill, 1995)

In choosing an appropriate research paradigm, I was reminded of Cecily O'Neill's words illuminating the importance of 'listening' to the voices of those being researched – not only the need to observe teacher trainees in an educational research setting, but also to listen intensively and extensively to the kinds of discourses of their knowledge of their personal experiences with children.

Being a Child Development lecturer accredited by the MOE Singapore, I was fortunate to have the opportunity to listen to the teacher trainees' ideas, views and experiences at the beginning of their study session. As stated earlier some have been preschool teachers without any prior knowledge of child developmental studies. The majority of the trainees were willing and eager to develop their knowledge of the child as they were aware that 'a child-centred caregiver understands the power she wields and uses her power in ways that facilitate the development of independence in young children' (Keenan, 1998, p.5).

Hence, in this research, there was a need for a methodological framework which would be both focused and flexible enough for me to gather a rich cross section of data using a variety of qualitative methods. As stated earlier the data aims to depict the understanding teachers' knowledge of the child prior to their study. As cited in Newton, (2001) understanding is both a mental product and a process, which Nickerson, (1985) describes as 'the weaving of bits of knowledge into coherent whole.'

My main focus was on the following 3 stages of the research study:

- First, to determine the knowledge of child development, theories of childhood and play based learning of the trainees prior to their study course by way of questionnaire and field notes
- Secondly, during study sessions evaluation of the teacher trainees' observational accounts and interpretations of the child
- Then, the Professional Journal and the final Public Presentation
- Finally, upon completion of the study course, trainees participate in an informal interview and answer the same questionnaire given at the beginning of the session to obtain their increased insight and knowledge gained of the developing child

At the beginning importantly there was a need for me to become as much a part of the trainees' classroom culture as was possible, immersing myself naturally in their world – observing, pondering and questioning without being too intrusive.

The main aim was to gather, to consider and to analyse as much data as possible over a period of one year, using the following methods:

- Distribution of the questionnaire before the study session
- Logbook (Field notes, record of the trainees' behaviour and interaction in the classroom)
- Classroom Journal (views of the teacher trainees in the classroom)
- Observation and Evaluation of the child in a classroom setting
- Professional Journal
- Students' Final Presentation of 'Child Study, Making Learning Visible'
- Interviews audio recording 'Voice text' (Interviews using qualitative and ethnographic techniques of methodology)
- Conclude the study by distributing of the same questionnaire that was given at the beginning of the study to gauge their development of knowledge and awareness of the child)

Importantly, as the researcher, wanted to become an integral part of the learning in the classroom through observing the teacher trainees myself their interest in what they are learning, their dedication to learn about the developing child. I needed to make them feel the importance of understanding human development not only when dealing with the children in the classroom but also in their daily personal interaction with their parents, spouse, children and friends. I was always in the classroom observing and interacting with my trainees.

One of the most essential means of collecting data methods in the field is being the 'participant observer', allows ongoing and intensive observing, listening and communication with the focus participants, whilst remaining involved in the field context (McCormack 1991).

As a research method, the participant observer role allows the researcher to probe deeply into the culture being observed, whilst analysing intensively the multifarious phenomena that constitutes the life cycle of that group (Cohen and Manion 1989). Additionally, the participant observer mode allows the researcher to obtain observations in a natural setting where it is more difficult for the participants to consistently 'mask' what is really going on (Smith 1978 in Borg & Gall 1989, p.392).

Wolcott (1988) describes three distinct styles of the 'participant observer' role: the active participant (one who has a job to do in the setting as well as the research), the privileged observer (someone who is known and trusted and given easy access to the context) and the limited observer (someone who researches, observes, asks questions, and builds trust over time) (p.194).

The need to both observe the trainees during the lectures and also to work actively with them at times, led me to straddle dual roles of the more passive or limited observer, and that of the active participant. Such a constant variation in researcher roles is not uncommon in an ethnographic context as the researcher's need for clarification and analysis grows and narrows.

As Spradley (1980) notes: The role of participant observer will vary from one social situation to another, and each investigator has to allow the way he or she works, to evolve. But as your role develops, you will have to maintain a dual purpose: You will want to seek to participate and to watch yourself and others at the same time. (p.58) I was

constantly reminded of the word of Glazer (1980) who writes that a researcher must become deeply involved with (their) material and allow it to absorb (them) while remaining emotionally vital enough to step back and perceive the contours of the data. It is a rigorous, affective exercise demanding emotional reserves and critical perceptiveness (in Ely 1991. p.113). Through meticulous survey research of the sample I managed to collect the most valuable data I needed. What is meant by survey research?

Survey Research

The most commonly used method in educational research is the survey. Typically, a survey collects data at a particular point in time with the idea of describing the nature of the existing conditions and then comparing with new findings (Cohen and Manion, 1994). This is exactly the focus of my study

The collection of information typically involves one or more of the following data-gathering techniques: structured or semi-structured interviews, self-completion of questionnaires (Cohen and Manion, 1994). The concern of many participants in research involving solely in-depth interviews and case studies is representation. In case studies, critics point to the problem of representation. If the researcher is studying one group in depth over a period of time, who is to say that group is typical of other groups, which may have the same title (Bell 1993).

Survey and the Questionnaire

One way of allaying such fears has been to add the use of survey, most commonly involving the use of a questionnaire, to give a better picture. A great deal has been written on the actual design of questionnaires. A valuable summary for practitioners is provided in Yonngman (1986) or Cohen and Manion (1994) where they describe the most important point for a questionnaire is that it can be designed to capture the required responses from the targeted group. On the other hand there are potential problems one may face when constructing and administering a questionnaire. The questionnaire needs to be short and simple and the distribution period should be taken into consideration as the participants themselves would be busy with their own work (Leedy, 1985). Getting

the questionnaire across to the target participants too may pose a threat. I had the advantage of distributing the questionnaire in the lecture room where the responses were easily gathered.

The first task of my study was to find out the trainee teachers existing knowledge of child development by way of a survey questionnaire. I distributed the questionnaire before the beginning of the first lecture. Hence, I was fortunate enough to gather their existing initial knowledge of the theories of childhood and the developing child.

According to Bell, (1993) the main emphasis of a survey would be on fact-finding. It is probably true that a survey is essentially a fact-finding or shaping theory. However, survey results can be used to test hypothesis or add weight to a theory – in addition, it is often forgotten that some of the data collected in a survey can be ‘qualitative’ in nature, e.g. people’s views or perceptions of an issue. This data may contribute to the development of theory as much as interview or observational data. Walker (1985) sums up both pros and cons of a survey by questionnaire: the questionnaire is like interviewing-by-numbers and like painting-by-numbers it suffers some of the same problems of mass production and lack of interpretative opportunity. On the other hand it offers considerable advantages in administration – it presents an even stimulus, potentially to large numbers of people simultaneously, and provides the investigator with an easy (relatively easy) accumulation of data.

The initial data I had from the teacher trainees were valuable to my research project, it is through their views and knowledge I seek to argue the importance of understanding child development for those working with children. Teacher trainees are constrained by the ideological limits of what they know, and what they understand (Nicholson, 1995). It was my intention to seek and search their knowledge of child development. The questionnaire dealt with various aspects of the child, theories and play based learning.

Teachers’ Child Observational Records and Evaluation

Upon completion of the child development module, it is compulsory for teacher trainees to observe and evaluate the child’s nature. Such observations help the teacher trainees to assess their behaviour and interaction through their newly gained theoretical knowledge.

The observational questions would help them in both theoretical and practical understanding when dealing with the child. These questions include:

- What are the experiences and interactions of young children's physical, intellectual and social and emotional development in the classroom setting?
- How does the teachers' observation of the physical, intellectual and social and emotional development help both the teacher and the child in their interactive development?
- What is the joint socialization of development by children and adults?
- How important it is to observe the child in a naturalistic setting and understand the strengths and weaknesses of the child?
- How do young children relate to each other?
- What do young children do when they interact with peers in the classroom?
- Why do young children need to be stimulated?
- How do young children perceive their experiences?
- How well can the child's interactions be understood through the theories of child development?

Comprehensive observations of the child would help to evaluate any particular behaviour successfully. Upon completion of extensive observational analysis teachers gain confidence to participate in interviews, transcripts and questionnaires with greater analytical depth and clarity. The trainees' eventual account of their observation helped to give a clear overview of these foci, framing them within the methodological approach used to gather information from the group.

Their observation evaluations of the child, in part presented as individual mini case studies. What exactly is a case study?

Overview of Research Design

The Case Study as Methodology

The case study has been defined as a 'bounded system of study' (Smith in Stake 1981) or an 'instance in action.' (MacDonald and Walker 1975). As a research style, Skilbeck

(1983) argues that the case study 'is the key factor in the revitalisation and democratisation of educational practice and knowledge.' (p.18) On the value of the case study as a research method, Yin (1991) adds: '(the case study) is an empirical inquiry that investigates a contemporary phenomenon within its real life context when the boundaries between phenomenon and context are not clearly evident; and which multiple sources of evidence are used.' (p.23)

For the purpose of this study I particularly like the definition of Wiersma (1991) who describes the case study as one 'characterised by an investigation of a single group, event, institution, or culture' (p.422). John Carroll (1996) also provides an excellent overview of the use of the case study in classroom research. Carroll points out, that the case study is particularly suitable for study in classrooms because participants in classrooms 'create a unique set of social relationships that become a single unit of experience capable of analysis and study' (Carroll 1996, p.77). Additionally as in the case study, where to make sense of what is happening the whole context needs to be closely observed, the classroom provides a learning microcosm where, 'the whole creative sequence needs to be studied, not just aspects of it' (Carroll 1996, p.77).

The case study was specifically chosen for this research because the trainees compulsorily needed to observe a group of children or individual child's development in the three domains, record their behaviour, characteristics and interaction with peers.

It afforded me an opportunity to discuss their views, ideas during (their observation of the child) and to analyse their evaluations, awareness of their knowledge of the developing child and the theories.

The teacher trainees' ability to identify the children's behaviour modes, values, and conceptual understandings was the primary identification of their own developing knowledge of the child. Indeed I anticipated that these modes of knowledge and understanding would somehow reflect in their records of observational experiences, as well as in what the trainees' themselves revealed to me through the research questionnaire and group interviews. Teachers' case study of individual children or groups became a strong part of my study. The teachers themselves became my own investigative case study.

I was guided by the principles of case study methodology as identified by Lincoln and Guba (1985):

- The case study allows for a reconstruction of the participants' constructions (emic inquiry).
- The case study is an effective vehicle for demonstrating the interplay between inquirer and respondents.
- The case study provides the 'thick description' so necessary for judgments of transferability.
- The case study represents an unparalleled means for communicating contextual information that is grounded in the particular setting that was studied (pp.359–360).

Significantly, the need to ground the participants' experiences in an educational setting was important. The teacher trainees completed questionnaires, the interviews and their observational records of case studies of children's interactions helped to justify their knowledge and reflection as beginners of reflective practitioners.

The Case Study as Reflection

The argument for educators to become more accountable for their classroom practice and actively confront traditional curriculum pedagogy has gained momentum in the last decade. O'Mara (1995) argues for the growing need for classroom teachers to gain new knowledge of the way children works in classroom – the urgency for a 'transplanting of epistemology' from academic frameworks of theory and knowledge to the grassroots of classroom practice. O'Mara (1995) notes in her own case study work, that teacher trainees themselves possess significant insight into their own practice in an educational context which can in turn inform the planning of teaching curricula. O'Mara's observations are pertinent in a time when teachers are besieged by curriculum and educational policy changes and teacher trainees are pushed to emotional and physical limits as they pound the assessment treadmill.

As early childhood practitioners, we must be constantly aware of what the interests and needs of our young children are, and how they are best served through our pedagogical

practice. As Taylor, (1996) writes to be an early childhood educator is to be a reflective practitioner. Both give birth to ideas, both search for a medium to express and honour their vision (1994, p.7)...to interrogate the truths that (we) daily confront and imagine what is possible in education, what is not possible, and what might be (1996, p.54).

In response to Taylor's statement, it is important to note that the focus of this study cannot claim to be that of true reflective practice. As I was not evaluating or investigating my own teaching practice within a preschool classroom nor directly investigating the practice of the classroom teacher, the study could not be termed reflective practice. However, the ultimate aim of the study was to illuminate and document the experiences and attitudes of teacher trainees of early childhood education with the intention to 'give birth to ideas' to both my own and others about the importance of understanding child development studies.

Further Stenhouse (1982) contends that descriptive case studies of any kind provide documentary reference for the discussion and assessment of educational practice. (Burgess 1985, p.267). I see this as one of the most important functions of my case study. The data collected and the insight gained from observing and documenting the 'authentic voices' of these trainee teachers, can only serve to improve practice and program planning in preschool classrooms. I envisaged the final analysis would inform and enlighten the teachers about how theories and evidence within child development have influenced their educational thinking and practice and potential implications of research for educational practice. By urging them to assess their existing knowledge and through the study sessions help them with innovative ways of enriching their learning experiences, reflected clearly in the questionnaire, interviews, the observational records, the detailed Professional Journal and the final public presentation at the completion of the study.

Ethnography as Research

The desire to collect data which would give me a deep insight into the trainees' experience of children, was best achieved through the use of ethnographic techniques. As a qualitative research approach, ethnography allows the researcher intensive immersion

in the cultural lives of the participants where they can come to know their world from the inside, and understand the social phenomena involved in their everyday lives (Ball 1982).

Effectively, ethnographers strive to put themselves in the 'place' of the research group through a process of empathy, Smith (1983) in order 'to see life through their eyes as well as our own' (Ely 1991). The ethnographer not only observes and records what is seen, striving for what Geertz (1973) terms, 'thick description' of data, but also becomes intensively involved in ongoing processes of analysis, interpretation and explanation. As Allen *et al* (1986) point out, as ethnographers endeavour to determine why participants act and respond the way they do, they are drawn into the realms of insight, empathy and negotiated agreement (Mieniczakowski *et al*, 1993,p.12). As a site for ethnographic research, the classroom offers what Smith (1969) calls a notable cultural microcosm and social system, rich in diverse data for the educational practitioner (Smith in Donelan 1992). Donelan (1992) argues that ethnography like drama is based on the human capacity to empathise, to imaginatively project into a situation, to identify with another's point of view. Writers about ethnography describe the process of conducting participant observation in terms that are familiar to us as educators. (p.42)

The Research Group

As stated earlier the research group was Pre-school teacher trainees from ICEC. I was the lecturer for the child development module since 2002. I have witnessed many groups of trainees, and was impressed by their co-operative nature and their apparent enthusiasm for learning, and felt my study would be well suited to the goals and aspirations shared by both the school and the teacher trainees. Each group was an enthusiastic and friendly cohort delighted in learning about the child.

The Methodological Process

The most important considerations in my selection of methods for data collection was that they should be both flexible and varied enough to allow a realistic and diverse record of the trainees' actual knowledge of the topic at the beginning of the session.

Additionally, I wanted to be able to triangulate material thoroughly and consistently to ensure a reliable analysis of data was made, using not only my own observations and interpretations, but also that of the teacher as stated before. As illustrated, there was multiple data collection methods used to ensure information was valid and reliable. All interviews were recorded on compact disks, and written responses such as the questionnaires, enabled teacher trainees who were less comfortable with face to face interviews, to have another mode of response to the questions asked.

Data analysis was ongoing, with field note documentation (both mine and the trainees), their observation and evaluation analysis and the Professional Journal, providing vital information which over time was categorised by identifying common links or thematic elements in the data.

Translation of field notes into log data

A variety of data were collected in different ways for different purposes and to support triangulation of the evidence.

These include:

- Analysis of Logbook / Field Notes
- Individual and Small interviews Transcription & analysis of interviews/audiotape 'Voice Text'
- Class Journal (field notes of teacher trainees in the classroom settings)
- Trainees' Observation and Evaluations of the child in the classroom setting
- Analysis & interpretation of questionnaire
- Analysis of the Professional Journal

- Final Presentation of 'Child Study' to make 'Learning Visible'
- Qualitative and Quantitative Data Analysis

Such a wealth and variety enabled triangulation of the data.

Eisner (1991) argues multiple data types function both to foster credibility, and to enable the researcher to put 'pieces together to form a compelling whole.(p.111) Similarly, Glesne and Peshkin, (1992) contend that the use of multiple data collection methods contributes to the trustworthiness of the data as the more sources that are tapped for understanding, the more believable the findings. McCormack, (1991) stresses the researcher's need to strive for trustworthy and ethically sound data in arguing the research study.

My Observational and Interactive sessions with the Teacher Trainees

My classroom observations of the trainees helped me to understand their nature and temperaments. As a researcher I played dual roles in the classroom, both observing and often helping them in their inquiries of particular personal problems they face with their classroom and in some cases their own children. Most often I could sense their frustration of past ignorance they had encountered when dealing with their own and other children. The discussions helped them to understand their lack of knowledge of the child. I endeavoured to document as much as I possibly could about what I heard, observed and thought. These field notes, recorded initially in a small note pad (and later onto the laptop computer), were the important foundation for the logbook, which was to shape the principal body of research data.

The importance of taking copious notes in the field is reflected in the words of Lofland and Lofland (1984)...the complaint of the novice investigator (or the boast of the professional) that 'he (sic) didn't make any notes because nothing important happened' is viewed in this tradition as either naive or arrogant, or both (p.46). Cognisant of the need to record consistently comprehensive notes – to strive for 'thick' descriptions of what was happening, I jotted down as much as possible in my classroom observations as well as what I learnt from more informal interviews and discussions with the teacher trainees.

The teacher trainees did not seem disturbed by my notepad, and as I tried to make the jottings as inconspicuous as possible, I generally gathered notes of sufficient quality for logbook translation. The notebook was carried everywhere throughout the course of the study and became an important 'written memory' for me. As previously stated, as the teacher trainees became more relaxed with my presence in the classroom, I began to take notes on my lap top computer which I found allowed me to make faster, more comprehensive observations.

The Logbook / Field Notes

In defining the essence of the 'logbook', Ann McCormack (1991) describes it as a 'personal dialogue about moments of victory and disheartenment, hunches, feelings, insights, assumptions, biases, and ongoing ideas about methods. (p.69)

Fundamentally, the logbook unfolds as a 'cohesive history' of the participants' lives, allowing intricate and detailed data to be unraveled throughout the research journey (Ely 1991). I found both these definitions to be significant for me throughout the case study, referring to them often to ensure my jottings were comprehensive and focused. Field notes taken during each classroom observation were translated into a formal logbook. I considered this the most essential recording document for research data in the study and thus I treated the entries with great respect. The logbook was also regularly referenced and the field notes too were taken into account to give a greater scope for analysis. Each line of log entries was numbered for quick cross reference and easy documentation of statements. As the research progressed, I categorised a number of themes, which became the focus of log entry analysis.

My Interaction with teacher trainees' involved:

- Group Discussions of classroom topics among Teacher Trainees
- Their Ideas and Thinking of Children and Theories
- Personal Responses
- Their Attitudes Towards the Study Course

Within the log, my own 'observer's comments,' (Bogdan and Biklen 1982) were personal reactions and reflections to what I was witnessing in the classroom, and what were direct observations of classroom activity. Importantly, these comments allow for a simultaneous juxtaposition of the researcher's direct observations with an analysis of that data. As I progressed in the study, I viewed these comments not only as a form of intimate 'musing' about the minute-by-minute activities of the trainees, but also a monitoring of my own development as an ethnographic researcher.

The logbook was kept as a confidential and private document with myself and all names were changed. At regular intervals, when working and conducting lectures with different groups of teacher trainees I managed to maintain the entries and in this way, data was analysed for trustworthiness and authenticity. Each weekly log entry was accompanied by a number – I had 1 to 30 field notes, described by McCormack (1991) as 'conversations with oneself about what has occurred in the research process.' These log entries are direct reflections on the researcher's log itself, but are also considered to be a significant part of the log in terms of what it can tell us about the ongoing process. These documentations acted as ongoing documents for my own reflection and assessment about my role as researcher, themes I needed to investigate further, or other notable 'musings' about the research process. (Appendix B)

Individual and Small Group Interviews

Over the period of three years, teacher trainees of different cohorts were interviewed individually and in groups. The interviews took place during lunchtime or break time sessions and some were recorded on the computer. Each session was saved on a compact disk, providing essential 'live' data on the feelings and attitudes of the teacher trainees themselves. (Appendix A)

To lessen the stress that can come with individual interviews, I asked four to five teacher trainees at a time to volunteer to be interviewed. This seemed to be the best method as the teacher trainees were willing to come together rather than alone. At times, some of the teacher trainees agreed to be interviewed only if they could come as a team with their friends.

Glesne and Peshkin (1992) comment that interviewing more than one person at a time can prove extremely useful to the researcher for, 'some young people need company to be emboldened to talk; and some topics are better discussed by a small group of people who knew one another' (p.64). I found this to be the case with the majority of the teacher trainees during the research and continued the practice throughout the three year with different groups.

In making my decision on how I would conduct the interviews, I was strongly influenced by the work of Ann Oakley. Oakley (1981) is strongly critical of traditional interview methods where the relationship between the interviewer and the interviewed remains detached and professional. She views this as the representation of a hegemonic masculine paradigm based on 'objectivity, detachment, hierarchy and "science",' (p.38) and in response, she champions research involving women that opts for a more open and responsive relationship between the researcher and the participants.

If we are to encourage women to talk openly and honestly in an interview situation, they must feel empathy with the female researcher knowing that they are free to ask their own questions about the research. This was the approach I chose to take in my work with the young women in my research study, and as a consequence, the interviews were generally comfortable and very relaxed. In inviting the female to ask me questions or to discuss their anxieties about the interviews, I found they were released from the perceived tension of having to 'speak' for me in front of a recorder.

There were six key questions that I asked the teacher trainees in order to give them some focus during the interview. At times I found that due to teacher trainees' responses, or indeed lack of them, I dictated, rephrased or redirected the questions altogether, but in general I strove to be flexible in my questioning. I deliberately linked the interview questions to those in the questionnaire issued before and later in the year to the class, in a hope that those teacher trainees who felt more at ease writing than talking, would possibly expand on the questions at a later date.

The key interview questions were:

- (1) Could you describe your interest in preschool teacher training and early childhood education?
- (2) How can understanding theories of childhood help you personally, perhaps to be a better human being?
- (3) How will the theories help you to interact better with children? Identify some practical applications?
- (4) What influence would understanding the child from birth to preschool years have on you?
- (5) If you had the chance, would you have learnt child development before? (if you are married before you had your own children)
- (6) What is your message to those who are embarking on early childhood education?

As I was audio taping the interviews, I was able to scrutinise the trainees' responses – both verbal and non verbal, in a way that enabled me to see beyond my initial reactions to what I 'thought' I heard the first time. (Appendix B)

It was on further analysis of the audio recording that I was really able to hear and appreciate what the trainees were actually saying. As Mehan (1993) points out, when we listen to and look at life closely, which is what a videotape or audiotape or film record enables us to do, we see and hear a different version of social life than is otherwise possible. As each year progressed, I interviewed different teacher trainees on audio recording, gaining further responses and clarification about the former interviews. These interviews expanded to discussions about the previous and present work the teacher trainees had done and doing in other study sessions as well as their feelings about the processes that they experience in order to shape up their final Professional Journal, during other module units.

The interviews were kept informal and relaxed in an effort to encourage the teacher trainees' to speak freely and honestly about their experiences in their study sessions.

The Class Journal

At the beginning of the case study, I explained to the teacher trainees that a general classroom journal would be available for them to write entries about their experiences and reflections of gaining knowledge of the developing child. I deliberately did not ask them to keep personal diaries for two reasons.

Firstly, I considered it an unfair burden to impose another personal journal task onto them.

Secondly, and most importantly, I was interested in collecting what I termed, 'a communal voicetext' – I wanted the teacher trainees' to somehow record their own uncensored 'voices' through a communal textual mode. They were encouraged to read and comment on other entries in the class journal in an effort to activate a textual discourse between the trainee teachers shared experiences of the growing child. To enable them to feel free to do this, I stressed that names did not have to be given at any time in the journal. Importantly, no one was urged to write an entry unless they absolutely wanted to, and the teacher trainees' were asked to pass the journal to each other freely when they felt they had written enough. (Appendix A)

The teacher trainees continued to feel free to write whatever they felt without any perceived fear of reprisal. I felt this 'voicetext' was an extremely important data source for what it could reveal to me about their thoughts and feelings about the child development module. In short, I saw it as a form of an historical record about each different class over a period of three years compiled and owned by the teacher trainees themselves. Additionally, I felt the communal nature of the journal would allow many of the teacher trainees to express honest reactions to their learning of the child, theories of development and experiences through an unthreatening communication medium.

Roslyn Arnold (1994) writes, The journal...at a simple level can provide a record of events from the writer's perspective, at more complex levels, (it) invites deeper reflections on the significance or worth to the writer of private feelings or responses...teacher trainees feel safe to make disclosures...in the knowledge that such disclosures will be treated sensitively and may provide material for understandings and insights about one's self and others (pp.18–19).

To ensure the journal did not become lost, I monitored its whereabouts on a daily basis and I checked it at regular intervals for analysis and discussion.

Data Analysis

Analysis of data began from the first day I commenced research in the classroom. It became almost a religious ritual for me each evening to carefully thread my way through copious field notes of that day's classroom experience, and try to make sense of my often frantic jottings. It was an exciting but daunting process where the sheer volume of data collected frequently threatened to overwhelm my enthusiasm and passion for making sense of what I was seeing and hearing. To overcome the possible inertia that sometimes sets in when one is faced with a seemingly impossible task, I approached the analysis slowly and thoughtfully, very much in the vein of what Lofland and Lofland (1984) terms a 'steady plodder.' I found this approach allowed themes and ideas to emerge gradually in the data, enabling me to apply 'thinking units' or 'framed sorting files,' (Lofland & Lofland 1984 in Ely 1991, p.143) to the gathering information. Eventually I identified a number of themes (listed previously in this chapter) which provided the essential analytical framework for all my data interpretation.

The final analysis of the data was conducted by arranging field notes, interview transcripts, journal and questionnaire responses, into thematic categories through a laborious but extremely effective procedure. This allowed me to highlight those sections of data information, which were pertinent to the final discussion on research findings. (Appendix A and B)

Data Reporting Qualitative and Quantitative Methodology

Qualitative Analysis

We talk about data in research studies where it is purely knowledge based as qualitative and quantitative. The way we typically define them, we call data 'quantitative' if it is numerical in form and 'qualitative' if it is not. Notice that qualitative data could be much more than just words or text. Photographs, videos, sound recordings and so on, can be considered qualitative data (Ormrod, 1985).

Personally, I find the distinction between qualitative and quantitative data to have some utility. I think most people draw too hard a distinction, and that can lead to all sorts of confusion. In some areas of social research, the qualitative-quantitative distinction has led to protracted arguments with the proponents of each arguing the superiority of their kind of data over the other. The quantitative types argue that their data is 'hard', 'rigorous', 'credible', and 'scientific'. The qualitative proponents counter that their data is 'sensitive', 'nuance', 'detailed', and 'contextual'. Notice that qualitative data could be much more than just words or text. For many of us in social research, this kind of polarized debate has become less than productive. It obscures the fact that qualitative and quantitative data can be intimately related to each other.

All quantitative data is based upon qualitative judgments; and all qualitative data can be described and manipulated numerically. For instance, think about a very common quantitative measure in social research - a self esteem scale. The researchers who develop such instruments had to make countless judgments in constructing them: how to define self esteem; how to distinguish it from other related concepts; how to word potential scale items; how to make sure the items would be understandable to the intended respondents; what kinds of contexts it could be used in; what kinds of cultural and language constraints might be present; and on and on. The researcher who decides to use such a scale in their study has to make another set of judgments: how well does the scale measure the intended concept; how reliable or consistent is it; how appropriate is it for the research context and intended respondents (Leedy, 1985).

Believe it or not, even the respondents make many judgments when filling out such a scale: what is meant by various terms and phrases; why is the researcher giving this scale to them; how much energy and effort do they want to expend to complete it. Even the consumers and readers of the research will make lots of judgments about the self esteem measure and its appropriateness in that research context. What may look like a simple, straightforward, quantitative measure is actually based on lots of qualitative judgments made by lots of different people. Similarly, interpreting the existing knowledge and 'knowledge gained' which emerged from my data was a consideration I thought long about. I wanted to guide the reader along a narrative journey which honoured the teacher

trainees' own voices, as well as my own. As Garner (1991) points out, the writing of a qualitative narrative is indeed telling a tale (p.169).

In using a form of descriptive qualitative reporting, the writer and reader can engage far more powerfully with the material in a way which transcends the traditional method of simply presenting the 'facts.' Witherell and Noddings (1991) argue that 'story fabric offers us images, myths, and metaphors that are morally resonate and contribute both to our knowing, and our being known' (Ely 1996, p.184). In particular, Van Maanen (1988) identifies three distinct styles of ethnographic writing most commonly used in qualitative work – realist, confessional and impressionist. Realist tales provide a direct, matter of fact form of narrative which privileges what happened with the participants. Confessional tales tend to focus more closely on the experience of the fieldworker than on the culture studied, whilst the impressionist tales are fleeting accounts of moments of the fieldwork, which are highly personalised and descriptive and carry elements of both the realist and confessional modes of writing (Ely 1991, p.171).

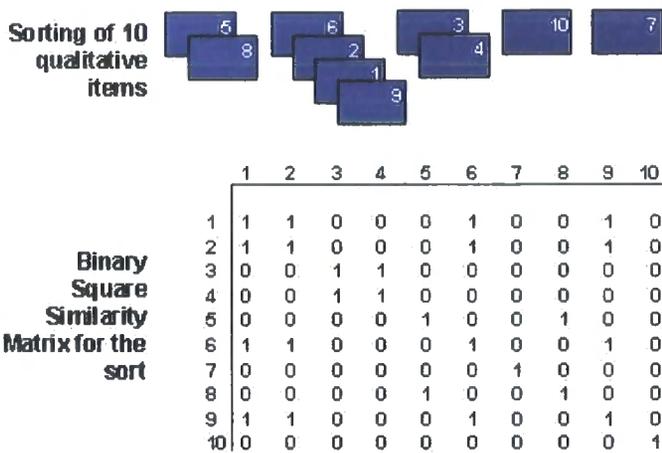
My desire to pursue the benefits of gaining a rich diet of the knowledge of child development and theories, which could change the experiences, and the attitude of the teacher trainees, and my own response to them as a researcher, is clearly depicted in study. The literature review was descriptive and personalised, but it maintained professionalism and credibility as a piece of a qualitative research. I found the observation and the interaction with the teacher trainees in the classroom was a most rewarding way of realistically portraying what had happened in the classroom but which still allowed for a degree of creativity. To ensure the narrative enabled the reader to be part of the research journey with me I employed a variety of 'narrative devices,' (Ely 1991) such as trainees' journals with photos of children and vignettes, which allowed more insightful and colourful descriptions of the group to emerge.

Quantitative Analysis

As stated earlier my study clearly falls under the broad heading of descriptive qualitative and quantitative research. On the other hand, all qualitative information can be easily converted into quantitative, and there are many times when doing so would add

considerable value to the research study. The simplest way to do this is to divide the qualitative information pile these into units and number them! I know that sounds trivial, but even that simple nominal enumeration can enable you to organize and process qualitative information more efficiently. Perhaps more to the point take text information (say, excerpts from transcripts) and excerpts into piles of similar statements. When something even as easy as this simple grouping or piling task, the results can be described quantitatively.

For instance, if ten statements are grouped into five piles (as shown in the figure), the piles could be described by using a 10 x 10 table of 0's and 1's. If two statements were placed together in the same pile, 1 would be put in the row-column juncture. If two statements were placed in different piles, 0 would be used.



The resulting matrix or table describes the grouping of the ten statements in terms of their similarity. Even though the data in this example consists of qualitative statements (one per card), the result of a simple qualitative procedure (grouping similar excerpts into the same piles) is *quantitative* in nature. Once the data is in numerical form, it can be manipulated numerically. For instance, five different judges could sort the 10 excerpts and obtain a 0-1 matrix like this for each judge. Then we could average the five matrices into a single one that shows the proportions of judges who grouped each pair together. This proportion could be considered an estimate of the similarity (across independent judges) of the excerpts. While this might not seem too exciting or useful, it is exactly this

kind of procedure that I used as an integral part of the process of developing 'concept maps' of ideas of teacher trainees' questionnaire.

Trustworthiness of Data

Qualitative data

Being trustworthy as a qualitative researcher means at the least, that the processes of the research are carried out fairly, that the products represent as closely as possible, the experiences of the people who are studied. (McCormack1991, p.93)

The qualitative researcher must be unwaveringly scrupulous in the ongoing collection and analysis of research data. The chosen methodological framework must be flexible and comprehensive enough to allow the researcher to analyse meticulously and validate thoroughly the immense volume of data often associated with qualitative research. Throughout the process, the researcher must strive to continually reassess their own position, to ensure a consistent and honest recording and interpretation of data. As Hammersley, (1983) reminds us, the researcher must always remain in some way detached from the field work; there must be some social and intellectual distance for when all sense of being a stranger is lost, critical and analytic exploration of the data is jeopardized.

Additionally, whilst the analysis of data must reflect an attempt to identify common threads and shared experiences, it is equally crucial to ensure that the multiple perspectives of participants are acknowledged and considered. The use of a variety of methodological approaches can help such multiplicities of knowledge and points of views to be honoured authentically throughout the analytical process. Taylor (1996) highlights the work of Richardson (1994) who describes the rendering of truths and trustworthiness in research data as a 'crystallisation of ideas.'

As Taylor writes, 'Richardson rejects positivist and neo-postivist ideas of truth, validity and falsification, and confirms the importance of struggle, ambiguity and contradiction.' (p.44) For Richardson, crytallisation deconstructs the traditional idea of validity, and

provides us with a deepened, complex, thoroughly partial, understanding of the topic (Taylor, 1996, p.44).

In choosing the case study as a method of research, I knew the data would be unique to the classroom context chosen for the study. Aware of the seemingly intangible nature of qualitative inquiry and the dilemma of imposing individual value based interpretations on data analysis, I chose therefore multiple data collection procedures. This allowed careful reading and checking of data via audio recording, classroom journal, logbook and class questionnaires.

Quantitative Data

‘To behold is to look beyond the fact; to observe, to go beyond the observation. Look at the world of people, and you will be overwhelmed by what you see. But select the mass of humanity a well-chosen few, and observe them with insight, and they will tell you more than the multitudes together’ (Leedy, 1985).

As stated before quantitative research involves either identifying the characteristics of an observational phenomenon or exploring possible correlations among two or more phenomena. A correlational study examines the extent to which differences in one characteristic or variables are related to differences in one or more other characteristic or variables. In simple correlational studies, researchers gather data about two characteristics for a particular group or other appropriate units study (Ormrod, 1985).

In my study teacher trainees’ Pre-Knowledge of Child Development and Theories of childhood, Play based learning and then the consequent learned body of knowledge act as the three variables of determinants.

Peer Support and Checking

The consistency and intensity of classroom observations and group interviews alongside the documentation of the trainees’ responses in both the journal and the questionnaire, allowed me to analyse and question the data systematically for internal validity and consistency. In order to further maintain credibility in my analysis and interpretation of

data, I enlisted the regular support of other lecturers, colleagues as well as teacher who are already in service. I considered this paramount in checking for consistent, honest appraisal and representation of the data. Both peers were willing to discuss my observations and interpretations on a regular basis and I found this to be an important element in my analysis work. Their ongoing critical and honest appraisal of my work ensured my position, as researcher remained balanced and honest in relation to my interpretations of collected data. Lincoln and Guba (1985) comment on the value of this kind of peer debriefing in writing...the process (of peer debriefing) helps keep the inquirer 'honest', exposing him or her to searching questions by an experienced protagonist doing his or her best to play the devil's advocate (p.308).

Member Checking

The teacher trainees' themselves were enlisted in regular 'checking' on data collected in group interviews through informal group interviews. Subsequent discussions allowed them to validate what they had said and further clarify my interpretations where necessary.

Lincoln and Guba, (1985) argue that 'member checking' is the essential key to research credibility in qualitative studies such as this: 'Credibility is a trustworthiness criterion, which is satisfied when source respondents...agree to honour the reconstructions; that fact should also satisfy the consumer (p.329).'

Garner (1991) points out that the value of member checking lies in its capacity to reveal interpretative problems in the data, as well as in its role to act as an important medium to establish trust and collegiality between the researcher and the participants (p.167).

Constraints and Considerations

It is acknowledged that the scope of this case study was constrained in that the field work took place in the classroom in a single training school over a period of three years of approximately four groups of teacher trainees.

The research cohort of 100 teacher trainees accounts for representation of teacher trainees. Additionally, whilst I endeavoured to document rigorously the everyday

experiences and attitudes of trainees in the research classroom, the study did not have scope to investigate the effect of familial, religious and ethnic influences as variables in the teacher trainees' activities and attitudes towards children.

Furthermore, the study did not seek to explore the other modules incorporated in the training curriculum. But the knowledge gained by the child development module was the main focus and its significant effect on the trainees' attitudes towards the rest of the modules. This was clear in the observational evaluation of the focus child or children the research group undertook in the programme. I considered the child development module was the cornerstone that helped trainees to address complex issues during observations of the child and also helped them to assist in acknowledging varying factor in the child's behaviour and experiences.

In respect to time frames, the study was conducted over a period of three years with different groups through classroom lectures and discussions. Given the changing nature of the development program alongside the possible natural maturation in the trainees' overall development, it is acknowledged that they may have presented different behaviour and attitudes in each semester.

The level of participation by the trainees' and their responses in the interviews, questionnaire and class journal, may have been coloured by their perceptions of what they felt I wanted to hear and see. However, in selecting a multiplicity of methods for data collection gathered consistently over time, greater credibility and reliability of the trainees' responses was assured.

In collecting data, the researcher must be ever aware of the personal values and perceptions that they bring into the field. There must be an ongoing effort to balance 'between the development of empathy and the pursuit of a distanced, non-judgmental stance' (Friedman 1991, p.113). Lloyd and Duveen (1992) argue that when we become ethnographic observers of teacher trainees, we are in constant jeopardy of allowing our own perceptions of social gender representations to affect our descriptions. Sara Lightfoot (1975) adds:...in observing trainees, we must be careful not to let our recognition of individual capabilities and bias categories influence and shape our observations so that we become prisoners of our own preconceptions (p.137).

In immersing oneself in a classroom over a long period of time, the researcher runs the risk of 'identifying so strongly with members, that defending their values comes to take precedence over actually studying them' (Wood 1986, p.34).

The constancy of identification with the participants, and the unique closeness established through the ethnographic process between researcher and participants, has important implications for fieldwork observations and subsequent analysis of data. Smith (1983) urges the ethnographer to engage in continued self-examination particularly in times of 'heightened awareness' during the observation process. She argues that the emotional reactions of the researcher to what they see and hear in the field, is an important element for understanding and validating documentation of data. For Smith, the researcher must be rigorous in distinguishing between emotions that are generated from the observed situation, to those that may be self-generated and biased (Jansen & Peshlin from LeCompte 1992, p.705).

This view is extended by LeCompte (1987) who believes that the quality of qualitative study is greatly enhanced by the researcher's acknowledgement of the power of subjective values and influence on the study. The researcher must strive for what LeCompte terms, 'disciplined subjectivity' where they must continually examine their own responses to field situations in view of the behaviour and attitudes of the participants (p.43). Agar (1980) concurs with the former views in arguing that the qualitative researcher should strive to uncover subjective biases, and deconstruct them as part of the research methodology. Indeed the researcher's own ethnographic journey should be documented faithfully in order to assess and validate the observations and conclusions made in relation to the emerging data.

As Agar writes: 'as you choose what to attend to and how to interpret it, mental doors slam shut on the alternatives. Whilst some of your choices may be consciously made, others are forced by the weight of the personal and professional background That you bring to the field.' (p.48)

As a female researcher working in a mostly female (except for one group of trainees with three men) classroom, there were certain tensions and considerations in my work, which need to be noted here. The very fact that I was a female endeavouring to gain information

from a gendered culture I was a part of (i.e. that of the feminine), meant that I needed to be aware of my own established feminine perceptions, my own constructions of a female reality. Concepts such as the female's tendency towards emotionality and that females were better, more empathetic listeners were considerations I needed to keep in check during my field observations and analysis of data.

The very real possibility that my own gendered experiences as a female could significantly colour my observations and interpretations of the activities of my female participants, persuaded me to enlist the critical assistance of my colleagues who listened to, discussed and read my observations and interpretations with honest and insightful appraisal. The regular interviews and discussions with the trainees' themselves, also worked to ensure I was able to confirm or rethink many of my hunches or perceptions about their activities and attitudes. In terms of my own emotional and professional responses to my experiences in the field, I was careful to monitor the field notes and interviews for evidence of subjective interpretations. In all of the logs I was disciplined in identifying my own responses through the use of expressive language between lines of the trainees.

Ethical Considerations

The entire endeavour was grounded in ethical principles about how data are collected and analysed, how one's own assumptions and conclusions are checked, how participants are involved, and how results are communicated. Before the study formally began in the classroom, in January 2002, I met Ms Deborah Harcourt principal of the teacher training school at the International Centre for Early Childhood Education. We discussed the process of my research for the well-being and protection of the trainees' privacy during the study. The sample consisted of 100 teacher trainees (approximate age group 24–40 years of age) in four to five groups. The teacher trainees begin their studies with the module of Introduction to Child Development and then proceed to The Developing Child from Birth to Preschool years.

Permission to proceed with questionnaires, class journals, logbook/field notes, the interviews, access to trainees' group presentation, observation and evaluation,

professional journal and public presentational documents was granted by the head of the school.

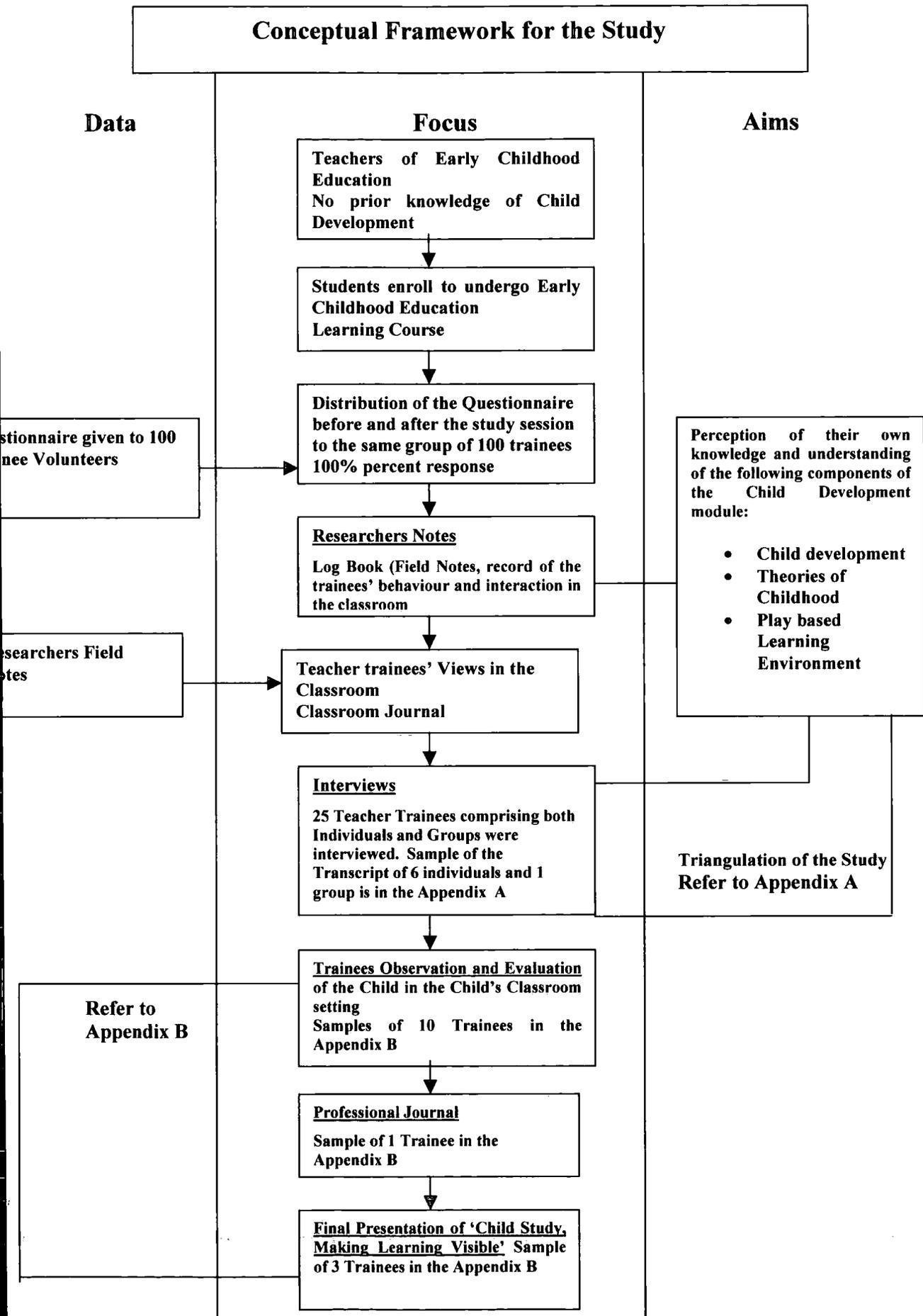
The institute placed very few demands on me other than the usual code of confidentiality in changing the trainees names in the study and ensuring the trainees' were never put under pressure to participate in the research. The trainees' were given the permission form, (Appendix A) which was signed by them and returned to me before I began work in the classroom. The permission letter outlined who I was and the nature of the study, and invited them to contact me if they had any queries about the research itself. At all times during my work with the trainees, I explained to them what I was doing and ensured they understood what was being asked of them.

Before any audio recording began, I explained the procedure to the trainees' and asked their permission once more to use the recordings in my study. They seemed to respond positively when they knew exactly what was going to happen, and I felt this was important to the success of the entire research study.

Other lecturers were aware of what I was doing and were invited to comment at all times about any concerns and reservations they may have had with respect of the work I was doing with the trainees. Importantly however, the trainees themselves were given the opportunity to comment on what I was doing in the classroom. They were considered in many respects 'colleagues' in the process and throughout the research no matter how difficult this sometimes became, I endeavoured to keep this relationship an ongoing and active one.

The following conceptual framework for the study highlights clearly the narrative interpretative journey. I have stated the methodology of the research process. The Data, Focus and the Aim depict the nature and the process of my study.

Conceptual Framework for the Study



The Chapter Seven marks the beginning of the narrative interpretative journey. It traces the field experiences in the classroom with special emphasis on the students' own stories, attitudes and responses to interviews, questionnaires and informal conversations. Both Chapters Six and Seven are introduced with contents adapted from my field notes, classroom journal with trainees' views, ideas and interests. I sincerely wish to invite the reader to become an integral part of this most enlightening classroom narrative journey.

CHAPTER SEVEN

A Stranger In Their Midst –

An Ethnographic Journey

Much of qualitative research involves prolonged engagement in the lives of other human beings, going beyond the superficial mask of public impression and entering a highly personal realm of private thoughts...It makes sense, then, that emotional response such as closeness, identification, sympathy, and warmth would be spontaneously elicited in the researcher (Friedman, 1991, p.112).

This chapter, a new part of the journey, aims to transport the reader along a further ethnographic narrative which highlights, unravels and explores many of the ‘observer’s comments’ important musings documented throughout the entire research period, which marked my developing journey as an neophyte ethnographer (Bogdan & Biklen 1982). It is these progressive reflections, alongside everyday classroom observations, which provide further insight into the behaviour and attitudes of the trainees, and the ways these in turn affected the changing shape of the ethnographic process.

Reflections

Entering into the research classroom for the first time, I feel positive and focused. Whilst I was not indifferent to the difficulties that may lie ahead of me, I felt that I had a clear vision of the work I was to do, and could deal with whatever challenge confronted me. The school principal had been welcoming and co-operative. As ‘gatekeepers’ to the school environment, other lecturers and the administration staff were wholly supportive and accommodating, and I was always excited at having to start the child development module with the new intake of teacher trainees at ICEC. With the ethical clearance and approval from the school as well as the teacher trainees, during the very first hour of the lecture session, I distributed the questionnaire to the new cohort. Most often I encountered friendly yet nervous teacher trainees sitting quietly trying to get to know me

better. After a brief introductory session, with the teacher trainees, I discussed at length of my research, and the importance of understanding the teacher trainees existing knowledge of child development, theories of childhood and their knowledge of play, by way of a questionnaire. It seemed obvious that the teacher trainees were not sure of my intentions so I clearly and simply stated the framework of my research. A number of them were friendly enough to express their willingness to answer my questionnaire. The questionnaire was distributed among the teacher trainees. This was the beginning of the first data collection within the classroom in the first hour of the very first lecture. Most often I found them willing participants.

Over time however, due to conflicts outside the classrooms with changes in the overall concepts in preschool education in Singapore, trainees developed a certain amount of frustration, which resulted in me experiencing a gamut of changing emotions, perceptions, and doubts, both as a researcher, and a female. As Parsons (2001) states, teachers need to understand varied problems and frustrations of the students, Parsons (2001) compares teacher to a person who wears 'many hats' in a classroom. At times a teacher is an instructional expert, pedagogical content knowledge manager and teacher-as-counsellor. In 'reality' that teaching involves the whole person and not just the 'head'.

In my naiveté, I did not anticipate nor expect that these feelings would have such a profound effect on my work in the classroom and my growing relationship with the teacher trainees. The very nature of the huge classroom, a space which offers liberated and collaborative learning, meant for me that field observations could never be static, nor my physical presence remain unobtrusive. There were ever changing and dynamic 'happenings' within the room which invited my constant and active attention and sometimes, unexpected involvement. This form of educational research, with its interactive communicative mode of learning, invites strong empathy and disclosure from its participants (Parson, 2001). Consequently, I often found myself unwittingly drawn into the female worlds of my participants, both as critic and confidante. As a result, it was at times difficult to maintain professional objectivity in the classroom.

My field notes reflect:

More and more, I find I am being drawn into the group by the teacher trainees themselves – they tend to come to me more, and seek ideas and affirmation..There seems to be great empathy being established here. (Field Notes 5, Lines 10–16, Appendix A).

I was reminded of what Atkinson (1990) describes as the ‘ethnographic tension’, which can be experienced by the researcher as they grapple with the emerging contrast between the ‘self,’ of the participant observer, and the ‘other’ of the observed. I was to confront and reflect on this dilemma many times throughout my fieldwork.

On one such occasion I wrote:

I need to be careful about dominating their (the teacher trainees) work with my perspectives. Their familiarity with me now has led to the line between researcher and participant being almost completely erased...(Field Notes 6, Lines 20–25, Appendix A).

Feminist sociologist Arlie Hochschild (1978) argues that when women study other women, they tend to act on a ‘nurturing impulse’ which is often reciprocated by the participants (Hochschild in Reinharz 1992). As the days progressed, there were many incidents where the teacher trainees looked to me for counsel and support they are facing in both their professional and personal life when dealing with children, and I found myself willingly responding to their needs:

Suddenly there is a cry from Ann who has been quiet and reserved with me up until the last few weeks. ‘I have a problem’ screams Ann... ‘the supervisor is making my life miserable I can’t play with the children in the child care she yells...not to spoil them by playing with them too much, they need to work otherwise the parents are going to be frustrated!’ (Field Notes 12, Lines 30–38 Appendix A).

Hinson (2001), argues that teacher-as-counsellor is one of the roles a teacher may embrace; assisting teacher trainees with their personal concerns and problems through availability, approachability, listening and problem solving.

However, there were also days when I felt so immobilised by what Wolcott (1975) refers to as 'ethnographic fatigue,' that I felt utterly detached from the teacher trainees. I was despondent, exhausted, convinced that nothing significant was happening in the classroom when I hear what was happening outside the classroom in the real world when they are confronted by teachers with different opinions attitudes and mindsets. Consequently, I became discouraged and frustrated. Yet, there is a possibility of change in the attitude of the parents with the intervention of the Ministry of Education (MOE) and Ministry of Community Development Youth and Sports (MCYS) to develop a more play based learning environment.

Reinventing Singapore: Changing a Country's Mindset by Changing Its Education System

The government in Singapore needs the old rigid concepts to change as stated in the article 'Reinventing Singapore: Changing a Country's Mindset by Changing Its Education System' which suggests that there's little point in changing the philosophy of higher education without changing what precedes it (Patrick, 2003).

Changing mindsets of the parents' requires starting at the preschool level. The government has been pushing concepts such as creativity and emotional literacy at secondary, primary, and kindergarten levels for sometime now. Plans are underway to retrain teachers. The review committee recommends a shift away from "time efficient methodologies" to facilitated learning that is designed to nurture flexible mindsets. In other words, the emphasis will shift from the teacher to the learner. Also, at the junior college level, A Levels are under review. The review committee considers them to be too rigid and content focused. Gradually, the old school of thoughts of the teachers and parents are being replaced by the new concepts of thinking (Patrick, 2003).

The entire ethos underpinning education in Singapore is being recast...the Singapore government is trying to encourage Singaporean students, educators and parents to loosen up and think for themselves. In response to this, various government initiatives have been set up to promote independent thinking skills and creative expression.

Most recently, a government review committee came up with a new economic model for Singapore. The model is based on new economy thinking, namely that economic growth

in the future will be based around "knowledge" and other intangible concepts. Connecting ideas will become more important than the ideas themselves. Future growth will be driven by creativity, innovation, and the ability, to use a popular cliché, "to think outside the box" (Patrick, 2003).

According to the review committee the most effective way of changing mindsets is through the education system. Consequently, it recommends that Singapore's education formula needs to move from uniformity to diversity, from rigidity to flexibility, from conformity to resilience, and from molding to empowering (www.bc.edu/bc).

Framework for a Kindergarten Curriculum in Singapore

Transitional moments of change in Preschool Education

The changes are taking place, at this transitional moment in Singapore it is obvious that the new beliefs and strategies confuse the older teachers when they are confronted by child developmental studies and theories. In January 2003 the MOE launched its 'Framework for a Kindergarten Curriculum in Singapore'...the document certainly marks a historical milestone in giving voice to the preschool sector, which has for a long time been regulated to simply a 'preschool' status and almost ignored for its own part in children's development (Lim 2004).

I often experience the rigidity of the strong teacher centered approaches in Child Care Centres through the trainees' observation and evaluation statements. They regularly observe children in the company of older teachers. According to Lim (2004), the older teachers recognized the demand and the stress placed upon them by the parents to provide their children with some form of early education in order to prepare them for academic demands in Primary One (the first compulsory year of formal schooling for seven year olds).

Most Singapore parents, who are attuned to the values of meritocracy, want to provide their children with a head start in early education. The pressure compels educators to develop structured teaching methods for children as young as toddlers. It is obvious that trainees who are involved in observation in such Child Care Centres develop frustration and anger and yet they are unable to express what they feel about the particular situation

due to other constraints such as objections for exposing the activities of the centre, fear of losing the particular opportunity of the child care to continue and complete their studies.

My focus and the goals of the child development is to help trainees construct their own knowledge as they observe and interact with children. As discussed in Chapter Three (p.12) the developmentalists emphasize stages and readiness for learning as an active process that takes place as the young child acts upon the environment and construct his or her own knowledge (DeVries & Kohlberg, 1990; Kamii, 1986). Hence the teacher trainees need the opportunity to practice what they have learnt through observation of the child.

- Would their beliefs and strategies confuse them when they are confronted by those who lack insight into the study of child development?
- When the teacher trainees observe children in the company of authoritative adults they develop frustration and anger yet they are unable to express what they feel about the particular situation due to constraints...such as objections for exposing the activities of the center and teacher in charge.

Have I put my teacher trainees in very awkward situations with this new understanding of the child? It is very obvious that they are frustrated, in understanding what is lacking in Child Care to which they were oblivious before they started the study sessions.

In my field notes I have documented that...

Most of them are frustrated at what is happening at Child Care Centres! I ask them to be patient - I remind them of the tasks before them to make a difference in child's life...They begin to moan about Supervisors in the child cares / preschools and most of the parents (Field Notes 2-12. Appendix A).

Each day brought new changes for me. My status in the classroom evolved constantly as my relationship with the teacher trainees developed and grew. This was as much a result of my own developing role as a researcher, as it was from the trust and support that the

teacher trainees endowed me with over the semester period. Lofland and Lofland's (1984) proclamation that on completing qualitative work, 'You are not the person you were when you began,' (in Ely 1991, p.192) became more meaningful to me as the data unravelled and my analysis progressed. I kept this thought firmly entrenched in my mind, as I observed my own research role change and evolve overtime. It also worked in a similar pattern for those trainees who've been assistant teachers in Child Care Centres prior to the training. Their beliefs too have changed and evolved with the new knowledge.

Establishing a Presence

I knew that I was like the 'lecturer who is trying to establish theoretical perspectives in a very teacher centered environment,' yet I felt that there was a need to continue establishing that nothing was difficult if applied correctly, a kind of initiation period before they would trust my presence in the room:

I sit and watch the teacher trainees as they wait for my questions. They are in a close bunch – quietly sitting. They eye me eagerly...(Field Notes 1, Lines 10–6, Appendix A).

I realised quickly that the trainees' awkwardness was not only their confusions at the Child Care Centres, but also with the new processes and thinking they were absorbing in the classroom. As Chapter Five documents, their responses to the study of child development were immature, often punctuated with the typical adult learner syndrome of embarrassed, self-conscious childlike behaviour. This evoked enormous frustration in me, and often I wanted to interject in the process. My responses to the first days of fieldwork reflect my feelings:

I was struck by the role play they did today with its stereotypical of adult learners...there were no questions about the validity...I feel frustrated by their lack of understanding as they belong to the generation where learning was rote... As a researcher, I realise that I

am privy to their world whilst being an adult in my own, and this is a strange feeling...(Field Notes 5, Lines 6–16, Appendix 1).

I needed to remind myself continually that the behaviour and attitude of the teacher trainees should remain the focus of my objective enquiry, but there were times when their confusion and resistance to the work I was doing, did affect me on a personal level.

On many occasions I questioned myself.

I find myself thinking from the very beginning of the session, I have been feeding them with too much of theories and about developmental stages of the child. Am I trying to overload them with information?...It is difficult for me to keep quiet when I know that they are confused about being early childhood educators and not quite sure how to implement the ideal programme in structured classrooms. (Field Notes 7, Lines 10–15, Appendix A).

I realised that it was due to these confusions that at times their behaviour became erratic which both bemused and confused me. Over time their natural reactions to the interviews and the journal, became significant field data. The observation and evaluation report as well as the final Professional Journal proved to be a difficult task for the trainees from the start.

But in the class journal, they expressed their self-evaluation of understanding the child and the theories of childhood. They freely voiced their ideas, views and concepts of the child and theories (Class Journal, Appendix A).

Susan faces problems in the observational classroom comes to me on the way out and asks me ' what do you think I should write in the journal,' and I tell her gently that the journal is about 'her' and her true feelings and reflections about the child she is observing...She is nervous about writing the truth. If she writes the truth she would not be able to continue with her observation at this particular centre to complete her course. (Field Log 10, Lines 3 –9, Appendix A)

This hunch was later confirmed in one of the interviews when several teacher trainees revealed to me that they found writing in the journal difficult because of their fear of

scorn or disapproval from the centre as well as the fear of expulsion from the centre was carefully explained,

'(We are) more worried about what you are going to think, if (we) write the wrong thing that you're not asking for...like if (we) write down (our) true feelings, (we) worry about what you are going to think of (us) after learning child development we feel the need to voice their disapproval of the routines activities that involve the child (Audio recording, 6 Sarah, Appendix A).

I now, strongly believe that this lack of trust in allowing me to write their 'real' selves, was linked closely with the fear of them being exposed even though I convinced them that their names would not be published. They lacked trust, not only in me, but also in themselves as well as their peers. The teacher trainees had established their ideas about what was 'right' and what was 'wrong,' in terms of interaction with children, importance of being respectful towards them, and their interpretation, and their conception lay at the heart of their classroom ideology, which prevented them from being liberated through their work they did in the early weeks of the semester:

They voice their disapproval of mismanagement in children's classrooms. Most of them blame the parents. They are however, happy about their awareness (Audio Recording, Interviews Appendix A).

I became increasingly aware of the power they possess in the classroom to either empower or destroy negative efforts and visions. On a number of occasions, the teacher trainees turned to me for assistance, and as my notes document, I was often reminded of my both influential and responsible role in the classroom:

There are number of times during this lesson when the teacher trainees turn to me and make comments about the programs, ...I try to remain absolutely neutral in my expression so they do not think I approve or disapprove of their critical view of others' behaviour towards the child. As they have now, gained the knowledge to judge for themselves, I often leave them to make their final evaluation of a situation especially when they are interpreting their observation of the child (Field Notes 9, Lines 79–81 Appendix A)

During the interviews and classroom discussion sessions, I became acutely aware of how my reactions affected the teacher trainees' responses to their evaluations. In the early weeks, I became progressively frustrated by the difficulty I faced in not getting them too involved in conversations. What I realised over time was that the teacher trainees' responses were typical of their own attitude towards school procedures as they themselves were used to a very structured approach to learning from a very young age but the present climate in Singapore as we highlighted before is changing.

Interestingly, my focus was drawn to the following MOE website stressing the importance of Innovation and Enterprise.

Why is MOE focusing on nurturing the spirit of Innovation and Enterprise (I & E)?

MOE in Singapore argues that Innovation and Enterprise as an important life-skill, which will better prepare the young generation to see relevance and thrive in future endeavours. 'As a country, we also need people with a strong I&E spirit to meet the challenges of global economic developments, and to hold their own vis-à-vis international competition. We will need people who are willing to try new, untested routes, without undue fear of failure' (moe.gov.sg/speeches).

The ability to create and seize new opportunities, rather than increasing efficiency of conventional methods, will be essential for the next stage of Singapore's development.

Is Innovation and Enterprise (I & E) a new focus?

I & E is not a new concept or an idea in education. It states that the 'teacher trainees should be innovative – have the spirit of continual improvement, lifelong habit of learning, and an enterprising spirit in undertakings.'

I & E also have its roots in our vision of. Under **Thinking Schools Learning Nation** (TSLN), MOE looked into the four areas of school environment, curriculum and assessment, training and development and structure of the education system. Since the 1990s, we have made good progress in all these areas. We have embarked on initiatives such as the Programme for Rebuilding and Improving Existing schools (PRIME), reduced curriculum content and infused thinking skills, revamped pre-service, in-service

and leadership training and introduced a broader mix of educational training. With all these improvements, the Education System is now in a strong position to give I & E a sharper focus over the next few years to better achieve the Desired Outcome of Education (moe.gov.sg/speeches).

I happily documented:

Amid this transitional period of system of innovative thinking I assured them that they would get the opportunity to practice what they have learned in the classroom one day (Field Notes 7, Lines 11–12 Appendix A).

My research work represented to them yet another part of daily classroom administration. To the teacher trainees, I tried not to represent myself as another authoritarian figurehead who wanted to know all about their thoughts and feelings of learning child development, theories and child's play – they were unsure and certainly unbalanced by my initial presence in their lives, and did not know if they wanted me to know too much about them and their learning. It wasn't until some weeks into the interviews that they realised that I had a genuine interest in their improved knowledge, and that the information they shared with me was confidential.

My ultimate goal for the interviews was to provide a relaxed and supportive space which would honour the authentic female voices of the teacher trainees by inviting them to speak freely about their experiences after learning the theoretical views of the child and award them the opportunity to ask me questions if they so desired. As the semester continued, this approach allowed a slow transition for the trainees from discomfort to acceptance, and from silence to disclosure.

Quests and Questions

As the semester progressed, I observed a significant link between the quality of the interaction in the group work the trainees were producing, and their changing attitudes and responses towards me. As they matured and relaxed, their work became far more thoughtful, artistic, and multi-layered.

The laughter and nervousness evident in their behaviour towards each other, was replaced by more serious contemplation about the shaping of their ideas and a notable higher level of risk taking opinions became evident:

I notice that whilst there is still some lack of confidence but number of them are beginning to become bolder and braver about making the what views what works for an efficient infant, toddler and the preschooler programme. They appear to be realising their own strengths for creating a special quality curriculum. They voice that an early childhood curriculum is not just there in providing infant stimulation, baby-sitting, or a watered-down preschool program. They are aware that understanding the child is an essential component in their daily work. Although the trust level and self-confidence of the teacher trainees was still fragile, there was a new strength about their work, with a greater tendency to allow me into their personal zones. Indeed, they began to view me in a variety of ways.

I became someone they could talk to informally and formally of the importance of facilitating infants' toddlers' and preschoolers' ability to solve problems. The adult's way of focusing on the child is called adult presence and comes in several modes, two of which are the active mode and receptive mode.

The four important adult roles in infant, toddler and preschooler education are as stated by Mena (2004):

- (1) As determiners of optimum stress through observing and deciding how much stress is too much, too little, and just right,
- (2) As attention providers, by meeting each child's needs for appropriate attention without manipulative motives;

- (3) As feedback providers, by giving clear feedback so that infants, toddlers and preschoolers learn the consequences of their actions;
- (4) As models, by setting a good example of appropriate behaviour that they want to see in infants, toddlers and preschoolers (Mena, 2004).

During many occasions of my documentations the teacher trainees communicated informally and naturally of the importance of observation as stated above which made me really proud of their new understanding. I became akin to a 'proud mother figure', as well as a facilitator, and a researcher. This affected me in the most surprising way. I realised with both satisfaction but also some hesitation, that I was feeling a tremendous sense of attachment and empathy with the teacher trainees. This had happened almost without my knowledge, but certainly enriched the trust relationship with them that I had slowly tried to establish. This realisation became an important part of my data, marking my own personal journey throughout the research more personal.

Through their own creative work of observation, the teacher trainees became empowered to explore more confidently, alternative realms of meaning whilst also allowing me to share in the experiences (Appendix B: Professional Journal). Importantly, within the lessons I facilitated, I was able to challenge them to look more closely for both professional and personal meaning in their work, and although I questioned how far I could go in my role as a 'visitor' in the classroom, I felt a responsibility to provide appropriate challenge to the trainees whenever possible.

Play and the Growing Child

When exploring their observational records towards the middle of the semester, our discussions were mainly on the significance of **play based learning environment** in early childhood education. I documented their responses:

I noticed they began to trust me enough to earnestly and openly discuss their responses to the characterization of play in the Singapore classroom...In the teacher trainees eyes 'Encouraging Learning and Teaching through Play.' (Field Notes 30, Line. 7-8, Appendix A).

Tharman Shanmugaratnam, the Senior Minister of Education often highlights the importance of play based interactive learning environment. The changing attitudes to play based learning become even clearer with the intervention of the government of Singapore. The senior minister even supported play in the MOE Pre-School curriculum frame work in (2003).

He highlighted two principles of play:

- Children as **active** learners
- Learning through **play**

He further stressed that learning is most effective when children are actively involved and engaged in carrying out tasks that they find meaningful. 'We must take advantage of children's natural inclination to learn through play'. Play allows them not just to have a whale of a time, but encourages them to discover, take a few risks, and make mistakes. It allows them to care for each other, and express their feelings. Much of this takes place in spontaneous play. But opportunities for structured play will also serve to develop a range of skills, such as creativity, listening and speaking skills. They allow children to be involved in organising, practising, and working together for goals' (moe.gov.sg/speeches).

The growing awareness of the importance of play by the MOE and the MCYS support undoubtedly heightened and enriched development of trainee's views on play as they continued to reflect on, and at times confronted their own old perspectives of play. The trainees themselves gradually expressed their surprise and curiosity at what they were learning about play based learning.

According to Lim's (2004), article on 'Looking at Education through Deweyan Lens: how play could take shape in Singapore's preschools' suggests that both spontaneous and structured play, when facilitated well by adults, can motivate children to learn in a safe environment. Furthermore, in the learning process children develop creativity, oral and personal and social skills.

Although the document from the MOE does not detail how play could look like in preschool classrooms, it creates an assumption that there is broad range of knowledge and skills that children ought to learn but in Dewey's philosophy 'play' is not an outward

behaviour display by children. Rather, it is a 'free play of the child's powers, thoughts, physical movements with his own images and interests' (Dewey, 1990). Learning through play is encouraged in the classroom with more emphasis on a cognitive educational framework, as Singapore's wealth is her people.

"A nation's wealth in the 21st century will depend on the capacity of its people to learn," Prime Minister Goh Chok Tong Singapore

The economy of Singapore lies mainly on the efficiency of her workforce. The country's wealth lies in people. The government wants to help schools emphasize creative skills as much as curriculum mastery, and encourage independent learning before rote memorization. The push, the government believes, will help maintain Singapore's economic lead by increasing the quality of its intellectual capital.

But one has to ask: Singapore has often been able to fashion marvels, but is manufacturing minds altogether too ambitious?

The government's plan has three main components. The first was the January 1996 launch of the "Thinking Program." The project, which aims to develop eight core thinking skills such as memory and evaluation, is expected to expand to all secondary schools by 2000. This April, the government announced a \$1.4 billion information technology upgrade for schools, which includes supplying one computer for every two teacher trainees age nine and above. Just two months ago, the third phase was put into place: a patriotism-tinged National Education program, designed to inculcate in young Singaporeans confidence in their country (AsiaWeek 2001).

Hence, the government needs the educated skilled population to lead the country from one generation to the other. The trainees are well aware of the values of meritocracy and the academic demands on preschoolers yet after much reading and discussions, there is an incredible awareness of the importance of play in early years. They are confident of the miracles play based learning could bring about to the classroom. As they themselves lacked experience in the wonder of free play during their early years.

Play based learning has brought about considerable empirical investigation highlighting benefits of play as stated in Chapter Five. It is now, obvious that the climate of Singapore would entertain a structured educational explorative play based classroom.

This can be quite common according to Smith (1988). Considerable empirical investigation has now been made into the benefit of play, but 'the jury is still out'. Most investigations have concentrated on the supposed cognitive benefits of play, and have been made in an explicitly educational framework.

The trainees themselves gradually expressed their surprise and curiosity at what they were learning about play based learning. This is clear in their audio interview, and the observational reports. In the Philosophy of the Professional Journal the teacher trainee highlights 'I believe that play is the vehicle which empowers young children to be learners and to make sense of their physical and social world.' (Appendix B)

Whilst my teaching sessions with the teacher trainees were fruitful, I was conscious that my own perceptions of female stereotypes and roles needed to be kept in check. I was ever aware that whilst the teacher trainees were developing a greater understanding of the overview of child development, environment, theories and the wonders of play as potential themes in exploring and reshaping cultural meanings and values about the child, it was paramount that their development was guided but not dominated, by my role as facilitator in the classroom.

On one such occasion, I reflected:

I am aware that I am in danger of pushing distinctly strong ideas and views within a semester, and at times I feel that some of the married trainees with children of their own look blankly rather disillusioned of their early attitude and behaviour towards children... I do want the trainees to respond positively with what they see as appropriate strategies when dealing with young children...I feel happy as the trainees are discussing the importance of the intervention of the adult (Field Notes 19 Lines 22-52 Appendix A).

It was this fine balance between researcher, teacher, and female, which was eventually questioned and challenged by the trainees themselves. As they became more familiar with me, my research became a topic of intense intrigue for them. Once, Sandy came to

me and confessed that it is important to highlight the significance of the individuality of the child as she was brought up by very strict parents demanding and comparing her with many others and she now finds herself being harsh and harmful towards her own children forgetting their individuality and abilities. With tears in her eyes she confessed that she decided to join the study sessions to understand the child better. She willingly agreed to be interviewed as she felt it is important for women and mothers to be aware of challenges they face when dealing with children.

My notes tell the story:

The trainees' relationship with me has changed, moving from one where they were uneasy of my presence...to one where they come freely and ask questions about their problems and solutions and my own research (Field Notes 19, Lines 2–6 & 18–20, Appendix A).

A number of them come and sit beside me and begin to discuss how the study of child development has been a subject of great interest for most of them. How theories have developed ideas designed to show one plan or set of rules that explains, describes, or predicts what happens and what will happen when children grow and learn.

During an interview Yvonne described how views and ideas of Erikson's Psychosocial theory shaped her teaching in her infants classroom. Teachers help babies develop a basic sense of trust by holding babies close and having warm physical contact with them when they are being fed and responding right away to their distress when they cry or fuss.

Then in toddlers' classrooms the teachers foster independence in children by giving children simple choices, not giving false choices setting clear, consistent, reasonable limits accepting children's swings between independence and dependence, and reassuring them that both are acceptable (Mooney, 2000).

Importantly for the preschooler, teachers should encourage children to be as independent as possible, focus on positive skills rather than negative behaviour, and set developmentally appropriate programmes that would help to boost high self-esteem.

As the semester progressed, my field notes often reflected my changing role in the classroom:

I am surrounded by a number of them who want to talk to me about their observation and evaluation of the child. The trainees feel happy about their observation evaluation. Their logbook highlights the importance of the study. Their voices help us to understand the need for change in the preschools in Singapore (Field Notes 23, Lines 3-5 Appendix A).

Whilst I was gratified that the trainees were sharing with me many of the decisions and difficulties they confronted as they worked through their observational processes on the children in the childcare setting, I was conscious of maintaining a careful balance between my contribution in the classroom as researcher and the lecturer in child development. But I gave my unswerving co-operation and support when they had problems analyzing the behaviour of the child, which also enabled the communication between myself and the teacher trainees to continue to be so open and relaxed, and I firmly believe that all of us working together collaboratively was an important factor in contributing to the richness and diversity of the research experience.

Individual Interview

The interviews are conducted to hear the teacher trainees' voices of the prevailing teaching practices in preschools in Singapore.

Discussion Transcript.

Discussion held on 26 January 2005.

Led by the researcher Sepalika

Voice of Teacher Trainee Sarah at her Preschool.

Sepalika: Good afternoon, Sarah.

Sarah: Good afternoon, Sepalika.

Sepalika: Could you describe your interest in Early Childhood Education?

Sarah: I've been working with children for number of years. Now, I am actually running my own preschool.

Sepalika: Do you like being an Early Childhood Educator?

Sarah: Oh! Yes, Yes.

Sepalika: Do you enjoy your work?

Sarah: Definitely.

Sepalika: Do you think learning Children Development, Theories of Childhood and Play based learning would help you in your work?

Sarah: Definitely. In my center we focus a lot on play, and I strongly feel that through play children learn a lot and I enjoy my work.

Sepalika: As part of your training you had to go to other preschools in Singapore to observe children. What did you observe in other centres? How can you define their practices? Were they too structured?

Sarah: Yes, most centres were quite different to mine. They were not play based. In the center where I was doing my observation, the children had to do worksheets, **everyday** even if they had been absent. They had to complete the worksheets the next day. So the children had very little time to play.

Sepalika: Did it frustrate you? Did it frustrate you that you could not implement what you had learnt in your course?

Sarah: Yes, yes. I felt the children should be really learning through play. They could have done most of what they were doing through play. The worksheets were more important than play!!

Sepalika: Didn't the supervisor of the centre feel it was too structured?

Sarah: The Supervisor implements the curriculum and then all the others have to follow the programme.

Sepalika: Can you give me your opinion of these practices?

Sarah: My other teacher trainee friends tell me that it is really the parents who request for the worksheets. They insist that children should do more worksheets. So the supervisor is pressurised to carry on with structured work sheets.

Sepalika: So in your opinion even if the supervisor is aware that it is wrong to be too structured yet she continues to implement work sheets to please the parents.

Sarah: Yes. I guess so one has to please the parents. Parents demand to see what their children have done in the school.

Sepalika: Do you think you will ever get a chance to implement what you have learnt in your course, in preschools in Singapore.

Sarah: I think there will be some difficulties. There are some changes taking place but not so soon...it might take a while.

Sepalika: Can you tell me the age group of these children, who are asked to do these worksheets?

Sarah: Two year olds!

Sepalika: Can they write?

Sarah: No!

Sepalika: What are these worksheets like?

Sarah: Worksheets are basically colouring, matching and circling. They should be really playing. They can really do all these in a fun way matching and sorting through play not necessarily through worksheets. I feel it is not necessary to do all these worksheet just to show the parents.

Children do not have enough time to play. Every half an hour they have to do worksheets and do something...English half an hour, Chinese half an hour outdoor half an hour lunch half an hour! So the whole morning is packed with these programmes.

Sepalika: They are nursery children aren't they?

Sarah: Yes.

Sepalika: After learning Child development did you feel sad to observe such situations at preschools?

Sarah: Yes. We can't implement what we have learnt in these kind of classrooms especially when you have one teacher to about 12 or 14 nursery children to handle.

Sepalika: Can these children write, as they are still in the nursery? Are the children forced to write?

Sarah: Yes. Basically if they cannot write teachers hold their hands and write.

Sepalika: What did you do when you were there? Did you voice your opinion?

Sarah: No. I found it difficult to do so but I did an activity during their reading time. The children were asked to read the words several times.

I told the teacher my method of reading through flash cards and matching the words etc. The children enjoyed. They had fun in reading. The teacher saw that the children were happy reading with me and happy to be involved in the reading sessions. So the teacher was convinced that it was a good method. Actually, the supervisor had just given the teacher the books but had not taught how to make reading fun.

Sepalika: Some of your friends went to other preschools, you were in a way lucky at this particular preschool as you were allowed to do at least a reading programme.

Sarah: I think I was I was lucky the teacher trusted me and let me do some tasks but my friends were not so lucky.

Sepalika: Thank you, Sarah for you time.

Sarah: You are welcome.

Finale

In ending this journey, there are two major considerations, which frame the final narrative.

1. First, there is the significance of the teacher trainees' attainment of the theoretical knowledge in terms of their own development of understanding the child's physical, intellectual and social and emotional development, the importance of nature versus nurture, theories of childhood and implementation of play based learning. The knowledge is acquired by lectures, workshops, interactive group discussions and videos within the classroom setting throughout three semesters. All these help to build their growing abilities to 'speak for themselves, and to bring their own questions and perspectives to the material' (Maher & Tetreault 1994, P.18). Finally, the teacher trainees' demonstrated a **public display**

depicting their final research project on the **Introduction to Child Study and Making Learning Visible** which they confidently presented was paradoxically both poignant and uplifting in its precision and depth. (Appendix B)

2. Secondly, the individual interpretations of the children in Child Care Centres, which consist of a global scan of the children's physical, intellectual and social and emotional development and their behaviour. Observational records and evaluation of the child's strengths and weakness, and the teachers' knowledge of implementation of teaching strategies filled their reports. The final practicum analysis, the **Professional Journal**, represented their strongest and also most vulnerable knowledge of the child. As a result of their successful completion of the journal most confidently were able to 'wade in a little deeper' into the child's world, allowing them to interact openly with their other lecturers, parents as well as their peers. (Appendix B)

During the final semester my relationship with them became even stronger. As their lecturer and the researcher I felt a strong sense of pride and joy and a marvellous bonding with them as they acquired both theoretical and practical knowledge of the developing child.

In describing this changing relationship with the trainees, I draw on the term 'emphatic understanding,' first coined by psychotherapist Carl Rogers, and used by Meador and Rogers (1977 in Ely 1991) to explain the developing, often close relationship, which may occur between researcher and participant. When this occurs in a research situation, the researcher is able to go beyond simply 'understanding' the words of the participants, but indeed, to essentially 'step into their shoes.'

For an early childhood educator, this idea of 'stepping into the shoes' of someone else is well understood and indeed employed every time we enter into the teacher process. This move towards a strong empathetic relationship with my participants became almost a natural and necessary progression for me in order to comprehend and appreciate their knowledge, behaviour and positive interaction in the classroom.

In response, the trainees allowed me to become almost 'one of them':

At the end each session I feel as if I belong in this class now – there is a sense of ownership of the teacher trainees’ work, which was produced as a result of imparting knowledge through vigorous interaction and learning.

As I observed the teacher trainees and their work for the final presentation over these closing weeks, I identified a dynamic between their images of self, their creative abilities, and the emerging maturity in their work involving child observation. As their confidence changed and grew, their work metamorphosed from superficial and awkward, to meaningful and multi-faceted. There was undoubtedly a sense of developing empathy not only with their peers and myself, but also with the teachers in the childcare they were scrutinizing and making their own assumption that one day they would make a difference in children’s lives.

What became obvious was a developing understanding in the trainees themselves about the possibilities and advantages of the preschool teacher being both the facilitator and caregiver in the classroom. This was particularly heightened by their understanding child developmental studies and the ability to evaluate the children’s behaviour. Whilst still hesitant at times about their final presentation and the completion of the study course, often they began to trust their own instincts. This is well illustrated in the last field notes, when I asked them to write about their awareness of child development, theories and play.

Things are a little difficult at first because when in the classroom with children it takes a while to strike a balance between theory and practice.

Gail tells me she can’t suddenly come up with suitable solutions when confronted by group of active toddlers...Regina tells me a little passively that at times being a preschool teacher is very demanding...She looks determined (Field 26, Lines 98–105 Appendix A)

I found that it seems important to all of my teacher trainees to collaborate actively and to continue to reshape the children’s environment when appropriate, and they seem far more able to challenge me in regards my interpretation of their beliefs than they were in the earlier part of the semester. (Field Log 26, Lines 106–112 Appendix A)

Final Presentation of Introduction to Child Study ‘ Making Learning Visible’

The Child Study ‘Making Learning Visible’ had the main focus on ‘Children as Competent Problem-Solvers.’ (Appendix B)

When Gail, Regina and Josephine’s final presentation began, I documented...

Gail, Regina and Josephine’s appeared confident. They appear highly focused and assured. They appeared to be confident and their power point presentation was perfect with the images of observed child unfolding along with their argument and evaluation of the particular situation (Field Notes: 30, Lines 13- 15 Appendix A).

They smiled briefly at the audience at the end and were ready for a question and answer session. They exemplified the power of their knowledge in both aesthetic and personal development. The trainees’ presentations had been excellent, it was this last presentation, which seemed to gather all what the teacher trainees had learnt over a period of year and a half. They presented it in an explosive and moving finale.

Although segments of this last field observation have been highlighted in Chapter Five, I now document the piece in its entirety:

I am struck by the emotion at work in their presentation – Gail, Regina and Josephine’s are focused so intently to prove to the parents and others the great ability children have to solve their own problems if the adults provide them time and space (Field Notes: 30, Lines 16- 17, Appendix A).

The parents in the audience have gone silent – of this much I am aware. I am overwhelmed by the sheer immersion of the trainees in demanding for a child centered approach both at home and in school. Teacher trainees’ empathy and emotional attachment in their voices cannot be denied. The teacher trainees are improvising, expressing to the audience their sorrow at how much children are denied of their freedom to explore, in their voices anger is alive and almost tangible in the room.

They are voicing out loud, the tension is perfect, and the moment is precise. Both the parents and the audience begin to feel the urge in their voices.

I stand and watch in awe at these young women, so capable of so much depth of emotion and understanding. Where are the nail biting, hair-twirling trainees, that I have observed over the past year? I stand and look at them and they look back at me. They are pleased with their work and its impact on the audiences... (Field Notes: 30, Lines 18-20, Appendix A).

Observing the trainees after the presentation further illustrated just how well their mutual support and friendship among the peers have developed in the classroom. They were extremely confident and strongly voiced their commitment towards making a difference in the child's learning. What was more significant for me however, was the value they placed on child centered learning.

Interestingly, during the final presentation and the Professional Journal they summed up their knowledge of the following issues of the developing child:

Child's Growth: A series of steps or stages a child goes through on the way to becoming an adult.

Child's Learning: Behaviour change that results from experience.

Developmental Theories: Ideas that explain changes in a child due to interaction between growth and learning.

Behaviorists theories: Ideas emphasizing change that originates in the environment through learning.

Norms: What most children do at a certain age.

Normative / Maturational view: A way of looking at development that stresses certain norms.

Cognitive growth: Centers on the mind and how the mind works as a child grows and learns.

Affective growth: Centers on the self-concept and the development of social, emotional, and personality characteristics.

Physical Growth: Development of skills in the use of the body and its part from birth to preschool years.

Motor Development: the development of skill in the use of the body and its parts.

Constructivist: A believe in the idea that children construct their own knowledge through interaction with the environment

Scaffolding: A process through which an adult supports the child's learning, providing support as the child moves from the current developmental level to a higher level.

I end this narrative journey with my own reflections of the field. The teacher trainees' presentation was of enormous contrasts for me as researcher tremendous relief to be finally leaving the field after an exhausting but stimulating 3 years of research. I strongly feel proud of the group of participants who had become important to me; and an onset of anxiety at the thought of deciphering and sorting a mountain of ethnographic data! I knew however that the time was right to leave, that I had accomplished what needed to be done (Bogdan & Biklen 1982) here in the field. The story was ready to unfold in a new and exciting way. I was surprised at the emotion I felt as I concluded the final stage of the journey.

My field notes best end this chapter as they clearly express my sentiments:

I close another journey, which has been one of the most enlightening and powerful experiences of my professional life. There can be no detachment in work such as this – it will silently, and sometimes violently, touch your soul in ways never thought possible. It will shake you out of entrenched apathy, turn your thoughts around and upside down, and demand some kind of response. But from all of this comes change – change which will hopefully inform, inspire, and enlighten the researcher, and ultimately the reader, to reassess the reality they have taken so much for granted! (Field Notes: 30, Lines 19-20, Appendix A).

Summary

Both Chapters Six and Seven have described a research journey grounded in the classroom experiences at ICEC. Chapter Seven in particular, has focused on the specific relationship, which developed and evolved between the trainees and myself during our work together. It has highlighted the changing personal and interpersonal dynamics not only for myself as researcher, but also for the trainees as they realised gradually their value of understanding the early childhood study.

The next Chapter Eight of this work, the Discussion, will synthesise the richly diverse data gained through the observations, interactions, and written responses of the research group. In the final part of Chapter Eight, I will draw conclusions and offer recommendations for early childhood practitioners, hope that future practice will acknowledge the privilege and the importance of providing young children with an aesthetic learning environment which is both empowering and liberating.

CHAPTER EIGHT

Synthesis and Discussion

What could you possibly learn by studying us? What would happen if what were inside us were to enter the world?

(Carol Gilligan 1990, pgs. 2 & 4)

This research has taken as its focus, the experiences and understanding of the growing child by preschool teacher trainees in a classroom. It has been a narrative journey through which the trainees' own voices have helped shape the discussion and provided the essential framework for ethnographic enquiry into highlighting the importance of the knowledge of child development for the early childhood educator or any adult who wishes to work with young children. Conceptually this study has been underpinned by philosophies related to the child, the theories, environment and emphasis of play. The assumption that teacher trainees' academic knowledge and their individual and collaborative voices are important to research and pedagogical practice, has provided the epistemological structure from which the study evolved and developed.

The study's pivotal question, '**How essential is it for early childhood educators to understand 'how children learn and think?'**' was further framed by three focus sub-questions:

- (1) How does the environment and heredity affect the child's physical, intellectual, social and emotional development?
- (2) What influence do theories have on the child?
- (3) How important is play-based learning?

Philosophical Influences

At the heart of the study's essential vision lay the conviction that research into the need for early childhood educators in Singapore to be knowledgeable about the growing child, seems a neglected area in Singapore.

A strong interest in the argument that those dealing with children needed to gain deeper knowledge of children was highlighted by the Ministry of Community Development Youth and Sports (MCYS). As a lecturer, I gave impetus to my own belief that the study of children helps adults to understand a clear overview of nature versus nurture, types of theories that affect the child's growth and learning, interaction and behaviour. To empower and enfranchise the authentic teacher trainees' voices in the classrooms appropriate learning structures were provided in two types of theories: developmental and behaviorists.

In terms of educational development, my quest as researcher and early childhood practitioner was informed by current educational ideology which questions how much early childhood practitioners acknowledge, and the influence knowledge may have on the work of our teacher trainees. This was particularly highlighted in Chapter One, where discussion focused on recent requirement for teachers to be sound in early childhood education as stated by Charlesworth, (2004), who suggests that understanding child development is designed for teachers in training and teachers in service whose major interest is the pre-kindergarten, kindergarten, and primary children. It is also a valuable tool for social service workers, special educators, parents, home visitors, and others who require a practical understanding of the young child. Principles of care giving are how to develop the correct interaction. Additionally, I was strongly influenced by philosophy such as that of Gonzalez-Mena (2004), emphasizing relationships - those between caregivers and very young children...Relationships don't just spring into being - they grow from a number of interactions. So it is all about interactions- not just any kind of interactions, but those that are respectful, responsive, and reciprocal or 'three-R' interaction.'

Importantly, this study stressed the essentiality of the teachers' own 'voices' of their experiences as key elements in the ethnographic process and subsequent data analysis.

Indeed, it was the attitudes and behaviour of the teacher trainees in the classroom and not the practice of the teacher, which constituted the focus of the enquiry of the study.

Embedded in the philosophical framework of the study were other vital questions I hoped would be clarified and answered:

- What kinds of voices did these trainees already possess in this classroom?
- Were their voices liberated and confident, or were they suppressed by institutional structures and/or their anxieties and insecurities?
- How much did learning contribute to the teacher trainees' overall personal and interpersonal development?

Interactive classrooms offer a voice to those who might ordinarily be 'silent' in other classes. Private and inarticulate feelings, which might otherwise not be expressed in interviews or group discussions, can be readily expressed through the group interaction experience (Griffiths 1984).

Findings and Recommendations

The research cohort was a mixture of experienced and inexperienced teacher trainees. Most of them had never learnt child development before even though some had been working in Child Care Centres for many years. It is quiet obvious that working with young children demands a high level of aesthetic competence and theoretical knowledge and process. The teacher trainees' understanding and maturity was relatively underdeveloped. Many lacked confidence in their abilities to create their own work, exhibiting poor self-images and self-esteem. Although I was unyielding in my efforts to encourage and nurture the trainees in the new direction of work, initial lessons were filled with their struggling efforts to come to terms in absorbing theoretical views. Gradually the exposure to facts and new knowledge offered them opportunities to explore themselves and their world through a practical and a creative medium.

My intention was to help them understand that becoming a 'real teacher' a teacher who could truly make a difference in children's lives comes with self confidence and

experience as stated by Parsons (2001, p. 26), a teacher's most typical role is that of 'instructional expert.' In that role, the teacher is responsible for planning activities to facilitate learning, for guiding the learner in learning activities and for evaluating them. Beyond the instructional responsibilities, a teacher also takes the role of manager. Finally, a role that is taking on increasing significance is that of 'teacher as counsellor.' Professional educators understand the 'reality' that teaching involves the whole person and not just the 'head' (Parsons, 2001, p. 26). I am amazed that I had the great opportunity to observe several classes of teacher trainees' gradual development of self-esteem and self-confidence. In the remainder of this chapter. I will take you through the first task of guiding the teacher trainees through the rough path.

1. Finding

Key Concepts: Important aspects of 'adult learner' classrooms where learners gradually develop the most important discovery of the 'creative self' through trust, self esteem and self confidence

At the beginning of the sessions it was clear that the trainees' lack of familiarity with the theoretical knowledge of the child's developmental domains made them experience a high degree of difficulty in expressing themselves confidently and freely. Their ways of knowing about themselves and their world appears to be directly linked with the way they define themselves in relation to others (Gilligan 1982). This can result in voices, which are often suppressed by fragile self-esteem and low self-confidence. At times trainees' emotional immaturity made it hard for them to hold on to their true selves as they experience the incredible pressures of being an adult learner (Pipher 1995).

The classroom became a space where their insecurities may well be challenged as the student is confronted with discovering her 'creative' self.

In discussions during the interviews most trainees revealed that they considered themselves 'really fortunate' to understand the image of the teacher as a facilitator and decision-maker, about the children's learning. This further enhanced their strength, whereas previously many of them exhibited a preoccupation with and anxiety about the best possible way to interact with the child. Teacher trainees' continuous support towards

each other in class helped to boost self-confidence. There was no evidence of any negative comments about each other's knowledge during the study period. The early weeks of study sessions were fraught with the teacher trainees' anxiety about evaluating how much they knew and the best possible way they could assist each other in groups.

In the early stages of their group work, they were constantly worried about their contributions to the group to gain a better final score. In my notes there were frequent observations throughout the early units, which documented that the teacher trainees were...*extremely aware and concerned about their own capabilities during presentations and at times seemed uncomfortable and uneasy in their efforts or was their uneasiness due to being female dominant classroom* (Field Notes:12 Line 45 Appendix A).

Pipher's (1995) assertion that females have long been given messages about their feminine persona that they should present a specific acceptable 'image' to others, was clearly observed in much of the females' behaviour throughout the unit. Field notes revealed...*a great deal of readjusting of their knowledge and a reluctance to talk to the class revealed uncomfortable self in most teacher trainees. I often besieged with comments about their strength and confidence in their personal strength and to diminish their fears of looking nervous and uneasiness in classroom presentations* (Field Notes: 10, Lines 13-14, Appendix A).

There was evidence to support Pipher's (1995) claim that females are perpetually concerned with their personality and self-image and this becomes a source of frustration as they try to fit the images they carry around in their heads of the perfect teacher. This was strongly felt when the teacher trainees had to do individual presentations. During the interviews with the teacher trainees, many of them agreed that they were extremely self-conscious about themselves, as it would be their first public presentation.

Recommendation

Within an all female classroom, the importance of friendship hierarchies is acknowledged as an essential driving force behind collaborative harmony and productivity. As Griffiths

(1995) argues, the strength and support which trainees can give each other, needs to be capitalised on, rather than undermined and fragmented (p.179).

However, trainees need to be empowered to use the strengths of their peer-support for encouraging and supporting each other to do the very best they can, both inside and outside the classroom. The collaborative nature of the classroom activities means such friendship bonds can be utilised positively for meaningful group experience and communication. In adult learning programmes the trainees should be encouraged to work through the same groups in order to understand themselves and others more honestly and comprehensively. There is a need to establish the closeness and space as a genuine and open learning environment, which promotes spirited dialogue and debate about their work of individuals and groups, and exposes teacher trainees to a multiplicity of ideas and ideological meanings. Such approach no doubt would help a trainee teacher to develop a positive, relaxed supportive environment for the growing child in the classroom. I found the gradual acceptance and the confidence within the class as well as the groups shaped their minds to enjoy the further sessions of child developmental studies.

2. Finding

Key Concepts: Teacher trainees' progressive knowledge of child development and the play-based learning environment.

Work with children is a challenging activity today. Those who work with young children agree that understanding the child has a significant impact of the growth and development of the child. Our children are our hope for the future and our responsibility for the present. Knowledge of their growth and development will aid adults who work with them to provide the most supportive environments possible (Charlesworth, 2004).

I found that knowledge of the child prompted teacher trainees to be more involved in an overwhelming support in providing a stimulating play based environment for the child to interact freely. They realized that young children learn through experiences. They learn through constructing knowledge as they interact with the environment and through various forces that exert outside controls on their activities. A variety of theories on play account for its importance as support for emotional, social, cognitive, and language

development. The teacher trainees' gradual development of understanding was apparent in their first Observation Evaluation Record. (Appendix B)

A young child from infant to preschool years is a small person who is complex and at times puzzling. Tello (1995) describes how children come into the classroom as reflections of their diverse family backgrounds and, therefore, are not always prepared to take full advantage of what it has to offer. These children may "speak an entirely different language, practice different customs, expect different kinds of nurturing, embrace different kinds of values, be surrounded by people who look different, or have variety of special needs" (p.38).

Primarily, the ten observation records, a compulsory requirement of 200 hours of vocational placement and finally the write up of the Professional Journal of the trainees stand as evidence for their variety of observations conducted on different individual and groups of young children.(Appendix B)

The trainees responses to the questionnaire before and after the study sessions signified a supported a strong development towards child centered play-based learning environment. Additionally teacher trainees' knowledge of the Child as well as application of Play based learning were clearly visible in their Observational Records, Presentations, Questionnaire, Classroom Journal, Individual Interviews, Professional Journal and the final the Child Study ' Making Learning Visible' presentation. (Appendix B).

Quantitative Analysis of the Teacher Trainees' Knowledge of Child Development, Play based Learning Environment and Theories of childhood before and after the study sessions

In this section, the focus is on the knowledge of the **Developing Child** and the importance of **Play in Early Childhood Education**. I managed to collect responses from a number of training sessions during the periods of 2003, 2004 and 2005 as I had the opportunity to begin the **Developing Child** Module with each new cohort. Of over 1000 trainees, 100 to 200 teacher trainees' responses were recorded by way of a Questionnaire, Interview, Field Notes, and Classroom Journal (illustrated in Chapter Six).

The questionnaire was based on the awareness of child, the play-based learning environment and theories of childhood. The questionnaire was distributed among 53 trainees during their very first lecture on Child Development. As the questionnaire was answered within the classroom in my presence the accuracy of the responses can be considered pertinent.

The trainees, being novice both to the classroom as well as to me, I strongly felt they showed their sense of responsibility and willingness to give me their genuine responses. Therefore it was clear that they paid greater attention when answering the questions.

Each study course lasted the following required time of training:

- (1) For the **Certificate in Pre-school Teaching** the trainees need to complete 472 hours. The certificate in Pre-school Teaching is offered on full time or part time mode, over three academic semesters. In addition to the 322 course hours, students will also undertake 150 hours of practicum experience.
- (2) **Diploma in Pre-school Education Teaching** is offered on a full time or part time mode, over two/four academic semesters. In addition to the 519 course hours, students will also undertake 200 hours of practicum experience.
- (3) **Specialist Diploma in Pre-School Education Teaching & Leadership** is offered in an accelerated mode of study. Students will be generally attending classes three times per week for three-hour sessions over five academic semesters. In addition to the 712 course hours, students will undertake 220 hours of practicum experience.
- (4) **Diploma in Pre-School Education Leadership** is offered in an accelerated mode of study. Students will generally attend classes three times per week for three-hour sessions over three academic semesters. In addition to 398 course hours, students will undertake 150 practicum hours at the completion of the final semester. (Appendix A)

Responses to the questionnaire at the beginning and the end of the study session of Certificate in Pre-school Diploma in Pre-school Education Teaching in 2003, 2004 and 2005

The trainees were given the same questionnaire before (at the very first session of the child development study) and after (at the end of the overall course).

Quantitative Survey results of the ‘Awareness of the Growing Child and the Play based Learning Environment,’ of 53 Teacher Trainees prior to the start of the Study Session.

1. Knowledge of Child Development and Play based Learning Environment and Percentage of Students Sample Size (Before the study Session).

Sample Size	Infant Development	Toddler Development	Preschooler Development	Knowledge of Play based Learning Environment	Application of Play based Learning Environment
53	10/53 18%	12/53 22%	13/53 24%	5/53 9%	3/53 5%

According to the above table, of the 53 teacher trainees only some of them had awareness of the developing child from birth to preschool years. As mentioned in chapter six, the knowledge and application of play based learning proved to be low in Singapore due to a strong teacher centered classroom environment.

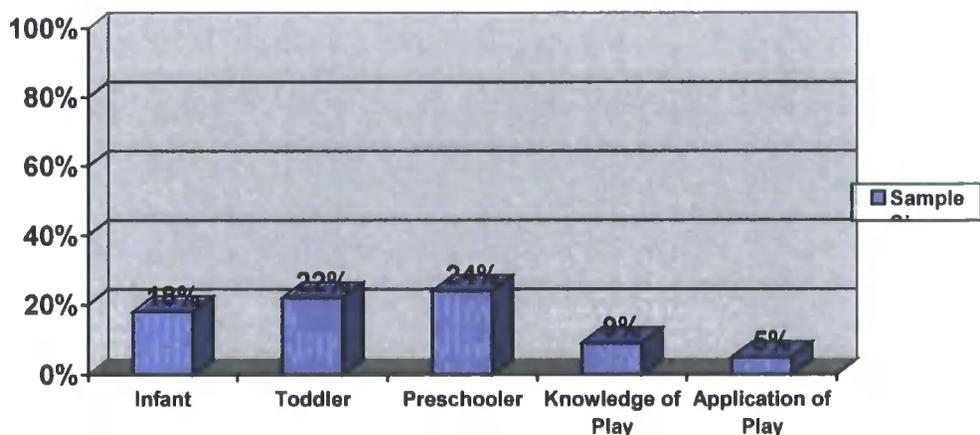


Figure 1. Knowledge of Child Development and Play based Learning Environment (Before the Study Sessions).

Children from birth to the preschool years are complex individuals who develop at a rapid rate. Theorists agree that warm, loving, responsive adults are essential to ensure

optimum development during these years. Children are born with the basic competencies needed to put their senses to work in order to learn about the world. Research indicates that the effects of many different environmental variables can promote or diminish children's competency (Charlesworth, 2004). The above findings therefore clearly suggest the inadequacy of the trainee teachers' knowledge of children from birth to preschool years. Most of the trainees who gave the above responses were involved with children for many years without prior knowledge of child development and play based learning atmosphere.

Knowledge of Child Development and Play based Learning Environment Percentage of Students of Sample Size. (After completion of the overall Study Sessions)

Sample Size	Infant Development	Toddler Development	Preschooler Development	Knowledge of Play based Learning Environment	Application of Play based Learning Environment
53	50/53 94%	48/53 90%	51/53 96%	25/53 47%	15/53 28%

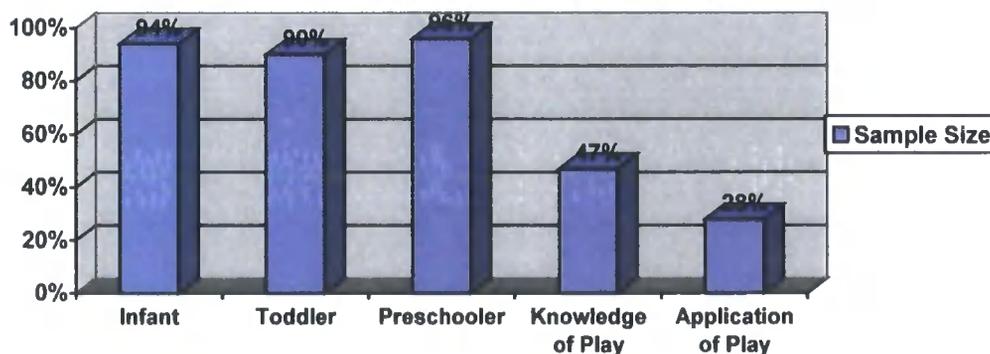


Figure 2. Knowledge of Child Development and Play based Learning Environment (After completion of the overall Study Sessions)

The obvious increase of awareness would be the primary foundation for further development in the field of early childhood education.

Comparison of findings of the same questionnaire before and after the study sessions of the teacher trainees:

Infant Development	Toddler Development	Preschooler Development	Knowledge of Play based Learning Environment	Application of Play based Learning Environment
<u>Before</u> 18%	<u>Before</u> 22%	<u>Before</u> 24 %	<u>Before</u> 9%	<u>Before</u> 5%
<u>After</u> 94%	<u>After</u> 90%	<u>After</u> 96%	<u>After</u> 47%	<u>After</u> 28%

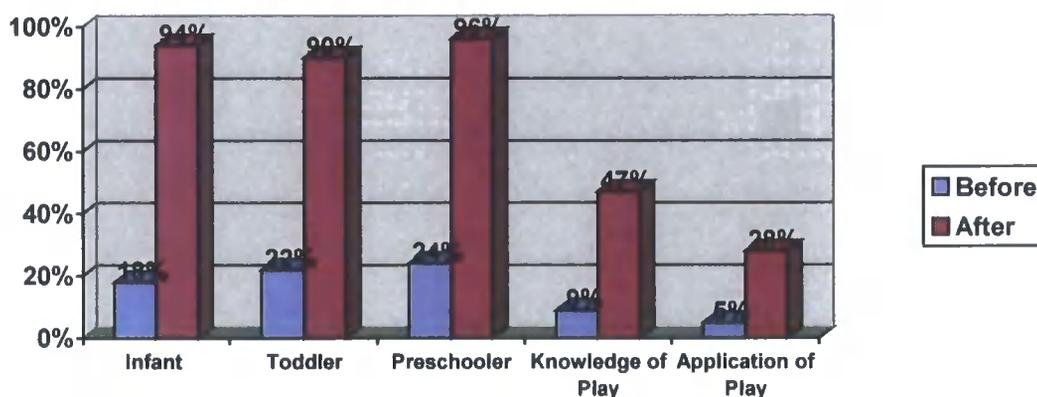


Figure 3. Knowledge of Child Development and Play based Learning Environment (Before and After completion of the overall Study Sessions)

Recommendations

The above findings before and after the study session clearly indicate the increased knowledge of the trainees. The understanding of the infant, toddler and preschooler seemed higher than the knowledge of play and application of play based learning.

In the literature review Chapter Five, the importance of providing a ‘rich play environment that will challenge his or her developing cognitive, social / emotional, psychomotor abilities was clearly stated. Development is influenced by the objects and people that surround the child (Charlesworth, 2004). As discussed in Chapter Seven in Singapore the ‘teacher centered classrooms’ are common but as stated by the Ministry of Education (MOE) they are gradually adapting to a play- based learning mode.

It is obvious that both the play-based environment and the use of such an environment, for most Singapore teachers would seem a new teaching methodology. In order to provide stimulating, explorative learning opportunities through play, teachers of young children need to undergo extensive understanding and experience of the growing child through the eyes of theories of development.

3. Findings

Key Concepts: Teachers' knowledge of theories of development and learning to stimulate the child's confidence, communication, intimacy and empathy

As stated earlier in the chapter, the majority of trainees developed strong bonds within groups during their study sessions. Within these groups friendship networks were identified as important infrastructures of trainees' daily lives, with specific identifiable modes of communication, strongly characterised by intimate sharing, discussions of their private knowledge (Duck 1993). These modes of communication feature high degrees of empathy and intimacy.

In particular, discussions of various theories and practices and participation in group work, allows significant close relationship and an opportunity for developing conversations and personal disclosures that other experiences inhibit. For many of the trainees, this kind of communication is an essential part of the way they make sense of their world and collaboratively construct personal and cultural identities (Gluck & Patei, 1991). The theories of childhood and an understanding of the human development can also become an important component to maintain strong bonds. This bonding among trainees can be a powerful force not only for surviving, but also for challenging conventional gender arrangements (Thorne 1993). Experiencing such learning situations would no doubt help teachers to develop suitable child centered classrooms as well as successful implementation of theoretical applications.

This was quite obvious in the teacher trainees Observation and Evaluation Records and the Professional Journal (Appendix B). Vygotsky's concept of scaffolding supports the value of good questioning for children's learning (Cassidy, 1989). Asking children open-ended questions such as 'How can we find out?' 'What will happen when we...?' and 'What should we do to...? What, why, how, when questions pave the way for children to

think and to solve problems through critical thinking as argued by Tudge and Caruso (1988) specifically addresses critical thinking skills. They found that cooperative problem solving could enhance young children's cognitive development. That is in line with Piaget's thinking; when children work together to solve problems, their interactive environment supports cognitive growth.

In natural situations, one or more experts and one or more novices are typically in the group...when children were paired based on their problem-solving abilities and were presented with a balance beam problem to solve together...Trudge and Caruso (1988) further suggest a number ways teachers can ensure that true cooperative problem solving occurs in their classrooms (Charlesworth, 2004).

Teacher trainees' knowledge and applications of the following theories were clearly seen in their Observational Records, Presentations, Questionnaire, Logbook and the final Professional Journal.

1. Overall assumption of trainee teachers' application of Piaget's Cognitive theory:

The trainees stated that as preschool teachers they needed to have a clear awareness of the importance of preschool children's learning through role-play. From Piaget's theory, the trainee teacher finds that dramatic play is essential to cognitive development. Through pretending to be someone else and through the use of objects for purposes other than their original intent (e.g., sand used to make a pie), children have their first symbolic experiences. These experiences are the basis for more abstract symbolic experiences and symbol learning. As language and fine motor skills develop, children use symbols (e.g. words and pictures) to make sense of their world. (Appendix B)

2. Overall assumption of trainee teachers' application of Vygotsky's Sociocultural theory:

The teacher also investigates Vygotsky's view of play. Vygotsky highlights learning self-regulation through play; that is, children learn the rules of social interaction. The trainees had a clear idea of why it is important to provide support for children's language development through activities such as conversation and storybook sharing. The trainees showed knowledge of scaffolding, a process through which an adult supports the child's

language development, thus reinforcing the child's efforts at verbal expression. It can be used during storybook sharing when the adult extends the experience by asking the child questions. The process continues by encouraging the child questions and relating the story to the child's personal experiences.

3. Overall assumption of trainee teachers' application of Erikson's Psychosocial theory:

The trainees understood Erikson's stages of development both socially and emotionally from birth to preschool years. The awareness of the infant's needs and the significance of adult application of attention, care and warmth and important, as is the recognition of the autonomous toddler, an attitude of patience towards the child and the importance of understanding preschoolers' initiation and the implementation of rules for the positive kind of behaviours. The teacher trainees realize that a delicate balance must be found between being too permissive and too restrictive.

4. Overall assumption of trainee teachers' application of Skinner's Behaviorist theory:

The trainees become observant of both the negative and positive behaviours of children. An understanding of Skinner helps them to be more concerned about the positive behaviour of children unless the bad behaviour is hurting someone else. Ignoring the negative behaviour and encouraging the positive behaviour would help the child to gain self-confidence. For example, in the Professional Journal teacher's reflections written on (31 of August 2005), depicts her understanding of analyzing the child's behaviour. (Appendix B)

5. Overall assumption of trainee teachers' application of Bandura's Social Cognitive theory:

The teacher is aware of the child's imitation of behaviour and unacceptable use of language. Teacher's application of Bandura's theory would probe to find out where the child might have learned such language or behaviour. Familiarity and knowledge of Bandura's social cognitive theory would help teachers to understand the cause of irrational behaviour of children. This would no doubt help towards positive application of behaviour controls.

Responses to the questionnaire at the beginning and the end of the study session of Certificate and Pre-school Diploma in Pre-school Education Teaching in 2003, 2004 and 2005

The teacher trainees were given the same questionnaire before (at the very first session of the child development study) and after (at the end of the overall course).

Quantitative Survey results of the ‘Awareness of Theories of Childhood’ of 53 Teacher Trainees prior to the start of the Study Session.

Within the period of 2003, 2004 and 2005, 53 teacher trainees awareness of theories of childhood were examined by way of a questionnaire. The questionnaire was distributed to the trainees as they started their first lecture on Child Development.

1. The knowledge of Theories of childhood and Percentage of Students Sample Size (Before the study Session).

Sample Size	Behaviorist Theory by B.F.Skinner	Social Cognitive Theory by A. Bandura	Cognitive developmental Theory of J. Piaget	Sociocultural Cognitive Theory of L. Vygotsky	Psychosocial Theory of E. Erikson
53	2/53 3%	1/53 1%	6/53 11%	5/53 9%	3/53 5%

According to the above table, of the 53 teacher trainees only a few had any awareness of the theorists and the theories of childhood while the majority of the almost of the trainees were not familiar with the major theories of child developmental studies.

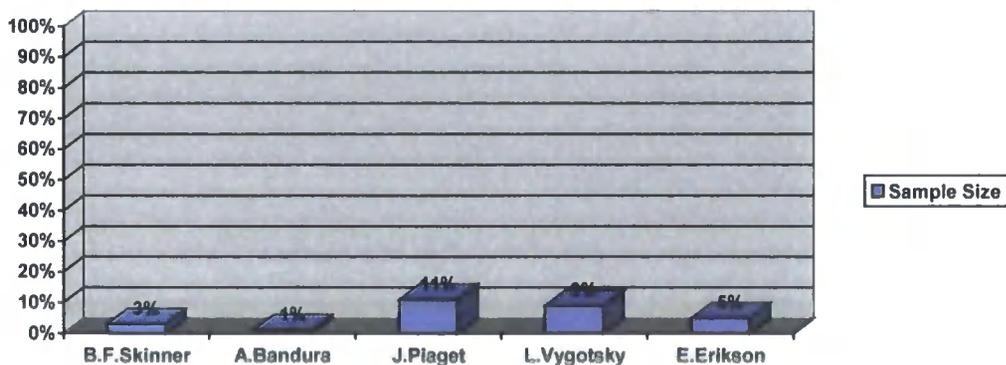


Figure 4. The knowledge of Theories of childhood (Before the study Session).

The above further emphasises the responses of the trainees to the questionnaire on the knowledge of theories of children.

2. Knowledge of Theories of childhood and Percentage of Students Sample Size (After the study Session).

Sample Size	Behaviorist Theory by B.F.Skinner	Social Cognitive Theory by A. Bandura	Cognitive developmental Theory of J. Piaget	Sociocultural Cognitive Theory of L. Vygotsky	Psychosocial Theory of E. Erikson
53	42/53 79%	38/53 71%	51/53 96%	50/53 94%	49/53 92%

According to the above table, of the 53 teacher trainees, the majority of them showed a marvellous awareness of the theorists and the theories of child development almost after a year of training in the field of child developmental studies.

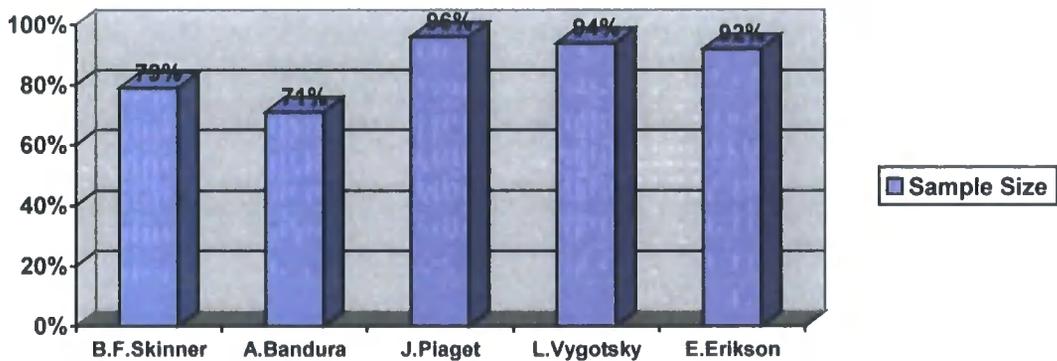


Figure 5. Knowledge of Theories of Childhood (After the study Session).

The above table again emphasises the increased responses of the trainees to the questionnaire on the knowledge of theories of childhood.

Comparison of findings of the same questionnaire before and after the study sessions of the teacher trainees:

Behaviorist Theory by B.F.Skinner	Social Cognitive Theory by A. Bandura	Cognitive developmental Theory of J. Piaget	Sociocultural Cognitive Theory of L. Vygotsky	Psychosocial Theory of E. Erikson
<u>Before</u> 3%	<u>Before</u> 1%	<u>Before</u> 11%	<u>Before</u> 9%	<u>Before</u> 5%
<u>After</u> 79%	<u>After</u> 71%	<u>After</u> 96%	<u>After</u> 94%	<u>After</u> 92%

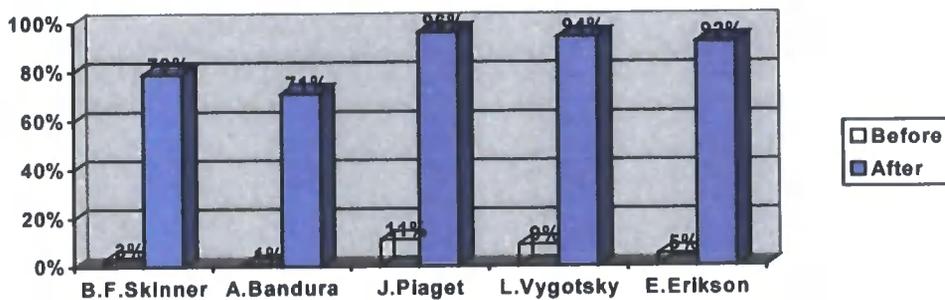


Figure 6. Knowledge of Theories of childhood (Before and After the study Session).

In terms of the teachers' response, the first and the second set of data highlight notable changes in their attitudes towards theories of child development at the end semester progressed. They clearly disclosed their increased knowledge in the questionnaire as well as in their Observational Reports and the Professional Journal. For example, in the Professional Journal teacher reflects how she has learnt and understood the child (31 August 2005, Appendix B).

The developing knowledge of the trainees was evident during on going sessions and I also found myself moving towards a more empathetic relationship with the trainees where my own intrinsic response was to assist and nurture their increasing knowledge. To my great delight strong elements of confidence began to emerge within the teacher trainees, which in turn affected their attitude towards the child in the classroom. Smith (1983) stresses that the key element of effective ethnographic practice, lies in the capacity of the researcher to put himself or herself in the place of the participant through a process

of “verstehen” or empathy. Margot Ely (1991) refers to this more precisely, as being able to see life through the participants’ eyes.

Recommendation

Applying Developmental and Learning Theory and Research with Caution

Adults who work with children must have a sound, underlying theoretical basis to support their actions (Glascott, 1994) but Stotts and Bowman (1996) provide a thoughtful view of the relationship between theory and practice. They point out that theory and research are only one set of data that may shape teaching practice. The individual’s personal experience and the children’s roles in their families and community are important to the total picture. Therefore, theory and research should be applied with caution, as each child’s individuality should be respected. ‘What makes theories worth reading and discussing is not the assumption that they mirror reality but they serve as suggestions or estimation of what could be done to benefit each child. Theories are helpful in that they organize and give meaning to facts, and they guide further observation and research (Stotts and Bowman, 1996, p. 171).

Both developmental and behaviour-oriented theories attempt to explain what happens as children develop cognitive, social, physical and motor skills. Each type of approach to explaining early development can be applied to every day work with children. Ideally, child development and theories of development should work as one. (Elkind, 1981, 1993).

Validity of the Findings

Questioning the validity of the above findings, I pursued this particular point with the trainees during the interviews. Using observations of their apparent enthusiasm, eagerness and self-confidence in voicing their positive thinking of the growing child, I spoke at length with them about their feelings of understanding the importance of the adult role in the child’s overall development.

Chapters Three, Four and Five document the significance of positive responses of the adult in the child’s life. These responses must begin at birth for optimum development to

occur. This was strongly supported by the trainees. They appeared to be strongly linked with the important emphasis they placed on the child and the acceptance of the major support of theories.

On becoming a teacher of young children, what became obvious to them was their overwhelming concern not to provide a 'too teacher centered' classroom. They held tightly to a belief that for positive guidance of children, adults need to be observant, listen to children and be sensitive to what their actions and responses mean and importantly their current level of thinking. Researchers such as Mestre (1991, citing Resnick, 1978), Von Glasersfeld (1989), and others caution that if we as educators do not take students' prior knowledge into consideration, it is likely that the message we think we are sending will be not the message received" (Lind, 1997).

It is important that what is learned from a child development course is checked against and applied to children in adults' care. The vocational training period of 200 hours resulted observing children in the childcare setting and writing about theory and practice.

The findings of the study were confirmed by the following research tools and results (Appendix B):

- 1. First the questionnaire before and after the study session** confirmed the increased awareness of the growing child in physical, intellectual and social and emotional development and the significance of the theories.
- 2. The Field Notes** recorded the teacher trainees' own behaviour and interaction in the classroom and the confusion of the 'teacher centered' or the 'child centered' programmes as they themselves were accustomed to more teacher directed activities. With the support and encouragement of the MOE and MCDS play based 'child centered' approach would be significant in the future.
- 3. The Classroom Journal** (Teacher trainees' views on what has been learnt in the classroom) revealed a gradual realization of the importance of observation of

children in the classroom and identifies individual strengths, interests, misconceptions, goals and weaknesses.

4. **Teachers' (10) Observation and Evaluation Records** (both 4 and 5 observations take up 200 hours of teacher trainees' study). The **Observation and Evaluation Report** and the **Practicum Journal** signified their depth of understanding of the nature of the growing child. How the systematic collection of data of the child's strength and weaknesses would assist in effective implementation of teaching methods is clearly stated.
5. **The Practicum or Professional Journal** reflects the teacher as the researcher who does a carefully planned and documented study of action designed to incorporate a positive environment where children could be stimulated and enhanced in their learning.
6. **Interviews/audio Recording - 'Voice text'** (Individual informal interviews using qualitative and ethnographic techniques of methodology at the end of the session). Teacher trainees voiced their appreciation in gaining the knowledge of the child and the theories. Their voices also indicated a strong determination to make a difference in children's lives.
7. **Teacher Trainees' Final Presentation of 'Child Study' to make 'Learning Visible'**. The project consists of documented evidence of children's learning processes that would help to make learning visible. The main theme was to educate the public on the importance of children as **thinkers** and **communicators**. The significance of listening and understanding how children think and solve problems by themselves through activities is emphasised. Children's involvement in each individual project signified their developing ideas, experiences, and reflections. Finally teacher trainees documented children's feelings of mutual esteem, collaboration and capability as thinkers and communicators. For example, interpretation using Foundation Learning Areas

(FLA) highlights Children as competent problem solvers (Child Study, Appendix B).

The main focus of the study was the individual development in preparation for working as a professional in the field of early childhood education. Through classroom learning and observation and documentation of children at child care centers the training provided the teacher trainees with numerous opportunities as stated above to draw together the theoretical framework within the practical hands-on environment.

Conclusion

This study sought to examine and highlight the importance of teacher trainees' understanding of the growing child, play based environment and the theories of childhood. At the beginning of this research journey, I expressed in Chapter One a strongly held belief in the importance of the preschool teachers' role in the preschool child's life. I championed that any adult who works with children needs to know both child development and the theories of childhood, which actively challenged traditional stereotypical notions that experiences would alone be sufficient.

As stated in the Chapter Two, most who worked in Child Care Centres in Singapore were not qualified early childhood educators until the MOE and the MCSY intervened and made it mandatory for them to obtain relevant qualifications.

Clearly, this study revealed that there is immense value in the knowledge gained by the trainees working within the learning context. The continuous immersion in young child's development awards trainees with rich ideas and opportunities to address issues of the growing child. For students, it introduces the uniqueness of the child as distinct from the older child and shows how to work with young children in a way that corresponds with their developmental level (Charlesworth, 2004). The young child, the theories of child development, and the play based learning environment signify the richness of the creative experience of a child.

Work with young children is a challenging activity today. Those who work with young children agree that development and education are inseparable at this age (Charlesworth,

2004). This study suggests, that adults who work with children must recognize that the importance of developmentally appropriate practices (DAP) is at the core of the early childhood educational profession. Educators must be sensitive to the to children's development as well as their environment. In particular, I wanted to highlight that competence has its roots in infancy and early childhood learning. Young children learn through experiences. They learn through constructing knowledge as they interact with the environment and through various forces that exert outside controls on their activities (Charlesworth 2004).

I was strong in my convictions that the importance of the knowledge of the growing child and the environment would be told, not only through my own research narrative, but also through the authentic voices and works of the teacher trainees themselves.

At times I became frustrated with the ever-changing attitude of the teacher trainees' lack of understanding of play-based learning. At the beginning preaching to them to develop such skills seemed like 'treading water' which prevailed until their understanding and confidence gradually grew and developed. In time, the communication became richly informative and diversely interesting.

Thus the research was successful in opening up dialogue between myself and the teacher trainees. It effectively exposed the difficulties many of them faced in attempting to understand play. A variety of theories on play helped them to account for its importance of a child's emotional, social, and cognitive and language development. I provided abundant materials for them to understand the methodology and opportunities for them to explore and provide a safe and supportive environment for children. In terms of elevating self concept and self confidence, it was affirming to reveal that continued work in child development studies did actively empowered the trainees to move beyond initial one dimensional perceptions of their world, to those which were more complex, and multi-faceted.

According to Sebastial-Nickell and Milne (1992), Ebbeck (1991) and Bruce (1989), human development is the basis for any study in early childhood education, and is particularly relevant in relationship between high quality care education and staff qualification.

Future Directions

This research has focused on the experiences and the knowledge of the developing child and theories of childhood of adults who have been involved in early childhood programmes.

The study of child development has been a subject of great interest during the twentieth century. Care giving as a profession has attracted more attention in the last few years since brain research information made professionals in other disciplines sit up and take notice. A great deal of interest has focused on how the brain functions in cognitive processing and learning (Charlesworth, 2004). The children from birth to 5 years have become the centre of attention.

Let us study the speech of the Minister of State to the Prime Ministers' Office Singapore Chan Soo Sen, 'Children are regarded as valued members of the family and the country's assets and future.' With Singapore's accession to the Convention on the Rights of the Child in October 1995, we reaffirmed our strong commitment to the well being of children...Our children are our future. They have rights that should be protected. We brought them to this world, not to be abused but to take over our heritage from us when we leave. What they experience today shapes the world of tomorrow...The quality of pre-school education and qualifications have become the main focus... The quality of pre-school provision depends greatly on the teachers and the training received by them. Teacher training and qualification offer high leverage opportunities for enhancing standards of training and expanding career opportunities for pre-school professionals in Singapore...This will ensure that pre-school professionals are well equipped to provide our young with an enriched learning environment, to nurture their social skills and values, and prepare them for lifelong learning.'

Along with the importance of the pre-school professionals the term 'Caregiver', too, has created some attention from the society. Caregiving as a profession still needs a boost up the status ladder. Caregiving is an *important* profession as mentioned in the previous chapters.

People in whose hands the lives of our children and future lie need to be recognised for what they do. “ I am not a baby sitter” is the plaintive cry heard from caregivers as they explain time and again that they are *professionals* in the early childhood education field (which is more and more being called early care and education field). It seems as if the younger the children, the lower the status of the practitioners responsible for their care and education. The general public need to understand that well trained early child hood educators and quality care centres could make a difference not only in the child’s immediate life but for generations to come as the positive formative years could eventual result in creating a positive, happy self-confident human beings. Korelak, Colker and Dodge (1993, p. 11) have identified seven key indicators of quality care for children:

1. The programme is based on an understanding of child development
2. The program is individualised to meet the needs of every child.
3. The physical environment is safe and orderly, and contains varied and stimulating toys and materials.
4. Children may select activities and materials that interest them, and they learn by being actively involved.
5. Adults show respect for children’s needs and ideas and talk with them in caring ways.
6. Parents feel respected and are encouraged to participate in the programme.
7. Staff members have specialised training in early childhood development and education

Such development in the future, in the area of early childhood education, would undoubtedly enrich the lives of children. In particular, it would help to increase the dignity of the early childhood educators.

BIBLIOGRAPHY

- Agar, M. (1980) *The Professional Stranger*. N.Y: Academic Press.
- Allen, L., & Santrock, J. (1993) *The Contexts of Behavior Psychology*. Brown & Benchmark Press: Madison, WI.
- Arnold, R. (1994) Research issues, psychodynamic pedagogy and drama in education. *NADIE Journal*, 18 (2), 18-19.
- Atkinson, P. (1990) *The ethnographic imagination*. London: Routledge.
- Atkinson, P. (1990) *The ethnographic imagination*. London: Routledge.
- Aubrey et. al (2000) *Early Years Education: A review the evidence from a television programme that explored features of the early years curriculum in three countries considered to be* www.scotland.gov.uk/
- Ball, S. (1982) Participant observer as a method of research. *Case Study Methods*, 1 (6), Deakin University Press.
- Bandura, A., & Walters, R.H. (1959). *Adolescent Aggression*. Ronald Press: New York.
- Bandura, A. (1962) *Social Learning through Imitation*. University of Nebraska Press: Lincoln, NE.
- Bandura, A. (1975). *Social Learning & Personality Development*: Holt, Rinehart & Winston, INC: NJ.
- Bandura, A., & Ribes-Inesta, Emilio. (1976). *Analysis of Delinquency and Aggression*. Lawrence Erlbaum Associates, INC: New Jersey
- Bandura, A. (1977) *Social learning theory*. Prentice Hall: N.J.
- Barrett, K.C., (1999) *Child Development*, Glencoe Division of Macmillan MacGraw-Hill School Publishing Company, U.S.A.
- Bee, H., (1995) *The Developing Child*, Harper Collins, New York.
- Berger, K.S., (1980-2000) *The Developing Person, Through Childhood and Adolescence*, Worth Publishers, New York.
- Bekman, S. (1990) Alternative to the Available: Home-based Versus Centre-based Programmes, *Early childhood Development and Care*, 58.
- Bekman, R., & Adamson, L.B. (1984) Coordinating attention to people and objects in mother-infant and peer-infant interaction. *Child Development*, 55, 1278-1289.

- Bell, J. (1993) Most research studies of human participants involve working with other mental health care professionals. ... Doing your Research Project. ...apt.rcpsych.org/cgi/
- Bennett, N. (1977) *Managing Classroom Groups*. Hemel Hemstead: Simon and Schuster.
- Bogdan, R.C. & Biklen, S.K. (1982) *Qualitative research for education: An introduction to theory and methods*. Boston, MA: Allyn & Bacon.
- Borg, W.R. & Gall, M.D. (1989) *Educational research*. N.Y: Longman.
- Boulding, K. E. (1984) B. F. Skinner: A dissident view. *Behavioral and Brain Sciences*, 7, 483-484.
- Bowerman, M. (1973) *Early syntactic development*: Cambridge: Cambridge University Press.
- Bredekamp, S (Ed) *Developmentally Appropriate Practices in Early childhood Programmes: Serving Children from Birth Through Age 8* (Washington DC: National Association for the Education of Young Children).
- Bretherton, I., Fritz, J., Zahn-Waxler, C. and Ridgeway, D. 1986: Learning to talk about emotions; a functionalist perspective. *Child Development*, 57, 529-48.
- Bronfenbrenner, U. (1979) *The Ecology Of Human Development*. Cambridge, MA: Harvard University Press
- Bronfenbrenner, U. (1989) *Familial Ethnic Socialization Among Adolescents of Latino and the united states*. jfi.sagepub.com/cgi/reprint/27/2/184.pdf
- Bricker, D. & Veltman, M. (1990) Early intervention programmes: Child-focused approaches, in: Meisels, S.J. & Shonkoff, J.P. (Eds.) *Handbook of Early Childhood Intervention* (New York, Cambridge University Press).
- Bruce, T., and Meggitt, C. (1991) *Child Care and Education*, Hodder and Stoughton, London.
- Bruce, T., and Meggitt, C. (1996) *Child Care and Education*, Hodder and Stoughton, London.
- Bruce, T. (1989) Early childhood Research and Practice. Fall 2002. Changing Curriculum... Traditional early childhood education in England has been ... of the Early Years Curriculum Group. Early childhood education, London.
- Bruner, J.S. (1975) Play is serious business. *Psychology Today*, 8, 82-85.4
- Bukatco, and Marvin Wdiehler, (2000) *Child Development – A Thematic Approach*.

- Butterworth, G., and Harris, M., (1994) *Principles of Developmental Psychology*, Lawrence Erlbaum Associates, Hove.
- Campbell, F.A. & Ramey, C.T. (1994) Effects of Early Intervention on Intellectual and Academic Achievement: A Follow-up Study of Children from Low income Families, *Child Development*, 65.
- Carr, K.S. (1988). How can we teach critical thinking? *Childhood education*, 65(2), 69-73. 5
- Cassidy, D.J., (1989) Questioning the young child: Process and functioning. *Childhood Education*, 65, 146-149.5
- Cassidy, D.J., & Berlin, L.J. (1994) The insecure/ambivalent pattern of attachment: Theory and research. *Child Development* , 65,971-991.
- Charlesworth Rosalind. (2004) *Understanding Child Development* (6th edn). Thomson Delmar Learning. NY
- Cobb, M. (2000) *The Development of Children*. New York. W.H.Freeman.
- Clark, M. (1989) *The great divide: The construction of gender in the primary school*. Canberra: Curriculum Development Centre.
- Clarke. H.H., & Campbell (1998) *Comprehension and the given –new contract*, In R.O. Freedle (Ed.), *Discourse production and comprehension*. Norwood, NJ
- Cohen L. & Manion, L. (1989) *Research methods in education*. London: Routledge.
- Collins, J.K. & Harper, J.F. (1983) *The adolescent girl*. North Ryde: Methuen.
- Commonwealth Schools Commission, (1986) *A national policy for the education of girls in Australian schools*. Canberra.
- Connell, R.W. (1987) *Gender and power*. London:Allen & Unwin. Cullen
- Davenport, G.C., (1994) *An Introduction to Child Development*, Collins Educational, London.
- Cowie, H. & Blades, M., Smith, P. K., (1991). *Understanding Child Development*. Black well Publishers Ltd, 108 Cowley Road, Oxford OX 4 1JF, UK.
- Cox, M. J., Owen, M.T., Henderson, V.K. & Margand, N.A. (1992) Prediction of Infant – father and infant–mother attachment. *Developmental Psychology*, 28, 474-483.
- Dennis, W. (1960) Causes of retardation among institutionalised children: Iran. *Journal of Genetic Psychology*, 96, 47-59.

- Dewey, J. (1990) *The school and Society; And the child* www.springerlink.com/
- Dodge, K.A., Pettit, G.S., & Bates, J.E. (1994) Socialization mediators of the relation between socio-economic status and child conduct problems. *Child Development* 65,649-665.27
- Dahlbom, B. (1984). Skinner, selection, and self-control. *Behavioral and Brain Sciences*, 7, 484-486.
- Donaldson, M. (2000) *Learning Theories*, www.suffolkandnorfolkscitt.co.uk.
- Donelan, K. (1992) Nothing else gets you that close: Using ethnographic research in education. *NADIE Journal*. 16 (4), 39-47.
- Duck, S. (1993) *Friends for life: The psychology of close relationships*. London: The Harvest Press.
- Ebbeck & Gibbons (1991) The effect of a team building program on the self-conceptions of grade 6 and 7 physical education studies. *Journal of Sport and Exercise Physiology* 20, 300-310. M(1998) The role of physical education in the development of active lifestyles.
- Ebbeck, M. (1995) Purposes of Early Childhood Education: expressed views of teachers and parents in Hong Kong, *International Journal of Early Years Education*, 3(2), pp. 3-18.
- Ebbeck, M. (1996) Parents' Expectations and Child Rearing Practices in Hong Kong, *Early Child Development and Care*, 119, pp. 15-25.
- Ebbeck, M. & Glover, A. (1998) Immigrant Families' Expectations of Early Childhood, *Australian Journal of Early Childhood*, 23(3), pp. 14-20.
- Ebbeck, M. & Wei, Z.G. (1996) The Importance of Pre-school Education in The People's Republic of China, *International Journal of Early Years Education*, 4(1), pp. 27-34.
- Eisner, E.W. (1991) *The enlightened eye*. N.Y: Macmillan.
- Elkind D. (1994) *A sympathetic understanding of the child: Birth to sixteen*(3rd ed.).Boston:Allyn and Bacon.
- Ely, M. with Anzul, M. Friedman, & T. McCormack Steinmetz,A. (1991) *Doing qualitative research: Circles within circles*. Bristol PA: Falmer Press.
- Eva Essa, (1999) *Introduction to Early Childhood Education*,3rd Edition (1999) Delmar Publishers London.

- Evans, R.I. (1989). Albert Bandura: The Man and His Ideas---A Dialogue. New York: Praeger
- Fabes, et al.,Lengua & Long, (2002) Parental expression of emotion. findarticles.com
- Freud, S. (1939) 'War panic' www.freud-museum.at/freud/chronolg/1939-e.htm - 4k
- Feng, J. (1994) Asian-American Children: what teachers should know. ERIC Document
Reproduction Service, ED 369 577. Available at: www.ed.gov/databases/
ERIC_Digests/ed369577.html
- Foss, G.F. (1996) A Conceptual Model for Studying Parenting Behaviors in Immigrant Populations, *Advances in Nursing Science*, 19(2), pp. 74-87.
- Friedman, B. (1991). *The feminine mystique*. N.Y: Norton.
- FitzPatrick, P., (2003) *Reinventing Singapore: Changing a Country's Mindset by Changing Its Education System*, *International Higher Education*, www.bc.edu/bc_org
- Garvey, C., (1977) *Play*, Fontana London.
- Garner,D. (1991) *Interpreting*. In M. Ely. *Qualitative research: Circles within circles*. Bristol P.A: Falmer Press.
- Gardner, H. and Boixmansilla, V. (1994) Teaching for understanding in the disciplines and beyond. *Teachers College Record* 96, 198-218.
- Garnett, P.J. and Tobin, K. (1988) Teaching for understanding. *Journal of Research in Science Teaching* 26,1-14.
- Gilligan, C. (1990) *In a different voice*. Harvard University Press: Cambridge.
- Glascott, K. (1994) A problem of theory for early childhood professionals *Childhood Education*, 70,131-132.2
- Glesne, C. & Peshkin,A. (1992) *Becoming qualitative researchers: An introduction*. N.Y: Gluck, S. and Patai, D. (Eds.) (1991). *Women's worlds*.N.Y: Routledge.
- Gomby , D.S., Culross, P.L. & Behrman, R.E. (1999) *Home Visiting: Recent Programme Evaluations, Analysis and Recommendations*, *The Future of Children*, 9.
- Gonzalez-M. J. (2004). Taking a culturally sensitive approach in infant – toddler programmes. *Young Children*, 47(2), 4-9.12
- Gottlieb,G.(1991) *Experimental canalization of behavioral development: theory*. *Devel.Psychol* 27:4-13.Gould,S.J.(1977). www.pepweb.org/

- Gottlieb et al. (1998) Neural Correlates of the Automatic and Goal-Driven Biases. www.pepweb.org/
- Guha, M., (1996) 'Play in School', in Blenkin, G., and Kelly, A.V., (eds), (1996) *Early Childhood Education*, Paul Chapman, London. The Open College, (1994) *Working with Children C8: Selecting and providing activities for play*, The Open College, Manchester.
- Greene, M. (1978) *Landscapes of learning*. N.Y:Teacher's College Press. Longman.
- Griffiths, V. (1984) *Feminist Research*. *Women's Studies International Forum*, 7 (6), 511-519.
- Griffiths, V. (1995) *Adolescent girls and their friendships*. London: Avebury.
- Grusec, J. E. (1992). *Socializing Concern for Others in the Home*. *Developmental Psychology* 27(2), 338-42.
- Halford, G.S. (1993) *Children's Understanding*. Hillsdale: Lawrence Erlbaum.
- Hammersley. M. & Atkinson, P. (1983) *Ethnography - Principles of practice*. N.Y: Routledge.
- Hendrick, J. (2000) *The Whole Child*, Merrill/Prentice Hall USA.
- Harlen, W. (1985) *Teaching and Learning Primary Science*. London: Harper Row.
- Introduction to Asian Education, www.aare.edu.au/01pap/won0136.htm
- Hiebert, J. and Wearne, D. (1996) *Instruction, understanding and skill in multidigitaddition and subtraction*. *Cognition and Instruction* 14,251-83.
- Hirsch, E.D. (1967) *Validity in Interpretation*. New Haven: Yale University. Ingleton, C. (1995) *Gender and learning*. *Higher Education* 30, 323-35.
- Hochschild, A.R.(1997) *The time bind: When work becomes home and home becomes work*. New York, Metropolitan Books.
- Hoon, S.S. (1994) *Quality of Kindergarten Education in Singapore: parents views and expectations*. Singapore: National Institute of Education. ERIC Document
- Hoon, S.S. (1999) *that Singaporean parents want an academically oriented program for their young children*. As states (1994, p. 2): *Reproduction Service*, ed 376968.html
- Hoon, S.S. & Lazar, I. (1992) *Early Childhood Education in Singapore*, in S. Feeney (Ed.) *Early Childhood Education in Asia and the Pacific: a source book*, pp. 169-173. New York: Garland.
- Jeffery, C.R. (1990). *Criminology: An Interdisciplinary Approach*. Prentice Hall, NJ

- Johnson-Laird, P.N. (1985) Mental models. In AM. Aitkenhead and J.S. Slack (eds) Issues in Cognitive Modelling. Hove: Lawrence Erlbaum.
- John-Steiner & Tatter, (1983) Becoming Bilingual Introduction Gallaudet University. clerccenter.gallaudet.edu/Products/Sharing-Ideas/becoming/intro.html - 10k
- Judd, C.M., Smith, E.R. & Kidder, L.H. (1991) Research Methods in Social Relations. Philadelphia: Holt, Rinehart & Winston.
- Kagitcibasi, C. (1996) Family and Human Development across Culture: A view from the Other Side (Hillsdale, N J, Lawrence Erlbaum Associates).
- Kamin, L. J. (1969). Predictability, surprise, attention and conditioning. In B. A. Campbell & R. M. Church (Eds.), Punishment and aversive behavior. New York: Appleton-Century-Crofts.
- Kane, C.M. (2000) African-American family dynamics as perceived by family members. *Journal of Black Studies*, 30, 691-702.
- Karpov, & Haywood (1998) do characterise virtual team in a similar way. uses slightly different terms "skewed working" www.emeraldinsight.com
- King, A.Y.C. & Bond, M.H. (1985) The Confucian Paradigm of Man: a sociological view, in W.S. Tseng & D.Y.H. Wu (Eds) Chinese Culture and Mental Health, pp. 29-46. Orlando: Academic Press.
- Kohn, M.L. (1969) A Study in Values. Homewood: Dorsey Press.
- Korelak DG, Colker L J, and Dodge DT (1993) The What, Why and How of High Quality Early Child Education.
- Lamb, M.E. (1999) Noncustodial fathers and their impact on the children of divorce. In R.A. Thompson & P.R. Amato (Eds.), *The postdivorce family: Children, parenting, and society* (pp. 105-125). Thousand Oaks, CA: Sage.
- Lauren B Rusnick. Educational researcher, Vol 16, No.9. (Dec. 1987) pp 13-20.
- Le Compte. M.D. (1987) Bias in the biography: Bias and subjectivity in ethnographic research. *Anthropology and Education Quarterly*, 18 (1), 43-52. *Problems*, 32, 478-87.
- Leedy, P.D. & Ormrod, J.E. (1985) *Practical Research: Planning & Design* www.ed.umuc.edu/graduate/current_syllabi/term023/p502st.pdf

- Leedy, T. F. and Bell, B. A., (1985) "Automatic Test Equipment Calibration/Performance Verification Evaluation and Research Program," Nat. Bur. Stand. (U.S.), NBSIR 84-2978, 21 pages.
- LeVine, R.A. (1974) Parental Goals: a cross-cultural view, Teachers College Records, 76,pp. 226-239.
- Hoff-Ginsberg, E., & Shatz, M. (1982) Linguistic input and the child's acquisition of language. *Psychological Bulletin*, 92, 3-26.
- Hoffnung, R. J., (1997) *Child and Adolescent Development*, Houghton Mifflin Company.
- Hoffnug, R.J. (2000) *Child and adolescent development*. Boston: Houghton Mifflin.
- Useful Journals: *Child Development Children and Society*.
- Honig, A.I. & Hirallel, A. (1998) Effects of quality early care on school readiness skills. Taylorandfrancis.meta press.com
- Hujala-Huttunen, E. (1996) Day Care in the USA, Russia and Finland: views from parents, teachers and directors, *European Early Childhood Education Research Journal*, 4(1), pp. 33-47.
- Hujala-Huttunen, (1996); Brown, (1997); Thomas,. (1998); Wang & (1985); Swick, (1985); Banks, (1993); Phinney, (1998); Ojala, 2000) *Child-rearing Practices in a selected Sample of Parents*. www.wwwords.co.uk/pdf/validate.asp
- Lewis, C. (1986) *Becoming a Father*. Milton Keynes: Open University Press.
- Lightfoot, S. (1975). *Sociology of education*. In M. Millman & R. Kanter. (Eds.), *Another voice: Feminist perspectives on social life and social science*. Garden City,N.Y:Anchor Press/Doubleday.
- Liang, X., Fuller, B. & Singer, J.D. (2000) Ethnic Differences in Child Care Selection: the influence of family structure, parental practices, and home language, *Early Childhood Research Quarterly*, 15(3), pp. 357-384.
- Lim, S.M.Y.,(2004) *Contemporary issues in early childhood*, Volume 5, Number 3. Teachers College, Columbia University, New York, USA
- Lincoln,Y.S. & Guba, E.G. (1985) *Naturalistic inquiry*. Beverley Hill CA: Sage Publications.

- Lind K K (1997) Science in the developmentally appropriate integrated curriculum. In integrated curriculum and developmentally appropriate practice, (eds) D Burts, C Hart, and R Charlesworth. Albany, N Y, State University of New York.
- Lofland, J. & Lofland, L.H. (1984) Analysing social settings: A guide to qualitative observation and analysis. Belmont, CA:Wadsworth.
- Lloyd, B. & Duveen,G. (1992) Gender identities and education. St.Martin's Press. Hemel Hempstead.
- Maanen, Van. (1988) Tales of the Field: On Writing Ethnography. 190 p. 5.5 x 8.5 1988 Series: (CGWEP) Chicago Guides to Writing, Editing, and Publishing
- Macadam, C., (1997) Choice and Empowerment for People with Learning Disability. The pack by Townsley, Howarth LeGrys and Macadam (1997) is designed to help staff, supporters and trainers involve people with learning disabilities in...File Format: Microsoft Word - [View as HTML](#)
- Maccoby, E.E., (1970) Experiments in primary Education :Aspects of project Follow – McCormack,A. (1991). Doing. In M. Ely, Doing qualitative research: Circles within circles. Bristol, PA: Falmer Press.
- MacDonald, B. & Walker, R. (1975) Case study and the social philosophy of educational research. Cambridge Journal of Education, 5 (1), 2-11.
- Maher. F.A. & Thompson Tetreault, M.K. (1994) The feminist classroom. N.Y: Basic Books.
- Mikulus, W.L. & Suvannathat, C. (1985) Common Errors in Child Rearing Practices, in C. Suvannathat, D. Bhanthumnavin, L. Bhuapirom & D.M. Keats (Eds) Handbook of Asian Child Development and Child Rearing Practices, pp. 397-405. Prasanmitr, Bangkok: Srinakrinwirot University.
- Morss J. (1990-1996), Underpinning knowledge for child care practices: www.blackwell-synergy.com
- Myers, L.C., David G. (1992) The Pursuit of Happiness: Who is. happy—and why. William Morrow and Company, Inc., (ISBN 0-. 688-10550-5).
- Myers, L.C. (2002) Parental pre occupation and prenatal mental health. Zero to Three, 22(6), 4-9.13
- Circles within circles. Bristol, PA: Falmer Press.

- McDonald, J. (1993) The impact of the educational setting on the aesthetic dimension: A study of three classrooms. Unpublished master's thesis, Queensland University of Technology.
- McNaughton, G. (1995) The power of mum: Gender and power at play, AECA Resource Book Series, 2 (2), June.
- McNay, M. (1993) Children's skills in making predictions and their understanding of what predicting means: A developmental study. *Journal of Research in Science Teaching* 30, 561-77.
- Meadow, K.P. (1988) Effects of infant hearing loss and maternal support on mother-infant interactions at 18 months. *Journal of applied developmental Psychology*, 14, 407-426.
- Mehan, H. (1993) On the use of videotape as an instrument in educational research. In D. Schratz. (Ed.), *Qualitative voices in educational research*. London: Falmer Press.
- Meijer, W. A. J. (1991) *Factual knowledge and understanding*. Religious Education Currency Press.
- Meyers, C. (1986) *Teaching Students to Think Critically*. San Francisco: Jossey-Bass.
- Ministry of Health Planning, Booklet 1, *Guiding Children's Behaviour*, www.healthplanning.gov.bc.ca/ccf/child
- Ministry of Community Development and Sports (2003) *Statistics on Childcare Services*. Available at: www.childcarelink.gov.sg
- Ministry of Education Singapore, www.moe.gov.sg/speeches/2003
- Ministry of Community Development and Sports (2003) *Statistics on Childcare Services*.
- Minuchin, N. (1985) *Friends for life: The psychology of close relationships*. London: The Harvest Press.
- Miller, A.I. (1996) *Insight of Genius*. New York: Springer McCormack, A. (1991). *Doing*. In M. Ely, *Doing qualitative research: Circles within circles*. Bristol, PA: Falmer Press. Available at: www.childlink.gov.sg
- Mooney, C.G., (2000) *Theories of Childhood*: Redleaf Press a division of Resources for Child Caring 450 N. Syndicate, Suite 5 St. Paul, MN 55104

- Neville, H.J., & Bruer, J.T. (2001) Language processing: How experience affects brain organisation. In D.B. Bailey, Jr., J.T. Bruer, F.J. Symons, & J.W. Lichtman (Eds.), *Critical thinking about critical periods* (pp. 151-172). Baltimore: Paul H. Brookes.
- Newton, D.P. and Newton, L.D. (1997) Teachers' conceptions of understanding historical and scientific events. *British Journal of Educational Psychology* 62, 184-92.
- Newton, D.P. and Newton, L.D. (1998) Enculturation and understanding. *Teaching in Higher Education* 3, 339-63.
- Newton, D.P. and Newton, LD. (2001) *Teaching & Understanding Across the Primary Curriculum, Evaluation & Research in Education Vol 15:3*, 2001.
- Newton, D.P. (1994) Supporting the comprehension of tabulated data. *British Educational Research Journal* 20, 455-63.
- Newton, D.P. (2000) *Teaching for Understanding*. London: Falmer.
- Nicholson, P., (Eds.) (1995) *Qualitative Research Special Issue*.
Poptel.org.uk/mark.burton
- Nutbrown, C., (1994) *Threads of Thinking*, Paul Chapman Publishing, London.
- Oakley, A. (1972). *Sex, gender and society*. Melbourne: Sun Books.
- Oakley, A. (1981). Interviewing women: A contradiction in terms. In H.Roberts. (Ed.), *Doing feminist research*. London: Routledge & Kegan Paul.
- O'Grady, S. (1996) Toward the practice of theory in practice. In P.Taylor. (Ed.), *Researching drama and arts education*. Bristol P.A: Falmer Press.
- Ojala, M. (2000) Parent and Teacher Expectations for Developing Young Children: a cross-cultural comparison between Ireland and Finland, *European Early Childhood Education Research Journal*, 8(2), pp. 39-61.
- O'Neill, C. & Lambert, A. (1982) *Drama structures*. London: Hutchinson.
- O'Neill, C. (1995) *Worlds*. Portsmouth, N.H: Heinemann.
- O'Neill, C. (1995, July) *Theory and research*. [Unpublished lecture]. Griffith University: Institute of Drama Education Research.
- Ormrod, J.E., (1985) *Human learning*. Upper Saddle River, NJ: Merrill/Prentice Hall.
- Ormrod, J.E., Ormrod, R.K., Wagner, E.D., & McCallin, R.C. (1988) Reconceptualizing map learning: *American Journal of Psychology*, 101, 425-433.

- Overton, W.F., & Reese, H. W. (1973) Models of development: Methodological implications. In J. R. Nesselroade & H. W. Reese (Eds.), *Life-span developmental psychology: Methodological issues*. New York: Academic Press.
- Papalia, D. E., Olds, S.W., Feldman, R.D., (2002) *A CHILD'S WORLD: INFANCY THROUGH ADOLESCENCE*. McGraw-Hill Higher Education McGraw-Hill Higher Companies, Inc., 1221 Avenue of the Americas, New York, NY10020.
- Parkes, (2004) Teachers on 'The Dish' at Astronomy from the Ground Up. www.csiro.au/csiro/content/standard/
- Parsons, R.K. (2001) Research Studies www.uark.edu/depts/agripub
- Parsons, J.E., Alder, T.F., & Kaczala, C.M. (2001) Socialization of achievement attitudes and beliefs: Parental influences. *Child Development*, 53, 310-321.
- Parsons, M. (1932) Social participation among preschool children. *Journal of Abnormal and Social Psychology*, 27, 243-269.
- Penn, H., (Ed) (2000) *Early childhood Services: Theory, Policy and Practice* (Buckingham: Open University Press).
- Piaget, J. (1962) *Soviet Psychology: Comments by Piaget*. New York: The Free Press.
- Piaget, J. (1965) *The moral judgement of the child*. New York: The Free Press
- Piaget, J. (1966) *The child's conception of physical causality*. Totowa, NJ: Little Field Adams.
- Piaget, J. (1971) *Science of Education and Psychology of the child*. New York: The Free Press.
- Pipher, M. (1995) *Reviving Ophelia*. N.Y: Ballantine Books.
- Reiss, I.L. 1967: *The Social Context of Premarital Sexual Permissiveness*. New York: Holt, Rinehart and Winston.
- Poe, P.(1982) Beginning in the bathtub. *American Baby*, 44, 12-20
- Raban, B. & Ure, C. (1999) Literacy in Three Languages: a challenge for Singapore preschools, *International Journal of Early Childhood*, 31(2), pp. 45-54.
- Retas, S. & Kwan, C. (2000) Pre-school Quality and Staff Characteristics, in C. Tan-Niam & M.L. Quah (Eds) *Investing in our Future: the early years*, pp. 53-65. Singapore: McGraw-Hill.

- Roer-Strier, D. (1998) Coping with Cultural Transition: a framework for studying minority parents and children in Israel, *European Early Childhood Education Research Journal*, 6(2), pp. 71-85.
- Remey, C.T., Yeates, K.O. & Short, E.T. (1984) The Plasticity of Intellectual Development: Meisels, S.J. & Shonkoff, J.P. (Eds.) *Handbook of Early Childhood Intervention* (New York, Cambridge University Press).
- Rich, A. (1980) *Vesuvius at home: The power of Emily Dickinson*. N.Y:W.W.Norton.
- Richardson, L. 1994. Writing: A method of inquiry. In *Handbook of qualitative research*, ed. N. K. Denzin and Y. S. Lincoln, 516–29. Thousand Oaks: Sage.
- Rockwell, R. E., Andre, I. c., & Hawley, M. K. (1996). *Parents and teachers as partners*. Fort Worth, TX: Harcourt Brace. 6
- Rodgers, D. B. (1998) Research in review. Supporting autonomy in young children. *Young Children*, 53(3), 75-80. 30
- Rodning, C., Beckwith, I., & Howard, J. (1989) Characteristics of attachment organization and play organization in prenatally drug exposed toddlers. Manuscript submitted for publication. 10
- Rodriguez, R. (1976) On becoming a Chicano. In S. White (Ed.), *Human development in today's world*.
- Rogers, C. S., & Sawyers, J. K. (1988) *Play in the lives of children*. Washington, DC: National Association for the Education of Young Children. 4, 5
- Rogers, E (2001-2002) Helping children deal with scary news. Retrieved November 17, 2002, from [http:// www.pbskids.org/rogers/parents/sept11.htm](http://www.pbskids.org/rogers/parents/sept11.htm) 28
- Rogers, E, & Sharapan, H. B. (1991) Helping parents, teachers, and caregivers deal with children's concerns about war, *Young Children*, 46(3),12-13.25 Rogers, M. (1990). Nintendo and beyond. *Newsweek*, 115(25),62-63.4
- Rogoff, B., & Mosier, C. (1993) Iv. Guided participation in San Pedro and Salt Lake. B. Rogoff, Mistry, A. Goncu, & c. Mosier (1993) (Eds.), *Guided participation in cultural activity by toddlers and caregivers*. Monograph of the Society for Research in Child Development (pp. 59-101),58 (No.8, Serial No. 236). 16, 17
- Rogoff, B., Thrkanis, C. G., & Bartlett, I. (2001) *Learning together: Children and adults in a school community*. New York: Oxford University Press. 31

- Roisman, G. I., Padron, E., Stroufe, L. A., & Egeland, B. (2002). Earned-secure
- Ross, H. S., Lollis, S. P., & Elliott, C. (1982) Toddler-peer communication. New York:Springer-Verlag. 16
- Rubin, K. H. (1977) Play behaviors of young children. *Young Children*, 32(6), 16-24.
- Rubin, K. H. (1982a) Nonsocial play in preschoolers: Necessary evil? *Child Development*, 53, 651-657. 27
- Rubin, Z. (1980) Children's friendships. Cambridge, Mass: Harvard University Press. 103-105). Boston: Little-Brown. [Originally published in *Saturday Review Magazine*, February 8,1975.] 26
- Rubin, K. H. (1982b) Social and social-cognitive developmental characteristics of young isolate, normal, and sociable children. In K. H. Rubin & H. S. Ross (Eds.), *Peer relationships and social skills in childhood* (pp. 353-374). New York: Springer-Verlag. 4
- Ruff, H. A., McCarton, C., Kurtzberg, D., & Vaughn, H. G., Jr. (1984) Preterm infants' manipulative exploration of objects. *Child Development*, 55,1166-1173.14
- Sameroff, H. (1975) Developmental Theories and Individual Differences. *Early Development and Parenting*, 3, 113-23
- Sameroff, A.J. & Fiese, R. (1990) Familial risk and child competency. *Child Development*, 54, 1254-1268.12
- Santrock, J.W. (1988-1993), *Children*, third edition, WCB Brown & Benchmark Publishers, Oxford, England.
- Scarr, S. & McCartney, (1983) How people make their own environments: A theory of genotype environment effects. *Child Development*, 54, 424-435.
- Schickedanz, J.A., Schickedanz, D., Forsyth, P.D. and Forsyth, G., (2001, 1998) *Understanding Children and Adolescents*, Fourth Edition, Allyn & Bacon, U.S.A.
- Scott, J. (1992) Experience. In J.Scott & J.Butler (Eds.), *Feminist*.
- Scott, J. (2000) Children as respondents: The challenge for quantitative methods, in: CHRISTENSEN, P.& JAMES, A. (Eds.), *Research with Children: Perspectives and Practices* (pp.98-119) (London: Routledge/Falmer).
- Sebastian-Nikell P. Milne R (1992) *Care and Education of Young Children*. Melbourne:Longman Cheshire.

- Seifert, K.L. & Hoffnung, R. J., (1997) *Child and Adolescent Development*, Houghton Mifflin Company.
- Sharpe, P. (1993) *The National Experience in Pre-school Education, Teaching & Learning*, 13(2), pp. 67-73.
- Sharpe, P. (1993) *The National Experience in Pre-school Education, Teaching and Learning*, 13 (2), APP. 67-73.
- Sharpe, P. (1) *The National Experience in Pre-school Education, Teaching and Learning*, 13 (2), APP. 67-73.
- Shepel, E., (1995) *Teacher self-Identification in culture*. Aeq.sagepub.com
- Shonkoff, J.P. (Eds.) *Handbook of Early Childhood Intervention* (New York, Cambridge University Press).
- Shotter (1993) contends that social constructionists, in general, study the contingent flow. www.roguecom.com/roguescholar/collaboration.html
- Simeonsson, R.J. & Bailey, D.B. (1990) *Family Dimensions in Early Support intervention*, in: Meisels, S.J. & Shonkoff, J.P. (Eds.) *Handbook of Early Childhood Intervention* (New York, Cambridge University Press).
- Singer, D.G. (1999) *Imaginative play and television: Factors in a child's development*. In J.A. Singer & P. Salovey (Eds.), *At Play in the fields of consciousness: Essays in honor of Jerome. Singer* (pp. 303-326). Mahwah, NJ: Erlbaum.
- Skilbeck, M. (1983) *Lawrence Stenhouse: Research methodology*. *British Educational Research Journal*, 9 (1), 11-20.
- Skeels, H.M. (1966) *Adult status of children with contrasting early life experiences: a follow-up study*. *Monographs of the Society for Research in Child Development*, 31,no. 3.
- Slade, P. (1954) *Child drama*. London: University of London Press.
- Spitz, R. A. (1946) *Hospitalism: a follow-up report*. *Psychoanalytic Study of the Child*, 2, 113-18.
- Smith, P. K., Cowie, H. & Blades, M., (1998). *Understanding Child Development*. Blackwell Publishers Ltd, 108 Cowley Road, Oxford OX 4 1JF, UK.
- Smith, J. (1983) *Quantitative versus qualitative research: An attempt to clarify the issue*. *Educational Researcher*. 12 (3).

- Spradley, J. (1980) Participant observation. N.Y: Holt, Rinehart & Winston.
- Stake, R.E. (1981) Seeking sweet water: Case study methods in educational research. (Audiotape).The American Educational Research Association.
- Steven,T.(1983) 3 Theories of Mental Representation and Mental Models. www.cs.ucl.ac.uk/staff/a.sasse/thesis/chapter03.html - 32k
- Sternberg, R. J. (1998) Human Intelligence: Practical Intelligence. www.indiana.edu/~intell/practicalintelligence.
- Stott, F.M. & Bowman B.T., (1996) Child development and knowledge: A slippery base for practice. *Early Childhood Research Quarterly*, 11(2) 169-184.2
- Stott, F.M. & Bowman B.T., (1996) Understanding development I cultural context: The challanenge for teachers. In B.L.Mallory & R.S. New (Eds.), *Diversity and developmentally appropriate practices* (pp. 119-133). New York: Teachers College Press.12, 32
- Suppal, P (1997) Using the Caregiver Assessment Scale. *Child Care information Exchange*, 115 (115), 25-28.
- Sutherland, P., (1992) *Cognitive Development Today*, Paul Chapman Publishing, London.
- Taylor. P. (1994) Helping teachers to overcome their obstacles to arts education. *The Artspaper*. Spring/Summer, 5-7.
- Taylor, P. (1995) Pre-text and storydrama:The artistry of Cecily
- Taylor, P. (1996) Doing reflective practice in arts education. In P.Taylor (Ed.), *Researching drama and arts education*. Bristol, PA: Falmer.
- Taylor. P. (Ed.), *Researching arts education*. Bristol P.A: Falmer Press.
- Teller, D.Y. (1997) First glances: The vision of Infants. 38, 2183-2203
- Tello, J. (1995, Nov./Dec.). The children we teach. *Scholastic Early Childhood Today*, 38-39. 1
- Thorne, B. (1993). *Gender play: Girls and boys in school*. Buckingham: Open University Press.
- Trevarthen,G. (1992), The natural intersubjectivity of Language. coyote.miyazaki-mu.ac.jp/learnerdev/

- Tudge, J. (1990) Vygotsky, the zone of proximal development, and peer collaboration: Implications for classroom practice. In L.C. Moll (Ed.), *Vygotsky and education: Instructional implications and applications of sociohistorical psychology*. New York: Cambridge University Press. 4
- Upshur, C.C. (1990) Early Intervention as Preventive Intervention, in: Meisels, S.J. & Van den Veer, R. and Valsinser, J. (1991) *Understanding Vygotsky*, Oxford: Basil Blackwell.
- Verba, S. (1994) An Investigation of the dynamics and strategies used within peer
www.aare.edu.au/94pap/massg94103
- Verba, S., Schlozman K.L. & Bardy, H.E. (1995) *Voice and equality: civic voluntarism in American politics*. Cambridge, MA: Howard University Press.
- Vygotsky and Luria, (1930/1994, pp. 136–137) *Sociocultural Context of Cognitive Theory* [PDF] content.karger.com/ProdukteDB/produkte.
- Vygotsky, L.(1997) *Implications for Teachers*. www.aare.edu.au/04pap/par04497.pdf
- Vygotsky, L. (1978) *Minds in society*. Ed Michael Cole et al. Cambridge, MA: Harvard University Press
- Vygotsky, L. (1981:1986) *Vygotsky and His Theory*. [coe.ksu.edu/jecdol/Vol_3/articles Wang.htm](http://coe.ksu.edu/jecdol/Vol_3/articles/Wang.htm) - 27k - Cached - Similar pages
- Wertsch, J.V., & Stone, C.A. (1985) A social interactional analysis of learning disabilities remediation. Paper presented at the International Conference of the Association for Children with Learning Disabilities, San Francisco.
- Wertsch, J.V., & Tulviste P. (1992) L.S. Vygotsky and contemporary developmental psychology. *Developmental Psychology* 28, 548-557.
- Wiersma,W. (1991) *Research methods in education: An introduction*. Boston Allyn & Bacon.
- Williamson, D. (1972) *The Removalists*. Sydney: Currency Press.
- Williams,W.(1998) Are we raising smarter children today? School-and home-related influences on IQ. In U,Neisser (Ed). *The rising curve; Long-term gains in IQ and related measures* (pp.125-154). Washington, DC: American Psychological Association.

- Wetherell, C., & Noddings, N. (1991). "Prologue: An invitation to our readers." In C. Wetherell & N. Noddings (eds.), *Stories Lives Tell: Narrative and Dialogue in Education* (pp. 1-12). New York: Teachers College Press
- Wood, J. (1994) *Gendered lives: Communication, gender and culture*. Belmont, Calif:Wadsworth Pub Company.
- Wood, P. (1986) *Inside schools: Ethnography in educational research*. London: Routledge & Kegan Paul.
- Woolcott, H. (1988) *Ethnographic research in education*. In R.M. Jaeger (Ed.), *Complementary methods for research in education*. Washington DC:American Educational Research Association.
- Woolstonecraft, M. (175[1792]) *Vindication of the rights of women*. Harmondsworth: Penguin.
- Wyrwicka, W. (1984). Natural selection and operant behavior. *Behavioral and Brain Sciences*, 7, 501-502.
- Patton, M. I., Youngman, M. B., (2000), *Qualitative Evaluation and Research Methods, Analysing Social and Educational Research data*, McGraw-Hill Book Company www.staffs.ac.uk/schools/business/bsadmin/staff/
- Yin, R.K. (1991) *Case study research design and methods*.Newbury Park: Sage Pub.
- Youngman, F (1986) *Education for a Changing World 2001 Handbook*, is a useful reference when trying to unwrap the politics underlying 'popular. education' and he also gives a thought-provoking critique ...www.gla.ac.uk/adulteducation/Personnel/liam

