

UNIVERSITY OF DERBY

**FACILITATING THE DEVELOPMENT OF CRITICAL THINKING SKILLS AND
SELF-DIRECTED LEARNING: AN EXPLORATION OF LEADERSHIP AND
CURRICULUM PRACTICE IN A PALESTINIAN KINDERGARTEN**

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Abstract

Developing critical thinking in early childhood is vital especially in Western culture since it improves an individual's skills in creative thinking and enhances a person's sense of responsibility. This is the fundamental contention of this thesis. These skills assist in developing and implementing a state of mind of not accepting negative situations and instead directs the individual towards trying to resolve and improve it. These issues have not yet been fully explored in Arab-Palestinian society in Israel. The development and application of notions of personal responsibility, critical thinking, and kindergarten-age children's involvement in learning has yet to emerge as a reality in this community. This is needed because existing theory and practice involving these aspects of learning within the Palestinian system is problematic. Moreover, the development of a new approach to teaching and parenting of kindergarten-age children that fosters critical thinking and personal responsibility may not be a reality that is immediately achievable, but it is a possibility.

This study aims to investigate how educational leaders can help kindergarten children aged 3-5 years to develop critical thinking and personal responsibility skills. The research focuses on Arab (Palestinian) children in Israel as these skills are not traditionally taught in the home or in educational settings in this culture. The literature shows that there is a marked disparity between the educational achievements of Arab and Jewish children in Israel, making the implications of this study salient not only to practitioners, but also to policymakers and educational institutions.

In order to examine these goals, a case study involving qualitative research approaches of a kindergarten classroom has been conducted. The context of this study is an important and complex set of factors determining and shaping the content and form of the thesis and of the research that is embodied in the text. This study has been conducted in a kindergarten belonging to an Arab Municipality located in Northern Israel that was established in 2010 and is situated in a rural area in the north of the country. Lesson plans following the National Curriculum for Kindergarten Education were infused with teaching activities designed to facilitate the acquisition of critical thinking skills.

The findings of the project showed that the presence of a strong educational leader had a positive impact on facilitating kindergarten children's development of personal responsibility and critical thinking skills. This was especially the case if the leader played an active role in facilitating a learning environment at home and in school in which children were acknowledged and given greater autonomy and access to opportunities in which they could engage openly with parents and peers. This study calls attention to the need to further explore educational leadership in the context of early childhood education, as its implications for childhood development, particularly regarding critical thinking and personal responsibility, have not been sufficiently examined. This study claims to open possibilities for doing this in at least the Palestinian Kindergarten communities in Israel and perhaps beyond.

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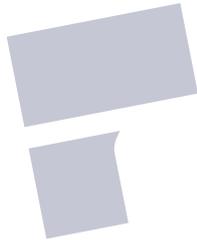
My husband, Gawad Khalaily, for his love, guidance, faith and support, as he continues to serve as the cornerstone of my personal and professional life.

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 pdfelement

Preface

This is the original work of Maysoon Khalaily submitted to the University of Derby for consideration for the award of Doctor of Education in 2017

Contents

Abstract	2
Acknowledgements	3
Chapter 1 : Introduction	7
1.1 The nature of the challenge	7
1.2 Objectives and tasks	14
1.3 Overview	18
Chapter 2 : Literature Review	20
2.1 The foundations of this study	20
2.2 Educational leadership	21
2.3 Theories of educational leadership.....	25
2.4 Characteristics of the educational leader	29
2.5 Leadership and pedagogy in the kindergarten	30
2.6 Emotional well-being	32
2.7 The social pedagogical theory of leadership	32
2.8 Summary of leadership themes	37
2.9 Critical thinking in the Palestinian kindergarten.....	38
2.10 Perspectives and theories on critical thinking	45
2.11 Independent and self-directed learning	56
Chapter 3 : Research Objectives and Methods	65
3.1 The research field and research questions at Deir-Hanna Kindergarten.....	65
3.2 Research design and data sources	67
3.3 Research methods–mapping of approaches	74
3.4 Reliability and validity	98
3.5 Research ethics	101
Chapter 4 : Findings	104
4.1 Introduction	104
4.2 Part 1 Evidence : key findings from the research diary	105
4.3 Parental involvement and staff support	109
4.4 The role of emotions	112
4.5 Using the leadership approach.....	114
4.6 Part 2 Evidence : the parents' interviews	118
4.7 Part 3 Evidence : from the curriculum and lessons plan	123
4.8 The lessons and learning	125
4.9 Evidence from the children’s portfolios and analysis of drawings.....	140

Chapter 5 : Analysis and Evaluation	145
5.1 Introduction	145
5.2 What kind of educational leadership characteristics, environments and actions help to facilitate the development of the critical thinking skills of children 3-5 years of age?.....	146
5.3 What kind of educational leadership characteristics help to facilitate the development of the sense of personal responsibility for children aged 3-5 years?.....	155
5.4 What are the characteristics of critical thinking in children aged 3-5 years?.....	162
5.5 What are the characteristics of personal responsibility and viability in children aged 3-5years	166
5.6 What are the tools and skills of independent learning that kindergarten children can use in order to develop their critical thinking skills?.....	168
5.7 Learning skills.....	172
5.8 How can parents influence the child’s development of critical thinking and personal responsibility ?.....	181
5.9 Summary of findings and analysis for Chapters 4 and 5.....	183
5.10 Findings covering cognition, the role of the self and language.....	185
Chapter 6 : Conclusion	189
Bibliography	202
Appendices	I
Appendix 1 : Research Diary.....	I
Appendix 2 : Interviews.....	X
2.1 Interview number 1 Parent of Child X.....	XII
2.2 Interview number 2 Parent of Child XX	XVII
2.3 Interview number 3 Parent of Child XXX	XX
2.4 Interview number 4 Parent of Child XXXX	XXIII
2.5 Interview number 5 Parent of Child XXXXX	XXV
2.6 Interview number 6 Parent of Child XXXXXX	XXVIII
Appendix 3 : Analysis of the lesson plans	XXXI
Appendix 3.1 : Lesson plan 1	XXXIII
Appendix 3.2 : Lesson plan 2	XXXIII
Appendix 3.3 : Lesson plan 3	XXXIV
Appendix 3.4 : Lesson plan ('Ward and the spring of water')	XXXIV
Appendix 3.5 : Lesson plan (the puddle)	XLII
Appendix 4 : The portfolio of the child	XLV

List of Figures

1	Educational achievement for age 15 and upwards in Deir-Hanna	10
2	Deir-Hanna village	12
3	Photographs of the school, children and staff	13
4	Timing and phasing of professional research adapted from Bhatt (2004)	19
5	Some of the ways in which securely attached children perform better adapted from Macleod–Brudenell and Kay (2008)	34
6	Bloom's taxonomy	47
7	E. De Bono's hats	48
8	The picture of the cockroach	112
9	Categories of the teacher's work	118
10	Questions asked and answered by the children	127
11	Developing independent questions	128
12	The teaching leadership strategies relating to a 'scientific' form of critical thinking	136
13	Drawings by children	141
14	Drawing of houses	142
15	Drawing of a tree	143
16	Drawing of the family	143
17	Kindergarten management skills	148
1	Research Diary	IX

List of Tables

1	Synopsis 1 (Leadership models and pedagogy in the kindergarten: synopsis of approaches, theories and outcomes)	36
2	Synopsis 2 (Sources and models for critical thinking)	54
3	Sources and models for personal responsibility	64
4	Sources and tools for gathering data and information	68
5	Synopsis 3 (Research methods: mapping, approaches and data sources)	82
6	Lincoln and Guba (Criteria and evidence for research credibility)	101
7	Synopsis 4 (Findings and outcomes for pedagogy in the kindergarten)	139
8	Synopsis 5 (Contexts of leadership types and outcomes)	155
9	Supporting young children in learning environments	165

Chapter 1 : Introduction

The thesis begins with a review of some wide-ranging theories and perspectives on learning and pedagogy in relation to educational leadership. Models are examined for their relevancy to my research questions and strategies. In Chapter 1, I will present theories and models for leadership and pedagogy, specifically addressing years 3-5 in kindergarten. In Chapter 2 I will show the main sources and models for critical thinking that have been developed in relation to early childhood and which are largely dependent on educational thinking and practice. Chapter 2 also contains an assessment of ideas of personal responsibility that were crucial for the practical research and curriculum development explored in Chapter 3. In order to present my independent study I will outline the research methods adopted and then adapted to my research strategy and will map data sources within what is a case study approach to my key themes and concerns.

Finally, in Chapters 4 and 5, I will present findings and outcomes of the analyses and will discuss meanings and the main conclusions of my study. The nature of the research and its location has meant this work-based project, and the thesis that emerged from it, is diverse and was constructed over an extended period of time. To help the reader there are a number of diagrammes and figures and it is hoped that these help summarise and provide a charted route through the process of discovery explored in this work.

In order to express the consciously personal as well as professional aspects of my study I have used the personal register and pronouns where I felt this was appropriate and would enhance the quality of the narrative. Similarly, I have used a 'register' involving the use of different gender titles so as to convey equivalence when the idea of the child or learner requires a pronoun. To have used a single proxy such as he or she, him or her would, I believe, have distorted the reality of mixed pupils and suggested an appropriate weighting on one or the other. In a culturally sensitive environment this was significant.

Critical thinking can be defined as the process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information to reach an answer or conclusion. These skills are largely developed in early childhood when children learn to question reality as it sometimes is experienced, and then learn to change and resolve issues that face them as necessary. However, learning these skills is not a simple thing, and it is largely dependent on the legitimacy of ways of thinking and acting that a given society and culture enable. Thus, it is arguable that in more conservative societies, these skills tend to be under-developed within the schooling experience and institutions.

1.1 The nature of the challenge

This study aims to investigate how educational leaders can help kindergarten children aged 3-5 years to develop critical thinking and personal responsibility skills. The research

focuses on Arab children in Israel as these skills are not traditionally taught in the home or in educational settings in this culture (Dwairy, 2006). The literature shows that there is a disparity between the educational achievements of Arab and Jewish children in Israel, making the implications of this study salient not only to practitioners, but also to policymakers and educational institutions (Al-Hag, 1995). In international educational tests such as the Programme for International Student Assessment (OECD, PISA, 2012) of 15-year-old school pupils' scholastic performance in mathematics, science, and reading, Palestinians perform poorly and there is a discrepancy between the performances of Jewish and Arab students in Israel. Despite this data few changes have been made to the curricula taught in Arab schools and kindergartens to improve these performances. In the round of PISA testing that took place in March 2012, Israel was ranked 40th in Maths, 33rd in Reading and 40th in Science out of over 70 countries tested. The test results also proved the disparity between Hebrew and Arabic speakers, with 67% of Arabic-speaking students being graded as weak but only 31% of Hebrew-speaking students receiving the same grade. While 10% of Israeli pupils were graded as 'excellent', almost all of these came from the Hebrew-speaking sector of Israeli society. Thus, it is obvious that changes need to occur to bring Arab pupils and students in Israel up to the standard of their Jewish and international counterparts.

Despite this data, few changes to the curricula have occurred since these results were published; indicating that the Ministry of Education has abdicated responsibility for instigating these needed changes. In addition, the recent cancellation of the standardized Meitzav tests, (tests for assessing levels of students in the Israeli education system in maths and reading), will make it harder to campaign for changes as there will be no data to back up those who campaign for reform. As Arab schools in Israel have yet to see the benefit of teaching critical thinking skills, preferring to stick to more conventional teaching approaches and discouraging creativity and innovation in learners, changing this mindset will be a long and difficult process.

My personal experience as a teacher in a kindergarten in an Arab village in northern Israel taught me the importance of this subject matter and the issues surrounding it. In my kindergarten, there were 28 children at the time of the research project and it is one of twelve municipal kindergartens in the village. As a teacher/principal of the kindergarten, I am responsible for implementing the educational policies of the ministry of education and designing the educational environment so that it will support the learning curriculum defined for pre-schoolers by the section for 'Comprehensive Primary Education' (Kavim Manhim, 2010). As a manager of the kindergarten, I need to follow district policy, report to the regional supervisor, and answer the needs of the children in the kindergarten. In addition, I design a yearly programme of action that will incorporate the input of all these stakeholders. In this framework, objectives must be set along with long and short-

term goals and a plan for the school year. In addition, I must analyze the alternatives and determine the curriculum, and apply a schedule and deadlines for feedback and control (Chozre Mankal, 2011).

Palestinian Arabs in Israel

Deir – Hanna is an Arab Village in the Palestinian community in Israel (PCI). This community consists of several religious and ethnic groups - Muslims, Christians, Druze, and Bedouins - each with its own unique identity. Israel was established in 1948, when two-thirds of Palestinians were expelled or became long-term refugees. The 160,000 Palestinians who remained (13% of Israel's population) formed a weak and fragmented community and were considered as a formal citizenship group but did not have full citizenship rights and equality with the Jewish population (Israel Central Bureau of Statistics, 2009).

It is important to note that Palestinian status under international human rights instruments, to which Israel as a State is party, is that of a national, ethnic, linguistic and religious minority (Adalah, 2011; Shamshoum, 2015). For example, in her book, 'Stateless Citizenship: The Palestinian-Arab Citizens of Israel', Molavi (2013), characterises Palestinian existence in Israel as paradoxical. While technically citizens by law, they are denied both national membership and state identification, as Israel posits itself a state for the Jewish people. State policies traditionally attempted to weaken the minority through division of the Druze and Bedouin communities, through the denial of most collective cultural or political rights, and pervasive material deprivation. Given their low socio-economic status and higher attrition, education is very important to life achievement in the Palestinian community (Al-Hag, 1995; Sherer and Enbal, 2006). For this reason education in the PCI also reflects a difficult reality and potentially a dark future.

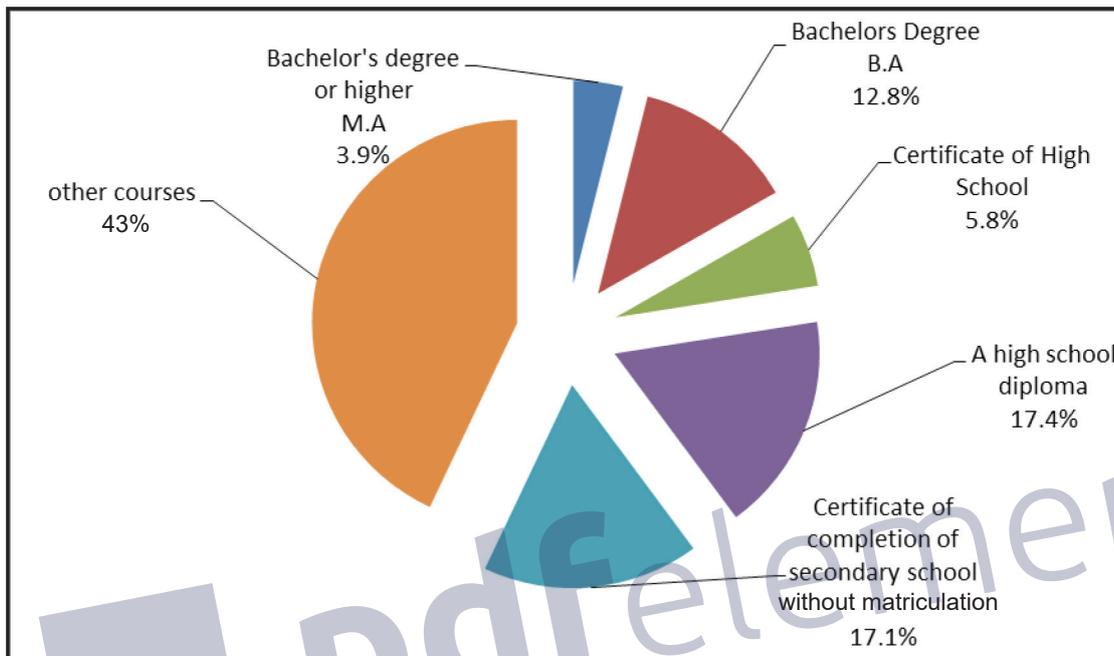
In 2001 Human Rights Watch (HRW), reported on how Israel's discrimination against Palestinians influences every aspect of the two systems (Jewish and Arab). Education Ministry authorities even openly acknowledge that they spend less per student in the Arab system than in the Jewish one. Palestinian children attend schools with larger classes and fewer teachers than Jewish children, with some traveling long distances to reach the nearest school. Arab schools also contrast dramatically with the Jewish system in their lack of basic learning facilities such as libraries, computers, laboratories, and recreation space.

The village of Deir-Hanna

I believe it will be helpful to add some information with regard to the physical and educational aspects of my village Deir-Hanna since I believe it is important to understand the climate, culture and education in this village and its effects on its children. The village is located in

Lower Galilee situated on six ridges (Moamar, 1979). At the end of 2012, the village had a population of 8,500. Approximately 80% of Deir-Hanna's inhabitants are Muslims and the remaining 20% are Christians. The following diagramme shows the volumes and levels of educational achievement for the village population according to the Israel Central Bureau of Statistics (ICBS, 2008).

Figure 1 : Educational achievement for age 15 and upwards in Deir-Hanna



From the information shown in the chart, we can point out a low percentage of continuing study for the BA and the MA degree. At the same time, the percentage of 43%, who take additional courses for the development of their careers shows a commitment to the value of learning and further study. Education is highly valued in Palestinian society and as in many cultures is viewed as a means of social advancement.

All of these awards, certificates, diplomas, degrees and courses show a level of achievement, including academic attainment. They do, however, have different meanings. Here are the main differences between degree, diploma and certificate levels summarized: certifications are specialized and industry specific, diplomas are also specialized but more in depth than certifications. Diplomas are also what you receive upon graduating from high school. Degrees are awarded by colleges and universities and courses are a unit of instruction in one subject, lasting one academic term or more.

Additionally, the village has a moderate socio-economic level and the study, though much concerned with context and culture in Palestinian society, was not focussed on disparities of wealth or power. The village includes antique houses made of densely stacked buildings; this can mean a 'pile of houses' which is irregular. Narrow winding alleys separate the blocks of the complex structures, in large part made up of multi-storey

houses. This nucleus is surrounded by a wall, Daher Alaomr, dating from the mid-18th century, containing beautiful passages within the wall from the period and an impressive mosque built by Daher Alaomr and renovated by Ahmed El- jazar. During recent times the village has been characterized by the expansion of built-up areas. The spreading of construction and expansion reflects not only the increase in the population of the village but also the growing desire to improve the living conditions and standards of life of the population. The use of modern building techniques has contributed greatly to change in the character and style of the buildings and typical house and of course has changed the image of the entire village. This scattering effect of development has weakened the status of the “Hmolah” which refers in English to a tribe or clan. The new residential areas often involve living side by side and often intermingle members of different 'clans' who may have formerly lived apart.

Deir -Hanna is rooted in the Palestinian culture, and it is mostly a traditional culture that gives great emphasis to honouring the values of the collective life and identity of the community. This social and cultural tendency, it is argued, limits the capacity of children to think critically and keeps them in relative obedience. For this reason, it is important that the children of the community are enabled to develop critical thinking skills and thus learn to think in a more independent way (Coursen-Neff, 2005). This intention is of course a means of expressing the values of a tolerant and inclusive community where individual self- expression and development can be encouraged and where the crossing of boundaries and awareness of the 'other' could be viewed in their positive lights and contexts.

The pictures of the village show that its physical properties enable the staff to establish relationships with the children in kindergarten. Mothers are literally physically close-by and there is a warm relationship between staff and community in a way that generally helps children.

Figure 2 : Deir-Hanna village



Figure 3 : Photographs of the school, children and staff



1.2 Objectives and tasks

In this challenging context, therefore I determined to build a new model to educate children how to think in a more critical way. I decided to develop this model in my kindergarten because due to the challenges of the 21st century I believe it is necessary to change the form of education our pupils experience. The Ministry of Education's policy requires that they acquire higher order thinking skills that will enable them to create new knowledge throughout their lives by consideration (thinking), creativity and criticality ("Pedagogical Perspective - Educational Thinking," Ministry of Education, 2010). However, there is little or no published research among kindergarten children in Israel or Arab societies that deals with personal responsibility and critical thinking. Furthermore, there was no existing critical thinking curriculum or model of pedagogy that had been developed for the Palestinian child or kindergarten. Therefore, I was interested in exploring both areas and examining how I could build a model that produces a preschooler who has developed personal responsibility and critical thinking skills (Copple and Bredekamp, 2009).

One of the reasons for studying critical thinking in the kindergarten in the Arab community context is the intention and aspiration to help change and transform individual lives and communities within the Arab community in Israel. Palestinians are a minority community in one of the few democratic societies in the Middle East, and by training Arab children to critically analyse and understand their surroundings and to take responsibility for themselves, the inequality and social problems around them may be improved and ameliorated (Abu-Asbeh, 2009). This may organically contribute to a growth of democracy in other communities and societies in the region. This is a very large aspiration and it certainly cannot be achieved in the short term but it can be argued that children who live in democratic societies later go on to participate in civic decision-making when they are older, which also requires a culture of critical thinking and personal responsibility (Nussbaum and Yechieli, 1995). Therefore, children who learn critical thinking skills at a young age will be more comfortable participating in civil society and engaging in responsible decision-making, as they grow older.

It is of course the case that the learning of what is called critical thinking skills is not just a question of how the child can contribute to the wider culture or society, important though that is. There is also the key issue to be addressed of the changing and growing child itself. The growing child is in a true sense 'sui-generis'. It exists in and for itself as a being and a person. It is a 'self' with all that is implied for its own self-development and it is not just an object in a scientific study of child development. This is crucial to our understanding of this work-based project and the role of kindergartens in Palestine/ Israel. A motivating belief of the study was that the child could be at the centre of both action and thought and was a thinking subject, not just an object of study.

My working model relies on previous works dedicated to educating children for critical thinking capabilities (for example Suleeman, 2008; Wade, 2007 and Paul, 1994 and 2008). Theory in this field states that critical thinking skills assist children for better understanding of the world and especially in developing a sense of personal responsibility for their knowledge and actions.

The development of critical thinking skills and personal responsibility in Arab children therefore carries with it potential benefits for their communities and region, as it enables them, at least in theory, to reach the same potential as their Jewish and international peers. The goal of this research therefore is to create a basis for the integration of new curricula that will support the integration of educational leadership activities and personal responsibility and critical thinking curricula into the policies of Israel's Ministry of Education. The research and its critical analysis is intended to throw light on professional and educational contexts in what are disadvantaged communities composed of Arab populations. By providing empirical evidence as to its necessity, this thesis hopes to provide a contribution to society's progressive thinking and development. The further goal of this work is to address a gap in the literature of early childhood education. This work leverages the advances of some leading scholars in critical thinking and knowledge acquisition (Bloom, 1956; Piaget, 1954 cited in Suleeman, 2008; Suleeman, 2008; Wade, 2007). These authors believe that critical thinking does not occur naturally and that it is the responsibility of parents and educational professionals to teach children how to think critically before they can learn higher-order subject matter. The assumption is that critical thinking requires success at tasks such as evaluating arguments and making objective judgments based on more than one dimension of a given issue (Marzano, 2002). The importance of mastering critical thinking is even more apparent with reference to personal responsibility. Some scholars go so far as to define critical thinking in terms of the acceptance of responsibility for one's own learning (Teare, cited in Zuber-Skerritt and Tear, 2013). Personal responsibility however, is a vital 'ideological', notion that states human beings choose, instigate, or otherwise are active in determining their own fate and the outcomes of the interactions in which they are engaged. A corollary is that because we at least in part cause and are responsible for our actions, we can be held morally accountable or legally liable. Personal responsibility can be contrasted to the idea that human actions are caused by conditions beyond the agent's control. Since the late 19th century, personal responsibility has become increasingly associated with political conservatism and libertarianism. Critical thinking is then in a sense an encounter with 'agency'; a matter of how we can teach and learn the ideas and skills which help us shape our own lives rather than accepting them as a matter of fate, determined elsewhere by others who may not understand what or who we are. It is in this sense that personal responsibility can be identified with progressive and transformative learning (as proposed in Zuber-Skerritt and Teare, *ibid*).

A key conceptual issue within the work-based project upon which the thesis rests was the question of how we can conceptualise and test the acquisition of critical thinking skills by children in kindergarten. The further questions and potential answers that arise from this can be problematised at doctoral level around two complementary themes; first the need for explorations in leadership within Palestinian kindergartens might facilitate skills development and conceptual thinking; and second, the development of the idea of personal responsibility or what Teare (cited in Zuber-Skerritt and Tear, 2013), calls 'personal viability' as a key learning objective and outcome for kindergarten children in this case in Palestinian communities.

Despite the necessity of acquiring these skills and building a strong culture for critical thinking and personal responsibility, it can be argued that the role of the educational leader in facilitating this work has not been sufficiently explored in academia or adopted in official curricula. The definition of an educational leader, for the purposes of this study is based on a synthesis of several authors' definitions. While these definitions will be explored in greater detail in the following chapters, this study emphasizes accessible dimensions of leadership; that leadership is inherent in each and every one of us and that acts of leadership can be as simple as expressing, creating or acting outside familiar and safe boundaries in order to do good (Harris, 2004; Pearce and Randel, 2004; and Parry, 2003). Without strong leadership in schools from the education professionals involved, I argue that it is hard to develop critical thinking and personal responsibility in children. The process is not simply 'natural'; it is learned and it is taught and is therefore the outcome of a conscious and reflexive engagement with learning and teaching in its contexts.

There exists clearly a large and varied number of approaches to the question of leadership in schools and its impact on learning outcomes. Table 2 Synopsis 2, attempts to cluster this variety within 5 'types' which are generic but not of course comprehensive. This schema cannot claim an over-arching comprehensive account of this academic and professional arena but it can claim relevance to the theme of the thesis, which is about leadership within the kindergarten in Palestinian contexts and its contribution to an evolving need for critical thinking.

The review of literature and models of educational leadership which follow in Chapter 2 contribute to the research questions and strategy in the following ways:

- the importance of school leadership and management in the kindergarten has been high- lighted and the question of leadership effectiveness for curriculum change has been given attention and justification in the thesis
- the consideration of leadership types allows a range of key concepts to be identified and these key concepts are relevant to the evolving pedagogy of the kindergarten. This is shown in Table 1 Synopsis 1: 36, where leadership models generate concepts

and potential outcomes for research and curriculum development

- the analysis of relevant literature contributes to the research questions by indicating a conceptual framework and sets of concepts which link leadership with ideas and practices covering 4 key themes concerning the management of learning, the management of the kindergarten environment, the development of cognitive capacities, emotional and personal responsibility aspects of the child's growth and experience, and the management and development of the cultural and community context, including that of parents and family
- leadership considerations enabled the thesis and its research components to develop ideas and practices around the management of a 'vision' for the kindergarten and for coordinating the disparate elements of the kindergarten environment. These included the notions of creating trust and confidence with children and parents
- the leader/researcher was able to be perceived as a central and authoritative figure within the kindergarten partnership, especially by staff and parents who were key stake-holders.

In searching for answers to the question of how does leadership in the kindergarten contribute to encouraging critical thinking, the project considered evidence of leadership 'types'. It hoped to demonstrate the relevance of such types as potential models for the practitioner who was required to develop appropriate pedagogies, manage learning processes and deliver learning outcomes for the children and parents themselves.

Effective educational leadership and management of schools has increased in importance and there has been much research conducted into the effectiveness of school leadership and its impact on children's performance. This has involved curriculum choice, though Gunter (2012) appeared to show recently that many teachers in the UK, for example, are not so free to choose their own forms of leadership or scholarly activity. The Palestinian kindergarten at the heart of this study was an institution that allowed its leaders to innovate and they were able to use dimensions of leadership that included what Bush (2011: 5) referred to as "influence, values and vision". Most leaders try to influence individuals or groups in order to achieve a desired outcome. The concept of values infused the kindergarten work and characterised the leader's sense of self-awareness and personal values. This was allied to a sense of moral and communal values which was able to recognise emotional factors and capabilities in the learning processes. The models of leadership approaches or types, (summarised at Table 1 Synopsis 1) is an attempt to portray a range of relevant characteristics which could be tested in practice against the objectives of the project.

There is another factor which is worth noting and this concerns the idea of distributed leadership, where leadership is not the sole responsibility of one leader and instead recognises the influence of various sources of leadership capability (Torrence, 2013). The Deir-Hanna kindergarten leadership attempted and recorded the need to have teachers and

parents develop their own reflexive ability to change situations and learning practice with the children. Hargreaves and Fullan (2012) have developed this idea of teachers developing their own 'professional capital' so that with the children they can adapt and lead educational changes through developing themselves. The project in the kindergarten and its community attempted to apply and use these ideas and concepts and the thesis represents an attempt to bring together the evidence and themes of an extended work-based project which had these concerns of leadership, change and critical thinking at its heart.

1.3 Overview

The thesis begins at Chapter 2 with a review of some wide-ranging theories and perspectives on educational leadership. Models are examined for their relevancy to my research questions and strategies, and I present theories and models for leadership and pedagogy, specifically addressing years 3-5 in kindergarten. In Section 2.9 of Chapter 2, I show the main sources and models for critical thinking that have been developed in relation to early childhood and are largely dependent on educational thinking and practice. Chapter 2 also contains an assessment of ideas of personal responsibility that were crucial for the practical research and curriculum development explored in Chapter 3. In order to present my independent study I outline the research methods adopted and then adapted to my research strategy and which enabled me to map data sources within what is a case study approach to my key themes and concerns.

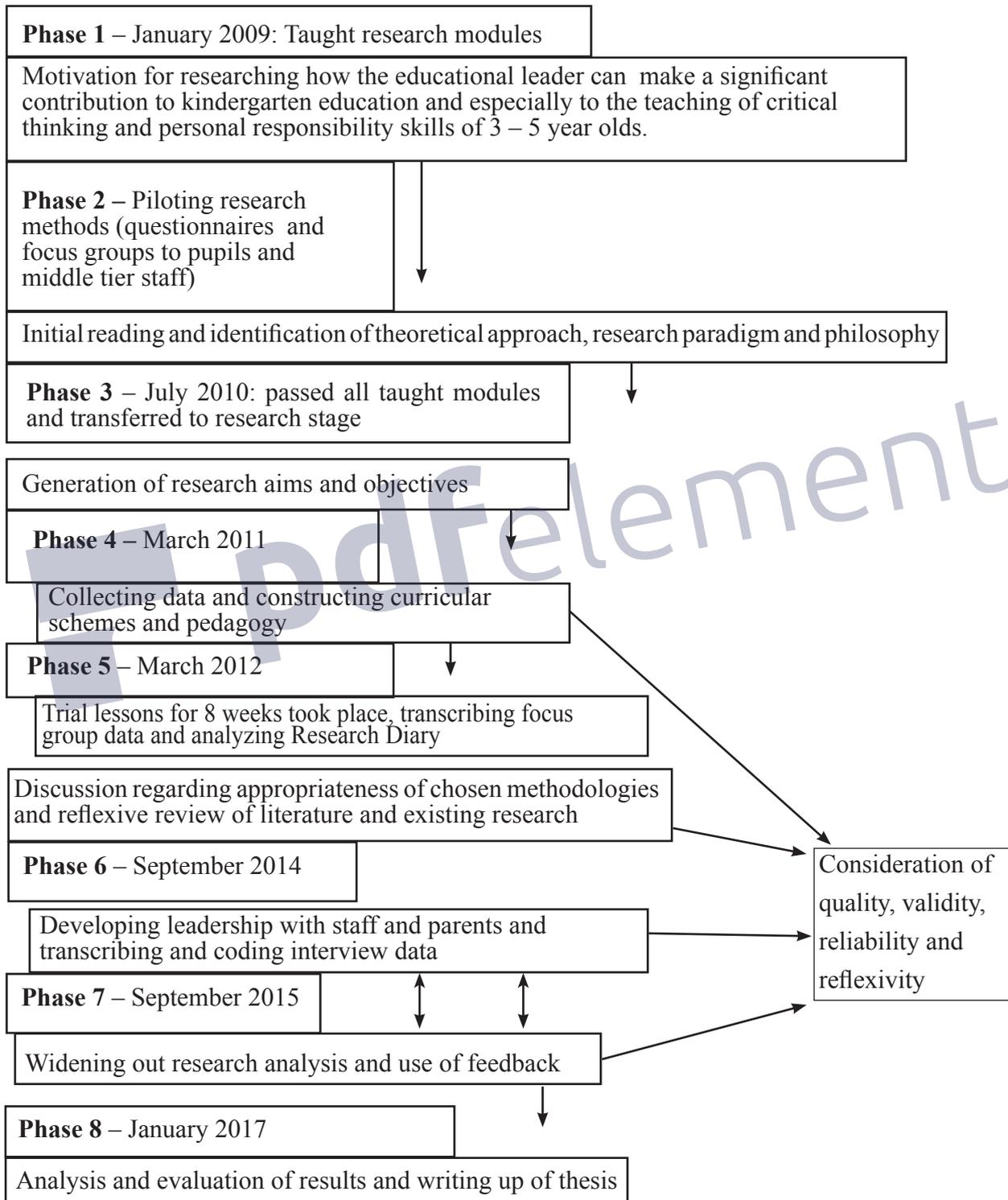
Finally, in Chapters 4 and 5, I present findings and outcomes of the analyses and discuss meanings and the main conclusions of my study. The nature of the research and its location has meant this work-based project, and the thesis that emerged from it, is extensive and diverse and was constructed over an extended period of time. To help the reader navigate the thesis there are a number of diagrammes and figures and it is hoped that these help summarise and provide a charted route through the process of discovery explored in this work.

The diagramme that follows immediately below is intended to help the reader of the thesis situate the flow and sequence of events and processes which made the work-based project (WBP) a lived reality for the author over an extended period of time. The period of exploration, study, practice, reflection and hopefully 'illumination' lasted for some 8 years, whilst the research phase, though notionally much more limited in time and scope and lasting a year, was a reflexive process that had no artificial beginning nor ending. The critically thinking teacher, according to Elliot (1995) does not distinguish between research, practice and self-examination when tackling curriculum issues and it is equally difficult to artificially separate phases of work and life which were a continuous and continuing lived experience.

It is hoped that the results of both the research and WBP contained within this thesis will

continue to have an impact on the Palestinian Kindergarten in its own village and society, and perhaps even wider, far into the future.

Figure 4 : Timing and phasing of professional research adapted from Bhatt (2004)



Chapter 2 : Literature Review

2.1 The foundations of this study

The importance of creating a proper platform for the development of educational leadership skills for teachers and critical thinking in children has been recognised by many recent researchers (Michaeli, 2008). In particular, the role and necessity for developing critical thinking and personal responsibility in early childhood development is apparent throughout the literature on early childhood, as early education is the first and arguably the most important stage of lifelong learning (Michaeli, *ibid* 2008). Without a sound base all that follows may be problematical.

The first five years of a child's life are fundamentally important. They are the foundation that shapes children's future health, happiness, growth, development and learning achievement at school, in the family and community, and in life in general. Recent research confirms that the first five years are particularly important for the development of the child's brain, and the first three years are the most critical in shaping the child's brain architecture (Oates and Yates, 2016; MacLeod-Brudenell and Kay, 2008; Montessori, 1907 cited in Lillard, 2005; Piaget, 1980 cited in Suleeman, 2008; Vygotsky, 2004 cited in Suleeman, 2008; Sanders, et al, 2008 and Jenkins, 2004). Early experiences provide the base for the brain's organizational development and functioning throughout life. They have a direct impact on how children develop learning skills as well as social and emotional abilities. Children learn more quickly during their early years than at any other time in life. They need love and nurturing to develop a sense of trust and security that turns into confidence as they grow (MacLeod- Brudenell and Kay, 2008: 56).

The foundations of children's language and their cognitive and social skills are laid in the earliest years of life. Timely and appropriate early detection and intervention in early childhood can reduce and prevent learning difficulties and disabilities. Despite the necessity of these interventions, there is a notable gap in the literature of early childhood education as to the role of the educational leader in developing these critical skills, most notably in relation to critical thinking and notions of personal responsibility. This matter is the focus of the work reported on and analysed in this work-related project and provides the basis of the doctoral thesis.

There are two essential parts to this thesis; first a focus on the role and function of educational leadership, especially within the kindergarten stage of learning and second, an exploration of the idea of 'critical thinking', for young children. Both of these concerns are related in this study and both are related to the author's professional and biographical development as a teacher, learner and principal of a kindergarten within the Palestinian community of Israel.

I have had extensive experience with early child development since I am a senior kindergarten teacher. I have taught for more than 19 years and therefore I was exposed to diverse methods of learning and education for young children through play - instructional methods and through group learning. Therefore, my intention is to use my personal and professional experience and to show how this experience could contribute to the theoretical and practical understanding of early childhood learning. This intention was explored and set in my own particular context of a Palestinian kindergarten within its own community, within a particular village, within the state of Israel.

This literature review is comprised of three sections, each of which outlines in some detail aspects of studies in early childhood which are the foundation of this research. The first section presents the literature's characterization of educational leadership in early childhood education, which includes references to its various definitions, representations in complementary fields, pedagogy, types of leadership and appropriate theories and models of educational leadership. In addition, some of the prevailing ways of assessing the effectiveness of educational leadership in respect of critical thinking are considered. The second section assesses the literature of critical thinking including the prevailing definitions in the context of the kindergarten, and its application in various fields, and models of teaching. The prevailing methods for its measurement and the roles of parents and teachers in developing critical thinking are also examined. Finally, the third section presents the literature relevant to models and theories of personal responsibility, most notably in the field of education, where there is little research completed for the targeted age group.

2.2 Educational Leadership

How does one define leadership? According to Lasry (2010), there are over 650 definitions of educational leadership that can be found in the literature. Even after four decades of research on leadership, the literature can still best be characterized as a “confusing mass of findings. Endless accumulation of empirical data has [still] not provided an all-inclusive understanding of leadership”. (Lasry, 2010: 32-38). This number is a clear indication of a lack of consensus in the research and investigation of this topic.

However, the most broad and agreed-upon definition comes perhaps from Bennis, one of the most important contributors to the study and research in the field of leadership for over six decades:

“Leadership is a function of knowing yourself, having a vision that is well communicated, building trust among colleagues, and taking effective action to realize your own leadership potential”

(Bennis, 2007: 02).

These words served as an impetus for this research, in which I aimed to cultivate my own leadership skills and capacities and those of others by fostering self-reflection, communication and trust in the resource-limited environment of my kindergarten. With this quote in mind, I selected the following scholars to help further delineate the various characteristics of educational leadership that were ultimately used as indicators in this study. These scholars touch on a number of analytical dimensions in the study of leadership, something that adds, I believe, some analytical depth to the study of leadership in the context of early childhood education.

Aflatka (2007), defined leadership in amorphous and intuitive terms, likening leadership to love. While it is difficult to define love, everyone recognises it when it occurs. The same could be said of leadership. However, this is not a satisfactory starting point for an exploration of the empirical realities of the kindergarten. Perhaps a good starting point might be that of MacLeod-Brudenell and Kay (2008), who argue that there are unique characteristics of the early years that shape the leadership role, including the fact that the vast majority of such leaders are women. The main types of leadership and management models are summarised by Crawford (2009), as relating to:

- the personal qualities and characteristics of the leader
- leadership styles
- contextual theories
- transactional or transformative theories.

Therefore, whilst it is not surprising that the definitions of leadership are as numerous as the theorists involved, this thesis is concerned with transformational leadership. Such models are focussed on a participatory style where the leader focuses on cooperation with a team rather than trying to exert control over them. The qualities and leadership skills needed to make such a model work involve communicative skills of a high order, the use of reflective skills and an understanding of one's own behaviour, motivations and actions and the need to be flexible and to be able to meet the demands of change and professional and personal challenges. These qualities are the subject of this thesis and it is hoped inform the narrative and analysis which make up this thesis.

Some scholars take a more individualistic view and examine the leader in the context of its institutions. According to Nevel (2011), educational leaders aim to look for innovative ways to facilitate the learning process in their institution's population and lead by example, despite an ever-changing and often chaotic educational context. Robertson et al (2009), build on this idea, expounding the view that individuals can be educational leaders no matter at what level in the institution, and can focus on improving learning opportunities as their main function and work. This includes developing one's own educational leadership capacity and that of their institution.

Some take a more evolutionary approach to leadership. Dasborough (2006), suggests that educational leadership cannot be mass-produced; it must be actively developed and fostered. The Darwinian concept of educational leadership, according to Inbar (2009), asserts that educational leadership emerges gradually as “survivors of a system,” i.e. those who have successfully climbed the hierarchical ladder, are deemed fit to lead, are able to develop organizational capacity and further advance the knowledge of leadership development. James et al, (2007), expanded on this idea, positing that leadership is the way in which people change the minds of others and move organizations forward to accomplish identified goals.

Within these realms, scholars have focused on group dynamics in fleshing out the concept of educational leadership (Gilad, 2011 and Reiter, 2011). These scholars summarily find that the leader is actually the coordinator of a group, the one who endows it with its vision, its path, its practice and its success. Therefore, the primary goal of an educational programme aimed at fostering leadership is to create the conditions that allow and encourage acts of leadership.

Types and models of leadership

Matveev and Lvina (2007), state that organisational leadership has evolved as a behavioral trait. Scholars have expanded on this idea, approaching leadership as a “contingency” to one’s environment, which has led to a number of neo-charismatic theories of leadership (House, 1977; House et al, 1999; Conger and Kanungo, 1987 and Bass and Riggio, 2006).

They claim that the three most widely recognized leadership theories within this viewpoint are the theory of charismatic leadership, the strategic theory of charismatic leadership, and the full range theory of leadership.

They further posit two sub-categories of leadership within these types- transformational and transactional. Transactional leaders are leaders who use either contingent rewards as positive reinforcement when the desired standards are reached or management-by-exception as punishment or negative feedback after problems occur (Conger and Kanungo, 1987 and Burns, 1978). Transformational leaders, in turn, are able to influence their followers to transcend self- interest and use their full potential to achieve their organisation's goals (Bass and Riggio, 2006 and Northouse, 2013). Taken together, Bass and Riggio (2006), posits that leaders are made by carrying out acts of leadership, combining the urge to break boundaries with the desire to serve and improve others through actions of reinforcement and feedback. My thinking and practice in the kindergarten in relation to these two types and in particular, the overarching themes inherent in transformational leadership, that is to say, going beyond self-interest, contributed to my understanding of the role of leadership within my WBP and this thesis.

Others scholars have developed models based on these foundations; most notable among these is Leithwood who with his colleagues investigated transformational leadership throughout the late 1980s and early 1990s. Based on the findings of both quantitative and qualitative research, they put forward a model of transformational leadership encompassing three main categories of leadership practices: setting directions, developing people and redesigning the organization (see, for example, Leithwood et al, 2006). These three main categories include nine additional dimensions of practice, which can be further subdivided into more specific practices linked to the context of the leader's work (Leithwood, Jantzi and Steinbach, 1999). In this model, teachers do not distinguish between the transformational leadership behaviour of charismatic behaviour and intellectual stimulation and inspirational motivation (Leithwood et al, 2006). All of these characteristics are holistically bound together in the actions of the leader.

Moreover, teachers in these studies do not distinguish between individual concern (transformational leadership behaviour) and contingent reward (transactional leadership behaviour). They consider this to be an indication that transformational and transactional leadership practices are interwoven and that transformational leadership is effective when it manages to incorporate transactional practices.

Another prominent model of leadership is functional leadership (Adair, 1983 and Kouzes and Posner, 1995). Scholars in this realm have sought to define 'functional leadership' by delineating the actions leaders take in order to be successful. In other words, they examine the functions or responsibilities that every leader must address in order to be effective. The following study employs a similar approach to the study and characterization of leadership, similarly positing that leadership is the ability to decide a group's direction and illuminate the road ahead by knowing the next step and leading others with him/her to it.

Educational leadership as used in this study draws on each of these models. The researcher's personal vision is employed in conjunction with the transformational, transactional and functional dimensions, enabling the educational leader (the researcher) to achieve the institution's goals. By combining these theories and perspectives, one can develop the many-faceted role of the educational leader as one who develops the necessary activities in the educational context: setting directions, influencing followers (other teachers and children) through reinforcement, and designing the kindergarten as an environment conducive to communication with others in order for these activities to 'evolve' organically, as a natural behavioural trait. It is clear, however, that the evolution of a trait is also a learned response that is shaped and formed by the social and educational processes and by the growth of the self as an active agent in the learning process. I used these models to develop a way of introducing critical thinking into the kindergarten; through exploring

and adapting educational leadership in practice. This meant a commitment to the idea that the more enhanced leadership skills were demonstrated by the kindergarten teachers and parents, the more likely it was that critical skills would develop in the children themselves.

2.3 Theories of educational leadership

The literature on educational leadership contains many theories that claim to be integral to the training of educational leaders. Every era appears to bring with it a new theory of leadership (Lam and Zvi, 2008). Within the focus outlined above on transformative, functional and charismatic leadership, a number of approaches were examined in order to help construct the model tested in this thesis.

Functional theories

Adair's Theory (1983) is an approach that focuses upon the characteristics of functional leadership. This theory emerges primarily from the study of group dynamics and Adair focuses on how groups form, evolve and perform. In this model there are three vital responsibilities of the leader, and a range of scholars have formulated and tested models for its implementation in the last two decades such as:

achieving a task (Colbert et al, 2006); (2) creating a sense of togetherness and collective responsibility (Colbert et al); and (3) making certain that each individual's needs in the group are recognised, for example, in respect of safety, respect, praise, intimacy and fulfilment. Therefore, the leader must also help members satisfy individual personal needs (Brown, 2002).

This model considers the individual and his or her needs such as intimacy, respect and safety. The team is viewed as being responsible for building up and collaborating with leaders and achieving the tasks of this model that, in this study, are to improve critical thinking skills and develop the idea of personal responsibility. In particular, this approach sets out the following vital functions of leadership that were used in the development of this study:

- planning (seeking information, defining task and setting aims)
- initiating (briefing, task allocation, setting standards)
- controlling (maintaining standards, ensuring progress and ongoing decision making)
- supporting (individuals' contributions, encouraging team spirit, reconciling and morale)
- informing (clarifying tasks and plans, receiving feedback and interpreting)
- evaluating (testing the feasibility of ideas, performance and enabling self- assessment).
- Functional theory emerges from the study of individuals' personal experiences of

leadership (Barker, 2007; Kouzes and Posner, 1995). Supporters of Kouzes and Posner's theory focus on what leadership is and what they believe leadership means to others.

Moreover, this theory aligns with that of Adair and adds the following five leadership practices:

- modelling the way forward – where the leader leads by example, behaving in ways that reflect the shared values and beliefs that the leader aims to teach. In this way, she builds confidence, commitment and affects consistent progress in her pupils (Avolio, 2007)
- inspiring a shared vision - where the leader enlists others in sharing a common vision by engaging others' values, interests, hopes and dreams. This can be achieved in many ways, including emphasizing powerful or expressive language to inspire others (Avolio, 2007)
- challenging the process - where the leader seeks new ideas and challenging opportunities to change, grow, innovate and improve others. This can include activities that require others to take risks, to experiment and to learn from mistakes (Kouzes and Posner, 1995)
- enabling others to act – where the leader brings to light his/her belief and care for others by exhibiting sensitivity. This can entail delegating power, believing in others and offering visible support (Colbert et al, 2006).
- encouragement – where the leader praises and celebrates his/her team's accomplishments on a frequent basis (Bass and Riggio, 2006).

Neocharismatic leadership theory

Functional theories of leadership tend to focus on instrumentalist views of motivation and organisation. They often attempt, naturally, to engage with what works in the classroom and across the institution and are clearly attractive to practitioners who seek results and measurable outcomes for their work. However, there are other approaches to leadership which have claims also to effectiveness for practice and which have evolved from the notions of charisma and charismatic forms of leadership and authority. House et al (1999) argue that this type of leadership can be understood as a combination of three theories: charismatic leadership (House, 1977), the strategic theory of charismatic leadership (Conger and Kanungo, 1987) and the full range theory of leadership (Bass and Riggio, 2006). Neocharismatic leadership theory can be used to understand how leaders influence followers (Mark-Bell, 2013). Leaders, according to this theory, possess charismatic qualities and other complementary skills, such as skillful self-expression and the flexibility to adopt appropriate behaviour in a range of situational contexts. In this way, one can evaluate a leader's charisma based upon the perceptions of his/her followers in a particular context or more simply put - the basis of charismatic theory is the influence

of the leader on the led (Mark-Bell, *ibid*). In the context of early childhood education, this influence or charisma can be posited as a means to achieve specific learning goals, such as improving the critical thinking and personal responsibility skills of children. I suggest that this charismatic form of leadership also has the ability not only to directly impact on children, but can contribute to the shaping of the environment around them, through interactions with parents and by fostering similar, desired traits in children by leading by example. Therefore, this idea will be examined following and adapting the recently published work of Zuber-Skerritt and Teare (2013), which focusses on the development of personal attributes and capacities in the individual and is encompassed within what they term 'personal viability'.

The full range theory of leadership

Bass and Riggio (2006), suggest that the full range approach is a functional theory that ultimately leads to and supports transformational leadership. This theory posits that transformational leadership is accomplished through four categories or what Bass and Riggio term “the four I’s”: A. Idealized Influence, B. Inspirational Motivation, C. Intellectual Stimulation and D. Individualized Consideration. Idealized influence is demonstrated when the transformational leader serves as a charismatic role model to followers. Inspirational motivation is characterized by the leader teaching about his or her vision and inspiring her followers to adopt it themselves. The third, intellectual stimulation, is established when the transformational leader activates her followers' creativity by questioning and challenging them. The fourth, individualized consideration is demonstrated by the transformational leader's ability to raise her followers' personal examination of her ideas and teachings. Overall, this theory argues that charisma is a significant part of transactional leadership. However, it is not the only part of the transactional process (Bass and Riggio, *ibid*) and proponents of this theory suggest that the best leaders tend to be both transactional and transformational (Bass and Riggio, *ibid*).

The attribution theory of charisma

House (1977), has suggested that as a component of the full range theory, charismatic leadership focuses solely on upon the characteristics of charisma in leaders. As described above, the core of this theory rests upon the level and type of influence the leader has on followers. The charismatic leader is considered a special person who is unique to her followers and possesses the natural ability to persuade them, often appealing to them in different situational contexts such as helping them “in their hour of need”. House argues that transformation and transaction processes are equal and possess merely petty differences in the context of great leaders, as their individual qualities naturally encourage “smooth” transactions among followers.

Charismatic theory has a number of variants and one of them posits that charisma is often a

trait that one perceives in another, but cannot be easily described by direct references to particular behaviours, traits or individual characteristics (Conger and Kanungo, 1987). Exceptional behaviours and expertise aside, contextual factors such as a crisis play a significant role in the attribution of charisma (Conger and Kanungo, *ibid*: 642). This includes the use of dramatic, symbolic and metaphoric language that lends credibility to communication. Conger and Kanungo claim that leaders are perceived as the ‘holders of an idealized vision’. Followers will only attribute charisma to a leader who personalizes their vision with steadfast resolve. As Conger and Kanungo note, the trust resulting from these conditions is extraordinary, and comparable to reverence. There is a subtle sensitivity at play in which a leader understands the needs and values of her followers and respects them while continuing to mirror his or her personal convictions. This is a process in which charismatic leaders will demonstrate poise and self-sacrifice. These leaders also excel in ‘impression management’, enabling them to communicate with followers easily and effectively, while maintaining this reverence.

Context for charisma

Middlehurst (1993) builds upon these transformational theories and stresses the necessity of “visibility” in the examination of a successful leader. She also elaborates that this difficulty might be due to the duality in authority where administration is separate from delivering knowledge. Visibility is important for the development of followers' trust during the transformation process. Duality in management or authority can be handled through strong communication and teamwork, which is what a transformational leader attempts to deliver.

In the context of education, many scholars posit that charismatic leadership can be difficult without the right contextual conditions. These include environments that are conducive to the kinds of transformations and transactions described above, specifically: institutions in crisis, small-sized institutions, and environments in which stakeholders wish to achieve institutional quality (Bensimon et al, 1989). In the context of this current thesis, in order for a teacher to be a leader in kindergarten it is essential for her to be deeply familiar with cultural aspects of the kindergarten and the village. There is a rich and complex context for learning here which cannot be underestimated. Knowing and sharing cultural nuances assists the teacher by helping her to achieve her goals in the kindergarten through the appropriate instructions and cooperation. Leadership of a charismatic kind is not possible without possession of a sensibility to the culture and environment and receptivity to the distinctive yet often varied ways in which it is transmitted between the different generations.

In this context, transactional and transformational leaders are able to manipulate their skills and their environment in order to achieve change (Bass and Riggio, 2006) This

includes addressing followers' needs for self-actualization and for them to make a meaningful contribution to the enterprise (Bass and Riggio, 2006 and Burns, 1978). Leaders' approaches in each of these environments differ, based upon their respective strategies. For example, the transactional leader emphasizes social exchange, and stabilizes the environment by making minimal changes. In contrast, the transformational leader may focus on challenging the existing paradigm and engaging followers in a new level of thinking concerned with values and vision or improvement (Bass and Riggio, 2006 and Burns, 1978).

2.4 Characteristics of the educational leader

For decades, researchers have attempted to identify the definitive characteristics of educational leadership, but with only limited success (Coles, 1993). Due to the number of theories which have been generated, the sheer variety of definitions and the different models of educational leadership available, this task has proven to be quite difficult. In light of these complexities and in the face of a defined task of my own, I have attempted to classify the key characteristics belonging to and derived from the theories described above which are of most benefit and applicability to my key objectives.

One such key objective in my work was to define and apply some of the elements of charismatic behaviour and attitudes within the kindergarten and to think through ideas of charisma that might be useful to my overall project. One example concerned the importance of charisma in the model developed by House et al, (1999), who define charisma as the ability to exercise diffuse and intensive influence over the normative or ideological orientations of others. Their approach to the definition of leadership and charisma is a reflection of the leader's impact on her followers, as exhibited by:

- a high degree of loyalty, commitment and devotion
- identification with the leader and her mission
- emulation of her values, goals and behaviour
- viewing the leader as a source of inspiration
- derivation of a sense of high self-esteem from their relationship with the leader and her mission
- an exceptionally high degree of trust in the leader and her beliefs.

These qualities appeared to satisfy several of the requirements that I intuited were needed for the development of a leadership concept that would allow the transformational and the transactional elements of critical thinking skills to be introduced into my professional workplace.

An additional source concerned Bass and Riggio's (2006) conceptualization of leadership, resting upon the ability of the leader to set goals, improve others' strengths,

and foster followers' need for autonomy and respect for their individual values. These characteristics influence the behaviour of a transformational leader such as greater commitment and the effects such as improvement in an individual's performance, thereby enhancing, strengthening and creating greater confidence in the relationship between leader and follower (Mark-Bell, 2013). These characteristics I believe further support the value of charismatic theory within my overall approach, which emphasizes effective communication, vision, integrity, humour and delegation between leaders and followers (Mark-Bell, *ibid*).

Likewise, the characteristics of each of the theories described above can be said to support their individual models. According to Kouzes and Posner (1995), leaders lead by example, inspiring others with a shared vision, encouraging risk-taking and making mistakes and visibly exhibiting belief in their followers. Adair (1983), also emphasizes leadership characteristics such as the ability to achieve tasks and foster a sense of community, while satisfying individuals' needs.

Other scholars, most notably Stogdill (1974) and Guron (2009), have attempted to formulate a synthesis of the research that describes the features of educational leadership. They identify five groups of features: achievement, responsibility, interpersonal capability, strength and understanding of the situation. Recent works in the area of leadership revealed similar characteristics, such as a strong desire to complete the mission, determination to achieve goals, originality, initiative and self-confidence, but they did not identify any features unique to educational leadership in the kindergarten specifically. (Lee, 2005; Silins and Mulford, 2002; Shin and Zhou, 2003; Amit and Bar-Lev, 2013; Goldring, 2008; Leithwood et al, 2006; McKinsey and Company, 2007).

A summary graphic (Table 1 Synopsis 1: 36) attempts to show the range and scope of leadership theories which have been used in this thesis to identify the main characteristics of teacher- leaders and their use of pedagogical strategies. This thesis of course is concerned with a specific level and type of education and therefore its focus reflects an engagement with younger age children and the teaching and learning issues and challenges faced by kindergarten teacher- leaders. Table 1 Synopsis 1, also attempts to picture the overlap between leadership approaches and pedagogical 'styles' and methods appropriate for the kindergarten in its Palestinian/Israeli context which are outlined below.

2.5 Leadership and pedagogy in the kindergarten

Despite the fact, that much research has been undertaken regarding skills acquisition in kindergarten, scant attention has been paid to the role of the leader in early childhood education (Thornton, 2005). There are, however, some existing models which touch upon educational leadership generally, which could be transferrable to the context of this research.

Visionary models

Visionary models of educational leadership champion the vision of the leader in developing the skills of young children in educational settings (Kagan and Bowman, 1997; Thoronton, 2005). These studies suggest that the key elements of effective leadership lie in the leader's ability to 'provide vision and communicate it; develop a team culture; set goals and objectives; monitor and communicate achievements; and facilitate and encourage the development of individuals' (Rodd, 2013).

Proponents of the visionary model of educational leadership focus on creating change, innovation and motivating children to perform tasks that they are not inclined to do, in order to advance the goals of the institution, the development of new images of an educational reality and the redefinition of the kindergarten experience from a holistic perspective (Livni, 2003). In this light, one might concede that educational leadership without vision is meaningless (Watkins and Marsick, 2003). The vision is the message, delivered through a kind of 'symbolism' and it is this message that unites the educational leader and her followers in a common effort to realize it. Many pedagogical models characterize the leader as one who is inspiring to her followers (Goldhirsh and Wagner, 2004; Strange and Mumford, 2002; Ratz, 2000 cited in Strauch-Nelson, 2012; Katz-Kurland, 2006 cited in Strauch-Nelson, 2012; Vera and Crossan, 2004 cited in Strauch-Nelson, 2012). They further attribute the beliefs of the educational leader to the leader's personal strength; strength that allows the leader to enhance her followers' commitment to and their sense of significance through their personal contribution in kindergarten. By her ability to communicate, as well as by leading by example, an educational leader in kindergarten expresses high expectations of the followers and their ability to fulfil the leader's vision (Katz-Kurland, *ibid* 2006).

Natural pedagogical theories

A source of ideas and inspiration for my work and research was found in the work of Montessori (1907, cited in Lillard, 2005) and Froebel (1889, cited in Strauch-Nelson, 2012), who examine and expound a concept of 'natural pedagogy', both inside and outside of the classroom, drawing on insights from nature. The argument suggests that by encouraging them to love nature, children are more likely to take care of nature, because we cherish things we love. However, a more fundamental aspect of this work is the children's encouragement to focus their learning through cognitive models within their natural environment. This approach, by itself, is not enough for young children, so the kindergarten teachers have supplemented this training with consideration, sympathy and love as essential elements that help the child connect to his or her learning. It is maintained that together, these theories impact upon children in six key dimensions: confidence, social skills, language and communication, motivation and concentration, physical skills and understanding. These dimensions or attributes, based on their interactions with the natural world, can develop in

children a new sense of belonging that is a result of the calming and familiar experience of nature (Grahn et al, 1997 cited in Strauch-Nelson, 2012).

2.6 Emotional well-being

Within the notion of pedagogical leadership, it is now common to address the matter of emotional literacy and capacity. The emotional literacy model draws extensively from positive behavioural interventions and support strategies. There can be little doubt that the emotional well-being of the child is important for the healthy development of both body and mind. Pedagogies and leadership strategies for kindergarten-age learning must take adequate account of these needs. What is referred to as 'Response to Intervention' (Fuchs and Fuchs, 2006 cited in Tilly, 2008), and their 'Comprehensive, Integrated, Three-Tiered Model of Prevention' frameworks are attempts to address emotional contexts and content for young learners and offer insights for the teacher/ leader in the kindergarten (Tilly, 2008). The use of these frameworks and their integration within the pedagogy of the kindergarten teacher, offers opportunities to address the behavioural needs as well as the social and emotional needs of the child. This is particularly the case in encouraging emotional intelligence that is based on the idea that emotional skills are crucial to academic performance and enhance or hinder our ability to learn (Kahn, 2013 and Gardner, 1983).

2.7 The social pedagogical theory of leadership

In accordance with the stated objectives of this thesis it is necessary to raise the issue of leadership in the context of children's needs for creative and critical thinking. This was stated to be relevant to the need for open-minded and autonomous thinking in the child if the adult is to engage in rational social life, especially in a society often torn by conflict and division. According to Dewey (1993 and Taylor and Francis, 2007), the world in general and democratic society in particular requires responsible leaders who can think and act with empathy, courage and clarity. These leaders inspire children to develop self-confidence by showing them how to think and act with creativity and courage, and by instilling in them commitment to be active citizens of the world (Taylor and Francis, 2007). One may infer then that an educational leader in kindergarten must organize the environment to reinforce free communication, experimentation and self-evaluation; the child is to develop personal responsibility and viability within a culture of tolerance, understanding for those who are different and an ability to manage a personal and social identity in positive and 'democratic' ways. These concepts and processes are of course basic elements of what has come to be termed 'critical thinking' and the basis of the principles for a developmental curriculum (Hurst and Joseph, 1998). As such, they form a key part of conceptual framework used in this thesis.

Pedagogical understanding

One of the most prevalent characteristics of educational leaders is pedagogical

understanding (Goldhirsh and Wagner, 2004; Retz, 1999 cited in Strauch-Nelson, 2012; Strange and Mumford, 2002; Katz- Kurland, 2006 cited in Strauch-Nelson, 2012). According to the literature on this topic, the kindergarten leader should have an intuitive and theoretical knowledge of pedagogy. Pedagogy, according to Armour (2011), is characterized as 'learning in practice'. The perspective argues that the term 'pedagogy' has a broader meaning, and refers to the ways in which individuals learn as well as the pedagogical knowledge and skills that teachers need to command in order to effectively support learners. The kindergarten leader, according to Armour, is not necessarily a specialist in the teaching profession, but is a person who recognizes children's knowledge structure, as well as the potential link between children's experience and their educational potential. She knows and makes sure that other teachers know that from an educational point of view, familiarity with subject matter is not enough; the educator strives to reach the child by using her knowledge, insights and values (Goldhirsh and Wagner, 2004).

The second characteristic within this viewpoint is based on the visionary model (Thornton, 2005; Rodd, 2013; Mackenzie et al, 2001). This characteristic highlights the importance of abstract thinking and an inclusive conceptual approach to teaching. This is something, which is required for the creation of a kindergarten 'vision'. The consolidation of a kindergarten vision is the first test of an educational leader. It is not enough that the kindergarten leader merely visualises the primary educational goals of the kindergarten. This vision must become a reality and the kindergarten leader must be prepared to lead the children, parents, teachers and all others involved towards that goal. For this reason, some scholars highlight the importance of the process over the 'vision' or outcome itself (Goldring, 2008). The process of designing the vision becomes the central element of the self-identity and ethos of the kindergarten (Harries, 2004). As such it is a critical aspect of leadership for the kindergarten and for the emergence of a curriculum which includes critical thinking within it.

This process is not a 'one-off event', but repeats itself every few years, placing itself continually under review and developing in new directions. Therefore, the second primary characteristic of kindergarten leadership – from a pedagogical perspective - is the leading of others to the construction of and evolution towards a shared vision.

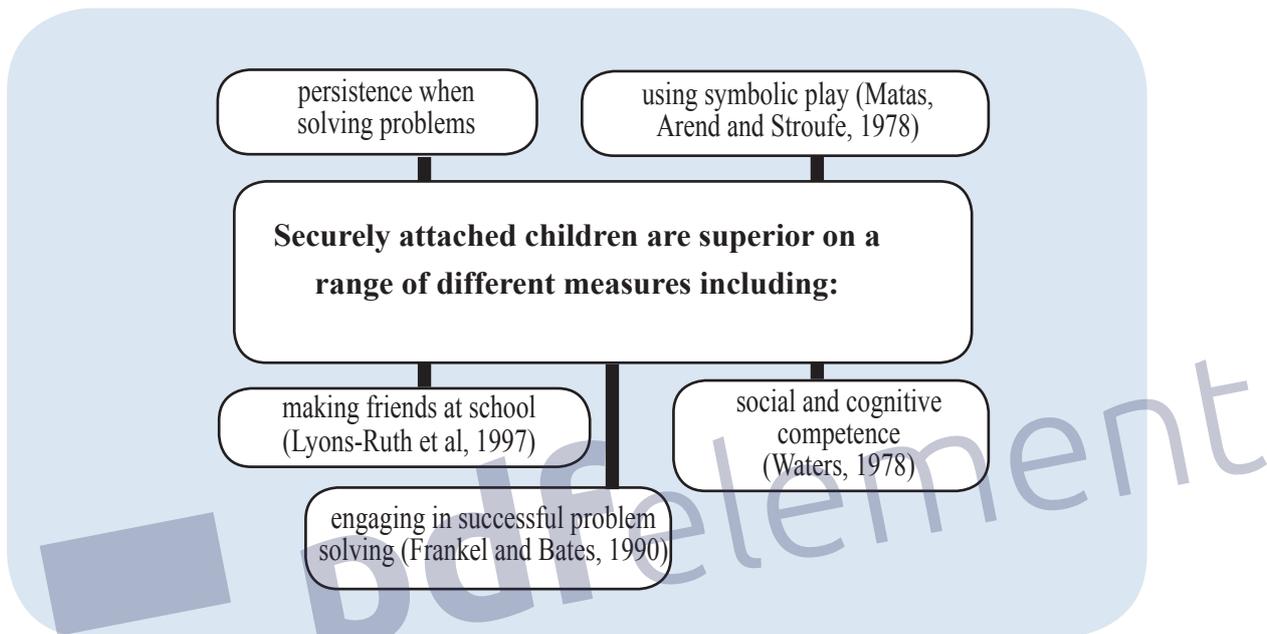
According to the natural pedagogical theories of Montessori (1907: cited in Lillard, 2005) and Froebel (1889: cited in Strauch-Nelson, 2012), the third characteristic highlights the leader's ability to use love as a natural method of learning and reinforcement. This aspect of natural pedagogical theories is also at the same time a social pedagogical matter and also an emotional one involving attachment.

The most famous attachment theories of emotional bonding that support these pedagogical theories is contained in the work of John Bowlby (1951, 1959, and 1969), who thought

love was central to learning and who developed the idea of attachment. He argued that the need for attachment was an instinctive biological need, and that mother-love in infancy and childhood was vitally important for mental health, behaviour and holistic development. This work indicates that security and attachment for children can be assessed on a range of different measures including those identified in Figure 5 below:

Figure 5 : Some of the ways in which securely attached children perform better

(adapted from Macleod–Brudenell and Kay, 2008: 100).



A kindergarten leader should ‘be a person who loves’, i.e. loves children. Children need to feel secure in the knowledge that the kindergarten teachers have their best interests at heart and care for them (Crawford, 2009). The main components of educational love, in this regard, is the message conveyed to the children, their responses to it and the connection between the kindergarten leader and her children (Kahn, 2013). The importance of this third pedagogical characteristic is of great importance in early childhood education, as evidenced by its alignment with Aflatka's (2007) definition of the educational leader that considers love and encouragement the most significant tools for a child's breakthrough, providing him/her with motivation to progress and positively reinforcing the child's self-image. This love and encouragement therefore reinforces their sense of competence, confidence, self-esteem and pride (Aflatka *ibid*).

In line with those described above, another principle pedagogical characteristic when discussing educational leadership is the personal example set by the teacher herself/himself (Scouller, 2011). Some scholars consider this to be the most important pedagogical feature. In practice, it is important to note that there is no end to the teacher's responsibility for exercising clear judgment, courage, integrity and transparency in decisions and policy.

Personal example is evident also in times of joy and sorrow (Scouller, *ibid*). In this view, the educational kindergarten leader must be present and accessible to children. According to this approach, children derive a sense of belonging that enhances their enthusiasm, confidence, emotional well-being, learning capacity, communication and problem-solving skills.

A summary of the approach to understanding leadership as it is used in this work-based project, and the research that was embedded within it, is given below in the text after the Table 1.

 pdfelement

Table 1 : Synopsis 1 (Leadership models and pedagogy in the kindergarten: synopsis of approaches, theories and outcomes)

Types of leadership	Authors/sources	Key concepts for pedagogy	Data and place in Thesis	Outcomes in research and management of learning
functional and transactional	Adair, Colbert, Brown, Barker, Kouzes and Posner, Avolio, Leithwood, Bennis and Torrence.	vital functions of leadership for team, knowing self, building trust, change situation	2.2 2.3	stability, predictability, authority, management, reflexivity
visionary transformational and charismatic, charismatic role model for followers	House, et al, Conger and Kanungo, Bass and Riggio, Mark-Bell, Middlehurst, Bensimon et al, Burns, Thoronton, Rodd, Katz-Kurland	- visibility of leaders - vision - motivation for change - communication - visionary and symbolic aspects	2.3	change, adaptation, inspiration, vision, teaching culture educational change
community leadership psychological and cultural forces professional development leadership	Zuber- Skerritt and Teare, Gunter, Livni, Watkins and Marsick.	- actions for change - transformation at personal, social and professional levels - outcomes - personal viability and self-development - children's performance	2.4	re-define core assumptions new behaviour and interest in the community professional enhancement free to choose scholarly activity
visionary and symbolic model of leadership	Kagan and Bowman, and, Thoronton	- vision - team culture - Improve the Individuals	2.5	creating change innovation vision inspiration leading by example
emotional leadership and emotional capital	Crawford, Bourdieu, Bowlby, Fuchs and Fuchs, Tilly, Kahn, Gardner, Bowlby, Aflatka, Scouller and Bush.	- emotional literacy - consistency in support - creation of cultural and social capital with children - emotional attachment and social competence	2.6	attitude changes long term internalisation cultural and social capital security attached influence, values and vision
Socials and emotional-pedagogical 'leaders'	Dewey, Froebel, Montessori, Taylor, Bruner Katz-Kurland and Bush, Goldhirsh and Wagner, Strange and Mumford, Macleod- Brudenell and Kay, Goldring and Harries.	- empathy, active citizenship, developmental growth, love, influence and values	2.7	democratic ethos, critical thinking, responsibilities, emotional well-being and innovation

The purpose of the diagram above is to give a conceptual synopsis and rationale for leadership characteristics that were central to the WBP and the research that is reported on in Chapter 3 and underpins the later analytical findings of Chapter 5. The key point here is that differing perspectives on leadership can yield, for the purposes of research and analysis, a set of concepts for pedagogical practice in the kindergarten which themselves can lead to demonstrable outcomes in learning. There exists clearly a large and varied number of approaches to the question of leadership in schools and kindergartens and its impact on learning outcomes and whilst this thesis does not attempt to encompass them all by any means, it is hoped that the selected approaches to leadership relevant to the kindergarten phase of education have yielded a framework for understanding the development of critical thinking in this phase. Table 1 Synopsis 1 above, attempts to cluster this variety within 6 'types' which are generic but not of course comprehensive.

2.8 Summary of leadership themes

The typologies of leadership indicated at Table 1 are a schema which cannot claim an overarching comprehensive account of this academic and professional arena but it can claim relevance to the theme of the thesis, which is about leadership within the kindergarten in Arab Palestinian contexts and its contribution to an evolving need for critical thinking. The review of literature and models of educational leadership contributes to the research question and strategy in the following ways. First, the importance of school leadership and management in the kindergarten has been highlighted and the question of leadership effectiveness for curriculum change has been given attention and justification in the thesis. Second, the consideration of leadership types allows a range of key concepts to be identified and these key concepts are relevant to the evolving pedagogy of the kindergarten. This is shown in Table 1 Synopsis 1, where leadership models generate concepts and potential themes for research and action and outcomes. Third, the analysis of relevant literature contributes to the research questions by indicating a conceptual framework and sets of concepts which link leadership with ideas and practices covering 4 key themes concerning:

- the management of learning
- the management of the kindergarten environment
- the development of cognitive capacities, emotional and personal responsibility aspects of the child's growth and experience
- the management and development of the cultural and community context, including that of parents and family.

In addition, leadership considerations enabled the thesis and its research components to develop ideas and practices around the management of a 'vision' for the kindergarten and for co-ordinating the disparate elements of the kindergarten environment. These included

the notions of creating trust and confidence and even 'love' with children and parents.

Finally, the leader/ researcher was able to be perceived as a central and authoritative figure within the kindergarten partnership, especially by staff and parents who were key stake-holders.

In searching for answers to the question of how does leadership in the kindergarten contribute to the research question concerning the role of leadership in encouraging critical thinking, the project considered evidence of leadership 'types'. It hoped to demonstrate the relevance of such types as potential models for the practitioner who was required to develop appropriate pedagogies, manage learning processes and deliver learning outcomes for the children and parents themselves. Effective educational leadership and management of schools has increased in importance and there has been much research conducted into the effectiveness of school leadership and its impact on children's performance. This has involved curriculum choice, though Gunter (2012) appeared to show recently that many teachers in the UK, for example, are not so free to choose their own forms of leadership or scholarly activity. The Palestinian kindergarten at the heart of this study was an institution that allowed its leaders to innovate and they were able to use dimensions of leadership that included what Bush (2011: 5), referred to as 'influence, values and vision'. Most leaders try to influence individuals or groups in order to achieve a desired outcome. The concept of values infused the kindergarten work and characterised the leader's sense of self-awareness and personal values. This was allied to a sense of moral and communal values, which was able to recognise emotional factors and capabilities in the learning processes. The models of leadership approaches or types, summarised at Table 1 Synopsis 1 was an attempt to portray a range of relevant characteristics, which could be tested in practice against the objectives of the project.

There is another factor, which is worth noting and this concerns the idea of distributed leadership, where leadership is not the sole responsibility of one leader and instead recognises the influence of various sources of leadership capability (Torrence, 2013). The kindergarten leadership attempted and recorded the need to have teachers and parents develop their own reflexive ability to change situations and learning practice with the children. Hargreaves and Fullan (2012), have developed this idea of teachers developing their own 'professional capital' so that with the children they can adapt and lead educational changes through developing themselves. Again the project in the kindergarten and its community attempted to apply and use these ideas and concepts (Bush, 2011; Gunter, 2012).

2.9 Critical thinking in the Palestinian kindergarten

The purpose of this section is to present the main theoretical assumptions concerning critical thinking in early childhood education in order to describe the environment in which the proposed educational leadership model is implemented. First, I consider definitions of critical thinking in general and then more deeply in terms of the context of

the kindergarten within a Palestinian community. I then examine different approaches to analysing and developing critical thinking in different fields including ideas of teaching critical thinking. At the end of this section, I examine the 'environmental' variables necessary for the successful teaching of critical thinking.

Definitions of critical thinking

Critical thinking is well established in the literature as one of the thought processes harnessed by all effective educational leaders (ISLLC, 2008; Fisher, 2007 cited in Friedman and Fisher, 2009). The critical thinker is one who tends to design, repair and modify beliefs in light of cogent arguments and one who can understand, accept and attempt to reconcile at least two strong and opposing views on the same subject (Darmoni and Levy, 2007).

The study of critical thinking in various domains has helped to shape its definition in the context of education and to some extent, early childhood education. For example, in the area of developmental psychology and science education, critical thinking is defined as a mental activity that creates meaning in order to process information and achieve one's aims. Astington (1993), expands on this definition and posits further that critical thinking is a thought process whose result is an appraisal of the products of different reasoning in the form of arguments, ideas, expertise and more. From the philosophical perspective, Lipman's (1991), definition has prevailed and served as one of the foundations for the study of critical thinking in society. Lipman defines critical thinking as skilful, responsible thinking that facilitates good judgement because it is self-correcting and is sensitive to context (see Lipman, cited in Harpaz, 1996).

Scholars universally assert that proper teaching methods can improve children's acquisition of critical thinking skills, as well as their ability to use them more efficiently and critically (Branco Weiss Institute, 2003; Dewey, 1993; Taylor and Francis, 2007; Montessori, 1907: cited in Lillard, 1998 and Froebel, 1889: cited in Strauch-Nelson, 2012).

These scholars draw upon insights from the practical and theoretical aspects of the nature, instruction and assessment of critical thinking as a reflective activity in their research and scholarship. In this regard, critical thinking is characterized similarly, in the context of educational institutions and instruction. Here, critical thinking is envisaged as a rational and practical activity, centring on decisions as to what one should believe and do in complex situations. Educational leaders are in a position to facilitate creative activities that foster the formulation of new ideas, and that suggest alternative ways of seeing a problem. This is achieved by asking questions, suggesting possible solutions and research programs, offering deeper and more expansive analyses of critical thinking and therefore facilitating more critical definitions based on their context (Paul, 2008; Ennis, 1996).

Accordingly, Ennis (ibid) argues that thinking is rational and critical when the thinker seeks to analyse the arguments carefully, find valid evidence and comes to basic conclusions. He likewise views the goals of teachers of critical thinking to be to develop people who are fair, objective and committed to clarity and accuracy. Although in that study – and many others like it – he references older children and adults, this conceptual approach, it will be argued, can also be applied to younger children.

Critical thinking in the context of kindergarten

When one reviews the available literature on critical thinking in education, particularly in Hebrew and Arabic, it quickly becomes apparent that there is a major gap in the literature that supports the improvement of critical thinking in the context of kindergarten and the Palestinian kindergarten in particular. Due to the nature of this gap, I reference older scholars that operate outside of the realm of the Middle East and this specific age group (Santrock, 2004; Dewey, 1993; Taylor and Francis, 2007; Ennis, 1996; Donaldson, 1983; Astington, 1993; Woolley and Wellman, 1994 and Zuber-Skerrit and Teare, 2013). It is important for the purposes of this thesis to note that many of these scholars describe indicators of critical thinking that can be analysed in the context of kindergarten and in children aged 3-5, though that may indeed not have been their primary intention.

Santrock (2004), for example, posits that children younger than five years of age ask many questions and show curiosity. Using art education, he demonstrated that targeted activities could contribute to children's critical literacy through questioning. In this way he claimed that art develops children's minds in powerful ways and helps them to ask critical questions and foster understanding in all subjects. Therefore, when children learn how to look critically at images, they transfer critical thinking and problem solving skills to all areas of their education. Donaldson (1983), similarly found that children were capable of deductive reasoning and were sensitive to the context of targeted tasks in formulating new ideas and conclusions. Although in his research he found that children were not fully able to use deductive reasoning where appropriate, the results suggest that 4-5-year-olds are at a stage in which they can begin to acquire information and selectively apply critical thinking under certain conditions. Woolley and Wellman (1994), found evidence to support the proposition that children are able to appreciate perspectives other than their own. Therefore, they are able to take on others' perspectives through increasingly sophisticated simulation processes, i.e. by imagining themselves in another person's place. This idea is particularly salient to the literature on educational leadership and the role of the teacher in the classroom in developing critical thinking skills. Astington's (1993) work builds on this idea, suggesting that children are able to develop theories of mind that can be used to explain their experience and the behaviour of both themselves and others through these 'simulations'.

With regard to specific teaching activities, Brown's work (1975; 1978) (cited in Brown, 2002), in this area is particularly instrumental in capturing the state of the field of critical thinking research. Brown states that children are able to “think about what they have been thinking”- also called metacognition. Brown's findings show that children are able to assess their readiness to be tested on recall of simple materials, such as pictures of common objects. This work slowly evolved into research on the role of metacognition in studying academic materials and comprehending prose, a major cornerstone of critical thinking research today.

These findings signify that the seeds of engagement in critical thinking are already within children from a young age. Dewey (1993) (see Taylor and Francis, 2007), argues that young children can and should be encouraged to engage in reflective thinking (which he views, I believe, in our terms, as a form of critical thinking), and that this engagement is necessary to encourage the freedom to express one’s opinion. Therefore, early in life, children should receive guidance and encouragement so that the development of critical thinking can be assured (Suleeman, 2008). The basic proposition that emerges from these arguments is that the early promotion of critical thinking is necessary before children begin to develop negative habits that may impede critical thinking later in life.

Unfortunately, the development of critical thinking in kindergarten is not an obvious task for kindergarten teachers. Many kindergarten teachers do not have the tools to envision, implement and manage an environment that encourages critical thinking and they find it difficult to offer personal examples of critical engagement or thinking (Goldhirsh, 2004). Another obstacle in this regard is that critical thinking often results in what can be seen as 'undermining' the teacher or raising doubt. Many kindergarten teachers fear that this potential undermining and scepticism will be directed towards them personally as experts in the field, or as a challenge to their authority, and therefore refrain from introducing topics that are conducive to this behaviour (Ennis, 1996).

For some of these reasons it might be considered unusual for the idea of critical thinking to be applied to kindergarten schooling. Most young children are thought to be unable to control their own lives and their very young age is thought to determine their dependency on older persons, whether adults or older children. Yet there is a sense in which all progressive educators can be said to be teaching others to make up their own minds and to take control of their own lives. This raises the question of how can a kindergarten child take control of her/his own life? Many if not most decisions affecting the course of a young life are taken by parents and families. The area of choice for the child itself is very limited, it might be argued. Yet the child is a thinking and choosing being; it has an identity that is not just given to it but has to be created and sustained. This identity has to be reflexive and it involves an encounter between the child and the wider world. Following Jenkins' (2004: 55-56), arguments we

can say that the identity and even personality of the child and creation of the 'self' is at least partly as a result of the infant having 'agency' and a pre-disposition to learn. "Much recent developmental psychology seems to see no paradox in a vision of active-infants-in-their-own-right who require the work of others to realise their potential" (Jenkins, *ibid*: 56). This insight, it is suggested, is at the centre of the idea of critical thinking developed in my work- based project. The child is viewed as an active and potentially creative agent but within the Palestinian kindergarten context there was also a need for the "work of others" to be developed. This work had not been done and suggested an agenda for the work of teacher innovators in curriculum development and in how the management and involvement of parents in relation to the kindergarten was to be achieved.

Following this argument, it could be said that recognising the existence and capacity of others is an element of critical thinking which is entirely appropriate to the kindergarten ages. This capacity must be acquired and routinised in this period. Concern about others develops into learning about who she/he is and her place in the world of others. Jenkins refers to the work of Dunn (1988), who suggests that self-efficacy develops early in the life of a child, alongside a concern about and with others. These were the developmental concerns, which underpinned the idea of critical thinking for kindergarten children in this thesis. To some degree, these concerns are generic to the life and development of all young children but my concern was to explore them in my own experience and community and assess them using the knowledge I had acquired as a teaching professional and member of my community.

At the heart of these learning processes is the growth of a cognitive and social being; the child who relates in personal and emotional ways to her/his world of others. Doing this successfully over a sustained period is essential to the act of learning and the kindergarten phase is crucial to this. This is the context in which attachment and mutual recognition takes place and in which language is acquired. This is the reason why this thesis has engaged with theorists and researchers such as Beit Marom (2009); Bowlby (1951 and 1969), Holmes (1998), Vygotsky (2004) and particularly with Jenkins (2004: 56), who argues that the cognitive and emotional contexts are intrinsic to the social construction of processes of identification. Children develop self-efficacy early in life, he argues, and "From at least as early as eighteen months, children exhibit an understanding of the world of self and others as a moral world in which actions have consequences; from about three years old they begin to show signs of interest in and understanding of minds, of their own mental states and those of others". These are then stages and behaviour we can recognise as part of childhood in the kindergarten years and which help shape and organise the processes and experiences we have described as 'critical thinking'. This general sequence involves, according to Jenkins (*ibid*: 57-58), a human pattern for the emergence of identity in childhood which is the basis for the cognitive, emotional and personal viability and of the

cultural events and experiences which shape and define 'critical thinking' in kindergarten children. This thesis suggests that these four fundamental categories or themes should be seen as key factors which are at the core of the work-based project, which itself generated the research phase and findings. These key factors form a critical framework of concepts and ideas for the outworkings of the thesis. A summary of these themes and the associated concepts which informed the work-based project and subsequent researched phases reported in this thesis can be seen at Table 2 Synopsis 2.

The general sequence of development suggested by Jenkins involves individualised attachments to mothers and caretakers by seven to nine months of age; from twelve months onwards the categorisation and naming of things and persons occurs; by two, basic conversation happens; between two and four the child carries out everyday representations with others in the abstract and in play; understandings of others and self-expand, and the child's narratives increase in its community; self-identification of and with other persons then takes place through observation, differentiation, imitation and affiliation. By middle childhood, from five to six years, the child begins to have some moral responsibility for her actions and begins to understand social statuses and roles. These are the general processes we can observe in the kindergarten phases and they are a framework for the identification and classification of the specific indicators of critical thinking in the kindergarten. A detailed and generalised chronology and definition of critical thinking skills for children at the kindergarten age, however, is not possible. This is because there can be no one-to-one correspondence between a culturally and socially determined sequence of experiences and a set of 'skills' to do with critical thinking. As Jenkins states ...

“... children and childhood are experienced and understood differently in different places and times, and ... children should be understood and approached by researchers, as active contributors to and makers of the human world of which they are members’

(Jenkins, *ibid*: 58).

What is identified in the project and the research in this thesis is a set of experiences and capabilities, which suggest the growth of efficacy and capacity in kindergarten children. These attributes are about humaneness and selfhood in the child and they involve cognitive and emotional development within a specific cultural milieu. This culture is of course also about a specific form of group and ethnic formation; Palestinian Arab communities within an Israeli state formation. In this very specific context critical thinking takes on additional resonances when we consider that childhood is socially constructed, relational and capable of influencing the next and successive generations.

Critical thinking may therefore, be a means of progressive change and progress or at least a germinating idea, which can come to fruition in the future.

What must be explored and researched in its contexts is therefore not a pre-determined set or list of capacities and attributes that we could definitively label 'critical thinking skills' but rather a set of potentialities and possibilities which the growing child has. No simple list of critical thinking skills or facts can be set down and tested against a uniform check list or pre-formulated activity programme. What can be done is to explore and record the creative possibilities and processes as they take place in a context of interaction and enquiry. This interaction is complex and in movement; it charts the actual lived experience of children, their teachers, their families and important aspects of their community.

The generative capacity of this approach to critical thinking can be seen in the scope and reach of the four key themes mentioned above -which indicate an extensive set of concepts and ideas that enable us to understand children's capacities. In its portrayal of models and sources for critical thinking, Table 2 Synopsis 2 (sources and models for critical thinking) (see page 54) attempts to break down into single items and to list the processes and indicators of such thinking. Whilst this is not a comprehensive list of critical thinking skills, it is a more 'granular' portrayal of the attributes we can associate with critical thinking for kindergarten children.

Critical thinking in the Palestinian kindergarten

The main sociological and psychological context and locus of the current thesis is the Palestinian kindergarten. Palestinian society has unique attributes and characteristics and it can be described as being a society in transition between traditional ways and beliefs and modernity. This journey is by no means a finished one, however, and its development is perhaps best described as 'contested'. Nevertheless, whilst maintaining this vein of thinking Palestinian society can be identified with several main social values (Lichbach and Zuckerman, 2009; Dwairy, 2006 and Said, 1978).

The first and most important one is family solidarity. As in most largely rural cultures, the family is the most important unit in Palestinian society. The Palestinians' political experience and reality have served to further strengthen family ties. With no real government-sponsored social safety net, and with the lack of a functioning economy or enough independent government institutions or even enough banks to provide home or student loans, Palestinians have had to rely on family and neighbours to fill the gaps. The family serves as the primary source of identity and extended families tend to live together in compounds or villas divided into apartments for all male sons and their families.

Family identification and solidarity can be seen as the one traditional structure to have survived the Nakba (the disastrous dispersal of Palestinians which resulted from the

creation of the State of Israel in 1948 and the resultant wars and civil strife). Even in refugee camps, far from their villages or towns of origins, Palestinians continue to live, work and socialize within the confines of the family. Many men from the Occupied Territories or refugee camps in neighboring Arab countries often leave behind wives and young children to work in the oil-rich Gulf States. They send money home to support the extended family. In addition, these extended families pool their resources and provide for each other when money is needed for medical reasons or for college expenses. Palestinian children are raised with a keen sense of responsibility to family members. Older parents and grandparents rely on the financial support and care of their children and grandchildren. Though this responsibility usually lies with the eldest son, it can typically be borne by those who are most financially able or by the family as a whole (Dwairy, 2011).

Another important feature of Palestinian society is hospitality. Palestinians place a high premium on generosity and hospitality, as does Arab culture in general. Palestinian homes are always ready to receive an unannounced guest with food, sweets and Arabic or Turkish coffee. Visits with family and neighbours are commonplace, often occurring once or twice a week.

Finally, it is important to note that Palestinian culture dedicates an important place for honour. As in other traditional societies, a family's honour is often reflected in the virtue of its women. Modesty and chastity among women are key values. However, this notion has changed over time. Education, highly valued in Palestinian society for both men and women, brings honor to a family. Connection with the land, a prized and diminishing resource, is another source of honor. Steadfastness and service to the people and the cause of Palestine are perhaps the greatest source of family honor today (Lichbach and Zuckerman, 2009; Dwairy, 2006).

All these values are deeply rooted in the Palestinian education system and in family and social structures. Their impact on behaviour and feeling or sentiment begins at the very early ages, even in kindergarten. Therefore, it is essential to understand how pedagogical leadership could assist in creating a more 'critical thinking' reality and a set of practices in the context of these traditional values.

2.10 Perspectives and theories on critical thinking

The importance of childhood is hardly contested by anyone today. Childhood is socially constructed and as Jenkins has stated "...childhood and adulthood depend on each other for their meaning" (ibid: 59). We can only make sense out of the adult world if we understand what happens in the world of childhood. Personal identity and social identity are intertwined. Group and societal membership is part of a social structure and individuals change their definitions of themselves and can bring into being changes in human collective life. All of these processes require a thinking and motivated human

being, successfully adjusted to the challenges of everyday life. They require people to be able to take some control over their own lives and they require what we now call reflexive self-identity. All of this is not simply given. It has to be learned and taught and individuals learn by engaging in what Jurgen Habermas called instrumental, interpretive and critical learning (Habermas, 1972). Such learning begins in the kindergarten age.

This thesis explores how this learning takes place in its setting in a Palestinian community. It focusses on young children, their teachers and their parents as key actors in the generation of independent thinking and being. The overall intention is to generate the ability for children to think for themselves; it means not letting others make up our minds for us as Michael Newman states in his book about the importance of choice and rational discourse in justifying our own moralities (Newman, 2006: 9). Critical thinking then is not a neutral activity; it is about social justice and fairness. For the Palestinian community in which this study took place, critical thinking for its children is one of the means to a better future. Personal and collective change requires thinking people who as children are taught and learn to face an uncertain future. This rational and chosen future cannot be learned by rote. It must be shaped and learned through critical thinking. Critical thinking is not just one on a list of higher order competencies; it is not a product. It is a way of saying that our past must give way to new ways of seeing and experiencing our individual and social identity.

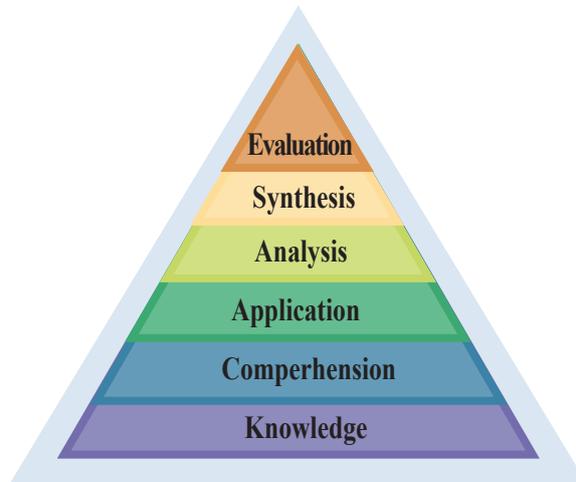
Having established a conceptual and progressive locus for critical thinking in the thinking and autonomous child, attention must now turn to an examination of some of the most influential perspectives on the teaching of critical thinking.

Bloom's taxonomy

Bloom's Taxonomy is the primary method that is often used in the development of lesson plans for the development of what can be termed critical thinking activities in the sphere of cognition. It contains six developmental and cognitive categories: knowledge, comprehension, application, analysis, synthesis, and evaluation. The first step in the taxonomy focuses on knowledge acquisition.

Figure 6 : Bloom's taxonomy

<http://bloomstaxonomyaet541.blogspot.co.il>)



Knowledge: according to Bloom, knowledge is gained through the behaviours or distinct situations that emphasize the memory of ideas, materials or phenomena. This can include: knowledge of details, terminologies, and of specific facts; knowledge of ways and means to treat specific knowledge; consensual knowledge, knowledge of sequences and trends; knowledge of classifications and categories; criteria, methodology, abstraction in a given area; principles and generalizations, theory and structures.

Comperhension: references the lowest level of understanding. Here, the child knows what is said and can use the material or idea submitted to him without necessarily referring to other material. The material can be transmitted orally or in writing, verbally, symbolically or concretely. His or her understanding is divided into three levels: translation, interpretation and extrapolation.

Application: occurs when one uses rules learned in the past in certain situations, which are different from situations familiar to the person from his previous experiences.

Analysis: is the breaking of the unit of learning material into its constituent parts and understanding the relationship between these parts. The purpose of such an analysis is to clarify the material and its foundation and to determine its method of organization. The child will learn to distinguish between facts and hypotheses, to identify conclusions and proofs, to distinguish between relevant and irrelevant material, to pay attention to the relationships between the ideas in the matter and to understand what the specific assumptions in the text are.

Synthesis: is the combination of elements and parts in order to form completeness; the process of combining parts and assembling them into a model and structure that did not

exist before. Synthesis includes creating a unique method of transmission, creating a program or suggestions, creating action plans and disseminating the abstract relationships.

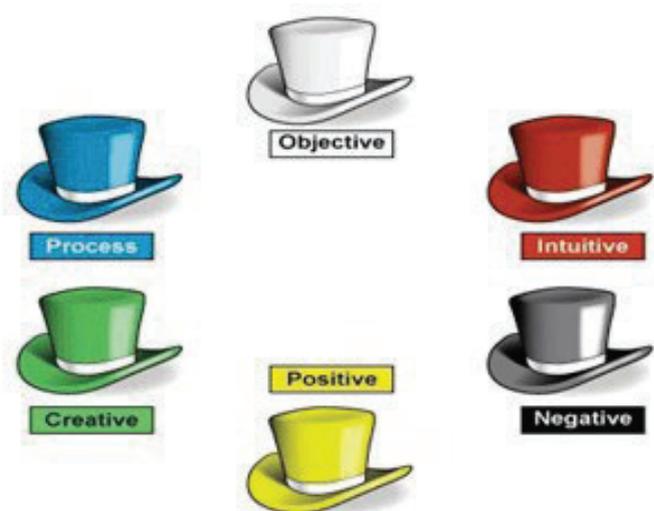
Evaluation: is judgement with regard to the value of ideas, facts, solutions, methods and similar, for a certain purpose. It involves using criteria and open standards for the evaluations, the determination of their accuracy, effectiveness and usability. Evaluation also includes judgment in terms of internal evidence and judgment according to external criteria.

Lesson plans that leverage this information are able to both develop schemes of learning that build in their complexity, but also evaluate the critical thinking of the children that follow them, as each level is increasingly complex and children's ability to operate within each of these realms is indicative of their critical thinking capacity.

De Bono's 'hats' theory

This is the second major theory that can be applied in the context of educational systems and was developed by E. de Bono in his book, 'Parallel Thinking' (1994). This theory, it can be argued, coordinates all the elements of thinking and places them in parallel next to each other, rather than as a hierarchy. The main point of his theory lies in putting ideas side-by-side in order to reach a true investigation of the subject. De Bono believes critical thinking can be learned through a curriculum, which is not constrained by traditional subjects and emphasizes the teaching of skillful thinking, especially in relation to practical decision-making (De Bono, 1998).

Figure 7 : E. De Bono's hats



(<http://www.skypeenglishclasses.com/wp-content/uploads/2011/01/090202a.gif>)

In this theory, de Bono's 'thinking hats' make use of all areas of intellect through 'parallel thinking'. Parallel thinking forces one to think creatively and not just contrary to the ideas of others. De Bono outlines a simple method for evaluating each element that can activate critical thinking. It is the division into six separate areas of thinking that together constitute his concept of 'ultra-thinking'. De Bono's ideas are based on the principle of efficiency of reasoning. This concept defines the practice of a particular type of thinking as wearing a hat of many colours. In his book he attempts to define all thinking – its nature and its contribution to the overall thought process. The concept of the 'six thinking hats' thus, allows us to control our thinking.

The six hats method is comprised of:

- white hat: indicates known facts and information
- red hat: indicates feelings, intuitions and subjective feelings
- black hat: indicates criticality based on logic and evidence of how it may be possible to do things differently
- yellow hat: indicates the logical positive outlook, preferences and advantages with logical support
- green hat: indicates creative effort and the search for alternatives and new ideas
- blue hat: indicates the management of the thinking process. This hat is the leader and could be perhaps called the metacognitive level of de Bono's scheme.

Piaget, Vygotsky and Bruner

The third approach considered here derives from the work of Vygotsky (1978 and 1986), Piaget (1954 and 2001) and Bruner (1983). Their theories address how guidance and assistance from a leadership model – teachers or parents within the immediate environment help children to advance their modes of learning. Piaget viewed children as having the capacity to act on the world so that they can discover how to control it (Suleeman, 2008). Through involvement with physical and social objects, a child actively constructs his or her knowledge of the world so that it becomes more in tune with reality; from this, the child's understanding develops, which in turn, contributes to the child's cognition. The child's construction of understanding and cognition starts from an internally organized structure that over time, with more experiences, becomes more and more differentiated.

For Piaget, experiences are important as they present opportunities for the child to continue making sense of the world, and this is done through manipulations of actions and in relation to concrete, practical problems. Internalized mental actions start to substitute for or represent physical actions; actions are internalized to form thought. However, the position or state of a child's knowledge construction depends on his or her readiness for change: children have to be active and constructive in order to develop their understanding of the world. Thought develops structurally through stages that are universal and ordered

sequentially. Piaget (2001) claims that the nature of development from one stage to a more advanced stage is made possible by the child's readiness, which depends on both maturational and environmental experiences. Altogether he asserts there are four stages, to be considered: sensory – motor, pre – operational, concrete – operational and formal, and each comes within an approximate age period with its underlying mental structure. The structure of children's thinking at each stage is distinctive and is the same for all children at the stage while different from other children and adults at other stages. Thus, the child starts with learning something concrete, real and practical, and from here he or she gradually deals with more abstract concepts and ideas. For Piaget the environment and education have to provide opportunities, so that the child can discover and construct its thought and mind processes. The child can ask any question about what is read, heard or viewed; the child is given activities that involve reasoning, elaboration and problem-solving; the child is encouraged to think, to engage in decision making, to elaborate his or her ideas and to construct insights that suggest possibilities for action. Piaget sees young children as being incapable of seeing the world as adults do. Young children can only be successfully taught if they have the necessary mental operations, but understanding is constructed by the child through the child's own, self – selected, problem solving, not through any direct effort of teachers.

In contrast Vygotsky (1986), did not view individual psychology or human cognition as socially determined. He proposed that cognitive development is socially constructed. In other words, individual psychological functioning is an emergent property of the sociocultural experiences of the human person. During social interaction that supports cognitive development, the child participates in and learns ways of thinking and acting that were not previously available to her or him. The cognitive growth that emerges is initially intermental - it occurs between two or more individuals. Following the interaction, if the child's thinking and understanding change to resemble what occurred during the interaction, the resulting cognitive change or development is instrumental or psychological. In this form of learning, it is argued that the child's own capabilities, interests, and goals contribute to the process. Vygotsky considers cognitive development as a process of qualitative change. He focuses on changes that occur when elementary mental functions, such as involuntary memory, are transformed into higher mental functions. For Vygotsky, higher mental functions are the result of the transformation of basic cognitive abilities into mental processes that are capable, with the aid of mediational means, of devising and carrying out conscious, goal-directed actions. To this end, he concentrated on changes in the mediational means that an individual use to understand and act upon the world. Social phenomena are instrumental in this process and Vygotsky was interested in a range of mediational means, both symbolic and material, including language, mathematics, mnemonic devices, artistic symbols and literacy.

Similarly, Vygotsky (1978) proposes that cognitive development is a product of one's social and cultural experience. He sees social interaction, in particular, as a critical force in intellectual development. By interacting with others, children gradually learn to function intellectually as individuals. Vygotsky defines the sociocultural environment of cognitive development broadly, including social interaction, the values and practices of one's culture, and the tools and symbols, including language that people use to support and extend thinking. Through these mechanisms, Vygotsky claims that children learn through relevant experiences provided in their culture and young children's involvement with these elements in their surrounding environment is therefore critical to their growth of cognitive capacities.

The framework which enables the child to progress cognitively is called 'scaffolding' by Jerome Bruner, a pioneer in childhood learning (Bruner, 1983). The teacher or adult, as described in the research findings in Chapters 4 and 5, provides the child with help through demonstrations, explanations, questioning and corrections (see, for example, the stories of the earthworm and puddles in Chapter 4). The child moves from the lower limit of knowledge to a higher level through this process. Language and communication are key parts of the learning process, including language in play. In fact Bruner argues that "The main characteristic of play ... is not its content, but its mode. Play is an approach to action, not a form of activity". (Bruner, in Moyles, 1989; see also Macleod-Brudenell and Kay, *ibid*: 192). We can see here the significance of what I have adopted as an action-learning approach. In the 'playing' stories of this thesis I intend to illustrate how the research showed children learn to develop as individuals, as members of their community and how they exercise choice over their actions as 'critical thinkers' at their own level.

Erikson's view of critical thinking

Noted scholars have pointed to many dimensions of critical thinking that emerge in different contexts, particularly in educational settings. A major contributor to these issues and themes is Erik Erikson, who proposed a lifespan model of development, taking in five stages up to the age of 18 years and three further stages beyond, well into adulthood. Erikson suggests that there is still plenty of room for continued growth and development throughout one's life. Erikson puts a great deal of emphasis on the adolescent period, feeling it was a crucial stage for developing a person's identity. According to Erikson, for example, (Kohlberg, 1973), children in preschool exhibit the early stages of critical thinking in a stage he calls 'initiative versus guilt'. Erikson's (1993), theory of psychosocial development has eight distinct stages and he assumes that a crisis occurs at each stage of development. For Erikson, these crises are of a psychosocial nature because they involve the psychological needs of the individual conflicting with the needs of society (i.e. social needs and requirements). According to the theory, successful completion of each stage results in a healthy personality and the acquisition of basic virtues. Basic virtues are

characteristic strengths, which the ego can use to resolve subsequent crises. Failure to successfully complete a stage can result in a reduced ability to complete further stages and therefore a more unhealthy personality and sense of self can emerge. These stages, however, can be resolved successfully later. Such an approach I would argue has a high degree of compatibility with the notion of critical thinking by young children which has been outlined so far in this thesis.

An example of this approach might be where 'initiative' is considered to be a positive response to the world's challenges, characterized by taking on responsibilities, learning new skills and feeling purposeful. In this stage, children begin to plan activities, make up games, and initiate activities with others. If given this opportunity, they develop a sense of initiative and feel secure in their ability to lead others and make decisions. In this way, the child's social world is expanded and he/she becomes more interested in other children. This enables them to develop self-awareness (Bingham and Stryker, 1995) as a positive social and psychological attribute. Such an approach I would argue has a high degree of compatibility with the notion of critical thinking by young children which has been outlined so far in this thesis.

Principles of education for teaching critical thinking

Having considered some of the key insights of childhood development which may be said to underpin thinking about critical thinking in younger learners we must turn to the matter of teaching such attributes. Educational theorists point to a number of principles necessary for the teaching of critical thinking (Benham (1995); Michelle (2008); Ennis, 1996; Darmoni and Levy, 2007). These principles appear to align well with the predominant definitions and theories of the field and include:

- encouragement: scholars emphasize the necessity of enabling children to ask challenging and critical questions. Examples include questions based on a text; an evaluation of one's point of view to make a specific claim; an examination of contradictory claims; and an analysis of other, more reliable information
- fostering necessary abilities for critical thinking: this includes the ability to analyse arguments, the ability to provide justification or support for a statement, the ability to ask questions, the ability to design and implement in accordance with previous processes and the ability to assess the reliability of information sources and accuracy of an observation. For teachers this requires creating teaching materials that develop these tools in a variety of learning areas (Benham (1995) and Michelle (2008))
- presenting a variety of opinions: this includes reading literature and history from different angles, inviting guests with diverse views, and encouraging critical discourse around a topic or article
- social interactions that enable cognitive growth: there is an entire branch of cognitive theory devoted to social learning.

These scholars focus on the ways in which people learn through observation. By seeing someone model a task, succeed or fail during an attempt, and get rewarded or punished for a behaviour, learners make decisions about what they will do - and how to do it. Teachers should then provide modelling in both academic and social situations. One effective strategy is 'thinking aloud' where the teacher talks about his or her thought-processes when demonstrating a skill requiring decision-making. This allows students a window into the types of questions they should ask themselves when pursuing the same task. It is important to note that from the constructivist perspective, students should also have many opportunities to share or engage with Piaget's framework for cognitive development and stage phase theory. Piaget (1954) is often credited with opening the door to studies of modern cognitive development. His multi-faceted research in developmental psychology and genetic epistemology (1972) (the study of the formation and meaning of knowledge) was driven by his curiosity about how knowledge grows and develops in the human mind. His fundamental proposition, that the growth of knowledge is a progressive pattern of increasingly sophisticated stages of mental faculty, continues to serve as a keystone of cognitive development theory (Brudenell and Kay, 2008: 134-142; Bjorkland, 2000). The following diagram attempts to outline and summarise the contributions to critical thinking provided by a selection of seminal thinkers which can be utilised in the study of kindergarten children within the scope of this study.

Table 2 : Synopsis 2 (Sources and models for critical thinking)

Key Themes	author/ source	key concepts and children's capacities	children's learning process and experiences	outcomes of critical thinking and children's capacities
Constructivist approaches	Piaget	<ul style="list-style-type: none"> - children act on the world - internalised mental world - stages of development - constructivism approach schemata 	<ul style="list-style-type: none"> - developmental adaption - maturation - assimilation - accommodation - equilibration - on-going problems and experience - arriving at solutions 	<ul style="list-style-type: none"> - problem-solving - performance and identification - competencies and capacities - multi-tasking - distributed cognition and skills - metacognition
	Vygotsky Bruner	<ul style="list-style-type: none"> - social construction of individual psychologies - mediation(s), material/symbolic - scaffolding - language and communications 	<ul style="list-style-type: none"> - linguistic mediation - verbalising knowledge - modelling for the child - guided discovery 	<ul style="list-style-type: none"> - transmedia navigation - networking - context and cognition inseparable - speech as verbal reasoning
	Dewey, Montessori, Froebel, Brown, Jenkins, Paul, Ennis, Bowlby	<ul style="list-style-type: none"> - love, empathy, feeling, belonging - creativity - attachment - metacognition - identity formation 	<ul style="list-style-type: none"> - play - presenting arguments 	<ul style="list-style-type: none"> - play - performance - tolerance - participation - judgement - engagement
Cognitive and skills dimensions	De Bono	<ul style="list-style-type: none"> - 6 'hats' –facts, feelings, logic, positivism, creativity, thinking processes 	<ul style="list-style-type: none"> - problem solving - decision making - research - understanding data - asking questions - critical approach 	<ul style="list-style-type: none"> - democratic ethos and engagement, - critical awareness, - self-development, - reflective thinking - deductive reasoning
	Socio- cognitive and socio-cultural approaches	Thornton	<ul style="list-style-type: none"> - Vision - communication 	<ul style="list-style-type: none"> - set goals and objectives
Bloom's Taxonomy		<ul style="list-style-type: none"> - knowledge - comprehension - application - analysis - synthesis - evaluation 	<ul style="list-style-type: none"> - behaviour(s) - classifications - abstractions 	<ul style="list-style-type: none"> - task performance - judgement - understanding prose and information - clarity and accuracy
	Erikson	<ul style="list-style-type: none"> planning activities, make up games, initiate activities with others 	<ul style="list-style-type: none"> develop a sense of initiative, feel secure in their ability to lead others, make decisions 	<ul style="list-style-type: none"> develop self-awareness, as a positive social and psychological attribute

Key Themes	author/ source	key concepts and children's capacities	children's learning process and experiences	outcomes of critical thinking and children's capacities
Cultural and environmental factors	Dwairy, Suleeman	<ul style="list-style-type: none"> - identities and culture - guidance - encouragement 	<ul style="list-style-type: none"> - awareness of the 'other' - crossing boundaries - belonging - promotion 	<ul style="list-style-type: none"> - self-awareness - confidence - positive habits
Emotional and social perspectives	Santrock	<ul style="list-style-type: none"> - questioning - show curiosity - look critically at images 	<ul style="list-style-type: none"> - using art education 	<ul style="list-style-type: none"> - art motivates children minds in powerful ways of thinking - foster understanding
	Donaldson	<ul style="list-style-type: none"> - deductive reasoning - sensitive to the context of targeted tasks 	<ul style="list-style-type: none"> - acquire information - selectively apply critical thinking under certain conditions 	<ul style="list-style-type: none"> - formulating new ideas and conclusions
	Woolley and Wellman	<ul style="list-style-type: none"> - appreciate perspectives other than their own 	<ul style="list-style-type: none"> - imagining themselves in another person's place 	<ul style="list-style-type: none"> - take on others' perspectives - increasingly sophisticated - simulation processes
	Astington	<ul style="list-style-type: none"> - mental activity - philosophical perspective 	<ul style="list-style-type: none"> - design - repair - modify - understand accept and attempt to reconcile views on the same subject 	<ul style="list-style-type: none"> - self-correcting - good judgement - responsible thinking - creating meaning for the information - cogent arguments
	Perkins	<ul style="list-style-type: none"> - social experience - questioning 	<ul style="list-style-type: none"> - motivations - thoughtful practice - self-managed 	<ul style="list-style-type: none"> - search and ask questions confidently
	Lipman	developing theories of mind	<ul style="list-style-type: none"> - simulations 	ideas

2.11 Independent and self-directed learning

As the objectives of this study have suggested an important aspect of critical thinking involves the conceptualisation (thinking about), recognition of and exploration and development of what I have referred to as personal responsibility. Teare (2013) cited in Zuber- Skerritt and Tear, (2013), refers to a very similar concept as 'personal viability' as a key element in a person's learning journey. When one begins to review the available literature on personal responsibility in education, it becomes apparent that there is gap in the published sources concerning this topic. Therefore, these concepts can be best explored more fully in the context and culture of self-directed learning in the kindergarten. It may also help the argument developed here to bear in mind the fact that there is little published and researched on personal responsibility in the Arab world of education and pedagogy.

Although there is a lack of literature on personal responsibility in education in peer-reviewed or scholarly work; however, some practitioners have been able to develop a foundation for its development in an educational environment. For example, the American school district, Pleasant Valley (Study Skills, 2014), defines personal responsibility as the acceptance of responsibility for one's own learning, as well as the acceptance of blame for failure or mistakes and the development of self- advocacy skills for interacting with other learners and adults. This definition aligns well with the literature on critical thinking.

Whilst there is little literature available on theories of personal responsibility in educational settings and the literature lacks consensus as to the definition of personal responsibility, the benefits of cultivating personal responsibility in children are documented and agreed upon in some of the literature. Benham (1995) and Michelle (2008) for example, state that children who display initiative, intrinsic motivation and personal responsibility achieve particular academic success.

Beaudoin (2012) claims that one can empower children by instilling in them the responsibility for learning. This view is reflected in the earliest works of early childhood education that continue to serve as a foundation for research today. For example, the belief that children who think they are personally responsible for their successes spend more time on homework, try longer to solve complex problems, and get higher grades than children who think events are beyond their personal control, has been documented for decades (Franklin, 1963; McGhee and Crandall, 1968).

Practitioners note that the effects of personal responsibility are evident in children's performance in other domains. For example, the Québec government's paper on teaching personal responsibility in physical education names benefits such as positive attitudes in children's relationships with others; something which enables them to adapt to the requirements of modern life (Beaudoin, 2012). The Quebec paper goes on to state that

the responsible behaviours and attitudes learned and experienced through school-based programs may be transferred to other settings outside of the gym or the school, such as the home and in the community.

The benefits of personal responsibility are particularly evident when it comes to the acquisition of learning skills. Since it has been demonstrated that children who develop a sense of personal responsibility obtain better academic results, it stands to reason that personal responsibility will affect how a child develops his or her learning skills. Development of skills, according to Berk (2006), is considered one of the main goals of any profession; skills that are the cornerstones of an individual's ability to think and function in society. Berk argues that the development of skills occurs by designing teaching methods that address the development of skills combined with various learning content, and through the use of experiential learning environments that encourage self-study, the carrying out of research and problem- solving using tools and equipment. According to Wood and Attfield (2005), it should be noted that the structured development of skills that will become inherent in the individual is a complex process requiring many years of teaching and learning. Skill involves a highly complex set of capacities and intelligence(s) and is key to the development of critical thinking abilities and performance (Crawford, 2015). Therefore, the delivery of other subjects in addition to critical thinking skills, the compounding effect of education at all age levels and the cognitive and motor abilities of the children have a complex relationship and it can be difficult to isolate a single element or phenomenon in a child's development. This was itself an issue in the identification of 'granular' and specific attributes of critical thinking skills mentioned earlier in this thesis (Beit-Marom, 2009).

Critical thinking : setting personal responsibility in the context of self-directed learning

The idea of critical thinking for young children at the present time is relatively new and untested in the field. There is a longer tradition and history of research and publication on child development and theories of learning. I hope that I was able to give recognition to this tradition in my literature review chapter in this thesis. These traditions generated for this project a set of concepts and propositions which were put together to form a set of explanatory 'frameworks' which it was hoped would be understood by the reader through a series of 'synopses'. These are diagrams showing complicated ideas and relationships and brought together a wide range of theoretical approaches and methodological concerns focussed primarily on leadership issues in a Palestinian kindergarten and the importance of developing critical thinking for young Palestinian learners (see the full list of synopses covering these matters- 'List of Tables' at p.6 above). The social, cultural and educational contexts suggest that there is, however, a need to develop new thinking if successful futures are to be built for the young learners who were the subjects , in addition to critical thinking skills, of this thesis and the objects of my study and practice. There is little published in this field relating to the Palestinian context of independent or self-directed learning.

My reading on themes of personal responsibility and personal viability as defined, for example, by Conrad and Hedin (1985) and Teare (2013) respectively and used in this thesis, led me to explore what is termed in other research work as self-directed learning (see Biemillar and Meichenbaum, 1992 cited in Anderson et al, 2003 and Higgs, 1993). We can also observe the use of terms used by other authors to explore similar themes to mine in this thesis. Self-regulation, independent learning, learning autonomy and even autodidacticism are terms in use to explore and analyse what I understand to be forms of critical thinking for kindergarten age children. The concerns and objectives around which ideas of personal responsibility and viability have been developed in the project can perhaps be explained as being compatible with self-directed learning. Such an approach argues that the learner's behaviour involves the learner her/him-self taking responsibility for her or his own learning. This involves both the learning processes and the learning outcomes of the approach. Both of these features are anticipated and explored in the research findings of this thesis (and for a summary form of these findings see Table 7, p.135 – 'Process of learning for critical thinking' and 'Outcomes and actual critical thinking techniques'). The definition of self-directed learning which best informs the thinking within this project comes from Higgs and argues the following:

“...the learner is characterised by responsibility for and critical awareness of, his or her own learning process and outcome, a high level of autonomy in performing learning activities and solving problems associated with the learning task, active input to decision-making regarding the learning task, the use of the teacher as a resource person and learner interdependence with teacher and co-learners” (Higgs, 1993: 122).

Such learning involving independent and self-directed effort within a collectivist and supportive environment in a Palestinian village kindergarten was the focus of my thesis. Naturally there was a parallel focus on pedagogy, which is also a focus on teaching and the facilitation of learning as they work together. The learning experiences and processes I both sponsored as a teacher and encouraged as a facilitator of others' learning were intimately connected both in terms of my methods as a teacher practitioner and as a member of the community. The community 'encodes' and serves to create much of the meaning in Palestinian daily life in what is a traditional and still highly agricultural village. Community and the values and practices which are part of everyday life are pervasive and run deep for many people. The village of Deir Hanna, existing in what is now northern Israel, lives out its life within a social and cultural zone and Dwairy's work which has been cited in this thesis articulates much of this context. Shamsoum (2015) has also written on this matter with specific reference to the nearby Palestinian community in Nazareth and is used as an important source for these matters in my thesis.

It is this context which has shaped my responses to cultural orthodoxy and some of the dominant forms of collective and authoritarian traditions. Independent and self-affirming critical thinking has not been a noted characteristic of Palestinian kindergartens in the past and I wished to introduce change and progress in this regard. I believed this was a route to better learning and to improved results for children. This in turn might be part of an attempt to produce an improved social result which would of course be of benefit to the whole community. I did not of course wish to undermine in any way the positive features of a close-knit and supportive, collectivist community. However, I did see challenges in the task I had set myself.

Two examples are presented to illustrate this theme. One of the values Palestinian society encourages in its citizens is 'family honour' and this is often seen to be reflected in the virtue of its women. Modesty and chastity among women are key values. However, this notion has changed over time (Dwairy, 2006). In traditional Muslim society, the woman is committed to her family (before marriage), and then to her husband and children. Her duty is to ensure cleanliness at home, to raise children, to cook food, and so on. But most important is her duty to take care of her honour. Honour is the most important thing a woman has, because her honour is also her family's honour. If she harms her honour, then family honour is also harmed. The contemporary significance of this can be seen, for example, in that six women in the Palestinian society in Israel were the victims of honour killing in (Bakri, 2017).

In order to preserve her dignity, a woman must behave according to the accepted norms of society: she should be humble, dress appropriately and not expose her body, not gossip and cry out loud, and she must not oppose her father or husband. This is a situation which surely demands new laws to protect women from family violence after the recent spate of deaths.

However, there is also surely a task facing educators? Learning to judge appropriately is one of the critical thinking skills and gives a person a chance to be part of the wider world and it is arguably as important as literacy and numeracy. Therefore, it is essential to create a more 'critical thinking' reality and set of practices in the context of these traditional values. It is critical thinking skills which can develop and implement a state of mind of not accepting negative situations such as those referred to above and instead can help and direct the individual who may be trying to resolve or improve these situations. For this reason alone, I believe learning critical thinking in early childhood is most important for later life. I think it could be a foundation for a healthy 'community psychology' which can draw on the best traditional collective values and on the need, we have to challenge and change the things that prevent our personal and social growth.

The second example I wish to give is about young critical thinkers who are not only influenced by complex and more mature perceptions and relationships but also by the skills that the child acquires under the guidance of her/his family and the educational environment. For example, she/he learns to say thank you and that she/he must wait in line. These basic guidelines expand over time and through them the critical thinker acquires enhanced social skills. These can include a range of abilities from basic skills to resolving conflicts with peers including the ability to share possessions and see the other's point of view. It is important to stress that learning does not only occur only through direct instruction (for example, it is forbidden to hit anybody), but also through imitation and observation; there is a hidden curriculum of often unstated values and behaviour. For example, if we do not permit the child to lie, however we tell him to say that he is younger than his age in order to get a discount at the play room, it is likely that he will deduce that at times it is permitted to lie.

The influence of the immediate environment constitutes a critical factor not only in the development of social skills, but it also wields noticeable influence on the social-cultural system where the child grows up. The child is alert to the behaviour of adults in the street, on television and in the education system and internalizes codes of conduct. In addition, the child who has acquired at home proper and appropriate social skills may have difficulty with their implementation when the group does not allow him to regularly exercise and experience them. For example, a child with normal social abilities who has experienced discrimination, due to his special need or other reasons, may suffer ostracism which will make it difficult for him to develop social skills and a sense of trust and closeness with his peers.

These concerns about the individual as a social being led me to ask how can we explore more fully the culture and context of self-directed learning in this situation of a Palestinian kindergarten? One response to this difficult question is to point to some of the areas explored and to the findings of the project which focused on a range of abilities which are involved in becoming a self-regulating and self-directed learner. Naturally this also involves considering the types of teaching and leadership used in the kindergarten and associated with the attempt to introduce critical thinking. The focus for explanation requires therefore giving attention to the following themes and issues which have been summarised in bullet outline form below:

- **The development of cognitive abilities especially metacognition** (see for example, Anderson et al, 2003 and page 54 of the thesis under 'constructivist approaches outcomes' which includes references to metacognition and distributed cognition). This category of learning and its processes and pedagogies were viewed as important for the demonstration of critical thinking skills in young children. Without these

attributes, it is argued, the development of self-directed and ‘critical’ learning would be significantly restricted. Metacognition refers to a complex array of skills (referred to as the ‘generic’ critical skills in the thesis) and understandings which are part of children’s own cognitive processing and their own knowledge of thinking and learning. Critical thinking skills at the personal level involve the child in achieving tasks and strategies to manage their thought processes but there is as yet little evidence on how generic and metacognitive skills are related to the specific elements of a teaching programme (Anderson et al 2003 , p.3). The thesis itself notes the difficulty in separating generic and granular critical thinking skills . This thesis had as one of its objectives the exploration of personal development viewed through a lens, as it were, of the notions of responsibility and viability as outlined earlier and which can be claimed as elements which contribute to our understanding independent learning and / or self- directed learning . The research attempted to explore , for example , how the parents ’ attitudes to a new version of the child at the centre of concern could be modified and still remain within the bounds of acceptability in a culturally conservative community where children are still expected to be seen rather than heard. The parents, for example, reported through the interviews that:

“Today, I am aware that I must give him personal attention and a lot of warmth, love (and offer a) personal example, which raise his natural inquisitiveness and desire to learn, to lead and think critically. This enables him to progress to become a more secure person which is good for him and his environment.” (Appendix 2:6 Interview 6, Q: 6)

One mother stated: “I was able to conclude that I had to give the child an aura that is comfortable, relaxed and not anxious, but enjoyable.” (Appendix 2:5 Interview 5, Q:1) These examples show, I believe, that a sense of self and sense of responsibility for learning located in the child was developed with the active involvement of the parents. Forming and developing relationships and being inquisitive go together. This was not an expression of hyper-individualisation which we can see in some aspects of western culture. It was, I believe, an adoption by the parents to an opportunity for their children to grow and develop beyond some of the restrictions of a traditional culture.

- **The development of strategies that, as Hey and Oates (2014:80) argue, ...”place(s) the child and adult as equals in their participation”**. The thesis in fact attempted to argue the case for putting the child at the centre of concern and attention and as Graves has put the case , and reminds us ...”formal education for all children is a relatively recent phenomenon in the western worldBut...in schools it had generally been accepted in the second half of the 20th century that no education worth its name could take place without the active involvement of the pupil, hence for example, the

emphasis on enquiry learning...” (Graves, 1993:2). Once again we can see here the importance of learning which is self-generated and draws on the belief in an active and self-directed learner at the centre of the learning process. An example from the research data in the thesis showed how a mother demonstrated an aspect aspect of the transformation through her statement: “It is sufficient for me that I have learned how to relate to my daughter, to educate her, to teach her, to mediate for her instead of being responsible for all her actions. I have learned how to allow her independence and impose upon her responsibility for her actions and words.” (Appendix 2:5 Interview 5, Q:5) I feel that the parent here demonstrated the idea that the disposition to ask questions is as important as acquiring ‘knowledge’. Young children respond well when they feel they can be heard.

- **Viewing the children as products of a socio-cultural environment so that self-awareness and positive psychological attributes can be fostered** (see the thesis at Table 2 p.54 for the outcomes of ‘Socio-cognitive and socio-cultural approaches’ and Hey and Oates, 2014:82). Here I believe we can see how this project and its research elements indicated that positive and affirmative support at a personal level can help personal and emotional growth for the young child. This in its turn can help the growth of the ‘personal capital’ which may underpin the acquisition of critical thinking skills within the type of collectivist culture described by Dwairy as characterising Palestinian social and psychological environments. The children needed a conceptual base so that ‘facts’ and science could be understood and used to explore their environment. As a basis for later life and learning what could be more important for the young child?
- **Giving attention to ideas of freedom and control in self-directed learning which involved negotiating empirical learning programmes with parents and the community and the cultural contexts of learning.** The project tried to promote self-directed learning behaviours so that future learning and behaviour would be ‘liberating’ in the sense defined by Paulo Freire and Ira Shor (1987). This perspective is concerned with helping learners to be more free and to achieve social liberation through the facilitation of self-actualised individuals who can achieve critical awareness. The project argues that this can be started at an early stage in the child’s development. It followed Freire’s idea that communities themselves need to be involved in educational transformations. The following statement is an example of how a parent perceived aspects of self-directed learning and critical thinking and began to be involved in educational change:

“You did not see how he dealt with the game, how he tried, how he assembled it, how he concentrated, how he talked to himself and how he thought, it was truly amazing. It is not only I who says these things, but all of us in the neighbourhood and those associated with him point out the differences between him and his peers. Due to my son’s advances, many neighbours contacted the council and asked to have their

children enrolled in your kindergarten” (Appendix 2:1 Interview 1, Q:1)

- **Seeing critical thinking for kindergarten children in its Palestinian context as a matter involving both freedom and control.** Higgs (1993), though using her case study in tertiary education, has put this concern succinctly as follows.... “The optimal state for learning involves a balance of freedom and control in the learning programme” (Higgs, *ibid*: 123). A sense of freedom - what I termed ‘finding the spark’ in the child requires a progressive and questioning curriculum and a teaching method which privileges the child’s own evolving capacities and awareness. What Higgs calls “freedom in learning...” can be equated with responsible learner self-direction and that control, meaning the direction and management of a learning programme, can be the role of both teacher and learner. This point is argued in this thesis with regard to the concept of personal responsibility and what Teare (2013) calls ‘personal viability’. In both of these concepts we can find an emphasis on self-directed discovery, a valuing of personal discovery in learning and learning how to solve problems, encouragement for experimentation, value put on encouragement and support, importance given to self-reliance, the recognition of significant others, care shown for mutual respect and tolerance for differences. These abilities and the values they are thought to carry help the development of a viable sense of ‘self’ for young children within social identities which can be problematical in traditional cultures facing the challenge of modernism. The Palestinian kindergarten at the heart of the project faced such a challenge.
- **The consideration of the culture and context of self-directed learning, which enables us to employ and hopefully critically evaluate notions of personal responsibility and viability.** This is significant because we are dealing with different theories about learning yet we know that learning is a process of active engagement with new forms of knowledge and is an encounter with a social environment and with a developing sense of self for the child (Rogers, C.R., 1969, cited in Higgs, 1993). The objective, whatever the emphasis any specific learning theory or approach takes, must surely be to help make the learners, the children in this particular narrative, “free in their own learning” (Rogers, A., 1992:75). Critical thinking skills appears to be one significant avenue through which progress to such a goal can be made in the early years. Children will grow up with a need to assess the truth of what they encounter in life and I believe we cannot start too early in life and in learning to equip them for this challenge. The explorations and findings of this thesis show, I believe, that there can be little doubt that it is worth the effort to explore such a vital theme.

To summarise, the current chapter introduced the notion of the critical thinking domain, meaning the intellectually disciplined process of actively and skillfully conceptualizing, applying, analysing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. Although frequently associated with growth and development

in adolescence and even adult learning, it has been argued that they are also relevant to the earlier childhood phases. These skills are of course highly valued in a democratic society. Palestinian children who grow up in a traditional society, it has been argued, need to be educated for a more broad and critical mode of thinking in order to adapt themselves to democracy and the challenges of modernity. This aspect of the learning challenges facing Palestinian children is one of the most important goals for kindergarten teachers in my view. A summary of key themes and authors who have helped conceptualise the growth of personal skills and personal viability/responsibility follows:

Table 3 : Sources and models for self-directed learning contexts

Key themes	Author/source	Key concepts and children's capacities	The child's learning process and experience	Indicators of critical thinking and children's capacities
-Self-directed learning	Zuber-Skerritt and Teare ,Conrad and Hedin	- personal viability	- experiential learning	- high self-esteem
-Personal responsibility and viability	Benham, Beaudoin Berk	- responsibility for learning	- self-guidance and control	- personal responsibility and viability
-Culture and contexts		- efficacy and making a difference	- spend more time on homework	- collective action
			- try longer to solve complex problems	- academic success

Chapter 2 has attempted to describe and present a perspective on educational leadership that can be related to the contexts of the Palestinian kindergarten. Types and theories of leadership have been explored and reviewed, not in an abstract way but in relation to the perceived professional and pedagogical needs of the kindergarten, which was the object of study and professional development. The ultimate object of study and of 'transformation' was of course the kindergarten child and it is the child who has been placed at the centre of the concern for critical thinking. This chapter also attempted to summarize a range of thought and analysis on the content and scope of critical thinking that it was intended would give shape and focus to the work-based pedagogic project, which was at the heart of this study. Four key themes were identified which run as a leitmotiv through the project and these concern the abilities and capacities of children which can be enhanced through the development of critical thinking. These elements embrace cognitive, emotional, social/cultural and personal viability concerns and these are central to the understanding of the project. The elements of critical thinking have been outlined both in conceptual terms and in respect of a real and 'problematic 'context of Palestinian education in the state of Israel. These were the framing elements of the empirical research which is described in the following chapter and which gave meaning and a lived context to the research questions and findings.

Chapter 3 : Research objectives and methods

3.1 The research field and research questions at Deir-Hanna Kindergarten

The kindergarten, which was the focus of this research, was established in 2010 and is situated in a rural area in the north of the country. The facilities and classroom resources including games were still new at the time of the study. There were 28 children in the kindergarten aged 3-5 years, ten of whom were girls and the rest of whom were boys. This kindergarten was one of 12 municipal kindergartens for pre-school age children in the village. The majority of the mothers in the village do not work but are homemakers (the average family has 3-4 children). Most of the fathers work outside of the village while some work in it. The kindergarten is located at the edge of the village, is surrounded by fields and olive trees and is green all year round. The parents of the children are afforded the opportunity to choose their preferred kindergarten. The local municipal council either confirms their choice or assigns the child to another kindergarten, balancing parent demand with the available kindergarten space in the village.

Philosophical framework

According to one commentator, the puzzling out of a research strategy can occupy a large part of a researcher's overall effort (Mason, 2002:18). "Intellectual puzzles, then, will contain different sets of ontological and epistemological assumptions and prescriptions, and will suggest distinctive types of social explanations". This opening section of the current chapter will examine the research approach and philosophy of the work-based project in its specific research phase: the chapter will then explore the methodologies and methods used for data collection; and it will reflect on the process of analysis and the success of the research design in meeting its objectives.

The research was guided by an assumption that 4 levels of understanding and questioning can be identified which are appropriate to this study and its methods of investigation:

- level 1: ontology-meaning how is reality experienced, especially by those in the study
- level 2: epistemology-meaning what counts as knowledge in the study and what is its purpose
- level 3: methodology—meaning how we understand and question data and information as part of the reality under investigation
- level 4: how we can collect appropriate evidence about the reality we are studying.

The aim of this particular research topic is to advance knowledge in curriculum design for the kindergarten phase of education in Palestine/Israel and to contribute to the transfer of knowledge in different contexts and places. The research methods employed in the study are designed to provide data to answer the research questions posed and to capture the reality of the issues and challenges with a view to action and the changing of that reality.

In this sense, the approach can be said to be rooted in an action learning perspective. Critical understanding of curriculum content and the role of the 'leadership teacher' is the focus of the project and the data relates to a case study of a single kindergarten in the village of Deir-Hanna in Israel/ Palestine. The case study embraces the kindergarten, its children, its teachers, its parents and the cultural contexts of a Palestinian village in the state of Israel.

Research objectives

The research philosophy or approach helped to define the research objectives which were shaped by an action learning concept of kindergarten leadership which included:

- developing new concepts of personal responsibility, critical thinking, and awareness in kindergarten-age children. It is proposed that the activities that were investigated support this leadership model because they will be, to some verifiable degree, promoted by it. This will in turn, indicate how the model might be validated for its own context and beyond
- developing a new approach to parenting of kindergarten-age children that fosters critical thinking and personal responsibility. Improvements in parenting skills, which mirror the leadership model, will help to validate it through the observed changes in children's sense of personal responsibility and critical thinking.

Research questions

The research questions addressed in this project are as follows:

- what kind of educational leadership characteristics and actions help to facilitate the development the critical thinking skills of kindergarten children, aged 3-5 years?
- what kind of educational leadership characteristics and actions help to facilitate the development of personal responsibility among kindergarten children aged 3-5 years?
- what are the characteristics of critical thinking that develop at a young age?
- what are the tools and skills of independent learning that kindergarten children will need to use in order to develop their critical thinking skills?
- how can parents influence the child's development of personal responsibility and critical thinking skills?

These questions are answered through the development of a new approach to educational leadership for its context in Palestinian education within the state of Israel. This approach, applied in both the educational and home setting, is validated by examining its effects and impact on the critical thinking skills and levels of personal responsibility in the kindergarten, and in terms of its potential for changing some aspects of learning for young children within and beyond its context in the village in which it took place.

3.2 Research design and data sources

The research strategy used in this study was initially inductive, so that a set of concepts were identified around the notion of leadership applied to the kindergarten phase of education. These concepts were critically appraised in the theoretical background of the thesis, focussing on notions of critical thinking, and a distillation or condensation of accounts that could be usefully applied to the empirical work was outlined (Blaikie, 2007). An analytical framework was arrived at by combining leadership themes with a synoptic account of what comprises critical thinking skills into a framework diagram. (See Table 1 and Table 2). Such an approach has been termed as ‘critical realism’ and is characteristic of the research strategy (Blaikie, *ibid*) in this thesis.

Research tools

Each method of research has its own strengths and weaknesses and the latter must be avoided in order to obtain credible data. A method which uses qualitative methodology usually relies on small numbers of participants not randomly chosen, conducts its inquiry in the field and usually does so over a long period. In order to evaluate the validity of the data collected researchers will use a number of data collection methods, each providing a different angle from which to view the field. Data collected with different research tools can be crosschecked providing the researcher with a good benchmark for validity, as identical or similar themes emerge from the data provided by different research tools. This approach, using more than a single method of collecting data, demonstrates higher internal validity as opposed to relying on only one research tool (Cohen et al, 2011; McNiff and Whitehead, 2005).

The whole project took place from January 2009 until January 2017. The research tools chosen for this research were semi-structured interviews, a research diary, critically assessed lesson plans and protocols, and children’s portfolios. The data for each method was collected over the course of one academic year and was assessed and continuously evaluated over the length of the project. As the research progressed, the chosen methods were continuously re- assessed in order to determine their efficacy and to make changes if necessary. The timing and the phasing of the research in relation to the delivery of the whole work-related project can be seen at Figure 4 on page 19 above. Cross-checking the information from interviews, lesson plans, portfolio analyses and the researcher’s diary enabled a holistic view of the development of the learning processes to take place, based hopefully on a critical self-awareness through processes of self-reflection. The raw data from each was reduced into categories and sub-categories and by paying attention to the frequency and the intensity of the processes and their characteristics, a range of empirical and analytical findings was produced. The internal validity of these findings was evaluated by using the technique of triangulation (McNiff and Whitehead, 2005).

The data was analysed as it was collected. The overlap between the data collection phase and the analysis phase is a common characteristic of qualitative research in which data analysis is performed while it is collected and ends only after the completion of the research. Then, the orientation of theories and the related data is connected to the conceptual aspects informing the research for a final analysis (Sabar, et al, 2007) which is reported on and explicated in Chapters 4 and 5 of this thesis.

A vitally important research tool for this research was the use of a research diary. Here, the researcher described how she came to make decisions and what prompted her choice of actions. In this way, the researcher tried to present a precise and credible description of the situations in which she found herself. Likewise, this diary was composed using qualitative data from the field such as gained from interviews, observations and lesson protocols containing open questions and approaches. In the research diary, she noted her feelings, reflections, the meanings that crystallized and research notes on events which were part of the project, after these events. The research diary was itself a form of synopsis for information, analysis and understandings which emerged throughout the whole project.

Table 4 : Sources and tools for gathering data and information

The following diagram summarises the main sources of information and tools for gathering Information:

Source of information/type of activity	Respondents and sources
A research diary-duration 20 months/485 pages	Children, adults in the community, parents, professional colleagues and self
Children's portfolios-whole class (x2)	Children Professionals and external experts
6 in-depth interviews-4 women;2 men (transcripts and translations)	Parents Parental contact twice per day
Lesson plans and curriculum development 15 trial lessons involving 3 staff-over time	Children Professional colleagues Protocols
Longitudinal research notes-158 pages	Children
Documents relating to the school-multiple/ varied	Palestinian/Israeli Ministry of Education/Culture Literary sources/publications Children
Reflections and self-development	Researcher, colleagues

Initial processes

In this section, I will elaborate on lesson plans and the main practices that were conducted in order to teach the children critical thinking. The curricular and pedagogical themes are

dealt with first in this section because there was of course a pre-existing reality before the research decisions were taken and methods adopted. The already existing curriculum was addressed through the use of thinkers in the field of children's learning and development. The pedagogical input was constant throughout the period of the work-based project and acted as an underpinning for the other research activities such as the production of the children's portfolios, the construction of the research diary and the use of reflection to inform on-going practice. Bloom's (1956) taxonomy of critical thinking skills was initially operationalised for the kindergarten children who were 3 to 5 years of age. There are six levels in Bloom's taxonomy requiring increasing levels of abstract thinking: knowledge, comprehension, application, analysis, synthesis and evaluation. For high school children and adults, the acquisition of critical thinking skills was found to be transformative, to significantly improve scholastic achievement and to contribute to the school climate (Bloom, 1956: 23-41). Although Bloom's taxonomy was used initially, a range of thinkers who had published on the cognitive, emotional and personal responsibility themes were also used to help frame the research activity and the practical work in the kindergarten classroom.

All the trial lessons were delivered for 8 weeks. Some 15 lessons were produced and developed for this activity. The following criteria were adopted to analyse the lesson plans used;

Knowledge : Children were asked about the names of a story's heroes and events described in the story in their right order.

Comprehension : Children were asked to describe and discuss the facts presented by the story. This involved enlarging on the text using the book's illustrations, comparing different sites mentioned in the book such as the differences between the hero's house and the house of his grandparents, or that of his neighbours.

Application : Children were asked to use what they had learned from the story and apply newly gained knowledge to solve real problems in their own household or problems they had heard about elsewhere. In this way they illustrate and show the problems they have in mind and explain how their life would be improved if a solution could be found.

Analysis : Children were asked to go beyond the facts presented by the story. They were asked to speculate about the motivation of the heroes, they were asked to investigate, infer and explain the actions of the story's characters.

Synthesis : Children were asked to use existing facts from the stories the teacher read to them and create a new story, change the ending or use their own name as they retold the story.

Children were asked to draw the story, the houses the story's heroes live in, and imagine details not mentioned in the story and more.

Evaluation : Children were asked to select and judge the actions of the story's heroes. They were thus asked to debate decisions reached by the heroes and recommend alternatives. Those listening to the debate had to evaluate the debaters on a set of agreed criteria.

The Children : Children were told repeatedly that they had complete responsibility over their portfolio and that they could remove and replace items from their portfolio if they felt they could improve the item.

Triangulation : In order to synthesize the data derived from the interviews, the research diary, the children's portfolios and the classroom assignments, the method of triangulation was used. Triangulation is particularly suited to the use of qualitative studies, as it allows the bringing together of a range of data from different methodologies (Levy, 2006 cited in Darmoni and Levy, 2007 and Shlasky, 2007). This approach is especially useful for one embarking on action research, as the researcher (or participant) and her environment is a rich source of data and she can provide a critical and reflective account:

“The main instrument of the research is the researcher himself. There is great importance placed on his vision and how he interprets the phenomena. The background of the researcher, his ethnic extraction and his personality are important elements in the study, and contain much subjectivity. Therefore, it is requested of the researcher to base the claims arising from the observations through the use of convincing data, such as descriptions of events, minutes of talks and discussions, quotes, and for further validation to examine information from various data sources, a process called triangulation, in order to ensure clarity and accuracy of the findings.”

(Sabar, Doshnik and Bialik, 2007).

In the qualitative approach chosen for this work-based project, which was action research within the framework of a case study, the researcher attaches importance to the meaning of things in the eyes of the participants, the students, their parents and the researcher herself. The approach therefore focuses on the meanings which the participants attributed to their actions and the actions connected with them. Indeed, by exposing the perceptions of the participants, the researcher is able to expand her understanding of the internal processes that are usually not visible to outside observers.

The facilities : The area of the kindergarten is about 120 square meters and is built according

to an open plan, i.e. the work areas are spread across the room without partitions. There are four additional rooms, which serve as kitchen, bathroom and office space. It is in these offices that the teacher can talk to the parents after a school day to discuss the progress of the child in the kindergarten. The kindergarten is open five days a week and is closed on Friday and Sunday, taking into consideration the local religious customs (Christian and Muslim). A school day runs from 7:30 AM to 14:00 PM.

Research design and pedagogical/curriculum issues

In this section I will describe the regular educational program delivered for kindergarten children and through this section I will show the significant need for critical thinking and new learning and educational procedures.

The learning of pre-schoolers in this program is facilitated through games and social interaction. It is agreed among researchers that the emphasis on games is the means and not the end; the process and not the product (Tuval, 2003). Therefore, the focus of the educational program is on the main pedagogical practices that affect the child's learning environment and includes both the overt and the covert experiences and contexts of the kindergarten as a learning environment. It includes not only the activities, inside and outside which are offered to small children, but also the attitude of the staff towards the children, their relationships with each other, to the parents and all who visit the place (Fisher, et al, 2014).

In kindergartens there exist free activities and targeted activities, exemplifying the concept that there is "learning that is not explicit and learning that is explicit" (Tuval, *ibid*). Some of the activities are conducted individually by the children, while other activities are conducted in groups or pairs. Therefore, this research study created learning opportunities through various activities such as free play, socio-dramatic playing, didactic play, conversation and discussion, creating activities, viewing the processes of nature, physical exercise and using books and computers. This environment, which also serves the purposes of this study also adheres to best practices and the requirements of the Ministry of Education, Culture and Sport's guidelines on teaching techniques (Ministry of Education, 2014; Perkins, 2011 and Guron, 2009).

The framework program for kindergarten children aims to view the child as a whole – thus aiming to provide for all his/her physical, emotional, social and intellectual needs. In addition, it is a multidisciplinary programme whose goal is to encompass all the major areas of learning where the child is expected to absorb and acquire knowledge. It is also about the development in parallel of the cognitive skills the child is required to develop in order to cope effectively with the demands of the programme. In the light of all this, the teacher in the kindergarten must have broad capabilities (Guron, 2009).

Prior to the critical thinking intervention which is the topic of this thesis, the kindergarten children had minimal ability to engage with and demonstrate the main educational values of the institution. One example of this is children displaying homogenous thinking with regard to stories or games. In this kind of situation, no independent thinking emerges and all children think alike; mostly frightened of and by the opinions of teachers and parents. In addition, parents who are mostly loyal to the Palestinian society's values, also educate their children to behave in a manner they think is commensurate with those values. According to Dwairy (1997), in this kind of education, no independent thinking is likely to emerge. To develop more independent thinking it is essential to act differently with children, in talking and playing both in kindergarten and at home. For the teachers of the kindergarten the evidence of their eyes, their ears and their thinking indicated the great need for critical thinking education.

Sampling : The sample was the whole cohort of children. The parents were an opportunity sample of 6 persons and were self-selected volunteers. The focus on the children's outcomes and actions meant that participants were chosen according to the researcher's understanding of the analytical themes that emerged during the project. This is a form of theoretical or purposive sampling. The following paragraphs and sections outline and situate the experience and 'stories' of the participants in this study.

The participants were kindergarten children, parents of the children (both fathers and mothers), a kindergarten assistant and a teacher who specializes in integrating children with learning disabilities. Children with diagnosed learning disabilities received one hour of remedial teaching per week. There was a Supplementary Teacher employed and this teacher comes in once every two weeks for a full day to replace the official kindergarten teacher so that the Head-teacher can participate in the in-service training provided by the Ministry of Education or prepare teaching materials.

Processing of the data : The data collected through the interviews with parents is analysed using content analysis. In the research process the statements were coded and analysed to identify common themes and categories, while the researcher looked for relationships between these themes and categories. The relationships between the themes were established through induction, enabling her to produce new field 'theories' or explanations of what was observed and created. This process is repeated as part of the research procedure until the researcher is satisfied that most of the data is explained (Shkedi, 2003 and 2004).

Following the initial analysis, it became necessary to change the question (Question 1) as changes in the achievements of the children required a more complex analysis. Here it was decided that the analysis of the responses to this question would be done with a different method than that of other open questions. The reason is that this question was essentially

different from other questions in the interviews. This question, in essence, is more comprehensive and its very nature invited the parents to explain the basic assumptions and internal processes that are the basis for their relationship with their children.

The data was assembled from the recorded responses and protocols of the interviews. In the first phase, the answers were read sequentially in an attempt to find similar components within the responses provided by each parent. Thereafter the researcher read the first answer of each parent and looked for common themes across respondents. The school team identified ideas related to educational approaches used in the kindergarten and themes that emerged from the interaction of the children with their parents at home. This enabled the researcher to fully understand the thought process of the parents and their expectations of their work with the children at home and later on in the kindergarten, as their child developed into a critical thinker.

The parents were to receive two training sessions, at the beginning of the school year and half way through the year, following the winter semester break. Communication with parents was to occur twice a day, in the morning when the child was brought to the kindergarten and in the afternoon when they picked up the child. Parents were trained and given a support role. At first parents reported having difficulties with their support role. Most parents and Arab parents in particular, think of their child as being only a little boy or girl and not someone with whom one can listen and have a meaningful discussion. They simply fulfil the child's desires and keep him or her quiet, peaceful and disciplined, so that they do not interfere with adults or ask questions. In short, the child gets everything without clarification or explanation. This is the kind of familial authoritarianism described by Dwairy's work on Palestinian family structures.

In order to ensure that the skills learned in kindergarten take hold in the home, a 'continuing education programme' for parents was established so that the researcher could facilitate the development of the child not only in the kindergarten but also in the thoughts of his/her parents. The researcher planned to ask parents to spend a minimum of 12 minutes with their child every day and talk about his or her experiences in kindergarten that day, and discuss and develop an interest in the child. At the end of the year, the child was to present his/her subject and learning achievements through the portfolio.

The parents : The researcher planned to have contact with the parents twice a day; in the mornings when they brought the child to the kindergarten and in the afternoon when they came to pick the child up at the end of the day. In addition, two sessions were scheduled in order to instruct the parents in what was expected of them during the research period.

Parents were asked to re-design the home climate and adopt a positive communicative approach toward their child. They were asked to forgo punishment as a means of instruction

and rely only on reinforcing good behaviour. Parents were asked to speak with the child about what had happened each day in kindergarten and to express enthusiasm concerning activities that excite their child.

The researcher also planned to ask parents to examine the learning outcomes that their child brought home in his or her bag and show their appreciation for it. In addition, each parent was to be told about a particular success the child had experienced during kindergarten activities and would be asked to celebrate that success with their child and with the extended family.

At night, parents would be asked to read to their children two bedtime stories to be provided by the researcher. These stories were to be used to practice the skills of critical thinking in the kindergarten. If the child expressed the desire to have another story read to them parents were asked to use questions facilitating critical thinking, following the example provided by the stories provided by me.

Kindergarten staff : The staff of the kindergarten includes a teacher's assistant, various therapists that work with children diagnosed with learning disabilities and the alternate kindergarten teacher. These individuals were to be instructed that children were not to be punished under any circumstance.

3.3 Research methods-mapping of approaches Qualitative research

This research uses a qualitative constructivist research philosophy. The chosen approach was a case study paradigm with elements of action research. The reason this methodology was chosen was that the field of study and its properties, the characteristics of the participants (including the researcher herself), the research questions and the research objectives all lend themselves to a qualitative study design in which the researcher can personally engage with each of the elements described and analysed in the study.

The qualitative constructivist research philosophy recognises the complexity of human existence and the need to collect information about holistic systems such as the social system pre-schoolers build in kindergarten and the multi-dimensional development and growth processes that pre-schoolers experience both at school and at home. The qualitative constructivist philosophy recognises the individual differences that each learner brings to kindergarten and his/her special contribution to the reality that the kindergarten unit constructs (Shkedi, 2003 and 2004).

There are two dominant research paradigms of inquiry that were considered in this study (McMillan, and Schumacher, 2006). The scientific paradigm could have been applied, which is based on quantitative, empirical research methods that rely on the statistical analysis of data used to prove or disprove hypotheses whose formulations are based

on existing theories (Mertens, 2005). On the other hand, the humanistic, naturalistic paradigm was also considered. This paradigm studies natural processes and relationships and makes 'subjective' inferences about the theoretical explanation of the development of these processes and relationships.

According to Macleod-Brudenell and Kay (2008), researchers choosing the scientific or positivist approach believe that objective knowledge which is verifiable is discoverable through experimentation in controlled settings, free of the experimenter's influence. In contrast, researchers choosing the naturalistic approach tend to believe that the search for knowledge and perhaps 'truth', should take place in the natural environment, and recognise the value contributed by the researcher to the study's findings. Such an approach tends to argue that versions of the truth are subjective and discoverable as an integral part of the complex, uncontrollable systems that characterise the human experience (Macleod-Brudenell and Kay, 2008 and Sabar Ben-Yehoshua, 2001 cited in Sabar, 2007).

Kindergarten is a complex system. An investigative approach free of manipulations and attempts to control variables was needed. The Qualitative approach chosen promised to reveal, according to Denzin and Lincoln (2005), a wide multidimensional area of the social world. This research, which focuses on using and applying notions of leadership development for the application of critical thinking for children, includes the subjective and objective details of a leader's daily life. For example, this may include an understanding of the experiences and the requirements of the research activities themselves, the social processes and organizations involved, conversations and the management of relations at work as well the importance of finding meaning in what has been created. It is therefore multi-dimensional and complicated, requiring an open mind and a certain flexibility in handling the different elements over an extended period of time.

These Qualitative and their associated research tools stress the significance of the abundance, depth, subtle distinctions and complex and multidimensional relationships of the study environment (Somekh and Lewin, 2005 cited in P. Mason, 2007). The environment in the village kindergarten had these complex characteristics, as has been indicated above.

Qualitative research, according to Jennifer Mason (2002), has the advantage of being able to question and analyse data immediately after it is collected thus guiding and focusing the research tools and the formulation of research in the field. According to Levy, 2006 (cited in Darmoni and Levy (2007) qualitative research is unique in that it produces field theories about practice and facilitates their crystallisation and maturation. Mason (ibid), claims that field theories produced by qualitative research are context-sensitive and must be tested within the context that helped shape them.

Qualitative research focusses on the human experience, of mankind and society in the person's natural habitat. This study seeks to understand the relationship between educational leadership and how kindergarten children learn critical thinking skills involving changing their view of the world (meanings), deepening their interpretations of situations and different processes (interpretations) and giving value to their personal views (inside perspectives) and experiences. The central goal of this research was to capture children's encounters with the world and with the researcher, as perceived and understood by each of the participants so that change could be encouraged.

The education system is a microcosm of the wider society. Therefore any educational institution including kindergarten, school, classroom, college, and university, is a natural arena of life where a world rich with events exists. Within this systemic structure, there exists a unique local culture that includes values, division of roles, behavioural learning patterns, and the specific culture and ethos of a place. The village of Deir-Hanna and its culture was and is such a place. In order to better understand the optimal conditions for the existence of any educational system, it is important to research and study it according to its culture and its unique characteristics (Cassin and Cromer, 2010).

Many qualitative studies rely on the phenomenological perspective. This approach allows us to enter the study without unduly relying on a single clearly defined theory. Theories about practice are constructed as a result of studying the way in which participants experience the phenomenon of life (Denzin and Lincoln, 2005). The premise here, according to Cassin and Cromer, (2010), is that knowledge is concealed in the meaning people give to their lives. Qualitative- phenomenological research generally focuses on how one perceives and interprets these events on an individual and group basis, without searching for one 'true' reality or a world of neutral and objective facts that can be quantified.

Qualitative research, according to Denzin and Lincoln (2005), has been shown to be effective in the study of sensitive, complex and variable issues and especially effective when studying the processes of teaching, learning and education in educational institutions. Therefore, this understanding may assist in developing curricula and teaching methods suitable for the learners frequenting the kindergarten. According to Denzin and Lincoln, educational research conducted using the qualitative approach, as undertaken in this study, makes it possible to examine the same research field, i.e. the kindergarten, from the various angles of observation provided by various participants (teachers, pupils and parents) at the same time, representing multiple and varied realities on a personal and interpersonal level. The subjective perceptions and interpretations of the details were by themselves part of the constructed reality and intrinsic to the research. The final construction (reported in Chapter 4: Findings) was put together using information provided by respondents and participants using the range of 6 methods outlined at Table 4 above to produce empirical evidence and appropriate data.

Qualitative research often consists of the stories told by the words collected during observations, interviews and from documents. The words are the tools that construct reality and the description of the experiences inherent in them (Cassin and Cromer, 2010). The ability to connect words to stories is known as a significant characteristic of the qualitative researcher (Denzin and Lincoln, 2005 and Cassin and Cromer, *ibid*) and this approach was used to facilitate the research in this thesis. In summary, qualitative research is human research that fits the realm of education in general and the world of my kindergarten in particular. Being deeply interested in developmental processes I chose the qualitative paradigm. In addition, I chose to frame the research as a case study to allow the distinctive characteristics of the people and place to be explored and expressed.

The case study

This research was conducted as a single, though multi-faceted case study. Stake (1995: 95 cited in Tosey, 2007) is of the opinion that “all evaluation studies are case studies”. Cohen et al (2011) argue that case studies are well suited for the study of the processes that characterise integrated human systems, such as the kindergarten. Based on this reasoning, this study is an evaluation study conducted in an integrated human system consisting of teachers, parents, children and auxiliary personnel and located in a community which has strong value orientations connected with education and social arrangements.

Within the framework of this investigation this study should be viewed as a whole; a unit within which learning processes, developmental processes and relationships are noted and observed (Anderson et al, 2005). This case study uses different combinations of tools and strategies for data collecting in order to inform the analytical process from different angles of the field. Combined in this way, these elements contribute to the validity of the findings (Creswell, 2007 cited in J. R. Anderson, 2010).

Case studies have been found to be useful for describing learning and development processes (Lawrence and Hardy, 1999 cited in Anderson et al, *ibid*), for examining emerging patterns of behavior over time and for describing the flow of behavior between groups and within groups (Camazine, et al, 2001 cited in Anderson et al, 2005).

During the initial stages of its development this research project was intended to be a multiple case study design. However, other kindergarten teachers felt that working according to the procedures that were chosen would significantly burden their work schedules. Therefore, a single case study design for a year-long study was chosen in order not to alienate the researcher’s colleagues. Included in the case study design, is an in-depth analysis of findings using multiple sources of information (parents, children, research journal and an outside professional) which was conducted.

Within the constraints of this case study design, the researcher employed action research

principles which are described in relation to each of the separate 6 methods or practices used in the project.

Action research has been described as 'living inquiry' (Mukherji and Albon, 2015) and this project focused on actual practices rather than abstract notions of learning. Central to the process of learning and action research in this work was the belief that change could be achieved through the thinking and practice of the staff, the parents and the children.

Action research

The research undertaken in this project was within the paradigm of action-learning research (ALR). Action research, according to Koshy (2005), must be available for public scrutiny. This is normally a prerequisite and helps safeguard both the ethical and objectivity aspects of such research. Those engaged in research and those working in the field do not normally receive any incentive for their investments. Therefore, it is very difficult to expect them to work on research over a long period of time and stand by all the rules and requirements presented to them. It must be remembered that those involved in the research must invest in the stages of preparation for the study, including team meetings, feedback and preparing the field for research.

In addition to the complications that arise from the participation of other parties in the research, it is also important to emphasize some of the potential risks and pitfalls, which arise when utilizing action research. Action research, like all qualitative studies, is prone to issues of subjectivity which can compromise the reliability and validity of the study by other scholars. I addressed these issues, as indicated above, through structured interpersonal interactions with other parents than those involved in the study and employing outside, objective help to analyse aspects of the study, such as children's drawings.

Action research, according to Macleod-Brudenell (2004), is a circular plan of action that combines design, collection and analysis of systematic data, practice and reflection. In this cyclical process, the teacher identifies an area that she feels needs improvement and begins to try various solutions to this problem (Cassin and Cromer, 2010). The research deepens and expands the understanding of the teacher who is researching the problem, and also enlightens the teaching community of her peers regarding the different ways of resolving issues that arise. According to Danielson (2009) cited in Cassin and Cromer, (ibid), action research is a form of reflective self-research performed by the participants and the workers themselves, in order to better understand their work and improve the results and process of their work.

It can be argued that action research is born out of the needs of the involved parties seeking to develop a systematic study in order to understand complex situations of interest. They adopt research tools, and through them explore themselves and their work,

to teach themselves what necessary changes are needed, and how to include them in their educational work. According to Sabar et al (2007) the partners involved in research of this type are usually teachers, principals and educational personnel working in the field. In this thesis the researcher personally intended to use this research and its outcomes in order to improve her work and her professional standing. The dimensions of the research were deliberately professional and personal in character, a position commensurate with the objectives of the professional doctorate.

According to McNiff, Lomax and Whithead (2003), cited in Johnson, (2005), action research has long been seen as one version of many among case studies with various applications. It is also accompanied by thinking and reflection (Sabar, 2009). One of the first educationalists who articulated the importance of action research as a valuable research tool was Lawrence Stenhouse (1975), head of the Applied Research Institute at the University of East Anglia. He writes:

“All existing research in the field of education is qualitative in the context of open learning programs, whether they are prepared by a single teacher at school, or prepared by a group working as part of a research centre for teachers, or a group of workers, working in coordination under the framework of an extensive project, or national project, all are based on the study and research function of the students and yet the major portion of the responsibility is that of the teachers in the field”.

(Stenhouse, 1975: 143)

Elliot (1995), Kemmis (2006), Winter and Badley (2007) and Hacoheh and Zimran (1999) followed in the footsteps of Stenhouse and designed models of educational action research, applying them within Stenhouse's conceptual framework and relevant methodological and ethical research approach.

According to Elliot action research is becoming more and more of an educational research tool; something that separates the educational research, i.e. the personal research of an educator, herself and her environment that is being studied, from the standard application of conventional research and enquiry in education. In his definition, this type of research can be organized into different formats, both quantitative and qualitative, such as a study of a single case or cases, naturalistic research and/or ethnographic studies.

Elliot (1995), assesses research in education and teaching and distinguishes between two conceptions of research in education, each one leading to different teaching methods. The first disconnects the professions that support education (educational philosophy,

psychology, and sociology) from the research of educational work in the field. The second is an interdisciplinary holistic approach that links research and teaching to relevant situations in the field. The latter approach is based on a paradigm of action research and is grounded in practitioner research. It presents a new way of teaching, which stems from the field of research and builds with it a theory of teaching and education.

Further, according to Elliot, action research (educational research in this context), is no different from teaching. It is just a branch of practice which complements the teaching, promotes the teacher in his/her work and allows him/her to examine their practice as well as adjust it to the needs of students in order to refine and improve professional and educational decisions (Elliot, 1995 and HaCohen and Zimran, 1999). Elliot affirms this position by stating that action research is another form of teaching. It integrates teaching and research into one operation. The research process is done by teachers in the field and is a continuous process that combines teaching, reflection on and during practice and the creation of change. He claims that the research is not external, but is a part of the teaching done by teachers in the field) and in conclusion he adds:

“Teachers who claim that they do not have time for research, because they are busy teaching, do not understand the relationship. They actually declare that they have no time to change their teaching in any which way.”

(Elliot, 1995: 181).

HaCohen and Zimran (ibid) add that action research springs from the researcher's perceptions of the values and principles of his practice and that the interpretations given to the processes and phenomena encountered in the field of research will depend on the situation or social and cultural context in which they develop. The challenge facing practitioners investigating their own practice is the need to maintain objectivity and rigour while searching for the truth among the contributions made by participant voices (of which the researcher's voice is one).

Kemmis (2006) points to the differences between education and schooling (within his own definitions). The latter is classified as a technique for teaching and creating knowledge, and he claims that in the last two decades the practice that dealt with teaching techniques has gained popularity over the natural trends of imparting education. Kemmis argues that there is a relationship between the desire to impart education and the need to train learners in the skills of original thinking, ideas which are driving this form of action research. Further, Kemmis (ibid: 469), argues that the meaning of education is the facilitation of learning, “...not only how to think, but also how to learn to think”.

Winter and Badley (2007) also address issues of judgement and wish to establish action research as an ethical approach to research and one which approaches a noble cause. They also note, in this context, that action research has been accepted as a tool well suited to examine ideas and values around critical issues and the formulation of policy in education. Because of the issues identified in the education of Arab children in Israel, this makes the present research especially relevant to the role of the teacher and re-inforces the importance of this work to the Arab education system.

Mapping data sources

To summarise the above account of the research processes and procedures a mapping exercise was undertaken to illustrate and illuminate the key questions and themes about the relations of leadership/teaching to the development of critical thinking in Palestinian kindergarten children. The results are shown in Table 5 below. As was argued in Chapter 2, leadership and criticality were 'problematized' in that they were placed within a deliberately eclectic and fruitful set of ideas and concepts derived from key contributors to the field both of leadership studies and of 'critical thinking' and thus their significance for the research component was identified (Blaikie, *ibid*; and Bryman, 2008: 13-15).

The overall intention was to link leadership, action research and practice to the acquisition of enhanced thinking or critical skills in the kindergarten children. The methods used to do this were systematic, coherent, and involved 6 practical research tasks or methods which were constructed to give practical effect to the research paradigm or approach which was an action research case study, and which relied on a qualitative and interpretive schema. There is a clear conceptual framework for both the WBP and the empirical research that helped drive the project and yielded a rationale for the assembly of data sources. The following diagramme which is a synopsis of research methods and data sources, illuminates these issues and themes.

Table 5 : Synopsis 3 (Research methods: mapping, approaches and data sources)

Research Paradigm/ Approach	Research Method	Rationale for data source	Activity and action	Key themes and focus	Location in thesis
Reflexive Constructivist Qualitative Case study/ action research	Research diary	<ul style="list-style-type: none"> - longitudinal data - critical concept framework - problematize themes and issues 	<ul style="list-style-type: none"> - concept development - sampling data - collection of data, coding and condensation of data - analysis and interpretation 	<ul style="list-style-type: none"> - teachers as leaders and researchers - critical thinking skills are key - 'action learning' required with action research 	<ul style="list-style-type: none"> - personal engagement of the teacher - professional management skills - models of leadership and critical thinking adopted
Inductive content analysis	Parental interviews	<ul style="list-style-type: none"> - parental views, experiences captured as data - Elliot – action research is teaching 	<ul style="list-style-type: none"> - inductive category development - testing of a model in the home 	<ul style="list-style-type: none"> - parental involvement - learning skills 	<ul style="list-style-type: none"> - parents changed behavior by children - critical thinking skills and personal responsibility attitudes re-inforced
Critical realist concepts (Blaikie)	Curriculum and lesson plans: analytical processes	<ul style="list-style-type: none"> - knowledge taxonomies (Bloom) - process and levels of cognition (Piaget and Vygotsky) 	<ul style="list-style-type: none"> - critical insight applied to observations - rated assessment techniques - comparative judgements 	<ul style="list-style-type: none"> - cognitive development 	<ul style="list-style-type: none"> - collaborative discussion - text and pictures examined - natural sciences explained
Interpretivist scheme	Children's portfolios	<ul style="list-style-type: none"> - subjective and objective evaluation of performance 	<ul style="list-style-type: none"> - comparative accounts of drawing 	<ul style="list-style-type: none"> - emotional evelopment - perceptual evelopment 	<ul style="list-style-type: none"> - quality of detail and thinking in drawings enhanced - perception of awareness developed in children
External textual evidence	Documents Published sources on Palestinian society and culture	<ul style="list-style-type: none"> - externally verifiable evidence - textual 	<ul style="list-style-type: none"> - collection of documents - assessment of relevance - analysis 	<ul style="list-style-type: none"> - verification of research context(s) - validity tests - themes in context 	<ul style="list-style-type: none"> - cognitive, emotional, personal and cultural contexts demonstrated as viable categories for action research
Critical reflexivity	Reflective accounts	<ul style="list-style-type: none"> - professional judgements on achieving goals - processes evaluated - self-reflection 	<ul style="list-style-type: none"> - performances assessed and evaluated - self-evaluation and critique 	<ul style="list-style-type: none"> - social and community partnerships - transformation and changes 	<ul style="list-style-type: none"> - cultural and family contexts re-affirmed as significant - codes of the 'self' as a professional upheld

This table shows the supporting theories and perspectives which drove the research process itself

The synopsis provided above demonstrates how the arguments and evidence presented in the thesis address the core issues raised by the research approach and focus. This concerns the relationship between a leadership/teaching model and criticality in the Palestinian kindergarten. The key matter was the impact of a pedagogical model on children's learning and command of critical thinking. The diagramme indicates the implications that the research had for teaching and learning in terms of activity and action; it maps, as it were, the research approaches used, and the rationale for the data generated within each method.

There is a necessary link posited between the teacher's research/teaching methods and the observed and analysed outcomes of the work-based project. This is derived from the conceptual and theoretical framework and approaches used to inform the research paradigm. The different aspects of the paradigm suggested to the researcher the differing but complementary research methods and activities. The data sources given in the diagramme indicate the evidence and argument that was used to create steps of reasoning that lead back to observations and explanations that are credible and verifiable in their context of a Palestinian kindergarten, which itself has a complex and contested cultural and social context (Dwairy, 2011).

The research diary

The 'researcher-driven' diary (Bryman, 2008: 516) was a crucial research tool in this research. The literature shows that the use of the research diary, while prone to the same subjectivity issues as all qualitative studies, is an excellent analytical tool for classroom studies – even compared to the use of video or audio recording (Sabar, 2001 cited in Sabar et al, 2007 and Denham et al, 2013). When triangulated, or compared and validated with other types of data, it can provide great insight into classroom dynamics and learning outcomes.

The research diary in this study serves as a record of the research activities of the project and was used to record a wide range of high-quality data to support and drive the findings. In addition to the data from the researcher's observations, the research diary also served as a place to record the researcher's associative reflections occurring throughout the study. It is important to note that the research diary was kept in Arabic since Arabic is the researcher's mother tongue and the language of the study's participants. Arabic is rich in metaphors, something that adds great depth to the analytic findings of this study though difficult to capture in translation.

According to Alger (2008), reflection is not always an easy exercise. It requires practitioners to expose their thoughts, feelings and experiential history to the reader. On the other hand, it provides the reader with the ability to understand how the study was conceived and why the specific research questions were asked. The addition of the researcher's reflective

associations enriched the data and facilitated the in-depth analysis of the findings, giving others a way to understand her focus in the field and providing them with a new way to understand why certain processes and events are important (Lichbach et al, 2009).

The research diary also documented other more objective data in the study, such as assignments sent home with the children. Here, communication with parents was documented and the parents' feelings and observations regarding the child's successes in the kindergarten and the need to celebrate them at home were recorded.

Primary data within the research diary was sourced through the compilation of a diary/record over a period of 12 months. The method used to assemble evidence was a form of qualitative content analysis in which events, occurrences, facts, expressions and insights were recorded. The process was summarily as follows:

- expressions and events recorded
- search for underlying themes
- leading to identifying thematic issues and analysis
- revision of themes and categories as research progresses
- progress via repeated and reflexive activity which involved sampling data, coding and simplifying themes, condensation of data and analysing and interpreting material.

The research diary had a dual focus derived from the conceptual framework and therefore addressed the theme of critical thinking for children in relation to the role and conceptions of leadership which were explored and analysed in the work-based project and were the framing device for the empirical research.

This process is consistent with the intention to deliver an interpretivist account of my work which puts the emerging themes of the research into their context, which is that shaped by the research questions and strategy (see Chapter 1). This type of interpretation of results is also consistent with the type of epistemology which argues that analysis must bring out the meaning of the diary entries from the perspective of its author as well as making a claim on external and objective evidence and knowledge (Bryman, 2008: 13-18 and 22-23). The diary represented both an external form of evidence base as a commentary on on-going professional work and on the research itself and its effects, and it represents an 'internal' dialogue, which supported self- reflection as an important part of the evaluative case study.

The research phase within this study lasted some 12 months, meaning more than a single academic year and it was structured in such a way that each day, a short description of activities in kindergarten was written. The diary itself overall was constructed over some 20 months of work . This description included reference to games, stories and spontaneous

activities done by children. In addition, the description included then current thoughts, emotions and actions of the researcher. Despite the advantages of using a research diary, there are several important limitations. A research diary's quality is heavily dependent on the individual skills of the researcher and can be more easily influenced by the researcher's personal biases and idiosyncrasies than more 'objective' forms of recording evidence. Therefore, rigor is more difficult to maintain, assess, and demonstrate. In addition, the volume of data makes analysis and interpretation time consuming. It is sometimes not as well understood and accepted as some quantitative research methods within the scientific community. Using a research diary may be unavoidable in certain kinds of qualitative research, and knowledge of its existence and use can affect the subjects' responses. A diary may also shade into autobiography and the writing of field notes.

The following schedule represents an English translation from the Arabic of the contents list and range of concerns dealt with by my research diary for this project.

Research Diary – Indicative Table of Contents

(translated and interpreted from the Arabic)

***Professional formulation of work-based objectives:**

identification of research parameters as part of the doctoral modules

literature searches and reviews: key themes on leadership and critical thinking skills

formulation of pastoral responsibility focus.

***On-going observations regarding:**

curricular interventions / lesson plans / learning support

-**children's development** in critical thinking skills

- pedagogical practice – self and colleagues

reviews of on-going performance

lesson plans devised and reviewed for critical thinking categories of teachers' work.

***Research phase(s):**

- trials and testing of research proposal(s)
- respondents and participants records of across the research phase
- interviews and transcribing procedures: data analysis and interpretation
- reflective research practice/self-reflection
- action learning approaches and implementations.

***Parental involvement:**

- training for children's parents as teachers across the project
- liaison and dialogue with parents and community: managing teacher-parent relationships.

***Specific project elements:**

- children's portfolios and analysis of drawing: motor skills development
- emotional contexts of learning.

***Meetings and engagement:**

- observations
- meetings (regular and irregular) with staff, parents and community
- reading and subject development
- planning and administration
- use of documents.

***Analysis, data and results:**

- on-going assessment(s) of progress
- assessment of verifiable evidence.

Interviews

The interview is defined in literature as a conversation with a goal. Goals of interviews vary, but the primary goal of all interviews is to gather information about the interviewee and the processes being studied (Cohen, et al, 2011). The interviewer patiently gathers

information about the nature of the interaction between the interviewee and the processes being studied and their development, or about the processes the interviewee is aware of but perhaps chose not to engage with. This information is evaluated several times. At first, it is evaluated by comparing it to the data gathered with the help of other research tools. Subsequently the information will be compared to the information gathered from other informants. Denscombe (2008) claims that the analysis of interview data based on the study's pre-determined research questions contributes to the emergence of new research questions and influences the selection of informants, as it did in this study with its specific focus on research in education (Newby, 2010).

The interview questions were prepared by considering the need to collect specific types of information from participants in order to answer the research questions (Sabar Ben-Yehoshua, 1997 cited in Sabar et al, 2007); Shkedi, 2003 cited in Shkedi, 2004 and Newby, 2010 cited in Shkedi, 2004). First a topic was chosen, then the questions and the methods for analysing the answers were developed, and a table was developed in order to separate and code this information. With regard to the questions, one must pay close attention to their composition, and how to choose words relating to the subject so that the questions are clear (Shkedi, 2003 and 2004).

The researcher conducted 6 in-depth extended interviews with parents to understand the processes that shape a pre-school critical thinker. Respondent parents were asked to express their thoughts about the child, his behavior, his practice of solving social problems, the type of questions he asks, what thinking and social skills he acquired during the period of his stay in the kindergarten, the influence of the child on the family, whether the child has elicited changes in the behavior and attitude of his parents towards him, and the child's independent study habits. In this interview parents were also asked to express their personal opinions about what had taken place in the kindergarten following the introduction of the critical thinking training activities and to describe their impression of how learning critical learning skills in the kindergarten was affecting the children at home and in the community.

Here, most questions were posed open-endedly, and the answers were recorded in full. The six face-to-face personal interviews were conducted with parents of children who were selected by the researcher, based on their high level of engagement with the programme and their availability.

Ashley, et al, (2007) cited in Cohen et al, (2011), discuss the importance of classifying interviews as formal and informal. In the formal type, the question is asked and the interviewee gives an answer, without relating to the interviewer and her thoughts. This type of interview is standardised and therefore easy to replicate. In this type of interview, it is easy to obtain information, but it is not possible for the interviewer to ask questions

that might develop during the interview or follow-up questions designed to clarify the information provided by the interviewee. An informal interview, according to Kendra (2010), (cited in Newby, 2010) is based on a focused topic and the interviewer must express herself well in order to elicit information pertinent to the study. The informal interview proceeds as an unstructured conversation whose focus the interviewer needs to keep on the chosen topic.

The formal interview style chosen allows the researcher to focus on the predetermined questions of the research but not in so strictly formal a way that she cannot ask follow-up questions or expand on emerging research questions when necessary.

According to Sabar Ben-Yehoshua (2009), an interview has three main shapes. First, the open ethnographic interview is one that allows the researcher to obtain a deeper understanding of attitudes and opinions, and allows her to divert toward unprepared directions when one emerges. In this way, she can extract unexpected information. Conducting an open interview is like an informal friendly conversation; as opposed to a conversation, it has a purpose and a comfortable structure. The interviewer defines the situation and the topic of the conversation and during the interview follows the interviewee's responses and expands the topics of conversation. In such an interview, trust is created between the researcher and the interviewee.

Second, the standard structured interview is one in which the questions and their order are determined in advance and nothing can be added to them. This type of interview is not suitable for the type of qualitative research conducted in this study, as its major themes and analysis emerged over the extended course of action research and classroom practice, as opposed to an experimental study with set parameters.

Third, the guided and focused interview is the type of interview in which the interviewer prepares questions which are only meaningful as part of a framework. During the interview, additional questions for clarification and expansion purposes can be asked in order to better understand the respondent's answers. The advantages of this type of interview are the better utilization of time and the ability to reference the main points. This method of interview may be better than an open interview as it is easier to compare the different respondents' remarks if that is viewed as a desirable aim of the research.

In this study, the researcher conducted six in-depth, semi-structured interviews with participating parents. Parent respondents were able to speak about their children, about the ways of thinking the children developed, their emerging character, their behaviours towards siblings and other children in the more distant family and about the quality of their relationships. The researcher prepared questions in advance, but during the interview, the

conversation broadened to other topics and at times needed clarifications. The underlying reason for using this research tool was the desire to reach an in-depth understanding of the processes investigated through each interviewee. Interviews with the parents were conducted in the parent's home after the conclusion of the school year.

Because of the relationship that the researcher developed with the parents during the school year, it was possible to conduct the interviews in a pleasant and friendly atmosphere, and create a sense of trust, openness and frankness that some commentators have noted as important for successful research (Ashly, et al, 2007 cited in Cohen et al, 2011; and Kendra, 2010 cited in Newby, 2010).

During the interview procedure, the researcher was aware that there was a chance that the interviewee's responses could be affected by the status of the interviewer, and that if it happened the validity of the answers might be affected. In order to minimize this effect, the researcher conducted the interviews in the respondent's home and started the interview by introducing questions as in a normal conversation. The success of this strategy became obvious when during the interview with one of the mothers, she began talking about an issue important to her, and said "This child is my most precious in the house and he encourages me to bring another child to life" (Research Diary).

The interviews were organized under main themes identified by the project and within the specified research strategy. These followed roughly the key themes identified in Table Synopsis 2: 53-54) and covered cognitive factors, emotional elements in learning, personal development and cultural factors. The purpose of this use of key themes was to locate and describe explanations as broadly as possible in order for the opinions and attitudes of parents in regard to critical thinking to be expressed and interrogated (Shkedi, 2004).

The curriculum and lesson plans

The standard organization of activity in kindergarten is not always conducive to research and development. In addition, I have already referred to the specific and distinctive context of Palestinian education and culture within the Israeli state system. For these reasons, the research was complicated by a lack of precedent set forth by the implementation of previous lesson plans and by the traditional organisation, structure and culture of the kindergarten. The researcher attempted to overcome this barrier by inviting children to participate in a private discussion and in fact by reviewing the established curriculum. This meant giving the children the opportunity to bring up topics of their choice and re-positioning the place of the child as a learner within the pedagogical strategies of the kindergarten. In order to teach children appropriately the new methods for critical thinking, new leadership skills were needed. The curricular decisions taken within the kindergarten were aligned with an action orientation as was the research. The objectives, as explored in Chapters 1 and

2, were to identify the processes of learning for critical thinking, to apply these to daily practice in the classroom and then to note and understand the outcomes and changes in both the practice of professionals and the abilities and capacities of children.

Curriculum issues and themes

The curriculum is of course all the learning and teaching which is planned and guided by the kindergarten, whether carried out individually or in groups and whether inside or outside the school itself. The curriculum includes the informal learning that is so important for the younger child and the emotional setting in which it takes place. Two key themes emerged within the curriculum/pedagogical strand of the project.

1. How does curriculum leadership link to kindergarten pedagogy?
2. How was the research/development of curriculum themes linked to the research and outcomes in this work?

This thesis records a practice-based project which took place over a period of several years and is at the time of writing (2017) continuing into the future within its community and village setting. The curriculum at the kindergarten was conceived of as a living part of the children's experience, and that of their parents and families. This particular focus of learning puts subjective experience at the centre of learning and it puts the wider context of the village, its community, its identity and its collective values in direct association with the development and application of the curriculum. All of these factors were in the mind of the kindergarten leader when searching for a relevant curriculum in terms of lessons, teaching material and teaching /learning methods. At the heart of this was a concern to bring about personal/biographical change in children's perceptions and experiences, both of themselves and of others so that critical thinking could be identified and encouraged.

The nature of the work-based project as an on-going set of experiences for children (and their adult supporters) over several years meant that the researcher/ leader had to design a curriculum (within of course designated guidelines from the Israeli state authorities) which met ever changing and evolving learning needs. The objective was, however, to ensure that critical thinking was embedded in this on-going process. The content of the curriculum as a product had to be matched to the idea of the curriculum as a process. A set of steps were undertaken to construct lessons so that a curriculum could be designed for the kindergarten in Deir Hanna:

- needs were diagnosed according to our knowledge of the children
- objectives for the lessons were set out
- content was arranged and discussed with colleagues
- actual tasks and activities were constructed
- learning experiences were selected and assessed

- processes for learning were identified
- classroom and learning arrangements and organisation were selected
- ways and means for evaluating what was to happen were chosen
- outcomes for critical thinking were identified.

Critical thinking as a key element of curriculum choice demanded that we look at the curriculum not just as a pre-defined set of resources. The intention to put the child at the centre of the project meant that the curriculum was not just facts to be learned by rote or any other method, but that learning was about the interaction of the child with his/her teachers, parents and environment. The curriculum was to be what actually happens in the classroom and learning environment and what the teachers and helpers do to prepare and to evaluate this experience. This was the curriculum model that accompanied and underpinned the application of the leadership approach to the practical aspects of teaching in this project.

Within this conceptual approach there are elements that are in interaction and influence each other. The teacher was expected to think critically herself by understanding her role and the expectations others had of her. This was the point of the training scheme with parents which set out the essential principles and characteristics of the encounter with children's critical thinking. The content of course was designed to cover the key learning objectives which are summarised in Table 2 Synopsis 2: 53. A key feature of this approach to curriculum is that it is concerned with both theory and practice. Following Stenhouse (1975) in this matter we can suggest that the curriculum is like a recipe for a meal. It is first imagined as something that is possible, then it is an experiment (it is made and put in the oven) and then someone must test it, eat it and make a judgement on how good it was. So, a curriculum is rooted in practice in this view and we can also say it needs an action learning approach to be implemented-both of which were features of this project.

It is also necessary to state that the curriculum has a wider context and is a communal and social enterprise. The researcher/leader has outlined in some detail the process of liaising and communicating with the 'community'. This means the social relationships of the school and of the community itself were important within this project. Sometimes these factors are known as the 'hidden curriculum' and they may be viewed as being negative in that they shape in hidden ways the thinking and behaviour of children. Whether they are positive or negative is perhaps an empirical matter which needs research; certainly the social and communal values and expectations of the Arab village can be powerful in the life of a growing child as Dwairy's (2011) work has shown.

The project attempted to engage with such issues though not as the central theme of the thesis. What was central was the idea that curriculum practice in the kindergarten did not focus just on individuals alone or on the group alone. It tried to focus on the way in which

individuals and groups create their own understandings. This was a key aspect of the approach to critical thinking and it showed, it is hoped, a commitment to exploring views and values capable of changing young children's lives and improving their well-being. It showed also the need and value of exploring practice with one's peers so that values are reflected in ideas and actions. This was thought to be an important part of professional and reflexive learning on the part of the teachers and their adult supporters.

The portfolio

In the project described in this thesis the child's portfolio includes documentation of learning outcomes such as drawings, tracings, coloring or other individual or team work products that were chosen by the child. It is important to note that the child was and is involved in selecting his or her best products for the portfolio. In this way, he or she makes a statement on the quality of the product and his or her responsibility for this quality. Children are free to review their portfolios, substitute new work that they consider better or add new work when so inclined at any time.

The concept of the portfolio as a research relevant tool was inspired by the work of Kroeger and Cardy (2006) and Seitz and Bartholomew, (2008). These researchers propose that portfolios should be multi-sourced, authentic, dynamic, explicit, integrated, based on ownership and multi-purposed. The portfolios used in this study helped the researcher to document the development of the kindergarten children once exposed to the critical thinking skills and personal responsibility interventions. These children were analyzed according to their individual development and their development as an age cohort.

According to Kroeger and Cardy and Seitz and Bartholomew, a multi-sourced portfolio provides the opportunity to evaluate the development of a variety of learning processes. The data sources are shown as learning outcomes that include texts, photos, drawings, tracings and decoupage art. Similarly, a portfolio that is authentic includes learning outcomes that are self-selected and reflect a variety of skills learned during the course of the program. A dynamic portfolio enables the researcher to capture the child's growth and change. Such a portfolio allows learning outcomes to be added at any point in time during the duration of the programme. An explicit portfolio invites participants to create their own criteria for evaluating learning outcomes so that they can take responsibility for developing the quality of their learning. An integrated portfolio shows evidence of the transfer of skills from school to the home and community. The child needs to understand that the critical thinking skills that are learned in kindergarten can be applied in real life situations outside the kindergarten. Thus, it can be seen that a portfolio is quite a complex and challenging activity for a young child.

The portfolio assessment process requires that the child assumes responsibility for the quality and management of the portfolio. The kindergarten children in this study were

told that they could do what they wanted with their portfolio. If they felt that a certain product was not as 'good' as they wanted it to be, they were free to produce one of better quality and substitute it for the piece they felt was not good enough. The transfer of responsibility is accompanied by reflection and self-evaluation, both exemplifying meta-cognitive thinking skills.

The portfolio assessment process is multi-purposed in the sense that it evaluates the effectiveness of the programme at the same time as it evaluates the growth and development processes the child experiences. The portfolio can be used as an effective communication tool between teachers and parents as the child moves from one grade to the next, or from one class to another. The children's portfolios were frequently discussed with the parents.

One type of learning activity for children aged 3 to 5 years that can be included in the portfolio is the drawing of the self, the drawing of the family, the drawing of a tree and the drawing of the home. These drawings were interpreted using the following assessment criteria: completeness of the drawing, position on the page, the distance between the figures in the family drawing, the complexity of the drawing (animals/ pets, birds, flowers, clouds, and colours) and the narrative the child shared with me once the drawing was ready.

The assessment of the drawing was based on the work of Regev and Ronen (2012), who find in their work that participants are able to express feelings and attitudes with the help of their drawings and tell stories about their drawings that reflect their own life experiences. An assessment table was created to help evaluate the drawings the children placed in their portfolios. The assessments were carried out by the researcher and her colleague who had earned an MA degree in therapeutic arts and is the head of the department at Haifa University. This adds an element of objectivity and expertise to the analysis of children's drawings as an assessment tool. The qualitative analysis and assessment of the portfolio data posed challenges that needed to be overcome. The researcher found it helpful that goals and assessment criteria were defined before beginning to look for and examine evidence (Kroeger and Cardy, 2006). The portfolio makes it relatively easy for the researcher to demonstrate that an individual student or an age cohort had moved from a baseline level of performance through the achievement of particular goals and beyond.

When contemplating the use of portfolios for assessing students' development during and following the acquisition of critical thinking skills, the researcher became aware that subjective judgments were often the unwarranted target of criticism by opponents of this type of assessment (Seitz and Bortholomew, 2008). On the other hand, in educational settings, teachers using portfolio assessment techniques often choose to compare notes with colleagues who independently rate the same portfolio (Seitz and Bortholomew, *ibid*). This same method was adopted in this study, providing the researcher with an effective

method for checking for the reliability of her assessments. In this way, every portfolio was initially rated by the researcher and then her colleague. Following the independent rating, the results were discussed until agreement between raters, or inter-rater reliability, reached 100%.

Reflection on kindergarten challenges and limitations

Teaching, researching and leading in the classroom and school community involves some significant intuitive thinking and action. However, it can also be seen as scripted to some significant extent. Educators have plans that they first visualize and then attempt to predict on paper what may happen in the teaching environment. Planning in any manner requires a person to see within the mind's eye. Once detailed on paper, the teaching act usually follows and that is when unpredictability and reflection surfaces.

This process of reflection is crucial for the process of becoming familiar with one's emotions while actually teaching, which calls for more neutral and professionally organised behavior. In addition, while teaching I would reflect on my actions and scrutinize what had just happened with a desire to improve my performance and the intended outcomes. The recursive process did improve my comprehension and understanding of self, the events and the context in which I was immersed. I was focused on the present with an eye to the future and this perspective motivated and encouraged me to change each day. No matter how much I changed and improved, I could connect where I was at present with where I was at some point in the past. I had evidence all around me in the classroom and as I accumulated more data (notes, illustrations, photos, daybook/research diary, and plans), the more change and improvement seemed to follow.

The need to reflect on 'self' as a means of self-development is widely endorsed in schools of education globally. Often there is a requirement to reflect on practice, which can be traced back to the work of John Dewey (the idea of felt need) and Donald Schön (reflective practice), both of whom put forward the notion that reflection is a critical underpinning of growth and learning.

One of the most challenging goals I set myself as a teacher is to set goals for the children that would give expression to their creativity, critical thinking and originality in their education. I had to allow them to develop as persons within the learning process in the kindergarten and to set challenges for them. Sometimes I had to let the children do their own learning that they are capable of, without supervision, and I had to re-examine my leadership character and integrity. Some evidence of these issues can be seen in some comments made by parents when summarizing the last course on 26.05.2012, when one of the fathers said: "I would not have believed that my son would happily have come to kindergarten two or three days into the new year and return happily, all the while asking to

stay in the kindergarten, even on vacation days and not want to stay home. He constantly asks questions and wants to know everything. He actually strengthened his personality and became a child with self-confidence, seeking information, and appreciating things. For example, the day before he goes to kindergarten, he opens his closet and chooses the most beautiful suit. One day he chose a suit he was going to wear the next day and in the morning chose another suit, saying that his kindergarten teacher preferred this color to the other one. In addition, when he is asked to prepare information about a particular topic that you want to begin to teach him, he immediately approaches his mother or me and wants to connect to the internet in order to search for information. If I tell him that, I am tired now and do not have time or desire to sit in front of a computer he goes off to bring me an encyclopedia and asks me to read to him the way his kindergarten teacher reads. In short, he is really imitating you, whether it is with the way of dress, or with asking questions, or in the manner of requesting, or in the way of seeking fulfillment of a specific goal or with your consistency and your character. This style, I am one hundred percent sure he acquired from you and not from us, his parents”.

It was evident to me that even after only a few days of introducing the project, improvements were already evident in the kindergarten. I became more open, honest and more interested. I began to consider the ideas and interests of others, and began to spread among others the sense of my enthusiasm and outline my vision of the growth of the child as critical thinker and improving the personal responsibility skills within the kindergarten, which I manage. I began to convey interest to the people who worked with me. I therefore took this obligation seriously and have had, I believe, an impact upon my assistant and co-workers. My assistant chose to encourage personal development in the kindergarten and beyond and she was able to finally discover that “When the children feel wonderful about themselves they produce wonderful results on their own”.

Moreover, during the process of this study, I placed the child in the centre of our activities and thoughts and enriched the relationship with the children and parents, which improved the interest of effective learning in preschool children. That is what caused me to see myself as a catalyst for new ideas. I began reading more about the subject of development of educational leadership and critical thinking among preschool children, and from this point of view, I could say that being daring is the key factor to its success. Therefore, I am constantly trying new things and it has become a habit. Not only that, but I learned that in order to win and build respect for children and their parents, we need to develop a relationship of trust. For if, the child does not trust his kindergarten teacher there is no chance that he will go the extra step to give her the best of her/ himself. Without trust, there is no obligation, and without obligation, there is not a kindergarten. I therefore concluded that what strengthens the special bond between the teacher and the children in the kindergarten includes four things:

- keeping promises
- attentive and active listening
- constant supportive relationships
- sincerity.

According to my judgment, these characteristics and behaviours are the cornerstones of effective relationships between the kindergarten teacher and her pupils. I must emphasize a very important point here, that in order to succeed as an educational leader in the kindergarten you must keep your promises and be a person who can be relied upon. Children learn more through imitation and I am for them a model for basic imitation. You must earn and win the trust of the kindergarten children and your word must be your bond. Do what you say and promise to do. That is what will train preschool children to commit themselves for their stay in the kindergarten so that they take responsibility for their actions and their activities. They will learn to listen to others because listening to others conveys respect, for it shows that you appreciate your friends in the kindergarten and trust them. What I am saying is that kindergarten children must show sympathy towards their friends and must identify with their point of view. Each child invests of himself in the other child who speaks to him, by understanding him and letting him feel understood. A child who feels understood will listen to you when it is your turn to speak. I therefore found, in my diary, that on January 28, the mother of Fatima entered the kindergarten while I was conducting a summary meeting, and she made the following comment 'I did not believe that children of this age listen to each other and understand what a queue is. I was shocked when you were speaking, that each one of the 28 children actually listened to you, and when one of the children wanted to express his opinion, another boy said: "My dear, it is my turn, give me my time to talk and then express your position, and I will be attentive and available to your every word that you say"'. These examples show the value of reflectively-led research activity and they comprised a significant part of the research dairy's entries in addition to the curriculum records and evaluations which were an on-going part of the pedagogical practice of the kindergarten. Reflection and reflective practice were then an essential part of the research project as both a conceptual issue and a matter of research practice in and around the classroom.

During the research study, whilst implementing the curriculum changes and procedures to develop a critical thinking curriculum, I was able to assess and evaluate several aspects of change and development that were taking place. First, I understood that children who are improving personal responsibility skills would always do their work out of a sense of joy of creation, internal passion and enthusiasm. I noticed that they had invested their all in promoting the tasks they are responsible for. They will do so regardless of the incentives and size of the challenge. (I realized this through the appearance of one of the children of the kindergarten who stood in front of all the parents and read the story of 'Ward and a Spring of Water' in its entirety. The story consists of 24 pages, and every page contains from 7-10

sentences and each sentence is composed of 5-9 words).

I also realized that before 'igniting' the sparks of personal responsibility and critical thinking skills for children and staff in the kindergarten, I must first ignite them for myself. I must then plant into the children and the staff the confidence in their capabilities and imbue them with sparks of the model that will develop personal responsibility and critical thinking skills.

When I began the process of change, I worked through several stages. First, I created a new type of communication with them whose basis was friendship and trust (In my diary I noted that on 27/01/2012 I initiated several kinds of activities that reinforce the subject of friendship and trust). I did this by giving more freedom of action and granting new powers (for example, as noted in my diary on 02/05/2012, the kindergarten teacher gave authority to a child with special needs, so that he could lead them in the topic of the cockroach (beetle), in terms providing information to the children since he was very interested in this type of insect). Then I attempted to imbue them with a growing sense of personal responsibility and the use of critical thinking skills. At first, I told them to believe in themselves, their abilities to lead, promote, influence, improve and succeed and to believe that their teacher is always there for them. In my opinion, this type of beginning contains the deepest fields of energy, and I see in such approaches great influence on our achievements and a great contribution to shaping our personalities. In my opinion, faith in ourselves and in our abilities is the basis that stabilizes and anchors the foundation of our leadership and constitutes the unique signature of each of us on our environment. It is largely responsible for the quality and intensity of support for improving the personal responsibility and critical thinking skills in the kindergarten, and I believe beyond.

Secondly, I learned how to better set goals and how to plan. I asked children to always focus on what they want to achieve and suggested that they must possess the courage to express their views, and to always be responsible for their actions. I taught them that to learn is to know, and therefore I invested every moment of my time to acquire and impart knowledge and to loudly and clearly proclaim the words spoken by the mother of Yanel at the conclusion of the course on 26/05/2012: "My son went to kindergarten and had no idea or knowledge of the issues taught in kindergarten. Truthfully, before entering kindergarten I did not invest anything into him because I was investing more in my oldest son because he was in first grade and it required of me greater investment. I therefore honestly say, all he knows today came after I met the teacher and she asked me to invest in my children and sit with him so we can both develop and promote him, and relate to him in all aspects in order for him to reach the level he is in today".

3.4 Reliability and validity

According to Waters-Adams (2000) and Koshy (2005) action research raises several questions for the researcher concerning issues and themes related to the reliability and validity of the study. It is important to the researcher that other practitioner-researchers should find her findings valid and reliable and feel they are able to adopt her conclusions and recommendations where appropriate in their own practice. It is also important for the researcher that others wanting to replicate this research should reach commensurate conclusions. It is in this regard that the researcher spent a good deal of effort in describing her methodology, the research field and the tools applied.

It has been demonstrated in this chapter of the thesis that this research uses a form of qualitative research methodology. The methods adopted to carry through the empirical work have strengths and weaknesses that guided the researcher in the selection and design of research tools and procedures (Cassin, et al, 2010). This section of the chapter concerns itself with the strengths and weaknesses of the methodology that reflect on the perceived reliability and validity of the research and will be discussed in detail below.

Reliability

According to Sabar Ben-Yehoshua (2009), the extent to which further research can be conducted using the same methodology and data collection methods, with similar participants and under equivalent conditions, in order to obtain comparable or commensurate results represents the study's reliability. Two types of reliability are recognized by researchers: internal and external reliability (Sagor, 2000 cited in Sabar Ben-Yehoshua, 2009).

Research is considered to have external reliability when another researcher can replicate it. Critics of qualitative research claim that it is impossible to achieve such reliability when conducting qualitative research due to the unique characteristics of the researcher's subjectivity during his approach to the research field. The characteristics that affect the focus of the researcher while in the research field and his interpretation of the data collected are thought to be unique and not replicable. In order to address these issues the researcher took several steps designed to increase the external reliability of her study. With the help of colleagues who were not part of the study, she obtained outside, objective help to interpret the data. Special attention was to be given to the authenticity of the analytical categories, their inclusiveness and comprehensiveness. This involved critical appraisal of ideas of leadership in the kindergarten, of notions of critical thinking and of how to conceptualise the Palestinian Arab culture and its life in the village and in the school. The researcher's colleagues thoroughly checked each of the emerging themes and categories to ensure that they reflected the purpose of the research, that they were built on unambiguous definitions, that they were independent and that they stemmed from uniform classification principles. Similarly, during the analysis of children's portfolios, the researcher was to use

the help of a certified art therapist and other kindergarten teachers.

Internal reliability

In order to strengthen the internal validity of the research findings the researcher took detailed notes, she kept a research diary and detailed lesson plans and added reflection during and after the actions that were taken in the research field.

Two basic conditions for collecting reliable information were anticipated to stand out. The friendly relations between the researcher and the interviewee(s), and the length of the researcher's immersion in the research field were both anticipated to enhance her ability to accurately interpret the meaning of the findings she collected (Zabar BenYehoshua, 2009 and Cassin, 2010).

The researcher argued that the measures undertaken in order to enhance the reliability of her findings would contribute to their credibility and reliability and that the procedures employed by her would produce stable and consistent results, proving that the credibility of social scientific research depends on the credibility of its findings and the manner in which they were constructed (Sabar Ben-Yehoshua, 2009).

Validity-internal and external

Validity, according to Sabar Ben-Yehoshua (ibid), is the appropriate scientific description and explanation of social situations, phenomena and processes, and when an educational institution is studied, validity must characterise its curriculum.

Internal validity refers to the extent to which the explanation of the observed action has been proven true in the context of the participants' experiences and perceptions, and to what extent the participants chosen as informers or respondents are suitable to represent the phenomena and processes being investigated. The internal validity of the research structure, according to Koshy (2005) and Shkedi (2003), refers to the degree of compatibility between the informants selected and the concepts and findings that emerge from the data collected. To help ensure internal validity, for example, participants would be asked to read the interview protocol and underline words or sentences that they felt were not theirs and to add, where they felt was necessary, words or sentences that were left out. A concern with internal validity must show how the findings of the research are commensurate with respondents' own sense of what is happening.

The question of external validity refers to the measure of confidence with which the abstract structures and conclusions emerging from the analysis of the data of research can be generalised to other settings and cultures. Answers to research questions were grounded in the study's findings. In order to estimate their external validity, and therefore the appropriateness of their generalization the method of triangulation was used. The

study's findings were triangulated with the findings of other studies, studies conducted with different methodologies, in different cultures and with different participants. The triangulation method exposes research assumptions of possible conflicting facts by using data from multiple and diverse researchers (Dawson, 1997: cited in Shkedi, 2002).

Establishing trust

The matter of securing validity for qualitative research is contested and much debated and perhaps one successful method of establishing trust in such work is through an adaptation of Lincoln and Guba's alternative criteria for validity and reliability, based on the notion of trustworthiness. This argues that credibility is given from the way analytical decisions are presented and contextualised within the larger picture. This can be especially important for practitioner research. The guidelines offered by Lincoln and Guba (1985), suggest 4 primary criteria for establishing trustworthiness and these are mapped in the diagramme below against activity recorded in the thesis. This presentation thus supports the ways in which credibility was achieved for the research activity and outcomes.

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Table 6 : Lincoln and Guba (Criteria and evidence for research credibility)

Lincoln and Guba criteria	Type of evidence
Credibility	<ul style="list-style-type: none"> - sustained involvement in research activity (see synopsis of findings and outcomes for pedagogy in the kindergarten, pg. 51) - peer de-briefing and member checks (see method c-reciprocal teaching and peer assessment (mutual learning), pg. 115) - monitoring self-perception (see synopsis 2: sources and models for critical thinking, pg. 53) - multiple data sources (see chapter 3.2: research strategy, tools and data sources, pg. 59) - checking transcripts of pupils and parents (see chapter 3.2: research strategy, tools and data sources, pg. 60)
Transferability	<ul style="list-style-type: none"> - detailed and 'thick' descriptions of respondents; experience and insights (see chapter 3.2; 3.3; 3.4) - combinations of observations, documentation, interviews and personal/professional diary entries (triangulation and ethnographic validity) (see chapter 3.2; 3.3; 3.4 and synopsis findings and outcomes for pedagogy in the kindergarten, pg. 128)
Dependability	<ul style="list-style-type: none"> - discussion of methodology and appropriateness (chapter, 3) - participants sharing details of feelings and emotions in the different phases of the research (see chapter 3, pg. 62, 65, 66) - interview results correlated with teacher perceptions (see chapter 2.10; 4.4; 4.5)
Confirmability	<ul style="list-style-type: none"> - findings shaped by differing perceptions perspectives, parents, children, colleagues. parents: (chapter 4), chapter 5 colleagues: (see synopsis sources and tools for gathering data and information, table: 4; the case study, pg. 69; reliability, pg. 88) - checking transcripts and data sources (see chapter: 2.10. pg. 43)

This project was framed within an action research approach and took place over several years. Thus over an extended period of time the findings were fed back to the participants to inform decisions about the next stage. This validated feedback was an important feature of the research and development phases and it is argued that the above diagramme yields an indication of the application of criteria and action for credibility and validity for both process and outcomes of the research itself and the researched-based practice of which it was a part.

3.5 Research ethics

Research ethics, according to Lizbeth (2013), helps to define and characterise the role and the profession of researchers. When one goes into the field with the people with whom one has practical contact during the research, it is possible and likely that one will encounter a range of ethical problems. In research, one must not cause any physical or mental harm to the subjects, and there are ethical codes governing this practice.

Since in this study the researcher set out to study people, it was important to be sensitive to their needs. While academic and philosophical ideas are important to the researcher, it is important to pay attention to the practice as well. The ethics of qualitative research deal

with the search for principles, with the commitments one makes to participants and with the measures to safeguard them and the information they give to the researcher (Sabar Ben-Yehoshua, 2009).

Denzin and Lincoln (2005), emphasize that the ethics of qualitative research becomes essential to the goal of the research and is an internal component that cannot be separated from the scientific component – the methodology of the research. Qualitative research is based on the ability of the researcher to maintain a relationship with participants based on trust, mutuality and openness. A qualitative researcher deals with ethical issues that are not easily solved. In such a case as this, the researcher must be careful to maintain a system of trust between herself and the research participants. Ethics plays an important role in shaping the research findings, and are used as a starting point in this research. Within the framework of the research, a number of actions were taken regarding ethical rules and a summary of key aspects under headings follows.

Deliberate and informed consent

In this research, some of the participants were adults and some were 3 to 5 year old children. Permission for their participation had to be obtained from the University, from the Head Scientist of the Ministry of Education, from the parents and from the Local Municipality. The researcher adopted the ethical principles of BERA (British Educational Research Association) recommended by the University of Derby and those that were published by the Israel Ministry of Education's office of the Head Scientist. The principles require the researcher to adopt methods that minimize harm, respect autonomy, protect privacy, offer reciprocity and treat people equitably.

The consent of the participants to participate in the research is based on receiving full information about its purpose and course of the research. All participants were to be required to express consent and sign a consent form to participate in the study. During the study, the researcher conducted a number of meetings with the adult participants (parents), informing them of the results of the study, asking them their opinion and confirming the conclusions - especially about the growth and development of their children.

Mutuality and partnership

Non-procedural contact between the researcher and the participants reduces the distance between them and broadens the ethical basis of the research by creating a climate of mutuality and partnership between researcher and participants (Sabar BenYehoshua, 2001 cited in Sabar, 2007).

On the other hand, it also contrasts with the need for objectivity. The researcher was careful to weigh both of these needs in the development of the methodology in order to maximize the positive effects of these interactions while minimizing their impact on objectivity.

Therefore, the study was to be conducted in full partnership with the interviewees and my familiarity with the participants contributed to the creation of closeness, while at the same time enabling the maintenance of certain limits to ensure the credibility of the research.

In this way, the adult participants perceived themselves as partners in the research and as informants. Accordingly, the researcher plans to share with them the full results of the research and receive their approval when interpreting the data that they provide.

Confidentiality, privacy and anonymity

Confidentiality maintains an important place in the ethics of this research. One must meticulously guard the anonymity of the participants. In other words, the researcher is obligated to protect the privacy of the participants. This provision is to be assured through the completion of a consent form. Over the course of the study, the researcher was under an obligation to make sure not to reveal the identities of any of the interviewees to one another. Most participants were to be randomly assigned letters or numbers as a means of identification in the research diary. Where names have been used, they would be fictitious. In qualitative research, personal and intimate connections are created between the researcher and the participants. Some participants would likely request that the information they divulge should not lead to their identification. The researcher accepted these requests and assured participants that all would remain anonymous and non-identifiable when in the public domain. Further, care would be taken to ensure that participants' identifying features are not used.

The research phases of this project attempted to capture and record interventions in the daily life and experiences of kindergarten children with a view to establishing the viability of notions of critical thinking. The research was multi-faceted and involved teachers, parents, people in the wider community, professional educators and most of all the children themselves. The findings of the research are reported in the following chapters 4 and 5.

Chapter 4 : Findings

4.1 Introduction

This chapter presents the project's findings which were carried out during the research phase(s) and also reports on the more extensive and embedded developments which enabled the topic to be developed. The theme connecting research and practice was concerned to explore the influence of an educational kindergarten leader/teacher on the development of critical thinking skills in children aged 3-5 years. Changes were observed and recorded in children's capacities and behaviour by tracking the factors that characterise personal responsibility and critical thinking skills. Children's sense of personal responsibility and their ability to demonstrate critical thinking skills, it is argued, were enhanced because of the findings and results of intervention described and analysed here. These changes came about as a result of the application of an educational leadership model in parallel with an attempt to improve leadership skills in parenting. In this emphasis on outcomes the project adopted an essentially action learning approach within what was a 'normal' working environment for a kindergarten in Palestine / Israel, though the conditions in which this took place are challenging and contested, educationally and culturally.

In the qualitative research phase, which was an intrinsic part of a much longer work-based project, the researcher used a combination of four research tools:

- longitudinal research notes in the form of a personal/professional research diary
- semi-structured interviews with the children's parents
- classroom lesson plans and curricular inputs
- analysis of the children's portfolios (i.e. drawings).

The wider context and significance of these research tools are discussed in detail in Chapter 3, the methodology chapter of the thesis, and accompany an outline of the procedures and protocols for each specific method of data collection. During the study, various factors were examined to track the development of children in terms of personal responsibility and critical thinking in the kindergarten.

Each research tool produced qualitatively independent data, and therefore the presentation of the data is organized by source, i.e. through the research diary, the parental interviews, the lesson and curriculum plans, and the children's portfolios, which are followed in presentation terms by documentary evidence and reflection by the author. A synopsis is at Table 5, in the previous chapter. Each data category is summarized separately and each summary includes the following elements: a description of each category, a summary of the evidence obtained from each research tool and an evaluation of the consistency of data across categories. The findings also include at (Table 7 Synopsis 4), a chart of the activity basis of the project which links with the identified learning processes for critical

thinking and a summary of the changes observed in practice and pedagogy.

4.2 Part 1 Evidence : key findings from the research diary

This section contains a summary of the findings and insights of the study, as charted by the longitudinal research diary and it contains four aspects. The first part describes the researcher's involvement in the process of developing the education leadership model whose effectiveness was measured in terms of fostering critical thinking and personal responsibility in kindergarten children aged 3-5. The second part describes the importance of involving parents in the process. The third part describes the role of emotions in education leadership. The fourth part describes the key factors that are necessary for implementing and replicating the education leadership model in other classrooms and in the future.

Developing the leadership approach/model with the child at the centre

In order to develop the leadership approach I developed and organised my personal research diary which focussed on teachers and children in the kindergarten. The research diary recorded events and occurrences in the daily life of the researcher/teacher and the children in the kindergarten. Within the mind of the researcher during this time, was the existence of an ideal-type model of a child, which of course is not a wholly realisable ideal. Nevertheless, it could and can serve as a type of guide, against which some of the realities of real children in real and sometimes difficult circumstances, can be assessed and better understood. The model or ideal-typical child existed in a sense, in the mind of the teacher, but within a real and evolving model of professional practice. This practice was concerned with the realities of teaching and learning in the kindergarten classroom and the findings of this part of the research were in essence a testing out and evaluation of the model, which itself was rooted in the real experience of Arab children in their village community and families.

The approach itself drew on the conceptual frameworks that were outlined in concepts and theories at Chapter 2 and Chapter 3. Drawing on these concepts in particular, the diary was able to illuminate the following aspects of content for the model:

- giving children more responsibility for their actions by putting them at the centre of the educational process
- developing cognitive abilities
- developing a learning dialogue with the child
- building trust between pupil and teachers
- careful listening by both the teacher and learner
- constant teacher support
- sincerity.

These desired outcomes are embodied in the findings expressed in the research diary and they flow from the application of concepts that are intrinsic to the development of critical thinking in young children. An exposition in concrete terms of examples and illustrations of these findings follows.

The diary, derived from the teacher's experiences and perspectives, showed that teachers make a great deal of effort to put the child at the centre of educational activities in order to give him/her more responsibility. This activity is given mainly by the teacher who takes a leadership position in a way that empowers learners.

A leader must manage his or her workplace with intelligence, drawing inspiration from both intellect and emotion. In the context of kindergarten teaching, the researcher realised that this requires having a vision and bringing it to both children and their parents—a vision of a model child who becomes a role model for others through demonstrating their capabilities in personal responsibility and critical thinking.

Cognitive issues

When focusing on the ways in which one could become a leader who empowers (rather than restricts) the kindergarteners' talents, the researcher began to stop controlling every detail and began to give the preschool children more responsibility. The research diary records at 13/02/2012 that the children were asked to plant seeds in the ground. Each child chose a tyre, filled it with earth, and attached his or her name to it. They planted the seeds and assumed responsibility for daily irrigation and care of the seeds; some of them drew the stages of growth of the seed. This particular project caused them to develop a sense of responsibility for their actions as they observed the plants change and grow as a result of their own actions.

The evidence of the research diary recorded how the child became the centre of the educational process, which also enriched the relationship between the children and the parents, and, over time, improved the children's sense of personal responsibility and critical thinking skills. Critical thinking is chiefly promoted by stimulating the process of deliberation in the child, i.e. by pushing the child to view things in a new way and thus developing his/her cognitive abilities. The child's reference point must be internal, rather than a ready-made product imposed as it were from the outside. This is why the process was conceptualised and developed under the title of 'the child as a centre of the educational process' (Research Diary, 28/02/2012).

In this model, proposed here for the first time in the Palestinian kindergarten context, the teacher must direct the learning dialogue with the child according to his level of understanding and development. The material submitted to the child must lie at the optimal position on the spectrum of the unknown and the familiar.

Implementing this approach is what led the researcher to see herself as a catalyst for new ideas, which put the child at the centre of the learning process. The children were expected to stand up in front of their classmates and present their daily news and their opinions; they later did this in front of the parents as well. They were thus forced to develop not only confidence but also personal responsibility for their presentations with their own actions and thoughts at the centre of what they did in the classroom. The case of one girl is illustrative: initially she was very quiet and would not speak, but after implementing this approach, she grew more confident and was able to express herself and make the presentations like the other children (Research Diary, 21/03/2012). The diary was thus used to record a personal sense of development and change at the level of the individual. A sense of self and self-confidence necessary for further growth was inculcated as the child was encouraged to take the centre of the stage.

Developing a learning dialogue with the child

The developing kindergarten child does not of course evolve in isolation but in communication and in dialogue with those around him/her. To develop a learning dialogue with the child teachers in this study emphasised a non-judgemental approach towards the children. Through the research diary, I learned that within every child in the kindergarten, there is a burning desire to be treated warmly, and the kindergarten teacher can provide for this need through a consistent, sympathetic and compassionate relationship. Such attitudes can be developed through small acts of caring. As noted (Research Diary, 13/03/2012), a boy was sitting alone in the sandbox while all the other children were playing together in the same box. The kindergarten teacher approached him and gave him cold water to drink, showing the child that she was concerned for his welfare. Thus, she taught the child through her actions and behaviour how small acts of kindness and consideration can make a profound statement. Another example was in February 2012 when one child was absent for two consecutive days and she contacted his home and asked about his welfare. Such a telephone conversation can bring about a great change in the way parents see the teacher. These are small and in themselves, relatively insignificant acts of concern and care, yet they can carry enormous symbolic weight in a community which associates learning with control and authoritarianism. The diary attempted to record these everyday acts of concern as a conscious element of the educational process; acts that were endowed with meaning and significance for the growth of critical thinking skills and sensibilities.

Moreover, in order to contribute to developing a learning dialogue with the child, teachers emphasized sincerity. This process was pre-announced in a meeting with parents (Research Diary, 17/01/2012), where the researcher shared with them all the essential information that she had available on matters of personal responsibility and critical thinking. This represented a belief that the more these parents know about the work of the kindergarten

teacher, the more they would invest in the direction she is going. This communication showed the parents that they are important to her and that she appreciates them; it was thought that it would also lead to the parents placing importance on the teacher's opinions and appreciating her efforts.

Developing and building trust and sincerity between the teacher and pupil

One of the most important techniques which was dominant in building trust between the teacher and pupil is empathic listening between them. The efforts to put the child at the centre of attention for learning and to develop cognitive abilities alone are not sufficient; indeed, they are likely to fail if the relationship of trust between pupil and teacher is missing. When children trust their teacher, they are open and will tell the teacher much of what is happening in their lives. The special bond between the teacher and the children in the kindergarten relies on the creation and continuance of trust. In order to succeed as an educational leader in the kindergarten, one must reliably keep promises. Children learn through imitation and the teacher is a model for them to imitate. The research showed that the teacher must earn and win the trust of the kindergarten children. Therefore, in order to encourage communication and to be a support for the children, when the children enter the kindergarten in the mornings, they have to select a face that reflects their emotions and explain to the teacher why they are feeling this way. One child chose a sad face and then explained to the teacher that his dog had attacked a cat and he was distressed by this (Research Diary, 26/02/2012). This atmosphere of concern and support creates a special bond between the teacher and the children. This factor provides elements of a model that encourages kindergarteners to commit themselves to taking responsibility for their own actions and placing trust at the heart of the learning process.

Developing a sense of attentive and active listening

By demonstrating attentive and active listening, the children will learn by imitation to listen to others. When the teacher shows that she appreciates the opinion of each child, then children too will show sympathy towards their friends and respectfully consider their points of view. The children grasp the relationship between the feeling of understanding others and the feeling of being understood. An example of this was recorded when the researcher found in her diary that (Research Diary, 28/01/2012), Child E's mother entered the kindergarten while she was conducting a meeting, and made the following comment, "I did not believe that children of this age listen to each other and understand what a queue is". These types of example demonstrate that being an active and attentive listener has an effect on the children and they will imitate it within their own developing capacities. An act of pedagogical leadership here has led to a changed capacity and/or willingness to engage in initial or proto-critical thinking in the terms defined by this project.

These findings are commensurate with previous studies that stress that 3-5 year old children

in Arab society in Israel react in a more constructive manner to more authoritarian styles of parenting. Such studies indicated that controlling parenting patterns and behaviour seems to prevail mainly among the Palestinians in the occupied territories (Dwairy, 2011). A possible explanation for this pattern is that Palestinians in the Gaza Strip and the West Bank are living either under Israeli occupation, and/or facing daily threats to their lives, and therefore may not be able to allow themselves the privilege of being non-authoritarian or permissive. In addition, because the Israeli occupation is thought by some to be supported by the United States and other western states, rejecting the western individualistic and liberal styles of life may be considered by some of the Palestinians to be part of their struggle to protect and preserve their cultural and national identity. This comment or insight is made to emphasise the significance of the wider context within the work of the project. The placing of the child at the centre of attention, consciousness and activity is not a neutral act; it involves an engagement with some key cultural forces and attitudes which exist in the society in which the kindergarten is embedded. This engagement is of course at a micro level; it involves the intensely personal and interpersonal everyday actions of individuals and the way they behave to each other. In engaging with critical thinking in this community of learning we were engaging in re-shaping and adapting some key cultural features of everyday life. The diary was in effect recording in some micro detail the fact that the way we treat our children is a sign of the way we think about ourselves and our lives and communities.

4.3 Parental involvement and staff support

When the researcher began her continuing education programme for parents and the training of the kindergarten staff everything looked the same as in the other kindergartens in the village, but in reality she felt that something fundamental was still missing; something that would excite all the parents, the children and the entire school staff and that would bring them together as one body acting in cooperation and with shared motivation. At this point, the children were not encouraged to express themselves or take responsibility for their learning, the staff preferred to use traditional teaching methods rather than try new ones and the parents were not involved in the children's learning outside of the kindergarten. The researcher decided this needed to change in order for the project to succeed. This would ensure a successful project that would bring change to the kindergarten and aid the children in successfully developing personal responsibilities and critical thinking capabilities.

The researcher looked for the same causes that would help her to propel the kindergarten forward to the standards of a successful model and that could motivate the educational staff, foster team spirit and inspire a connection to the centrally defined goal: the growth of a child who is developing a sense of personal responsibility and critical thinking skills in the kindergarten. The questions that the researcher dealt with during this time and noted

in her diary (Research Diary, 19/01/2012) were important and fundamental, including, what was the best way to foster this model and encourage its success, how to win the trust and cooperation of the staff in the difficult task of developing the model and what was the way to motivate and lead all team members in implementing the project.

As noted in the Research Diary, (22/01/2012), while watching a television commercial one evening, an epiphany came to her: the answer to her question was sparks. My task was to find the sparks through which she would succeed in lighting a flame, i.e., the success of the education leadership model and its relation to potential critical thinking for the young child. It was necessary to focus not only on those children that were 'leaders' in the kindergarten, but to give space to every child, investing in the sparks of success latent inside each of them. The spark/flame metaphor proved a fruitful one for each child has the potential to develop critical thinking and personal responsibility. Yet one ingredient was still missing from the model evolving in the school, which was the influence of the home and parental environment on the child.

The parents who participated in this study were highly motivated and wanted to teach their children different types of independent thinking. All the parents were Palestinian, and living in a rural area and their own education was mainly formally 'academic' and restricted to the conventional and conservative forms available in the past.

Teacher support

When considering the role of teaching staff in developing the leadership model, the main stages for establishing productive communication with them in order to create cooperation and enhance learning processes, were as follows: Stage 1, first, the researcher created a new type of communication with the staff (between the principal teacher and staff) whose basis was friendship and trust as noted at the time (Research Diary, 27/01/2012). She did this by giving more freedom of action and granting new powers: as noted in her diary, an instance of this freedom occurred on 02/05/2012, when the kindergarten teacher gave authority to a child with special needs to lead the class by providing information to the children about cockroaches, as he was very interested in this insect. This example of allowing the special needs child to lead the kindergarten demonstrated to the children that their parents and teachers had faith in their abilities.

In this context, it must be pointed out that strengthening the level of belief in the children was found to create security and a wide range of support for activities conducted both in and out of the kindergarten. When the kindergarten teacher identifies attitudes of disbelief from the parents about the capabilities of their child, the teacher must engage with this and motivate the parents to believe in their child. This is indicated (Research Diary, 28/02/2012), in a meeting with Child X's parent. The child had special needs and parents who had no faith in her capabilities. During the meeting to discuss Child X's potential,

the teacher advised them what to do. They were told that every time their daughter does something positive, they were to praise and encourage her. The central importance to learning of positive and personal recognition was a clear finding of this project.

While working in the kindergarten, the researcher observed that children who had achieved a sense of personal responsibility always did their work with joy, internal passion and enthusiasm. This personal responsibility and positive approach was visible when one of the children confidently read a 24 page story in front of all the parents; another child later explained the rules of chess to the parents before demonstrating his chess skills with his father.

Stage 2. For the second stage, the researcher taught the children how to set goals and how to plan. As recorded in her diary, the children began taking responsibility for their learning acquisition once they had learned to plan and set goals. According to the record at the time (Research Diary, 29.04.2012), one of the children decided to draw a cockroach in red and black colours, by following a certain process. The child collected data and knowledge and then planned how to implement it. He drew this abstract cockroach with a pencil on a sheet of white paper, then coloured in the cockroach and painted a background colour. Later, when he and his friend found a real cockroach, they compared what they saw to what was on the page and found that the drawing was missing important elements. They went inside to make a second drawing and asked other children to decide which of the two was nicer, and why. It was agreed that both of the pictures had a special beauty, yet the next day one of the children who had drawn the picture took another picture of a cockroach and added a rich background, saying, "I want to switch the first picture with a second one, because I see in the second one many more and richer effects". The investigative process helped develop this pupil's sense of responsibility for the accuracy of his cockroach drawing. The teacher's assistant, who also began to encourage personal development in the kindergarten, realised that children who feel positive about themselves and their actions produce a higher standard of independent work, as demonstrated by the child who drew the picture of the cockroach. Drawing this animal elaborated positive emotions, as can be seen in the details of the picture. (See Figure 8: the picture of the cockroach).

Figure 8 : The picture of the cockroach



The research diary recorded how we must think before we act and listen to those around us and if we have erred, change our decision. The researcher attempted to teach the children to always focus on what they want to achieve and that they must possess the courage to express their views, and to always be responsible for their actions. As researcher and teacher and as a personal confidant of the children I attempted to teach them that to learn is to know, and therefore I invested every moment of my time to acquire and impart knowledge and to do justice to the statement of Child Z's mother at the conclusion of the course (Research Diary, 26/05/2012), when she said that her son had no knowledge of the subjects taught in kindergarten before he started and that she had focused more on his older brother. However, by following the teacher's plan, she had seen a great change in Child Z and believed that working with the teacher had really helped him to develop. This is but a single example among very many where parents testified to the progress made by their children.

Based on the examples provided in this section of findings, it can be concluded that children who develop personal responsibility and critical thinking skills have self-belief and can independently set goals and objectives. Children are clearly influenced by those around them, learning through imitation and by listening to their encouragement and advice. They also develop the ability to plan their actions and to focus on what they wish to achieve.

4.4 The role of emotions

The findings above and the literature review in Chapter 2 have already identified the

role of emotions as important and fundamental for our happiness and for our ability to successfully integrate ourselves into the social fabric around us. An example is found in the Research Diary, (21/03/2012), when the kindergarten celebrated Family Day where the children were asked to present projects that they had worked on together with their parents at home. The researcher noted in her diary that these presentations invoked feelings of joy, love, pleasure and excitement in her. Such emotions helped her guide the staff with trust and mutual respect, and they helped her to become a better teacher who was accepted and loved by the children. The children responded to her in a more affectionate and positive manner, and likewise the staff expressed themselves more easily and confided their problems to her. This positive and caring approach helped create a more pleasant atmosphere in the kindergarten; one conducive to learning within the framework set by the project for critical thinking.

A positive emotional context for learning tends to produce beneficial outcomes specifically among young children (Macleod-Brudenell and Kay, 2008: 95-96). Previous studies have shown that interventions that promote positive emotions are beneficial to health (Bowlby, cited in Norman, 2011: 19-21). Even though emotional climates can be variable (Jenkins, 2004: 63) emotional disclosure, it can be argued, can produce significantly enhanced health functioning, especially when positive emotional content is evident in the disclosures. The use of relatively more positive-emotion words has also been shown to benefit individuals facing traumas and other severe stressors, as listed in my Research Diary, (21/03/2012), as when the kindergarten celebrated Family Day where the children were asked to present projects that they worked on together with their parents at home. I noted in my diary on this day that these presentations invoked joyful feelings, love, pleasure and excitement in me. These feelings are just some of the sensations and emotions that are in us, along with anger, frustration, disappointment, envy and fear. I also feel that our emotions help us to be wanted as friends, accepted in different environments and become an important part of any social group, family or friends. In addition, cultivating positive emotions among children is correlated with higher resilience in the face of crises and negative life conditions, so that these children are less prone to negative consequences when facing bad times.

Such research findings meant the researcher found herself in a situation where she had to see things in a positive way, and to try to find the good in every situation and every child; her positive outlook would thus motivate others. Through love and encouragement, we can support and encourage people around us (Kaminski, 2010). In this way, as we move forward we will be able to create a new language that allows us to identify and respond quickly to the needs of the children. From the Research Diary at 27/05/2012, we can see that the researcher/teacher came slightly late that day and sat in her office, looking at one of the binders. A mother came to the office and asked to speak to her. The researcher

invited her in and they discussed the project her child was working on at home for the kindergarten. The mother stated that the main thing she tried to teach her child was to love and respect others. The researcher felt this was an important focus and congratulated the mother. By teaching her child to love and respect others, the child can receive and give support to those around him or her. The interaction between the teacher and parent focussed on the desire for positive emotional support for the child and the benefits that can accrue when there is re-enforcement from both familial and educational contexts. Through engaging positive emotions, the child can be motivated to achieve the learning objectives set out by the teacher. The teacher must appear optimistic and show a strong belief in the child's abilities such as the example previously mentioned of asking a special needs child to make a presentation in front of the class. This optimism will allow the children to believe in themselves and their skills, and show them the importance of supporting others, such as in the example of the child who drew the cockroach. By engaging his classmates and asking their opinions, he was looking for support and reinforcement of the value of his work. The teacher will also benefit from this approach as he or she will see that success comes when the teacher and the children work together and will therefore feel motivated by their success. Everything that we know about individual psychology, according to Jenkins (2004) suggests that the early formation of the individual sense of self, warm or cold, secure or insecure, rich in experience or impoverished is immensely influential in our capacities to respond to what is offered or imposed on us by others. The introduction and recording of the growth and development of critical thinking in the kindergarten was undertaken with this in mind. The findings of the research support therefore the contention that emotional factors can be crucial for the development of stable and consistent and secure identities which themselves are often the pre-conditions for later learning and well-adjusted personalities. As Jenkins writes..."Assumed during the most foundational learning period, they (identifications and self-definitions of early childhood), become part of the individual's axiomatic cognitive furniture". (Jenkins, *ibid*: 50).

4.5 Using the leadership approach

The findings in the research diary demonstrate that the leadership/teacher's educational work can be classified along five major domains. Each of these domains is essential to the approach that was tested in the work-based project; it is argued that these were the primary aspects of the intervention that mediated the children's development of personal responsibility and critical thinking skills. The five domains record the conditions under which the leadership considerations and concept of critical thinking were developed and applied throughout the whole project.

Domain 1 : Personal skills and attributes

It is important that the teacher has a strong work ethic and morals, along with a personality,

by which is meant the possession of certain skills and attributes that are suited to working in education. She/he must love working with children and be responsive to each child and his or her individual needs. A successful teacher is empathetic and gives warmth and love to the children, which in turns inspires self- confidence. The Research Diary, 27/02/2012, records that a mother said to some of the other mothers, “I’m sure if you ask my daughter whom she loves more, her kindergarten teacher or me, I am sure her answer will be that she loves her teacher more than our entire family.” This is of course an exaggerated response but the point is being made that personal skills in the classroom are important for successful outcomes. A teacher should be enterprising, innovative, thoughtful, flexible and critical, as well as being sensitive, intelligent, pleasant and well mannered. The positive response of children to these traits was evident (Research Diary, 30/11/2011), when one child wished to bring a flower for the teacher because she treated him well.

It is important to note that although personality plays a role in motivating people to work in education, my emphasis is not on the development of personality theory. The emphasis in this work is on the development of professional capacities, which require the development and use of certain behaviours and attitudes to do with giving warmth and support to the growing child (Oates and Hey, 2014).

Domain 2 : Professionalism

Kindergarten teachers in the current study were in command of the materials necessary for successful teaching and were thus able to identify problems and solve them. They knew how to professionally organize an educational social environment that enables the empowerment of the child as well as paying attention to the goals and interests of the children. The teachers actively sought ways to implement ideas and use varied information sources and tools for learning. For example, on 10/01/2012, the Research Diary recorded that a teacher used several props to encourage a child to develop public speaking abilities.

The teaching staff chose interesting topics and challenges suitable for the child’s world, her/his rate of development and needs as well as acting according to the designated plan. During their work, teachers achieved many goals for the child’s wellbeing: the development of abilities, fostering social and emotional development, providing a variety of life skills, and acquiring interpersonal communication skills. The teacher made sure that there was plenty of stimulation in the kindergarten, that 'know-how' was available to combine the themes (integrative work), and that she was able to adjust to and adapt the needs of the individual and the group in a way that is suitable for an educational environment as well as the everyday life of the child. The findings recorded in the research diary in respect of this showed that the teacher must encourage the child to be a skilled learner, to be creative and specially to think critically as an intrinsic element of teacher professionalism.

Domain 3 : Management of the kindergarten

The kindergarten teacher had the skills and knowledge in system management so that she could create a positive interaction between the various factions in the kindergarten. The teacher knew what the proper management of the kindergarten involved and was able to work effectively within a team and create a pleasant working atmosphere. She had developed excellent interpersonal skills (Research Diary, 23/03/2012), and one mother expressed particular appreciation for the teacher's positive and cheerful attitude. In addition, the teacher was well organised, well versed in the subjects taught, constantly looked to improve and enhance the children's learning experiences and actively sought to engage the parents in the kindergarten's learning processes.

Domain 4 : Contact with parents

'Teachers' in the current study in one sense, included parents who through understanding and sympathy and being integrated into the educational practice in a pleasant manner and by building and maintaining a positive relationship, became important contributors to the whole enterprise. Kindergarten teachers need thus to act responsibly and with respect towards the parents, and listen to their needs. In the project staff worked on the quality of the communications between parent and child, as it was known that this will help the child feel secure and thus make him or her more open to learning. The teacher helped improve communication by recommending that the parents treat the children in the same way that they are treated by the teachers in the kindergarten. This was to provide continuity and enhance feelings of security, as the child feels he or she is being treated in a consistent manner by the adults around him or her, whether at school or at home.

Domain 5 : Project management

A child in kindergarten who thinks critically is considered strange in rural Arab society. Therefore, when the researcher began to refer the issue to the parents, she felt that they were reacting cautiously to the idea, as the concept of their child becoming a critical thinker is new in their society. This reaction made the researcher curious to test and assess the impact of the project as it evolved. In her work (Research Diary, 10/01/2012), a mother told her that while she was unsure if the project would work, she was willing to fully support it. This encouraged the researcher to present change in more attractive terms so that parents would be able to absorb the subject more gradually. What enlightened the researcher to this new insight was that she began by explaining and reasoning in order to promote the subject of critical thinking. She believed that children could bring themselves to self-realization if we gave them a comfortable atmosphere, acceptance, security and training. This gave her the green light to develop the principles of the model by changing practice according to the results in her diary on various dates. These principles were based on a set of processes within the kindergarten, which were designed to promote intrinsic motivation, support personal challenges, bring about perceptual changes, stimulate group

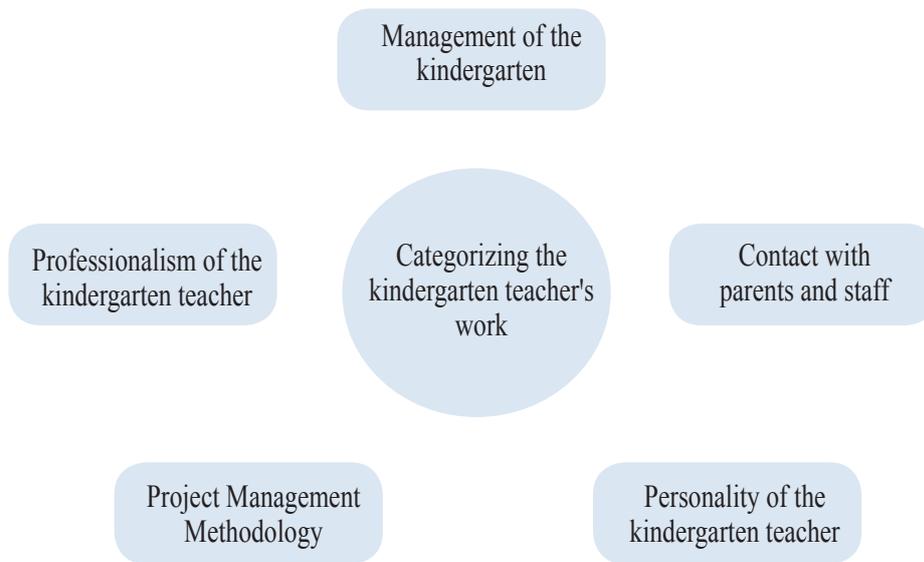
discussion and generate personal commitment. These processes and experiences were in fact an intrinsic part of the content of the leadership framework adopted for the project. The outcomes and processes were in one sense the evidence of critical thinking strategies beginning to work across the whole project involving children, teachers and parents.

The decision of parents to be involved and share in building the approach or model from beginning to end is because of intrinsic motivation and not due to external pressure. The main challenge in this model was to find a mechanism to help the children develop a sense of personal responsibility and expertise in critical thinking skills. Ultimately, this was done by the following techniques:

- development of incentive programs on the basis of personal responsibility and critical thinking individually and in a group setting
- building of instruments to measure the growth of the model
- developing a program of emotional security in the kindergarten for the children, parents and the staff (such as the training course for parents run by the kindergarten; see Chapter 3: Methodology).

Perceptual changes occur amongst parents when they understand the relevant issues related to child-rearing practices and when they reflect on the type of child they expect to grow and develop. They also occur amongst the staff when they see the potential for child development in the model. It is vital to have good communication for these changes to happen, i.e. parents should feel comfortable speaking to the teacher and both staff and parents should fully understand their roles. The researcher found that good communication led to an atmosphere of positivity, which made the changes easier. This need for communication was reflected in the principle of group discussion. Thus in order to have a successful group discussion with children, they should be interested in the same subject, which should be adapted according to their interests and concerns, so that they learn from each other and from their experiences. In this way, it is possible to build a system of trust, friendship and mutual esteem within an effective context of communication.

The five different categories of the teacher's work outlined above which referred to the professionalism of the teacher, the teacher's personal skills and attributes, project management methodology, contact with parents and staff and managing the kindergarten are summarised in Figure 9 below.

Figure 9 : Categories of the teacher's work

In summary, the findings in the current thesis which were substantially recorded in the research diary showed that a leader in kindergarten uses a range of means in order to educate children and teach them critical thinking. She uses emotional leadership, in which she establishes support, trust and good relationships in order to develop internal motivation among learners. In addition, she uses functional and transactional leadership techniques such as team building, knowing self, and building trust. Moreover, in order to create vision for the learners, teachers present visionary transformational and charismatic role models for followers by displaying examples of personal critical thinking. Finally, the work in kindergarten is always achieved in cooperation with other teachers on the staff and in the community of parents and supporters. Therefore, the teacher's work involves the use social and mutual pedagogical 'leaders' using combined resources in order to enhance learning in the kindergarten. The research diary method enabled the research phase activity across a range of domains and practical classroom actions to be recorded and captured within the overall objectives of the work-based project, which was and remains a long term engagement for all concerned.

4.6 Part 2 Evidence : the parents' interviews

After interviewing six parents using the semi-structured interview method (see Appendix 2: Interviews for an example of the full set of interview transcripts), the researcher confirmed that a child's education is a long and complex process, and every child has unique qualities, but there are common qualities that can develop a child's personal responsibility and critical thinking skills. The researcher aimed to identify the course of development of critical thinking and personal responsibility that children reflect and transmit, in particular through the way in which this process was perceived by the parents.

The interviews held with parents demonstrated that for the committed and engaged kindergarten teacher there are ways and means by which the child can develop personal responsibility and critical thinking skills. They include a range of factors which were identified in the interviews and which were translated into evidence for the research phase of the project.

Teaching methods

In the interviews the parents pointed out they had undertaken significant challenges adhering to the methods proposed by the teacher. Within the framework of the programme, the researcher set for the children meaningful thinking challenges which were either categorised by task / experience (the parents were shown for example the lesson plans for the puddle, the earthworm and the story “Ward and the Spring of Water”), or in the way that she asked questions. In both cases, the children were required to utilize critical thinking (Appendix 2.3 Interview 3, Q: 5). In addition, parents pointed out that she used appropriate teaching tools such as asking open-ended questions, using language as a communication tool and the discussion of problems or dilemmas, problem solving and research work. According to the parents’ opinions, these tools stimulate the children in learning and independent thinking and challenge them. The parents also stated that the teacher used specialised language to develop thinking skills in children. They stated that there is a need to have a set of concepts related to the language of thinking for the teacher to use and for the child to use at home, for example, “to ask a question”, “assume”, “conclude”, “estimate”, “consider”, “claim”, “explain”, and “evaluate”.

The opinions of the parents are highly important for this study. This is both a generic point and one related to the Palestinian context of the project. Parents are a crucial factor for implementing any kind of learning, and specifically critical thinking as an aspect of learning. Therefore, it is important also for parents to be part of the process that is described in this thesis. Without their involvement, the community and culture could have been an inhibiting factor rather than a positive context.

The child’s influences and motivations

The evidence from the work-based project overall and the research component within this showed that the child needed to experience several stimulations and conditions in order to develop personal responsibility and critical thinking skills. The child had also to acquire a range of tools and skills. External factors also play an important role so that the design of the educational environment, in addition to the teaching methods used and the role of the kindergarten teacher have all been proven to be important components. It is important to note that the tools and skills mentioned here are best understood as part of the conditions under which the learning of critical thinking can take place and be actively sponsored by the teacher/ leader. They are not co-terminus with critical thinking itself, but rather are

important elements of the overall context in which we can identify and support critical thinking within young children, especially within the Palestinian context.

Many factors influence and motivate the child to show personal responsibility and critical thinking skills. The parents' comments are relevant on this topic and are found in the following summary:

- children who show these characteristics of critical thinking feel calm and peaceful and are able to study independently
- children need a role model such as an adult that they want to imitate
- the child should be intrinsically motivated and have the desire to be an initiator and leader
- the child should also be highly interested in the challenge of learning
- the child should be very driven and motivated to learn he or she should also be enthusiastic about the activity
- the child should receive love, support, and encouragement in order to develop these characteristics.

During the process of the interviews, it was found that children who have acquired a sense of and capacity for personal responsibility were characterized by several crucial features, which are outlined below.

Responsibility and independence

The parents all made similar statements to the effect that the child should be able to act independently and take responsibility for their decisions and actions. This is summarised in the following:

- an independent and responsible child is a child who depends on himself, has acquired problem solving skills and who is comfortable asking questions
- the child should take responsibility for his or her actions and words
- the child should recognise the needs of others as well as his or her own needs and also be reliable as well as develop their own vocabulary
- the child should show good progress
- the child should be responsible for making her or her own decisions
- the child should be independent and do appropriate things on his/her own.

An illustration of such independence is shown at Appendix 2.2 Interview 2, Q: 12, when a mother told me about her involvement in the activities of the kindergarten, she reported seeing the child as a partner in activities and learning. She reported seeing the child in terms of what he prefers, what he wants, how he wants things to look, how he gives of himself and this challenges him and makes him more independent and responsible for his actions.

Achievement

When interviewed, parents agreed on some common factors that were necessary in order for the child to achieve his or her goals. Several parents, 1 and 2 of the interview respondents in particular, agreed that the child needed to be able to formulate and ask questions as well as work independently. Parents 2 and 3 said the child should be able to express him or herself, while parents 3 and 4 agreed that language skills were important. The following factors were identified in the interview data as being of importance for what the parents understood as achievement:

- the child formulates questions, gathers information, analyses it and makes conclusions
- the child exceeds the expectations of others with the knowledge that he or she displays and the questions asked
- the child achieves goals the child sets for him or herself and is happy to learn independently
- the child is observant and motivated to succeed
- the child looks for alternatives to get what he or she wants
- a successful child asks questions, expresses curiosity and emotions and is knowledgeable about many things
- a child who wants to achieve responds to encouragement and support
- a successful child can compete alone but can also cooperate effectively with others
- successful children initiate actions consistently the child has a strong ability to express and justify an opinion
- the child wants to achieve goals, good results and develop good language skills.

Data from the parental interviews confirms the impact of the critical skills programme of development, (See Appendix 2.3 interview 3, Q: 5). In this case the mother told me that “the most interesting experience for her son, was the project which they did at home”, the building of a house from polystyrene (this is the house of the main character in the story ‘A Rose and the Spring of Water’ and it is the one he chose to sculpt). She worked with him for almost a week to produce the house and spent a lot of time with him. The mother saw that I had placed a significant cognitive challenge for her son, and in this experience her son was required to use critical thinking. During the entire time of the project he would ask questions, pose a problem, discuss the problem and seek solutions. Truthfully, he is very satisfied with the tasks I gave him and it matters to him that he achieves excellent results. The tasks strengthened him more and more, along with the relationship between his family and made him a child who is more attentive and focused. It also led him to be personally responsible for his action when reading the story by heart to all the parents and their children without having missed a single detail of the story. He worked very hard and strengthened his language- every day he would ask his mother to read a story and when she had finished he would go to his father and would then ask him. It must be emphasized

that he imitated me and aspects of my own personality. He identified very much with the story, and the image of the rose and this enhanced his learning capacity and achievement.

It follows that a child who shows good emotional development can be the most popular and successful child in the kindergarten. Whilst celebrating the prospects of success we must, however, remember that nothing in child-rearing is inevitable. The emotional and material climate of family life is variable and sometimes unstable and that child-rearing practices can vary greatly within a single community. Children are rarely insulated from the storms of the outside world and as Jenkins states “Secure consistency and relative calm in the formative years may, therefore, be as much the exception as the rule” (Jenkins, 2004 *ibid*: 63). There can be no doubt that the parents who were interviewed were not a simple homogenous block of citizens but rather represented to a greater or lesser extent the sentiments of their fellow inhabitants which includes their diversity and differences of view and perspectives. It is hoped that the interview data captured something of this diversity.

Family support

The interviews showed parental attitudes towards their children changed somewhat during the project. The parents all made similar statements, that parents taking responsibility for their children’s education and showing interest in it is a source of motivation for the child. Parents 1 and 5 also stated that parents should praise the child for their achievements. In regard to support parents expressed a range of thoughts as follows:

- parents should praise and reward the child’s achievements
- it is important to involve children in different activities
- parents should also show interest in what is happening in the kindergarten
- parental involvement in the child’s education encouraged the child and was a source of motivation
- it is important to provide a comfortable place for learning at home
- continuous praise helped the child.

These common characteristics lead to the tendency of some children to be more successful than others, to have fewer problems in the kindergarten and to demonstrate better performance from a cognitive and emotional point of view.

An illustrative example can be seen (See Appendix 2.1 interview 1, Q: 1), when the child’s aunt brought him a gift, a pedagogic game (a puzzle of 32 pieces), he did not leave it until he finished putting it together. We see how he dealt with the game, how he tried, how he assembled it, how he concentrated, how he talked to himself and how he thought; it was truly amazing. It is not only his mother who said these things, but all of the neighbourhood and those associated with him pointed out the differences between the child and his peers.

What has been demonstrated in the interviews with parents is the significance of emotionally laden contexts for learning. Individual development and progress takes place certainly through age-related categories of identity and the emotional context in which they occur. These widen as the experience of kindergarten school forces interaction with other children and ever-widening networks of people. The central role of the teacher can be identified as can the role of the peer group. The family and parents remain as crucial as ever but are less negotiable than the relationships available outside the family. As the individual's skills become more advanced and developed, self-presentation and identity with others is required. Hierarchies and statuses have to be negotiated and friendship as distinct from kinship develops, and hopefully a sense of self which is private, secure, tolerant and open can evolve. For the subjects of this thesis, the children and their parents, negotiating a path through all of this involved the locus of the kindergarten. It was this system, structure and what can be termed a learning-focussed 'interaction order' (Goffman, cited in Jenkins, 2004 *ibid*: 67) of the classroom and playground which was the focus for critical thinking in this thesis.

4.7 Part 3 Evidence : from the curriculum and lessons plan Background

This section of the thesis discusses the findings of the new and distinctive curriculum of learning activities that was developed as a crucial part of the classroom leadership designed to foster critical thinking strategies. The activities were integrated into the content of the standard curriculum in several different ways: through cognitive, behavioural, communicative and developmental activities. The positive results described below indicate that these methods are well worth incorporating into the process of regular teaching. However, whereas the results and findings of the research diary and of the parental interviews can be located within a particular mode or method of research activity, the curriculum is not easily placed in a specific place or time. The curriculum is everything to do with learning and teaching and it was in a sense ubiquitous, permeating all of the activities of the kindergarten throughout the period of the work-based project and throughout the writing up of the project. The findings of the research and development which took place at Deir-Hanna therefore, in respect of pedagogic and curricular concerns, drew on all appropriate aspects of the research and on the daily practices of the kindergarten.

The most striking finding within this framework is that critical thinking strategies cannot be transmitted verbally from kindergarten teacher to the child. The child must be an active partner in the process, through an inductive process in which generalizations and laws are discovered and formulated by the children themselves. Among the appraisals that were conducted (which are discussed in detail later in this section), the children's part in the learning process was based on the following two components which themselves were conceptualised within the model which put the child at the centre of thinking and action:

- linguistic mediation - verbalizing the knowledge by participating in discussions. In this way, the children adopted language as a tool for verbalizing their thought processes and structuring their knowledge
- learning by experience - this was based on concrete experience in the knowledge acquisition process.

The elements of the learning process underpinned the specific methods that were adopted to teach critical thinking and learning. The three principle teaching methods that were employed in order to facilitate critical thinking were as follows:

Method A : Questions to awaken critical thinking

These questions fall into the following categories:

- questions that aim to get the child to understand the usage of the right language and to understand the structure of the problem
- questions of understanding that help the child classify the problem, understand the problem, understand new concepts and distinguish between the known and the unknown. For example: What is the problem? What are the facts associated with the problem?
- destabilizing questions: these questions undermine the basic assumptions and fixed beliefs of students. These questions cast doubt on the obvious, reveal problems without simple solutions and require thinking about the roots of things
- social questions: these are questions relevant to the lives of learners and the society in which they live
- questions directed at the solution process: how to solve the problem? These were open questions, which in principle have no definite answer. However, in practice they have multiple different answers and sometimes contradictory ones
- questions that direct the children to think about the process of learning and about themselves as learners, in order to develop the ability of self-guidance, planning and control. For example: What did you learn today? What did I learn about myself? In this part, practical questions were used where information was accessible to children.

Method B : Allocation of time to think

Thinking requires time. Dedicating time to think sends a message about the expectations of the process and helps develop a culture of thinking in the kindergarten. Research indicates that the responses of children to questions get better and deeper when they have more time to think before they respond (Dasborough, 2006). It is very important to establish norms that respect the need for time to think critically. The findings of the research show that the allocation of thinking time was an important element in this project for the development of critical thinking. For example, while performing activities I had to

tell the children, that I really enjoyed hearing from them and it is so great to listen to their answers, but after thinking in depth, therefore, I would be very thankful if they would use two minutes for thinking, and only after this time would I listen to their answers, instead of saying to them: is there anyone who is interested in sharing his/her thoughts with me? (Research Diary, 19/01/2012).

Method C : Reciprocal teaching and peer assessment (mutual learning)

Children learn and also teach by speaking in front of the children in the kindergarten. Children who teach their friends in a group or as part of a speech in front of the other kindergarteners are required to use different strategies for organising and presenting information. These cognitive tasks call for a combination of critical thinking processes for planning, monitoring and evaluation of the children's performances and for peer assessment.

4.8 The lessons and learning

Over the course of this study, the researcher used a set of four different 'curricular' activities to promote critical thinking strategies (which develop in parallel with the sense of personal responsibility, as discussed in Chapter 3). These four activities were carried out, one after the other, for 5 separate groups of 5-6 children each. The first activity was the storytelling exercise; the second activity was the earthworm exercise; the third activity was the puddle exercise; and the final activity was the drawing exercise, whose results are discussed independently in this chapter. While each child experienced this set of activities only once, these activities are representative of the leadership teaching techniques throughout the year of action research, and they provide real-time data for observing critical thinking skills in kindergarteners. Each of the four activities is described below and analytical findings and meanings for each are drawn out from the data.

Activity 1 : the story: 'Ward and the Spring of Water '

Using stories as a learning tool is part of a continuum of cognitive activities that deal with the areas of linguistic communication and emotional and social behaviour. These activities deal with social skills such as children's communication with their peers, listening, developing tolerance towards others and understanding their needs, coping with difficulties and answering questions. The story allows children to express their opinions, use problem-solving skills to offer solutions, and see situations from the perspective of other people. All this is made possible in a group dialogue, since different views are heard about what is happening and different positions are taken by different children. In this fashion, the child compares his or her views with opinions of other members of the group, and either strengthens his or her position or changes it. The discussion about the story invites a thought process about choosing strategies for problem solving, about the commitment of the individual to society and vice versa. It also sponsors a willingness of the children to work towards common goals, solving the problem in a democratic way

and creating a pleasant and friendly atmosphere between the members of the group in particular and the children in the kindergarten in general.

Storyline: The story is set in a small village where there is no running water, and the inhabitants must walk a long distance to get water from the spring. Ward is a young boy who fetches water for his family. One day he trips and falls on his way home; later he has a meeting with his parents to try finding a solution, but they cannot think of one. When his leg is healed, he returns to get water again but notices that the other people are tired. He decides to call a village meeting under a big tree in the centre of the village. Many people attend and work together to try find a solution. They decide to dig a channel from the spring to the centre of the village. Everyone helps dig the channel, and soon they can fetch water from a pool in the village centre. The story ends by challenging the reader to think of other ways Ward can use the water to improve his village.

The teacher told the children the title of the story, after which the children were asked to speculate about the storyline based on the title. The children then divided themselves into small groups and the teacher chose one group with which she would work. This group focused on learning the story, with the aim of teaching it to the other groups at a later stage. By giving them this assignment, it was hypothesized that they would be forced to exercise their nascent sense of personal responsibility.

The atmosphere was quiet and calm as the children attentively listened to the teacher's reading of the story, as the teacher did not allow children to ask or comment during the reading. When the children interrupted the teacher to ask a question, the teacher responded by asking the children to wait until the end, promising the children the opportunity to speak at that point.

After the reading was complete, free discussion was prompted amongst the children. Every child waited for his or her turn to give an opinion on the story; the others listened carefully before discussing what had been said by their classmate. This indicates that throughout the year, the kindergarten teacher had trained the children in conducting dialogues premised on listening to and respecting others.

The story invites critical thinking in a number of ways. The tables below present the questions asked by the students and the answers proposed by other students, demonstrating their critical thinking, collaborative group strategies, and ability to interrogate the material that is presented to them (see Appendix 2.1 interview: 1 and Research Diary: 21.03.2012). Information about the story:

- name of the story: 'Ward and the Spring of Water
- authors: Naif Farhat and Professor Michael Kreindler

- illustrator: Abed Al-Salam Sabe
- number of pages: 24
- printer: Dar Alhuda
- Editor: Ahmed Chamud.

Figure 10 : Questions asked and answered by the children

Child A: What is happening in the picture on the front cover?

Child B: A child is filling a bucket with water

Child C: A girl is carrying a bucket and wants to fill it with water

Child Y: A woman is carrying a bucket with no water in it.

Child B: Angry, because her father went to work and her mother is home alone and she is crying because she was afraid of being alone.

Child D: The woman is angry because she does not want to return home and wants to remain at the pool to drink water.

Child Y: She is afraid of a monster, which is very large, with one head, two eyes and a mouth. His voice is high.

Child A: Angry that father left her and went to work and she began to cry because she was left alone at home. She then went to the pool and swam.

Child Y: She is angrier than the second woman on the cover is because she hit her. Then her mother came and hit her because she caused many problems.

Child A: She is angry that her father hit her because he wants to go to work and she is clinging to him.

Child C: How does the person at the foreground of the picture on the front cover feel?

Child B: What is she doing?

Child C: She is carrying a bucket of water

Child A: The bucket is empty

Child C: No, the bucket is filled with water

Child A: The bucket has a hole and is dripping water.

Child Y: She puts the bucket on her head when she is angry with her husband.

Child D: She is angry with her father.

In addition, the kindergarten teacher encouraged the children to develop their own questions as much as possible. In the following table, it is notable that Child B was empowered in this environment to stand up for his logical and critical view, which countered the other childrens' automatic respect for authority.

Figure 11 : Developing independent questions

Child C: Who in your opinion is the hero in the story?

All the children voted for the lady, except Child B who voted for the boy

Child B: How do we know who the hero in the story is?

Child B: (who voted for the boy): The boy, because the story is built around him
Those who voted for the lady said:
because she is bigger

Child A: What would you like to say to the child who is at the side of the well?

Child D: Do not throw cake into the pool.

Child B: Why are you playing with drinking water?

Child Y: Why are you filling the bucket with water?

Child C: That I want to help him.

Child D: Why do you need the water?

Child B: A long time ago. The house is not the same as our houses.

Child A: A long time ago because they do not have water in their houses

Child C: In the morning, because it is not dark.

Child D: It happened in the summer
Child C: No, they are not wearing summer clothes.

Child D: There are no leaves on the ground.

Child A: There are no clouds.

Child C: In the spring because there is Grass and the trees are green.

Child Y: When did the story occur?

Child B: Where did the story occur?

Child C: In the village.

Child A: Next to the house since there are trees around.

Child Y: On the mountain since there is Earth, stones and a well.

Along with a description of opportunities to help the learner develop, I will explain how the children's suggestions were treated by the teacher, as well as follow-up activities that fostered learning and critical thinking. The activities of the group with the story revealed some of the characteristics of critical thinking and the impact of educational leadership.

Fostering the learning environment

The different atmospheres found during the activity that foster learning with critical thinking and personal responsibility were as follows. Firstly, an atmosphere where there are open learning modes was identified. Learners were given an opportunity to raise hypotheses and identify problems that children must deal with in the story. This arrangement brings forth different levels of critical thinking and allows for a variety of answers. Here no uniform response is required of the children, but rather different responses. In solving the problem, the children offered various solutions and each solution was different from the other's approach and in the way, it was implemented. The proposals reflect original personal thoughts of the children. The wealth of proposals indicated that the task allowed individual expression by children and put them at the centre of the learning process. While the children discussed possible answers the teacher encouraged them to expand on those answers.

Secondly, an atmosphere that fosters collaborative learning and teamwork was identified. The children were sitting in the group, and the activities required cooperation between them. The teacher asked the group to reach common decisions in several phases of the activity. The children had to agree on a solution to the problem as well as how to present this solution to the other children: this activity enhanced the extent and quality of their dialogue.

Thirdly an atmosphere that encourages assertiveness in the child and promotes a sense of individuality was encouraged. The story invites the expressing of personal opinions. Everybody has the opportunity to suggest an original solution to the problem, and persuade the members of the group about the justice of that idea.

Fourthly, an atmosphere was developed that encourages knowledge, understanding, and asking questions. The children worked together and made joint decisions about the knowledge of details and facts obtained by mutual consent, and no child took control of the decisions in the group. Child A was the leader of the discussion, asking who wanted to start the discussion and asking the other children to give more ideas. In other words, the children followed the procedures for building and sharing the knowledge of the group.

An analysis of the suggestions of the children

The children discussed what could be the main problem in the story and decided it was the lack of water in the village, after looking at other possibilities such as the lack of faucets and cars, the characters' fatigue and the distance to the spring.

Children offered five different solutions to the problem presented in the story:

1. *Child Y: "I think we can each dig a well near the house, and no one else will fill from it."* Child Y offers a technical solution by marking out borders. A border is a clear and agreed-upon sign near the home. With actual markings, the problem is solved.
2. *Child A: "The people can decide that whoever does not have enough area to dig a well should ask his neighbour to dig in the middle of the area between them without fighting; they can talk to each other and decide."* Child A highlighted the dialogue with Child Y by using the principle of justice. The problem can be solved through dialogue in which everyone states his or her entitlements and needs. People can compromise with their neighbours and there is no reason to argue.
3. *Child C: "I think the neighbour does not have to dig a well in the middle area. They can dig a large trench in the centre of the village where all rainwater will flow down into it. It will become the place where the people of the village can go to get water instead of going far away and getting tired."* Child C's proposal also solves the problem, but it leads to conflict between people. Why must the people in the centre of the village give a piece of their own land to dig a well while the others give nothing: that would not be right? They have to start looking for another solution to the problem.
4. *Child D: "Let us bring a car and the people can travel by car to the spring and fill up their buckets and return home by car."* This is another way to solve the problem and search for the right solution for everyone. Child A: "But at that time there were no cars. Your solution is not acceptable." He turned to other members of the group and said: "They all agree with me." Child A gave a personal interpretation of knowledge, presented his knowledge and applied it to this situation. He made a personal decision and shared with the others in order to receive a collective decision. He included the other children in his decision-making.
5. *Child B: "We have a piece of land far from the village in the vicinity of the village spring where my uncles dug a trench so that the water can come up to our plot of land. Let them dig a trench from the spring to the village just as my uncles did."*

This is another way of solving the problem based on cooperation between all the people in the village. He used the knowledge he had acquired in the past and fitted it to the current situation. Child B addresses the root problem. What causes the fatigue and walking long

distances? The spring is far and it is necessary to walk long distances, leading to tiredness. Child B proposed dealing with the root of problem. It is a good solution to eliminate the long journey and carrying the heavy bucket so this does not become a problem.

The teacher intervened and asked, “What do you think is the fairest solution?”

The teacher then allowed discussion between members of the group to help the children understand that their peers had different opinions. The discussion encouraged the children to clarify the differences between the solutions and to use their critical thinking skills. All the members of the groups stated their ideas and then discussed the various proposals, while the teacher mediated but did not dictate- the learning process. The goal was to reach a collective decision towards solving the problem, coping with opposing viewpoints, formulating questions and hypotheses and analysis of results and conclusions, which could then be presented to the other children.

Activity 2 : Twisting earthworms

This particular learning program for the children was designed to provide learning strategies and tools to deal with different situations of which the basic background material is the promotion of cognitive growth in early childhood. Therefore, this is of significance to the holistic view of cognition and the need to simultaneously relate to all its components. When faced with different situations, we must choose appropriate thinking strategies and allocate resources to improve them, before performing a cognitive task. For instance, when executing task-based critical thinking, we begin making predictions about the specific task. These predictions lead to setting goals / strategies of thinking or improving old goals and strategies, which leads us to analyse and explain the conclusions at which we have arrived.

Experience is important from the point of view of cognitively. The structure of an earthworm is very different from the structure of any animals known to the child. When we observe the common mammals, the children look for body parts that they recognize and that are similar to their own. They usually find most of them. This way they can imagine and speculate about the function of the animal: how does it eat, how does it walk, and how does it see and live? Earthworms invoke in the children a different experience. It is so different from us and other animals that we recognize that studying its body parts and functions is like solving a detective puzzle. Only careful monitoring allows for the learning to occur. Observing an earthworm is important for the stimulation of curiosity, encouragement of observation and for practising the process of drawing conclusions.

During this process, the researcher was informed by the approaches of Vygotsky (1978), Piaget (1954), cited in Suleeman (2008), in the building and improvement of critical thinking through the notion of stages of development through which we can improve the

learning and teaching processes, building one upon the other. Therefore, the objectives of the activity in the process were:

- familiarity with invertebrate animals
- acquisition of knowledge through observation, experience, research and learning
- developing critical thinking which is based on predictions and obtaining conclusions.

The information gathered by the children included the following: Earthworms are found after rain; they can be found in the garden, in the soil and in wet places. Its body structure is circles, blood, hair, skin, mouth, and joints and red and white blood cells. Its colour is brownish red and greyish red. Longitudinal muscles contract and stretch so they allow the progress of the earthworm in its bumpy winding crawl. It feeds only on plant parts. It fertilizes the soil. The earthworm is both a father and a mother. It lays eggs and digs small tunnels in the ground.

The questions asked by the children included the following: Which ones are the shortest and the longest earthworms? How deep in the ground can an earthworm reach? Are all earthworms lean? Why earthworms are dirty all the time? Why do earthworms get dirty? Who grows it? Does it have a mother and father? Does it have a family? Do earthworms sting? Does it bite? Why at times does the earthworm seem short and at times it becomes long? How does an earthworm dig in the ground? How does an earthworm dig? If it does not have eyes, how does it see? How does it grind its food if it has no teeth? If we were to put the earthworm on the table in the kindergarten and it starts to crawl, what will happen to it when it gets to the edge of the table? What is the material that the earthworm leaves behind? Why does it release that material? Does the earthworm crawl on its stomach or back? What is its body made of? Does it eat? What does it eat? Does it go to the bathroom? Why are some earthworms brown and red and others grey and red? Where are there other earthworms? By synthesizing the information and posing questions, the children gave meaning to information through explanations, answers and conclusions.

Critical thinking techniques

To mediate this process, the children used the following critical thinking techniques:

- **Comparing and contrasting of ideas.** For example, Child E suggested that it had a house like their own houses. With a smile, Child F said, “How does it grow up without a home, all the animals have houses”.
- **Distinguishing similarities and differences.** Child G asked, “How is its body structure different from our body structure?” Child H asked, “What body parts do we have in common?”.
- **Establishing hypotheses such as how the earthworm moved.** Child I said, “Maybe

it uses these hairs to move forward?” Child F pointed out that it had no legs, it had longitudinal muscles that shrink and stretch, enabling its forward movement.

- **Clarifying beliefs and conclusions.** Child F said, “Does it emit fluids while creeping, like a snail?” Child H answered, “Let us bring a glass and put it on the glass so that we can look at it”.
- **In-depth studies of the fundamental questions.** Child E asked, “How deep in the ground can get an earthworm reach?” Child H asked, “Does an earthworm have a mother or father?”.
- **Proposal and formulation of solutions.** Child F said, “Let us speculate, why is it, that at times we see a short earthworm and another time the same earthworm becomes long?” The solutions were: Child E said, “Earthworms have muscles.” Child G said, “I said muscle length.” Child E suggested longitudinal muscles that contract and stretch. Child H said, “When shrinking, stretching, they allow the earthworm to progress in a bumpy winding crawl”. Child I said, “Yes, just like the practice we did”.
- **Independent thinking.** Child H said, “I saw movement in the ground so I decided to track the movement of the earth so I stayed a few minutes and observed until Child F called me and I told him, “Come, come, let’s look at this area, there is possibly something inside that is causing the earth to move”. He came up to me and we observed the movement of the earth and suddenly we saw an earthworm hiding. We decided not to disturb it but to stay and observed it until it left. We then called Mohammed to bring the jar and we put it in the jar. Additionally, the children used the following techniques relating to personal responsibility:
- **Experience of dialogue.** Child H said, “Child E, do you know how the earthworm goes into the earth?” Child G answered him and said, “It swims.” With a smile, Child E responded and said, “First, you should have waited for me until I answered, because he asked me first; it does not swim but crawls, do you know why?” “Oh, now I remember,” said Child G, “its longitudinal muscles help it crawl.” Child H intervened and said, “Child G is right, you should have given her time to answer me and after that, if you have more to say then certainly we would happily listen to you”.
- **Investigation of the emotions that guide the thinking process.** Child E, “I like to touch reptiles.” Child G said, “Me too.” Child I added, “I was repulsed when I picked it up and it left stuff on my hands.” Child H said, “I’m not repulsed by reptiles and animals, I love to hold them and play with them. I suggest you go and wash your hands because maybe the earthworm is sick and you can catch the disease.” Child E replied, “Oh, let’s all go together to wash our hands. I am afraid of diseases and do not want to be absent from kindergarten.”
- **Development of intellectual courage.** Child H said, “Let us try and scatter leaves and roots of plants on the earth that lines the jar of earthworm. What will we see?” Child E responded, “Here, look at how the earthworm has begun to poke out from the earth.” Child G said, “Wow, look how earthworm is pulling towards himself

the plant parts we laid for him.” Child H added, “Let us try and see if earthworms eat meat” Child F said, “Oh no, he is not coming closer.” Child E stated, “In my opinion he only eats parts of plants.” Child G asked, “How did you know?” Child E explained, “Yesterday my mother and I sat and looked for online information.” Child F said, “Look at how he gorged himself on the roots.” Child H added, “Not only the roots but also the leaves, here will you see it”.

Activity 3 : Visiting a puddle Background

This program is an example of how one can plan learning activities that integrates the goals of the teaching content and the objectives of developing critical thinking skills. The analysis was based on the frameworks developed by Edward de Bono and discussed in the Literature Review in Chapter 2. In the framework of this program, the curriculum was enriched with science in order to foster strategic and critical scientific thinking and strategies of argument. The program was carried out in the following way:

1. **Invitation to research:** the researcher sat with the children and discussed how to prepare for a trip to a puddle and how to notify the parents. They decided it was best to write a letter. They cut Bristol board in the shape of a boot, and wrote a detailed message on one side of the boot, and allowed the children to decorate the other side with water-colour paint that fitted the subject.
2. **Thinking about the experiment:** comments and questions made by the children when asked about the project included: Is the puddle is deep or shallow? How deep is it? How can we measure its depth and with what? Why do you think I got the sticks that are marked? If I dip one of the marked sticks into the water, how high will the water be? Let us try to dip one of the sticks that we brought along into a puddle and let us see how high the water is. Let us measure the depth of one or two additional puddles and see which is the deepest.
3. **Building arguments:** the question that the researcher asked was: Why did I request the marked sticks? The arguments were: Child B: “Because you want to teach us mathematics.” Child P: “In order for us to measure the depth of the puddles.” Child Q: “We should measure the puddles.” Child R: We want to check the depth of the puddle.” The researcher listened to all the arguments they presented, and then we discussed what the children thought was the most probable argument- she then explained to them that we measure the depth of the puddles with these marked sticks.
4. **Activities for open research:** how would we measure the depth of the puddle if we did not have those sticks? I listened with interest and emphasized that is exactly what our goal is right now.

Despite the declared objective of the study, to develop critical thinking strategies, the strategies were not taught in isolation but integrated within the content of the regular science curriculum of the kindergarten. The outcome of the programme was a collection

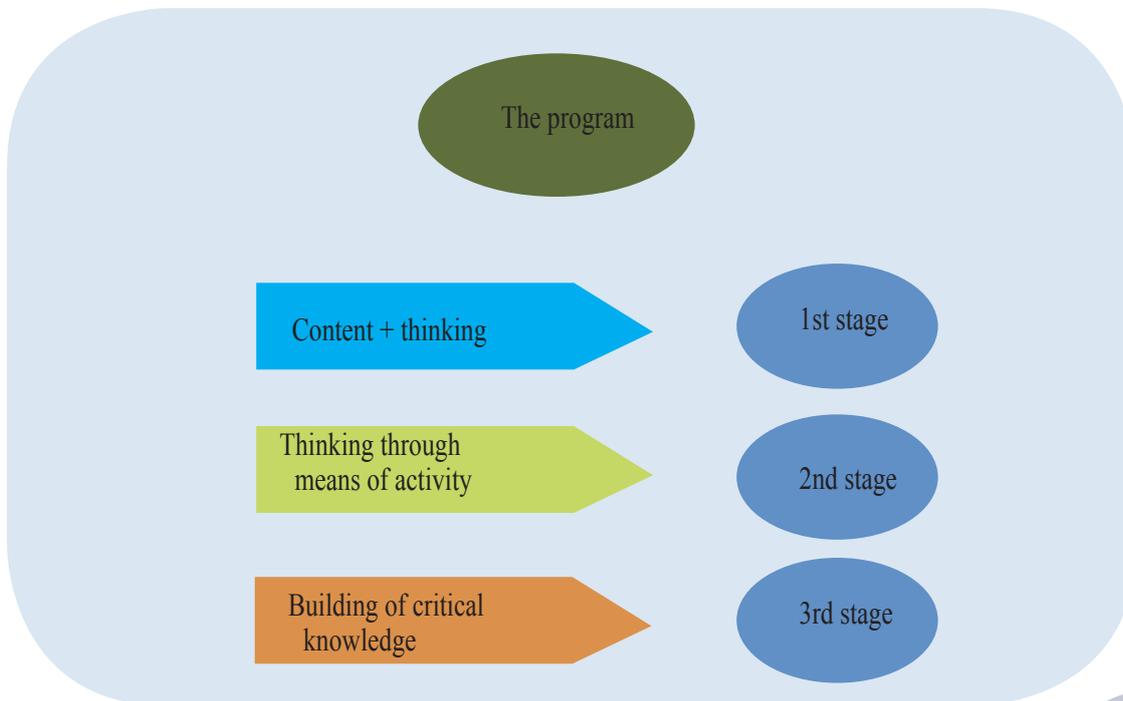
of thinking activities that can be integrated into the regular lessons. The lessons always began with a real problem or a question related to specific scientific phenomenon that children are called upon to solve.

In this activity in particular, it became clear that information of this nature could not be transmitted verbally from the teacher to the child. Rather, the child must be an active partner in the process of building new knowledge. Critical knowledge, according to Darmoni and Levy, 2007 and Vygotsky, 2004 cited in Suleeman, 2008, is abstract knowledge. Assuming that this proposition is valid for my purposes, then critical thinking as a type or expression of knowledge must be built into a supportive framework. One means of doing this within the confines of this project was to adapt Vygotsky's claim that children learn through relevant experiences so that learning can be applied and implemented in a practical manner. This approach is based on the importance of experience in the knowledge acquisition process. For example, the meaning of depth is an abstract concept for the child. He cannot understand it if he does not build his knowledge through experience and social interaction and use the language as a 'tool' for verbalizing thoughts and constructing critical knowledge.

Implementation and results

Over the course of a single brief activity which was intended to reveal critical thinking through playing, a dramatic improvement was evident in children's thinking at the strategic level. This involved their ability to use a strategy such as that of 'playing' and in the level of their cognitive/ critical knowledge. The teaching leadership strategies relating to a 'scientific' form of critical thinking are summarized in the following figure:

Figure 12 : The teaching leadership strategies relating to a 'scientific' form of critical thinking



The first stage of our visit to the puddle allowed the researcher to formulate and clarify the questions she was asking the children. She made sure not to use abstract questions, instead asking opening questions that had defined answers such as, “If we stand at this point there and look at the two puddles, which one do you think is the bigger? How did you know? What led you to think this way? How will you convince me that this puddle is larger than the second one? What did you rely on for your answer? How will you prove it to me? Which one do you think is wider? How did you know? What led you to think this? How will you prove to me that this is the best answer?”

Every thought process must be based on assumptions. We must clarify the assumptions and see if they are justified. For example, when asking the children how they could prove that this puddle is wider than the other is, they made assumptions such as Child B who said, “Let us hold hands and make a circle around the puddle.” Child G said, “Let us bring stones and arrange them around a puddle.” Child P suggested, “Let us bring empty Coke bottles and arrange them around the puddle.” After discussing the assumptions, everybody agreed to the suggestion of holding hands. The researcher then asked who could guess how many children were needed to surround the puddle. They gave many answers. She then tried to prove to them which hypothesis was correct. She asked them to stand tightly next to each other around the puddle. They still needed two more children to surround it. Once again, she asked them to hold hands leaving a bit more space so that we would not need the same number of children. Thus, they examined how assumptions shape children’s observation on the subject and how we investigate additional points of view.

Information, data and evidence are the basis for thinking. If we have data, we can argue and form conclusions based on that data. For example, is the water inside the puddle clean and clear like drinking water? The researcher listened with interest to their answers and then Child B asked to pour water from a bottle which we had filled with tap water in the kindergarten into a clear glass, and then fill a second glass with water from the puddle and check which one was clearer. Activities like these give us clear data, which can be corroborated and then reviewed as evidence.

It can be argued that every thought process is expressed and shaped through concepts and ideas. In devising learning and teaching strategies we must also consider alternative concepts or alternative definitions of the main concepts. One example concerned asking the children to throw a small stone into a puddle to see what would happen to the stone and what would happen to the water, and the children said, “The stone went into the water” instead of saying that the stone sank. Another example was when they said, “The water in the puddle started to make small circles” instead of saying rippling water. A third example was when Child P suggested, “Look, and you follow the ripples of water, to where they disappear”.

Thinking is giving meaning to information by explanations, analysis and conclusions. For example, when I asked the children to look at a puddle and see if they can recognize themselves or their friends in it. They started to raise such explanations, Child B said, “Look, when I smile my image smiles in the puddle.” Child R responded to him and said, “You mean the puddle is like a mirror, I also see myself but not clearly.” The researcher intervened and asked them, “I wonder, how can we see our image in the mirror and in the water in a puddle and we cannot see it in a tree trunk.” The children began to think and fell silent while they looked at each other. She intervened again and said “Look at your hands, can you see your face?” They all answered that they could not. Then, “What is common between the tree trunk and the palm of your hand?” Child G said, “They are thick.” Child Q said, “They are not transparent.” Here the children started to explain and identify hypotheses to be able to reach conclusions via exploratory discussions on the nature of certain substances which were ‘thick’ and ‘not transparent’ and these conclusions themselves could be explored and tested.

The researcher also directed the children to look at issues and questions in a different way, to find alternatives, and consider alternative or complementary options. For example, in the winter all mothers tell their children ‘Do not go into puddles’. I, however, encouraged the children to think about the puddle, to splash around and get muddy. When they experience a puddle (walking, surrounding it, and watching it), they develop a sensory motor point of view. Children will learn plenty of concepts: deep / shallow, wide / narrow, clear / cloudy in such an environment. They will experience influencing the material -

creating waves in a puddle, and experience the creativity and the concept of floating / sinking while preparing boats and floating them. At repeated visits, the children will learn about sequence, changes and the causes of changes: rain means a big puddle; and bright days mean a shrinking puddle.

Through such activities the children were encouraged to plan and to take some responsibility for their own learning. The children made practical suggestions about developing their learning and experience. Child Q said, “We will prepare a letter to our parents and inform them that we are planning a trip to a puddle”. Child G suggested that the children wear wellington boots. Child R added to this by suggesting they also wear heavy coats. After discussing all the options with the group members, it was decided on wellington boots. They began getting ready for the trip and the children began to experience the novelty of a trip to a puddle.

To sum up, in order to implement critical thinking among children, several means and approaches were used. The main means were storytelling, peer listening, answering questions, group dialogues, free discussion in class and respect for the views of others. In addition, practical tasks were also undertaken such as letter recognition and writing and drawing skills. During these processes children absorbed information, learned how to verbalise knowledge and how to question and doubt given situations; all elements of what we can view as critical thinking for kindergartners.

Table 7 : Synopsis 4 (Findings and outcomes for pedagogy in the kindergarten)

Actual tasks and activities	Process of learning for critical thinking identified and tested (4.3.2)
<ul style="list-style-type: none"> - story telling - peer listening - memory activities - gaining the attention of the learner - answering questions - group dialogues - free discussion in class and respect for others' views - letter recognition and writing skills - drawing - repetition - practice 	<ul style="list-style-type: none"> - absorbing information - linguistic mediation - verbalising knowledge - knowledge acquisition - vocabulary development - questioning - self-guidance and control - time management - open learning atmosphere(s) - independent thinking - child at centre of educational process - improved independence and autonomy - diversity of views - re-enforcement
Changes in kindergarten pedagogy and practice for the teacher and parent	Outcomes and actual critical thinking techniques
<ul style="list-style-type: none"> - personal responsibility and viability as a key objective for learners - demonstration of critical thinking skills by teachers and learners - child at centre of educational process - emotional (responses) and inputs from leadership - cognitive abilities enhanced - learning dialogue with child - trust - listening - support and encouragement - sincerity 	<ul style="list-style-type: none"> - comparing and contrasting ideas - distinguishing similarities and differences - establishing hypotheses - clarifying beliefs and conclusions - in-depth studies of fundamental questions - formulation of solutions - independent thinking - personal responsibility - experience of dialogue - investigations of emotions that guide thinking - intellectual courage - verbalising of knowledge

4.9 Evidence from the children's portfolios and analysis of drawings

Following on from the findings of the research techniques and methods used in the research diary, in the parental interviews and in the curriculum and lesson plans (see Table 5 Synopsis 3), this section of the thesis reports on the findings of the research specifically into the children's drawings and the portfolios they produced. This evidence related strongly to the intention to explore interpretivist evidence and to demonstrate both cognitive and emotional development as aspects of critical thinking in kindergartners. On average from the age of three, drawing the human figure, the home, a tree and the family, is a common experience among preschool children. Therefore, the researcher focused on the development of drawing the human figure, the home, a tree and the family. At that age the children are learning to develop their cognitive skills and sensitivity, it is hoped, by using aspects of the model of critical thinking and personal responsibility which have been demonstrated in this thesis.

The cognitive aspect must be emphasized in the drawing of the human figure, home, tree and family from all the drawings that the children made and the researcher focused on the cognitive and emotional aspects as opposed to just the acquisition of understanding and the experience of pleasure. Cognitive processes in this context relate to the processes of acquiring and organising information, involving memory, learning, perception, verbal expression, understanding, decision making, solving problems, reaching conclusions and the presentation of knowledge (Coles, 1993). There were of course emotional aspects of this activity and these included the development of perceptual awareness and the subjective understanding of drawings and representations of objects in the world and in the heads and feelings (hearts) of children.

Indicative Findings

In this section, I will present in summary form the way critical thinking is reflected in children's drawing. Drawings are an important tool in understanding the ways young children think and express themselves. Therefore, drawings were used in the current study to explore and develop notions of critical thinking and this research followed the suggestions of Roberts-Holmes (2011), as an educator who has argued that drawings are a powerful means through which children express their feelings and explore and learn (see also Mukherji and Albon, 2009: 214, cited in Mukherji and Albon, 2015).

The findings of the research in this thesis showed that the introduction and development of critical thinking had an impact on the quality of the drawings of human figures, houses, trees and families among pre-school children. The children showed very careful attention to the details of the images they were producing.

The children's emotions were visible in the drawings, and the drawings inspired emotional reactions in the children when they viewed them. In addition to the description of the image characterized by the spatial organization on the page, it required the inclusion of earth and skylines along with details contained in the drawing. It can also be added, that the mediation of parents in the home helped promote and improve the cognitive aspects in pre-school children beginning with their first steps such as the ability to listen and use verbal expressions, reaching conclusions, decision-making and problem solving.

My insights drawn from the presentation and analysis of the children's drawings led me to the following tentative conclusions and headings.

Image of a person

The children in the kindergarten, who were three years of age, drew an image, which showed a person standing on a base line i.e. the earth. In the picture, the people were placed over the earth, not standing directly on it, and were drawn using consistent lines. The researcher's kindergarten children aged four years drew images of a person that were rich in detail, standing directly on the base line i.e. the earth. The images were arranged on a base line at the bottom of the page and were invested with many details besides the image of the person, such as numbers, trees, houses, lines; the images were also drawn with consistent dark lines.

Figure 13 : Drawings by children

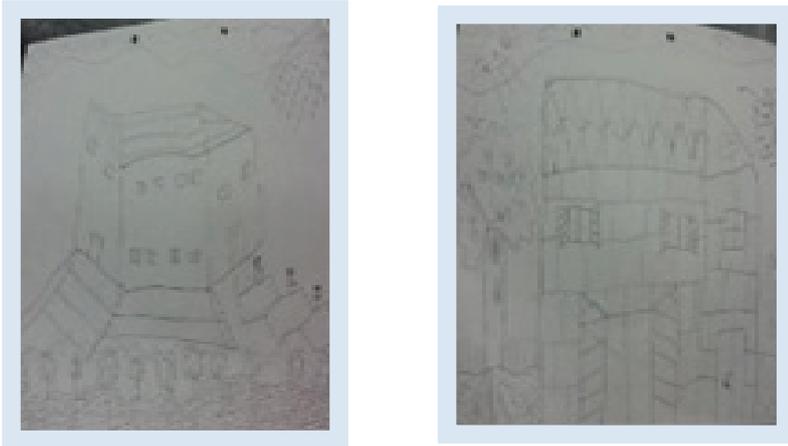


Drawing of houses

The researcher's pre-schoolers aged three years drew houses with the following characteristics: the roof of the house was a triangular shape with tiles common to most houses. The location of the houses was centred on the page and the page included detailed items besides the drawing of the house. The door was large in relation to the building and the sun was common in all drawings.

The children of my kindergarten aged four years painted houses that contained a base line and skyline and the shape of the house was suited to the page area. There were steps leading to the door, and a there was great investment into details that surrounded the house.

Figure 14 : Drawing of houses



Drawing of a tree

The researcher's pre-schoolers aged three years drew the tree with base lines and skylines, with details between them well organized on the page. The tree was drawn in proportion to the size of the page and a good deal of detail was invested in the tree and its environs.

The researcher's four-year old kindergarten children drew trees well. The drawings were well organized and drawn on the centre of the page. The tree and its surroundings were rich with details with carefully placed base lines and skylines and all the details were in proportion to the size of the page.

Kindergarten children (aged 5-6) drew the tree and used colours and shades. While there were no base lines or skylines, the lines were consistent.

Figure 15 : Drawing of a tree**Drawing of the family**

The researcher's pre-schoolers aged three years drew a family that were depicted between base lines and skylines. The images were in proportion with the page and were invested with details, both familial and in the surroundings. All the images were standing on the earth.

The researcher's kindergarten children aged four years drew the family with a great deal of detail aside from the images drawn, for example, there were letters and numbers. There were base lines and skylines and the drawing was in proportion to the paper and the images were on the earth.

Figure 16 : Drawing of the family**Methods and conclusions on the children's drawings**

The children's drawing portfolios were an indicative attempt to demonstrate the existence and use of evidence concerning the growth of cognitive and emotional capacities in my kindergarten children. How children perceive and represent the objects and people in the

world around themselves is significant for the general development of learning skills and I believed it held significance for the more particular critical thinking skills which it was the purpose of the thesis to explore. The range and scope of the evidence and the limited applicability of the research method in this particular aspect was such that only limited data was admissible and only limited analysis and conclusions were thus possible. The developmental outcomes were in this particular case somewhat fragmentary and of limited applicability; though perhaps some attention to the individual differences displayed in the drawings was available to the teacher/researcher.

What was displayed, I believe, was the educational and learning characteristics in young learners which can be stimulated in different educational environments, using different sources and approaches. Drawings and representational art appears to generate responses which are intrinsically rewarding and challenging for young learners. The specific approach adopted in the work-related project did not, however, allow definitions and articulations to be precise enough to be measured and ‘scientifically’ (meaning methodologically and qualitatively focussed social science in this case) tested. This made general propositions and specific ‘hypotheses’ (ie, ideas to be tested in practice and action-learning contexts in my own practice) somewhat difficult if they were to be derived and developed from the evidence collected through working with the children’s drawings. The attempt itself I believe was worthwhile because it attempted a different discourse, reflecting a notion of value and practice concerned with art and representation and I had not engaged with critical thinking in such a field prior to the research project outlined here in the thesis. If its success was limited that provided itself a means of evaluating aspects of my own thinking and practice and yielded perhaps other chances to succeed.

Chapter 4 has explicated a range of findings in relation to the key objectives of the thesis. These concern the application of key ideas of leadership, curriculum development, notions of child-centredness, the role of parental support and the detailed explanation of some learning strategies and methods as in the use of stories, experiential involvement in activities and the use of drawing from children’s portfolios. All of these factors were instrumental in the development of the notion of critical thinking in the kindergarten. The next chapter considers the findings from an analytical point of view with an intention to draw out meanings and implications for practitioners and learners alike.

Chapter 5 : Analysis and Evaluation

5.1 Introduction

In this chapter, the author/researcher examines the findings of the study at a general level in order to demonstrate that kindergarten children can be helped to develop critical thinking skills and a sense of personal responsibility with the help of an effective educational leader. Whereas the previous chapter examined the findings of the research activities with regard to the original research questions and the four practical research methods used, this chapter explores the utility and applicability of the findings within the work-based project as a whole, and assesses them in analytical and professional contexts. Within the framework of the models used to define and analyse critical thinking and leadership, it evaluates the outcomes of leadership activity (Table 1 Synopsis 1 and Table 8 Synopsis 5), and it assesses the impact of pedagogical practice and the thematic development of critical thinking and personal responsibility in young children (Table 1 Synopsis 1) brought together within 4 key themes which were as follows;

The management of learning, the management of the kindergarten environment, the development of cognitive capacities, emotional and personal responsibility aspects of the child's growth and experience and the management and development of the cultural and community context, including that of parents and family.

The primary research question was how educational leadership could better facilitate the development of personal responsibility and critical thinking skills in young children in the kindergarten. The crucial context was the organisation, structure and location of the kindergarten within the Palestinian community, a community with specific and challenging circumstances from both within its social and cultural borders and from without, in respect of the State of Israel.

This primary research focus can be divided into six analytical issues and concerns and these can be conceptualised as framing questions, which are derived from both the work-based project and from the research phases of the project and are addressed below. These framing questions provide a structure for this chapter, dealing with analysis and evaluation of the project findings:

1. What kind of educational leadership characteristics and actions help to facilitate the development of the critical thinking skills of children aged 3-5 years?
2. What kind of educational leadership characteristics help to facilitate the development of the sense of personal responsibility for children aged 3-5 years?
3. What are the characteristics of critical thinking in children aged 3-5 years?
4. What are the characteristics of personal responsibility and viability in children aged 3-5 years?
5. What are the tools and skills of independent learning that kindergarten children can

use in order to develop their critical thinking skills?

6. How can parents influence the child's development of personal responsibility and critical thinking skills?

The answers to these questions are composed of an amalgam of findings from the research phase of the work based project, together with analysis gained from the literature review and frameworks or 'models' evaluated in earlier chapters of the thesis. The answers to the questions are tentative and subject to review and continuing scrutiny as the project itself continues to evolve in the life of the children and the community it serves. It must also be stated that the answers given here are also derived from an on-going concern with professional development and a desire to see the kindergarten fulfil its promise of helping children to a better and rewarding future.

5.2 What kind of educational leadership characteristics, environments and actions help to facilitate the development of the critical thinking skills of children 3-5 years of age?

The findings from the research diary detailed in Chapter 4 have already shown that in order to be an effective educational kindergarten teacher/leader the following factors are important for the facilitation of the development of critical thinking skills of kindergarten children:

- the personal characteristics (personality) of the teacher
- the kindergarten environment: including management and organisational skills
- staff contact with parents: as an aspect of professional development
- leadership capacity, pedagogy and the growth of personal responsibility.

Some of the detail which makes up these categories and was examined in the thesis is described and analysed below.

The personal characteristics of the teacher

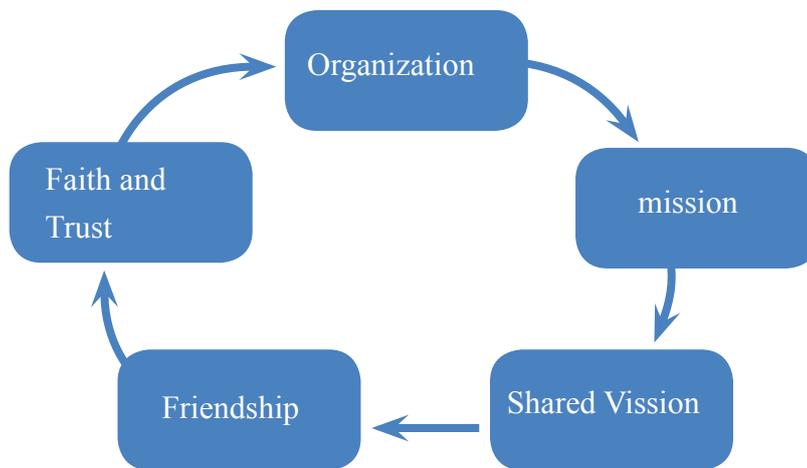
Personal characteristics, it can be argued, are ultimately governed by the teacher's vision. Vision, as a concept, emphasizes that the educational leaders must pay attention to how they visualize the primary educational goals of the kindergarten and how they choose to facilitate their vision in order to make it a reality, and how the kindergarten leader must lead children, parents and all others involved towards that goal. In this project, in order to fulfil the researcher's vision, she had to present her values and to ensure that there was a practical outcome to these values. This was in effect action learning, involving giving the children autonomy to explore their interests and thus developing their capacities. The practical vision was that education is the most important tool for a bright future, that children can help choose their own future, as active learners and can encourage others to adopt supportive behaviours. From the researcher's experience, she observed that

these values involve concepts, which are open to wide interpretation, so it is important to consider and clarify the meaning of this notion of vision and values within the context of her personal and professional life and work.

To win and build respect for children and their parents, she needed to develop her values by building trust, warmth, interest, faith and positive communication. This required the following: negotiating family rules to accommodate children's needs; encouraging parents to make time to discuss family matters with children; and communicating with each child individually. These activities led to an atmosphere of positivity, making the changes easier to accommodate, as detailed in Chapter 4. The importance of a leader/teacher's vision is corroborated by some important commentators on early childhood such as Macleod-Brudenell and Kay (2008: 441) who comment on the significance of beliefs and values. The evaluation of leadership types (Table 1 Synopsis 1: 36), such as those stressing vision and values outlined in Chapter 2 of this thesis, suggested links to specific types of pedagogy which facilitated the growth of critical thinking in and beyond the kindergarten classroom.

The kindergarten environment including management and organizational skills

The findings of this project on leadership development showed that the way the educational environment is organized has a significant impact on the effectiveness of the kindergarten. In particular, it was demonstrated that kindergarten management is a combination of theory and practice, which gives expression to educational leadership. As the kindergarten teacher and as a principal, the researcher fulfilled a leadership role in developing children's critical thinking and personal responsibility skills in the classroom. It was also important to meet with parents in order to help them direct their energy and invest it in their children outside of the classroom. This introduced order and consistency between environments, enabling all parties to coordinate and organize their work (Research Diary, 22/02/2012). In doing so, the researcher worked in several stages in order to inspire a shared vision with the staff and the parents, and to change the dynamic between each party by encouraging communication, fostering friendship and trust and granting freedom in the classroom (Research Diary, 27/01/2012). This enabled staff to utilize powerful, more expressive language in order to capture and spread this vision. Not only that, the researcher encouraged parents and teachers to demonstrate their faith in their children, something that instilled in them greater self-confidence (Research Diary, 28/02/2012). The key elements of this aspect of the project are shown below:

Figure 17 : Kindergarten management skills

The educational environment in kindergarten is a rich learning environment in which one can apply different tools, enabling learning through experience, and thus sponsor the development of independent critical thinking. Children's learning occurs through active engagement i.e. interaction with materials, phenomena and people. The importance of an educational leader is noticeable throughout this interaction. The leader's language is the main instrument for mediation and it allows children to reflect on the learning process. In this way, she must mediate between various learning tools and the child, identify their scope for development and lead him/her to the next developmental level. Such outcomes require an environment of choice that changes with the needs of the children and encourages inquiry, e.g. a variety of materials was given to the child and allowed for social interaction and points of play to develop as the child itself developed. All of this takes place in an atmosphere of mutual cooperation between the kindergarten teacher and the child and between the children themselves. Such an environment evokes curiosity and the desire of the children to play, to learn and experiment from different sources and leads to cognitive development. The relationship of action research 'leadership' to cognitive skills development was thus demonstrated as an outcome of a model of leadership, which was functional, professional and 'charismatic' (Table 1 Synopsis 1) and yielded critical thinking outcomes in the children's actions and learning.

The educational environment must also be perceived as safe and provide children with an accepting, warm and supportive atmosphere. Teachers must provide the child with a sense of belonging, security and protection, allowing him/her to be open to learning and to experience growth. The organization of a kindergarten, according to Israeli Preschool Educational Practice (Ministry of Education, 2010), makes a significant contribution to the balanced development and integration of its children. This proposition was supported by the research findings, as the researcher built an environment that matched the child's

developmental needs, enabling her to transfer messages, lessons and values needed to reinforce critical thinking and personal responsibility. The aspects of the environment that were identified as significant within this project included the following:

- the provision by the teacher of emotional protection and full attention to the child
- privacy and protection from the interference of other children
- the learning of what is allowed and what is not, in order to learn boundaries (Appendix 2 Interview: 2.1)
- independence and responsibility which allow children to practice taking responsibility for their own actions (Research Diary, 08/02/2012)
- an organised experience which allows for the creation of variety, interest and curiosity in the child's activities (Research Diary, 09/03/2012)
- the recognition of uniqueness and individuality (Appendix 2 Interview: 2.5)
- aesthetics such as decorations or suspended objects, tailored to the children so that they are accessible and put them at ease (Appendix 2 Interview: 2.2).

The project demonstrated that an educational environment in the kindergarten is an important issue that requires awareness, knowledge, thinking, planning and careful implementation by a conscious form of leadership and professional expertise (Appendix 2 Interview: 2.2).

The work-based project overall has demonstrated that the teacher must organize the educational environment to allow the child to access human support, collaborative learning, learning that allows dialogue between the partners, children-to-children and children-to-educator interaction, and material support through the use of tools and various cultural instruments. Such an environment allows the child to construct the meaning and interpretation of the knowledge, which the child should acquire and use as it progresses through the kindergarten.

In this thesis, the researcher used a conceptual framework rooted in the literature of 'early years' study (see Macleod-Brudenell and Kay, 2008: 323) concerning the organisation of the educational environment, which shows that it has the capacity to enhance the development of self-confidence and self-esteem in the child. The evidence from the findings in this regard showed the following:

- a good environment helps develop feelings of independence, proactivity and self-esteem (Appendix 2 Interview 2.2)
- a physical environment that provides adequate and interesting stimulation, in a quantity sufficient for all children, allows the kindergarten teacher to be less occupied with supervision and be freer to work individually with each child (Appendix 2 Interview: 2.1)

- an appropriate educational environment provides the option for the investigation of a wide range of stimuli (sight, sound, smell, texture and taste), through which the child receives and collects information about the world, about objects, about people and events around him.
- an organized educational environment prevents excessive stimulation. Additionally, it enables children to use space and facilities for spontaneous movement (Appendix 2 Interview: 2.2) the environment must convey what is allowed and what is not in order for the child to learn boundaries (Appendix 2 Interview: 2.2, Q: 13)
- an environment that is organized will allow for the creation of variety, interest and curiosity in the child's activities (Research Diary, 09/03/2012)
- aesthetics such as decorations or suspended objects must be tailored to the children so that they are accessible and put them at ease (Appendix 2 Interview: 2.2, Q: 6)
- an organized and efficient educational environment provides the child with space and facilities for the practice and training of spontaneous movement which helps to teach the child to recognize his motor abilities and to improve them
- a productive environment provides opportunities for the training of gross and fine motor skills (Appendix 2 Interview: 2.1, Q: 2).

The Israeli Guidelines for Educational Staff of Kindergarten Children (Ministry of Education, 2010), support all of these components and provide a policy context for the professional pedagogy of the Palestinian Kindergarten. With regard to the findings of the research and emanating from the practice of kindergarten leadership and management, the evidence showed the crucial significance of the educational environment for the learning of critical thinking. Such findings may have implications for the way in which Palestinian kindergartens are perceived by state officials and the evidence may provide support for claims on funding and finance, which historically have been lower for Palestinian kindergartens than for their Israeli equivalents.

The kindergarten's physical environment and its impact on education

Here I need to refer to the physical aspects of my village, Deir-Hanna, as it is important to understand the climate in this village and its effects on children. Deir-Hanna is located in lower Galilee. The village includes historic, densely stacked homes. However, the spreading of the construction reflects not only the village's population growth but also its investment in higher standards of living. In recent times the use of modern building techniques made marked changes to the typical building patterns, greatly impacting on the village's current image. These new residential areas have resulted in the intermingling of different "clans", something that is relatively new (Dwairy, 2004).

There are fundamental differences between Israeli and Palestinian values in education, which impact on the teaching and learning particularly in Deir-Hanna village. According

to Dwairy (2004), while Israeli society aims for individualism and self-orientation, Palestinian society is collectivistic. One of the major aims of education in individualistic societies such as Israel is to help students become independent and self-fulfilled. Theories of development describe a process of separation from the family and then a process of individuation of the self that leads to an independent identity at the end of adolescence (Dwairy, 2006). In the Israeli system according to this argument, as individuals rely on the state for their survival, not the family, they develop an independent identity. Education supports this system. Self-oriented education facilitates the belief in independence and encourages individuals to express feelings in order to actualize needs. In contrast, Palestinian learners and children rely on family networks for support and on its collective-authoritarian values. Therefore, collective values and norms are not a matter of choice but part and parcel of society's organization. They are internalised and help constitute what are to become viable personalities within their own context and culture. Thus, in kindergarten also, basic values are more collectivist, making it significantly challenging to teach critical, independent thinking.

Contextualizing practice in its environment

The Palestinian kindergarten emphasizes family harmony, interdependence, authoritarianism, and hierarchy within the collective. People tend to live near their parents and their behaviour is regulated by collective norms, which are often taken to be superior to the individual's needs. Social relationships are close and cooperative and involve much hospitality (Dwairy, 2004).

The family is responsible for raising and educating children, finding jobs and housing for young adults, and providing protection and assistance in critical times. Because of the vital interdependence between the individual and the family, familial authority often still plays out in the role of courts and law enforcement; something very different from western states. The family is authorised to judge an individual's behaviour and punish any deviation conceived to be threatening to family interests or harmony. Therefore, according to Dwairy (2004), psychological and physical punishments are commonly employed by the family to discipline and socialize children. Likewise, in Palestinian kindergartens, one must express what others anticipate. Palestinian communication is directed by values of respect, duty, pleasing others and avoiding confrontations. Emotional expressions on good or bad occasions, such as marriage or death, are ruled by what some might view as restrictive social norms. Palestinian teachers expect children to memorize information. They allow limited space for dialogue and critical thinking, discouraging initiative or creativity. The major learning functions that children acquire are to memorize, follow directives and be detached from their own feelings, avoiding self-expression (Dwairy, 2004). These characteristics of Palestinian culture and education greatly impact on the attainment of critical thinking and personal responsibility which by western standards,

are acquired by individuals motivated by their own preferences, needs, and rights. These individuals prioritize personal goals over those of others or over those of the collective, and employ rational analysis that contrasts the advantages and disadvantages of prioritizing others.

Staff contact with parents - as an aspect professional development

As a function of the leadership models used in the work-based project which were extrapolated to the research activities reported in this thesis, the kindergarten staff were challenged to develop ways to build the capacity of the parents of the kindergarten children, and to teach parents to take part in the development of the model. As stated in the research findings (Research Diary, 22/01/2012), by working with the parents one can provide children with learning that is adapted to their needs, as opposed to them adapting to the school's learning methods. The researcher also recorded (Research Diary, 18/03/2012) that in order to develop critical thinking skills and personal responsibility in the kindergarten, it was necessary to collaborate with the parents.

This thesis has demonstrated, I believe, that in one sense there is a partnership required between the professionals, the parents, the national 'systems' of provision of schools and the wider sense of community. It is a major task of kindergarten leadership to construct the actual and symbolic representations of the school and its learning agenda for those partners. This is of course a major challenge in any society where, for example, resources of all kinds are scarce and more so perhaps where some cultural traditions may militate against progressive learning organisations and methods.

Working with parents to support the development of the educational leadership model in the kindergarten was necessary to its success. Together parents and teachers have the ability to influence such matters, and it must be utilized in order to provide children with learning methods that are suitable to their needs (Research Diary, 22/01/2012). Collaboration is important to fully foster the thought processes of children which can lead to their achieving success in critical thinking (Research Diary, 18/03/2012).

The findings showed that professional development as an aspect of school leadership is integral to the development of a kindergarten teacher and for the engagement of the required partners in a learning environment. Through this study the researcher learned that the role of other parties in shaping the learning environment is important; something which enabled her to reinforce classroom learning particularly with the help of parents. The findings also supported the notion that the more the family invests in their children the more their children develop and grow. In this study, children of parents who were more active in the educational program had more creative ideas and demonstrated stronger critical thinking. Based on these results, it is also important that professional development includes greater education in the area of language development and acquisition and, as has been shown, the

importance of a curriculum based on knowledge of the environment. The professionalism of the kindergarten teacher must embrace a full range of environmental concerns and issues, especially if we allow the notion that the environment includes the social and psychological conditions under which the kindergarten operates.

As a kindergarten teacher with the autonomy to explore new ways of delivering lessons and the freedom to apply the methods available in the literature, the researcher acquired a range of new methods, tools and skills to help develop children's critical thinking and personal responsibility skills. As an action researcher, she engaged in self-reflection and was able to simulate her own form of 'professional development' as a result of the research. For me, writing this action research diary during the research period helped me to process emotions and thoughts which emerged during the learning process. According to Zuber-Skerritt and Teare (2013), this kind of process is essential in order to produce the deep meaning of research which could continue to be integrated within professional practice in the future. This form of action research is actually an interactive inquiry process that balances problem-solving actions implemented in a collaborative context with data-driven collaborative analysis or research to understand underlying causes thus enabling future predictions about personal and organizational change. Action research challenges traditional social science by moving beyond what can be called preformulated knowledge created by outside experts, for example by sampling variables, to an active moment-to-moment theorizing, data collecting and inquiry occurring in the midst of emergent activities and lived experience. In the education field action learning, I believe, asserts that knowledge is always gained through action and for action. From this starting point, to question the validity of social knowledge is to question, not how to develop a reflective science about action, but how to develop genuinely well-informed action – how to conduct an action science. I find this definition very helpful since it assists me to get a better understanding of the methodological process of data gathering and its analysis and to use this knowledge in a process of transformation and change which can impact upon children's lives.

During this experience, the kindergarten leader/researcher learned to recognize and develop resources that would help her build stronger relationships with the children and teach in their language through play and stimulation. A combination of practical knowledge together with theoretical educational knowledge thus strengthens the effectiveness of the kindergarten teacher and educational leader. Through this knowledge, the researcher was perceived as the central, professional and authoritative figure in the eyes of the parents and staff and was thus more effective.

As a consequence of the training that the parents received from the kindergarten's teachers, they reported a change of attitude towards their children. Parents participated in a series

of training sessions with the Kindergarten staff and an expert in child development. The training began with group sessions in which the aims of the programme were explained and the concepts of personal responsibility and critical thinking were defined. Each parent took part in an individual training session, during which the child's strengths and weaknesses were discussed and a plan for the parents to help their children improve their strengths was developed. Feedback from the parents also helped in the development of the children's projects during the programme:

Parent 1 said, “Today I have become more emotionally engaged as a mother, I have confidence in my son and do not constantly worry”. (Appendix 2 Interview: 2.1, Q: 6).

Parent 5 demonstrated a different aspect of this type of transformation through her statement: “It is sufficient for me that I have learned how to relate to my daughter, to educate her, to teach her, to mediate for her instead of being responsible for all her actions. I have learned to allow her independence and to impose upon her responsibility for her actions and words”. (Appendix 2 Interview: 2.5, Q: 5), Parent 5 also said: “I concluded that I had to give the child an atmosphere that is comfortable, relaxed and not anxious, but enjoyable.” (Appendix 2 Interview: 2.5, Q: 5).

The parents reported that they gave their children emotional support and conveyed to them that they are important, valued and respected which shed new light on their capacities and energized the children (Research Diary, 05/05/2012) and (Appendix: 3.4). The instruction was done with attention to the principles of love and support and the valuing of emotional expression. Taking encouragement from the work of Fischer et al (2014), the staff believed they have formed a partnership basis that radiates confidence, bestows authority and helps adjust behaviour alongside a positive and supportive atmosphere in the kindergarten. It is one of the crucial propositions of this thesis and the work- based project upon which it was based that a belief in the sense of each child’s abilities and personal responsibility can lead to desired change and progress via the enhancement of critical thinking skills. The professionalism of the teacher in regard to contact with parents is an important aspect of leadership, and in respect of the development of critical thinking outcomes, it was a vital ingredient for the processes of development and the delivery of enhanced critical thinking skills for children. A summary is provided below of the contexts and leadership approaches, including their association with critical thinking processes and pedagogy, and the transformative outcomes recorded in the findings of the thesis.

Table 8 : Synopsis 5 (Contexts of leadership types and outcomes)

Context	Leadership type	Critical thinking skills/pedagogy	Transformation and outcome
Kindergarten	functional and transactional emotional/supportive	facts, feelings, positivism child at the centre of concern cognitive concerns	professional practice transformed learning outcomes changed staff development
Family and home	transactional emotional	identity creativity self- development processes	children's abilities and critical thinking
Village/ community	charismatic/neo charismatic/ visionary community	personal viability skills social and communal values	parental engagement
Culture Civic society	emotional professional	self-learning social and collective, identity	community involvement social change cultural capital
Professional development	community partnership(s) reflexive action	mutual learning action learning and action research	professional practice enhanced

5.3 What kind of educational leadership characteristics help to facilitate the development of the sense of personal responsibility for children aged 3-5 years?

The second analytical question which frames the project's analytical findings concerned the way leadership characteristics can facilitate the growth of personal responsibility. According to the findings of this study, the answer to the question of how leadership can contribute to children's critical thinking and personal responsibility lies in significant measure in the following educational processes:

- learning through experience, action and interaction
- viewing the child as the centre of the educational process
- integrating emotions into the child-teacher relationship and learning process.

Learning through experience and interaction

Inside and outside of the kindergarten, the children were encouraged to ask questions and investigate the influence of the stimuli around them. Alongside these activities, the teacher/researcher provided the children with a sense of respect, love, encouragement, sharing and belonging (Research Diary, 16/05/2012) and (Appendix 2 Interview: 6, Q: 1). Encouraged by the work of Perkins (2011), the researcher followed a pathway involving questioning and social/experiential learning, as indicated in Table 2 Synopsis 2: 53. Perkins (2011), explains how learning academic subjects should be approached like learning baseball or any game, and he demonstrates this with seven principles for making learning holistic: from making the game worth playing (emphasizing the importance of motivation to

sustained learning), to working on the hard parts (the importance of thoughtful practice), to learning how to learn (developing self-managed learners). This approach energized and encouraged the children to search and ask questions confidently. Learning through these experiences increased children's motivation for learning through their enjoyment and facilitated achieving their goal. Former studies and contemporary writers have showed the importance of learning through experience and of evidence-based learning (Teare, 2013: 68-74) cited in Zuber-Skerritt and Teare, (2013). Learning is best conceived as a process, not simply or only in terms of outcomes. To improve learning the primary focus should be on engaging students in a process that best enhances their learning – a process that includes feedback on the effectiveness of their learning efforts. Therefore, education must be conceived as a continuing reconstruction of experience: the process and goal of education are one and the same thing (Macleod-Brudenell and Kay, 2008). In this study, the practice of the teachers focused on ways which children could actually feel and sense the learning, mainly by games and through play (Table 8 Synopsis 5: 146), or what Zuber-Skerritt and Teare (2013), call 'Lifelong Action Learning' which is learning from and for action so that human potential can be unlocked. The role of early childhood development in this wider agenda is perhaps somewhat unexplored but is nevertheless thought to be important in facilitating community engagement and development (Teare, 2013: 80).

Action learning aims to solve real problems that involve taking action and reflecting upon the results, which helps improve the problem-solving process itself, as well as the solutions developed by the team. There are several main steps in this process, which include:

- identifying a real problem that is important, critical, and usually complex
- setting up a diverse problem-solving team or “set”
- initiating a process that promotes curiosity, inquiry, and reflection
- insisting on a requirement that talk be converted into action and, ultimately, a solution a commitment to learning.

In this thesis, I use this important and well-validated method in order to examine fruitful ways of learning which are capable of promoting critical thinking in kindergarten. Many commentators and authors have noted that children must have the experience of feeling secure and loved by their teacher if they are to achieve their full potential (Crawford, 2009). The love of a teacher is an experiential requirement within the model adopted by the kindergarten, shown by interaction with the children, being sensitive to them and identifying with them (Research Diary, 04/05/2012). The findings of the research in the thesis indicate necessary components to this interaction between children and teacher, such as the ability of the adult to read signs and hints from the child (Research Diary, 07/05/2012).

The findings also indicated the significance of the capacity to answer and respond in real time, to express and contain feelings of various kinds (Research Diary, 10/02/2012), whilst supplying the supportive atmosphere and warm emotions needed by children (see Appendix 2 Interview: 2.1, Q: 1). The findings suggested that interaction between teacher and child can be shown in different ways and is a vital part of learning through experience and interaction. Substantial examples of this were recorded in the project and are outlined below.

The findings of this study indicated that improving personal responsibility is connected to how children perceive themselves in the kindergarten and how parents think children perceive and experience themselves in the home. The kindergarten is the child's main experience of life outside of the family; here he is no longer someone's son, but an individual receiving an education. Therefore, it is important that the teacher recognizes the individuality of every child and treats them accordingly. The project also concluded that teachers should tell children appropriate information about their own life, something which helps the children to understand they have lives outside of teaching and are individuals as well as teachers. Individuality is an integral part of the model designed to foster personal responsibility in kindergarten age children. Table 7 Synopsis 4, identified and summarised the project's pedagogic tasks and practices in this regard and indicated the critical thinking and personal responsibility outcomes for the learner. The link between the kindergarten contexts including leadership style(s) and pedagogical practice, rooted in experience and interaction, was established and appropriate outcomes for critical thinking were identified.

The child as the centre of the educational process

A crucial aspect of kindergarten leadership focusses on how the child is conceptualised and 'handled' by its teachers and carers as a person and as a learner. The project as a whole had a view that every child is important and every child can develop personal responsibility (Research Diary, 03/03/2012). This notion provided the researcher with the direction for collaborating with parents in order to overcome challenges. The results of the research validated the necessity of building a partnership with parents, ensuring that the child is placed at the centre of the whole educational process, whether within or outside of the kindergarten itself.

Collective capacity building outside of the classroom entails building the capacity of and collaborating with parents to transfer knowledge and learning methods (Research Diary, 22/01/2012). Parents are partners both as an educational resource and in the kindergarten for informal activities in the evenings and on trips (see Chapter 4: 96). The project found that this involvement promotes learning in children, assists in mediating norms and common messages and promotes the educational climate of the kindergarten as well as supporting a key learning objective for the centrality of the child.

The findings of the research suggest that promoting development can be done by stimulating the child's critical thinking capabilities (Research Diary, 09/05/2012). By placing challenges before the child in this way, the child must consider the challenge carefully and not act impulsively (Research Diary, 02/02/2012). This new process is not given to the child as a ready-made product from the outside; although the teacher can prepare stimuli that will help him, the child must actively be involved on his own in the developmental process (Research Diary, 11/02/2012). Hence, we can legitimately propose the idea that the child is at the centre of this particular educational process (Research Diary, 28/02/2012).

Helping the child develop self-control

The findings of the project suggested that teachers and parents could help the child to develop personal responsibility and critical thinking skills by nurturing the child's sense of self-control and self-regulation (Benham 1995, and Michelle 2008).

When discussing self-control, one refers to the ability of the child to delay a physical action until he is told it is appropriate, to endure frustration and adjust behaviour to the requirements of the situation. The goal is to educate a child to stand on his own, to know how to choose his way, to bear responsibility for his actions, to be a free thinker, to collaborate with others and friends from his own will and not be coerced, and to act kindly and carry out good deeds due to his conscience and social awareness. Such factors, it is clear, demonstrate the importance of social learning and emotional intelligence(s) for the development of critical thinking and personal responsibility. A key theme in the research findings (Table 2 Synopsis 2), records this in relation to children's learning processes whilst within the project more widely, performance, judgement, engagement and trust are shown as indicators of children's capacities for self-control and social learning. However, it is clear that children should also be made aware when their reaction has been inappropriate and they have lost self-control. Self-control is one of the most important skills in child development, since the lack of it may cause difficulties for the child in his relationship with his peers and he may even harm them.

Helping the child develop relationships with peers

Following the lesson plans and structured teaching (pedagogy) and the experiences the children underwent while cooperating with each other, we can say that the children were trying to plan the work that they had to do while working in pairs or small groups. Nevertheless, the coordination among children was dependent on the composition of the group. For example, when the researcher divided the children into groups herself, it was sometimes difficult for the children to plan their work, understand or listen to one another. Therefore, I changed my method and divided the children based on their interest levels in the subject- the ones who were likely to have the most interest were put into one group

together, while the ones who were likely to have little interest were put into another group. By matching the most motivated students together, this increased their overall motivation and helped them more easily to achieve the learning goals. When the researcher put the least motivated children into a group, she was able to tailor the lesson to their interests and therefore increase their motivation to learn. After participating in the programme, the collaborative work by the children in the groups they had chosen themselves was more efficient than previously. The children were more attentive to each other and tried to contribute to the group to which they belonged. This shows they had developed a sense of personal responsibility and each child wanted to play his part in the group. In the professional assessments of Harris (2004); Parry (2003) and Pearce and Randel (2004), one can find strong external validity for the significance of acts and understandings of personal responsibility. These researchers suggest the utility of defining a person through his acts of personal responsibility. We need to note of course that within this thesis it was found that acts of personal responsibility require collaboration and are deeply social and emotional in character.

The project found evidence of the importance of mutual learning and collaboration and showed that young friends treat each other differently than those with whom they are not friends. They often have more positive interactions and engage in more cooperative problem-solving tasks with their friends. When they are put in experimental situations that contain a conflict, friends also disagree with each other, often more than with acquaintances. However, the less-heated arguments end with more equitable solutions and do not cause a breakdown in friendship between the children. Friendships among kindergarten-age children provide clear motivation to maintain the relationship. Their ability to continue the relationship despite the conflicts provides them with important opportunities of how to learn how to live together. The coordination of activities that the children undertake may also indicate the beginnings of learning about justice. Children learn how to form and maintain friendships by observing how the adults in their lives, especially in the kindergarten, act with each other. If the teachers have a warm relationship with each other and with the parents, this provides a positive example of friends working together. Children also learn from their parents' friendships and grow to see friends as a support network and realise the value of having close relationships with people from outside of the family.

The sources and models for critical thinking (Table 2 Synopsis 2) indicated the importance of trust, friendship, security and confidence in the child's learning processes. The findings of the project yielded evidence of critical thinking and growth of personal responsibility, where those factors were identified and supported within and beyond the classroom.

It is worth noting, however, that since every child in the kindergarten who participated in

the study was at a different stage of psychological and social development, differences in behaviour could be seen among the children. Some of them cooperated with each other willingly, and they knew when to concede and when to help, while some of them (a small percentage) were not willing to help at all, to concede or would listen only upon my recommendation.

Helping the child develop a sense of belonging

The findings reported in the thesis clearly suggest that the child's ability to develop personal responsibility and critical thinking skills comes from the sense of belonging that the child feels in the kindergarten, and which the parents and teachers can help him to acquire.

The need to belong motivates the child and this sense of belonging constitutes a goal for the kindergarten and for all other social settings. Therefore, a most important thing for a child is to feel he belongs to the kindergarten. Hence, the question presents itself, what is a sense of belonging? The work of this project demonstrates that a sense of belonging is a positive and good feeling towards the kindergarten. The child feels that he has a place in the kindergarten, and that he is welcomed by the staff and other children, that he is loved and accepted, that he is part of the kindergarten, that his presence in the kindergarten is beneficial and what he is doing is necessary. It can be added, that feelings of belonging do not depend only on the child himself, but also on the group of friends in the kindergarten, family, friends, relatives and any other group with which the child is in contact. In order for the child to create a sense of belonging to the kindergarten, we must provide him with conditions that allow for a sense of belonging. For example, empathy, equanimity, interest, sympathy, support, communication, mutual respect, listening and looking at the child as somebody of equal value who is wanted and admired are all necessary conditions for this sense of belonging. Such were the objectives that infused the project's pedagogy, as were the objectives of the leadership approach adopted by the researcher.

The integration of emotions into the child-teacher relationship

The findings of the work-based project overall suggest that the child is motivated to develop personal responsibility and critical thinking skills when he is the recipient of love, acceptance, appreciation and respect, along with good communication. The thesis argues that these feelings should begin at home and continue into the kindergarten- if the child does not come from a home environment where he experiences these feelings, the teacher should encourage the parents to improve their relationship with their child and show more affection to him. This is evidenced in the thesis where changes in kindergarten pedagogy and practice were implemented for teachers and parents together (Table 7 Synopsis 4) and thus were an expression of the educational leadership of the kindergarten itself.

The results of the research also show that love and emotional development is a phenomenon that can be felt but cannot be easily defined. We can say that love is the acceptance of oneself and of others without discriminating against race, sex, nationality, social class, colour, religion, opinion, clothing and age. Therefore, whoever does this with all their heart loves himself and all those around him and accepts them as they are. We could call this unconditional love, which is what parents often express for their children. A person may also allow himself or herself and others to develop positive feelings and emotions towards others and thus change towards fulfilling their potential.

If we were to examine the phenomenon of love more deeply, it becomes clear that it is difficult, if not impossible, to find unconditional love. While parents should try to love their children unconditionally, sometimes this is not possible due to external factors, for example, the breakdown of the relationship between the two parents. Children will know if their parents do not love them unconditionally and this will affect their behaviour and sense of belonging. For this project, it was clear that emotional factors played a significant part in the readiness and capacity of children to develop and use critical thinking. As a key theme within the 'model' of critical thinking, it had an important part to play (Table 5 Synopsis 3) in the exploration of children's capacities.

The price we have to pay for the development of personal responsibility among kindergarten children is to partially concede the dependence of the children on adults. This is a small price in relation to the benefit that the development of personal responsibility among children can yield to both children and adults alike (see Appendix 2 Interview: 2.2, Q: 12). The evidence showed that the teacher must display enthusiasm through interactions with the children by changing the tone of her voice and by other non-verbal methods of communication, in order to stimulate and focus the attention of the child and to plant in him/her a desire and motivation to absorb the stimuli. This behaviour must be adjusted to the level and condition of the child. The teacher is conscious of the learning processes and pedagogic principles and acts accordingly. The findings showed that the teacher also changes the stimulus and selects filters and measures for prominence; such learning if internalized by the child will cause a significant change in him. The mediation by the teacher is directed also, to what lies beyond the stimulus itself - all mediation activities must become a type of model in which the teacher acts as a tool to help the children understand the situation around them. In addition, as skilled practitioners, teachers should show enthusiasm and flexibility when helping children with problems and difficulties, such as I described in my diary when a child was dealing with a certain problem and the teacher assisted him. What enables them to learn together is the teacher helping the child to learn, showing him concern (Research Diary, 14/03/2012), loyalty and affection (Research Diary, 04/03/2012), as well as sensitivity to others and love to those around him. The sharing of thoughts and feelings of mutual encouragement and support, are similarly important.

The children in the kindergarten were imbued with this mediation and used it with others through games and group activities, for example, by playing with others and giving them a toy and asking them for a toy in return. This can be interpreted as a friend providing for the needs and the desires of the other. A further point is that the teacher is seen as belonging to the child, is at his disposal and is destined to serve him. Identification with the teacher is very typical of children. This identification supports the internalizing of the teacher's rules and the child is motivated to obey the teacher in order to keep the teacher's love for him or her (Research Diary, 04/05/2012). The thesis has demonstrated the close interplay of pedagogy and teacher skills with the mediated experience in these examples, focussing on the emotions of the child-learner.

5.4 What are the characteristics of critical thinking in children aged 3-5 years?

Whereas the second framing question concerned the impact of leadership characteristics on the growth of personal responsibility, the third framing question for the analytical findings of the project was concerned with the content and qualities of critical thinking in young children. It is possible to define the characteristics of critical thinking in many different ways, though this work-based project chose to limit the context of such ideas in particular to the Palestinian Kindergarten. It is, however, possible to identify a range of personal attributes, behaviours, capacities, ways of understanding, learning modes and methods that are indicative of critical thinking and personal responsibility in general. It is equally possible to suggest that critical thinking is in fact a philosophy of personal responsibility and viability (Teare, *ibid*: 104). Within the overall frame of the philosophical foundations of early years' education (Macleod-Brudenell, 2008:15-37) and of more generalizable notions of personal responsibility, this thesis has adopted a definition of critical thinking which revolves around children's cognitive, emotional and social capacities alongside a recognition of the importance of emotional and empathetic support by their teachers. The teaching and learning of critical thinking skills has necessarily evolved from the activities and processes of learning documented in this work (Table 7 Synopsis 4: 129). Care and education were devised and delivered hand in hand within an approach that put the child at the centre of the concern. This was allied to an intention to identify leadership approaches and values and learning/teaching practices as essential elements of critical thinking in younger children.

Development of cognitive skills

The first two primary research issues in this thesis focussed on educational leadership and how this can facilitate the development and characteristics of critical thinking skills in young children. The content of critical thinking in this study, however, rests on a combination of concepts of learning, which have been adapted from a range of key thinkers and authors (Table 2 Synopsis 2), and actual activities which children can do in the classroom and in life. These leading academic sources have been used by the researcher

within the work-based project to produce a framework for learning and development for the knowledge and skills needed to produce an aware and proficient child, that is to say a child with some critical thinking skills. This is the child who has a sufficient measure of what we have called critical thinking skills and is thus cognitively developed. Therefore, the child is, we can say, cognitively developed for its age and stage in life when it can demonstrate appropriate attention, memory, perception, thinking and problem solving (Walkup cited in Macleod-Brudenell and Kay (2008), chapter: 6). For the purposes of this thesis, some key theoretical views of cognitive development were co-opted and adapted because they considered aspects of working with and supporting kindergarten children, which resonated with the daily work of the researcher/leader/teacher. They were also, and importantly, consistent with the objective of 'humanising' the learning processes and experiences of the Palestinian kindergarten classroom.

In particular, some of the concepts developed by Piaget and Vygotsky were adapted within what Walkup has called "the information processing approach to the care and education of young children" (Walkup, et al, 2008: 132). This approach enabled the researcher to test how individuals learn within their culture and to contextualise her practice as a key objective of the doctoral research and learning process. Certain approaches were considered and rejected as inappropriate to this context, such as behaviour management and overly directive didactic practice and control methods.

The fundamental approach adopted in the project was about planning for learning that relied on theories which view learning as arising from the child's active participation in the learning process itself. This was a 'constructivist' approach yet it built on critical realist concepts which were located in the work of key theorists, as is outlined in Piaget's work for example, on developmental adaptation, maturation, assimilation, accommodation, equilibration and schemata (Walkup, *ibid*:135). This approach provided a conceptual model, rather than a detailed or prescriptive scheme, in which the researcher could show that the child adapts to his/ her environment through experience. The stage theory used by Piaget would of course itself be limited within its own terms to pre-operational stages and pre-conceptual and intuitive stages up to say 7 years of age, which provided a partial match with the Palestinian kindergarten. The outcomes of the research phase of the work-based project was the evidence of these adaptations through learning experiences designed and planned by a conscious kindergarten leadership. These involved providing opportunities for children to construct knowledge through experience, rather than being told by the teacher. They involved selecting topics, which were relevant to the children and parents, building on what was already known and providing a variety of learning environments. This was supported also, by Robbie's case studies (1985) and Siegler's work (1996) (cited in Walkup et al, 2008) who discuss the principles and the means in which practitioners can support young children to apply information processing in

learning environments. The argument here is that there are indications that seek to show that children will think differently even when they are dealing with the same task. Table 9 below, has been adapted in order to give examples and to show the application of information processing principles in learning environments.

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Table 9 : Supporting young children in learning environments, adapted from Macleod- Brudenell and Kay (2008: 154-155)

Applying information processing principles in learning environments

Gain in the learner's attention	<p>This is important. You can do this by perhaps using cues to signal that you are ready to start. While engaged with the learner, keep his or her attention by perhaps moving around the room and varying pitch and speed of voice. Do not attempt to maintain children's attention for long periods, as their attention span is not extensive. Although there seem to be no definitive studies measuring attention span in children, it seems that 3 to 4 minutes per year of age is a rough guide. So, a 3-year old might be expected to concentrate for about 9 minutes and a 5 year old for about 15 minutes at a time. Obviously, this can vary, not only from child to child but also from activity to activity. Some children who are assumed to be suffering from Attention Deficit Hyperactivity Disorder (ADHD) are still able to pay attention for an extended period of time if the subject is interesting enough, for example their favourite television programme or video game. Similarly, toddlers may pay attention for longer periods when there are no distractions and the topics interesting. A child's attention span develops in three stages: young infants often stare at their mobiles for long periods of time and seem able to ignore other stimuli.</p> <p>At around 2 years of age toddlers' attention span changes rapidly and spontaneously from one object to another and they rarely play with one toy for an extensive period of time.</p> <p>The school-aged child is able to concentrate for longer periods on a particular task and yet is able to shift this focus when necessary. This is known as selective attention and is required for the child to progress appropriately within educational establishments.</p>
Relate back to things already known	In order to provide something to build upon, you might perhaps talk about the previous lesson on a topic or invite children to recall it as a group.
Pick out important points	By writing important points on the board or on handouts/transparencies, you are encouraging children to attend to these aspects. (This helps to overcome the limitations of sensory memory).
Organise material	Ensure that material has a logical sequence and progresses from the easiest through to the most difficult.
Encourage categorization (Chunking of material)	Present information in categories, for example, you could present seven groups of seven, rather than 49 separate items. (This helps to overcome the limitations of short-term memory and the fact that only a limited number of chunks of information can be processed at any one time).
Provide opportunities for both verbal and visual encoding	Although evidence is not conclusive that they are two different systems, it does seem that imaging can help memory.
Include opportunities for children to elaborate upon new information	Connect new information with some something already known, this might include a discussion of similarities and differences.
Include repetition	Include repetition within the teaching and learning situation in order to encourage transfer to LTM (long term memory). Outline, perhaps, the contents of the session and review at the end. By doing so, there is more chance that the learning will be processed.
Gain in the learner's attention	This can be achieved through daily repetitions of important numerical facts, for example, or of games and quizzes involving knowledge of basic facts and information.
Arrange for a variety of practice opportunities	This helps the learner to generalize the information so that it can be used outside of the original context within which it was taught.
Help learners become autonomous	Assist children in choosing appropriate learning strategies such as making summaries or asking questions.

Vygotsky's work on social cognitive approaches was also influential in that the research and development activities of the kindergarten were understood by the teacher-leaders to be part of the wider social-cognitive world of the children. This involved recognition of the specific cultural and ethnic aspects of a Palestinian kindergarten and which were considered in the light of the insights and analysis by Dwairy (2011). Speech and communication, language and thought are all part of the process that shapes a child's thinking processes. These things are part of the culture which shapes experience for the child "Vygotsky stressed the importance of the context in which learning takes place, seeing that as inseparable from the child's cognitive development." (Walkup, *ibid*: 148).

The practice of organising and managing learning in the classroom requires us to understand something of the cognitive processes, which underpin learning and performance. Memory and information are key to the creation of a knowledge base for a child (and for an adult also). Teachers as practitioners support learners not only through recognition of the stages through which a learner may pass and the significance of the learning culture but also through applying what has been referred to above as, "information processing principles" in learning environments (Walkup, *ibid*). This can be illustrated by the following examples within the diagramme at Table 7 Synopsis 4, which record processes of learning activity from the work-based project.

These processing activities help break down the elements of cognition within what we want to call critical thinking skills and perhaps most importantly they may help us to handle the information in a learning environment that now includes pictorial and visual material available on-line and via new computer-based technologies. This 'explosion into availability' (Davies et al, 2016: 17) of new learning technologies will surely influence young children in Palestinian kindergartens as it has elsewhere. Visual critical thinking skills are surely on the horizon as a challenge for all children as the digital technological products are acquired by successive generations.

5.5 What are the characteristics of personal responsibility and viability in children aged 3-5 years?

This theme indicates the fourth analytical theme dealt with in the project and indicated as a 'framing and analytical question' earlier at section 5.1 above, the thesis has already indicated in Chapter 2 the importance of treating the notion of critical thinking in a broad and generalised context. The critical skills and behaviours reported here are an attempt to make a synthesis of theoretical insights from eminent social theorists who have studied childhood and the practical insights gained from dealing with kindergarten children in their everyday setting as reported within this thesis.

One element of critical thinking which was thought by the leader/teacher/researcher to be of special interest in framing issues and concerns to be investigated and tested was that of

'personal responsibility'. An outline of what personal responsibility meant to the project at its beginning was given at Section 2.11. During the development of the project itself and as an aspect of the professional self-development of the researcher, this concept took on a distinctive emphasis. As the staff began to accept the idea that action learning for development was taking place and could be observed and recorded in the kindergarten, the idea of personal responsibility for young children became more significant. The outward signs and signals of personal responsibility involved the following factors all of which were illustrated in the findings of the research evidence (Research Diary, 10/01/2012):

1. Helping others - so as to assist people that are in some kind of distress or experiencing a serious problem. This action is derived mostly by empathy and the skill to figure out what someone is thinking and feeling. Empathy is the ability to imagine how someone else is feeling in a particular situation and respond with care. This is a very complex skill to develop. Being able to empathize with another person means that a child understands that he is a separate individual, his own person; understands that others can have different thoughts and feelings than he has; recognizes the common feelings that most people experience such as happiness, surprise, anger, disappointment and sadness. Therefore, developing these abilities is very important for the way children acquire better social skills as part of the development of personal self-awareness and of personal responsibility (Research Diary, 23/01/2012).
2. Respectful peer teaching/learning - children who respect other children have more respect for order and for the need for appropriate conformism. Children who have these attitudes and behaviours probably have less resistance to schooling and may learn more easily (Research Diary, 17/02/2012).
3. Nurturing respectful relationships – where children’s relationships have an impact on the learning that occurs in the setting and on children’s future interactions with other children in different settings. Like any relationship, for the relationship to be meaningful, time must be spent building it up from the initial stages and maintaining the relationship over time. When this occurs, children are more likely to feel connected to adults in the setting and feel that they are a valued member of the early childhood community (Research Diary, 15/03/2012).
4. Recognizing the individuality of others - meaning the ability to feel more separated and autonomous and therefore recognise their own and others’ individuality and their place in the world. In addition, when developing one’s individuality there is also opportunity to develop personal voice and to make correct and appropriate decisions (Research Diary, 16/03/2012).

It is important to note that personal responsibility is theoretically close to the notion of “personal viability” developed by Zuber-Skerritt and Teare (2013). Personal viability is holistic human development, which embraces the physical, mental, spiritual, emotional and financial aspects of human life. The main purpose of personal viability is to enable students to recognize and use all the natural resources at their disposal as well. In this vein, my interpretation of this term means that children in kindergarten learned how to

use their personal resources in order to gain educational goals.

5.6 What are the tools and skills of independent learning that kindergarten children can use in order to develop their critical thinking skills?

The fifth framing question and the analytical findings arising from the work-based project concern the extensive learning processes and conditions under which critical thinking can be said to be successfully advanced in the kindergarten. These are the contexts which form and shape the learning experience and it is hard to over-emphasise their importance within this thesis. Chapter 2 of the thesis has mapped out the framework for learning and development in the Palestinian Kindergarten which focussed on critical thinking and personal responsibility and a series of possible leadership models was outlined. A paradigm was suggested that could help define and deliver knowledge and skills within the kindergarten that would enhance the whole experience of learning of young children and yield the future possibilities that successful early years learning offers. This was the agenda and the possibility offered and explored by the research process. The carrying out of this involved a critical exploration of leadership and a testing out of practice in the kindergarten itself, right across the dimensions of the institution and its community and culture. The outlining of approaches and exploration of contexts was a vital part of introducing a professional teaching element into the classroom and therefore being able to identify the actual characteristics of 'critical thinking'. In a sense this is only possible through the use of a 'synopsis' which extracts and at the same time 'abstracts' the actual qualities or characteristics or proficiencies of critical thinking from the contextualised practice which is the substance of this thesis (Table 2 Synopsis 2). Some of these proficiencies or 'skills' are indicated below alongside an indication of where in the findings the evidence is found and from which the analysis has been made. I have drawn on the work of Zuber-Skerritt and Teare (2013: 170) and Walkup (2008: 154-156), to compile a list of critical thinking attributes or skills which were explored and evaluated within practice in the kindergarten and from the research elements of the work-based project. The process model implied by Walkup, in particular, stresses the principles to be used in constructing a learning environment. Such an environment, however important, does not dictate the content of learning and the content of critical thinking was structured in this thesis along the lines suggested in Chapter 2, and summarised at (Table 2 Synopsis 2), which embrace the following categories and which are in effect key themes of the thesis:

- cognitive dimensions of learning and being
- personal responsibility and personal viability as framing devices for learning behaviour and action
- emotional experiences and emotional intelligences which support learning
- cultural and environmental contexts for critical thinking.

These four over-arching themes are the framing device within which the more concrete detail of specific processes and skills have been examined in this thesis. The construction of these detailed skills is of course itself relatively arbitrary, but the model presented here and the list of processes derived from it attempt a coherent view of a burgeoning field of study and research. Some of the concepts and capacities listed below are at the same time also indicators of experience and critical thinking skills. They indicate process and activity and product and outcomes within the project's reach. The list, derived from the work-based project overall and the research phase in particular, though conditional and tentative and presented in this thesis is as follows:

- play: the capacity the child has to experiment with its surroundings and to engage in problem solving
- performance: the ability the child develops to adopt alternative identities and to discover alternate selves
- emotional and visual self-recognition
- competence and self-esteem
- emotional capability, emotional 'literacy' and emotional intelligence
- a sense of secure attachment: ability to make friends; successful problem solving; social competence; cognitive competence; using symbolic play (see diagramme cited in Macleod- Brudenell and Kay, *ibid*: 100)
- simulation: the child's ability to model real world activity and processes
- multi-tasking: the capacity to do more than one thing at a time and to shift focus when necessary
- distributed cognition: the ability to interact with tools that grow mental capacity and challenge an individual
- collective action: the ability to pool knowledge and compare with others
- judgement: the capacity to assess whether something is reliable and trustworthy
- transmedia navigation: the ability to follow stories (narratives) across different and multiple media
- networking and cooperation: the ability to look for information, synthesize it and share it with others
- negotiation: seeing more than a single viewpoint, respecting differences and following alternative behaviours
- self-evaluation: the capacity learners need to make good judgements about themselves.

The findings reported in Chapters 4 and 5 suggest that intervention, as conducted in this study, could improve children's skills for critical thinking processes. The list of critical thinking attributes above, however, are not a fixed set or ranking of granular skills which can be read off from a test situation. They are rather an indication of processes and experiences which can be taken to be suggestions for teachers and care-givers. They are

both processes through which critical thinking is developed and they are at the same time indicators of successful outcomes of critical thinking.

The findings indicate that it is important to provide opportunities to play. It is during play that children test their thinking whether dropping a spoon over and over again off the side of a high chair tray; rolling two marbles down a chute to see which is faster; seeing what happens when you dip chalk in water; or mixing cornstarch and water to make “gloop”. In addition, one should provide space for playing, including time for outdoor or pretend play, since such facilities can provide open-ended opportunities to try something and to see the reaction then to try something else and see if a different reaction is produced. This informal process of testing how things work is crucial to critical thinking.

Another conclusion from the findings in respect of the tools and skills needed for critical thinking is that it is necessary to help children view themselves as problem solvers and thinkers by asking open-ended questions. Rather than automatically giving answers to the questions children raise, the teacher should help them think critically by asking questions in return: “What ideas do you have? What do you think is happening here?” Respect for his or her responses, whether you view them as correct or not, can be indicated by the way a response is articulated. An example might be, “That is interesting. Tell me why you think that” or the use of phrases such as, “I am interested to hear your thinking about this”, “How would you solve this problem?”, “Where do you think we might get more information about this problem?”

In addition, teachers should not attempt to solve all problems immediately. Instead, they should ask some of the questions above and provide enough information so children do not get frustrated, but not so much information that the teacher would solve the problem for them.

The most important thing is to help children to develop hypotheses and to encourage thinking in new and different ways. By allowing children to think differently, teachers help them hone their creative problem-solving skills. The search for new ways of thinking can involve questions such as, “What other ideas could we try?” or encourage coming up with other options, “Let’s think of all the possible solutions”.

The above paragraphs in this section have outlined what we can think of as key processes for the development of critical thinking skills. They are the necessary sets of experiences and processes which underpin or surround the activities or the 'doing' of critical thinking. A person of any age cannot just do critical thinking in the abstract and a thought must have an object for it to be real and known to another person. We can therefore think of critical thinking as a type of performance. We know it is taking place through the evidence we collect of its presence in the world, in this case its presence primarily in the

behaviour and actions of the kindergarten children. Reflexive life and reflection of course does not always show itself in any given act but this is not the subject of this particular project. This project was focussed on activity in the kindergarten, which could be seen to be connected to what was called an action learning approach to these matters. The theories of learning that have been used as models for critical thinking have shown us, as it were, a series of learning processes and contexts. These were a key feature of the work-based project and the unfolding of these as part of professional practice in the specific kindergarten is recorded in the thesis, especially in the focussed research phase of the project. The actual practical activities and tasks undertaken by the children were derived from this collection of learning processes outlined above and can be described in terms of skills to do with learning, questioning, problem solving and researching. In addition, we must add the important aspect of socio-emotional learning and skills to the repertoire of critical thinking. Within the framework of this project, these skills are indicative of activities and experiences we can view as cognitive processes, which the project and thesis argued, led to the growth of critical thinking and personal responsibility.

Children and critical thinking

The idea of critical thinking is central to this work-based project and to the thesis which came out of the practical and creative work within the kindergarten and community. The idea, however, of critical thinking is not a simple and unitary thing. It can mean different things to different people and even though I have 'borrowed' ideas and concepts from writers and thinkers who have struggled to define critical thinking, I have had to define critical thinking in the kindergarten for myself. There was no existing model to use as guidance.

The idea of critical thinking in this work-based project draws upon what is known as 'critical theory' which, according to Newman (2006) involved separating out truth from what could be called 'ideology'. This means that we do not simply take things at face value but we look for the under-lying causes and conditions which make it so. It means as Newman states "... not letting others make up our minds for us" (Newman, 2006: 9). And it means that critical thinking is concerned with the idea of social justice and fairness. It is not just concerned with learning about the requirements of thinking as logical processes or as competency in achieving tasks such as working in a team or producing high quality outcomes as types of learning. Newman calls this a form of 'domestication' of thinking and this was not what was wanted within the kindergarten project.

The positive content of critical thinking in this thesis came from a belief that knowledge and learning could produce a social result. This was to include a better thinking Palestinian child who would cope more successfully with the challenges she/he would face in the future. It would involve learning which would lead to an enhanced sense of the self

and a more capable individual; more capable of relating successfully to others and of being personally more responsible and viable. These were the terms of debate for critical thinking in the kindergarten.

The content of critical thinking was therefore always about the cognitive and emotional setting of learning in the Palestinian community which was the home of the kindergarten. It was not a specific list of skills or attributes and it had an impact on teachers and parents as partners in the enterprise as well as on the children themselves. Critical thinking was about not only how institutions such as the kindergarten or schools actually work but was also about the social knowledge which was part of the social reality of the community.

As part of this social knowledge children need to be 'reflective agents' which means that they need to begin to be able to give an account of themselves in relation to others, including other children and adults. This project was about the process and experiences which stimulated such thinking. This involved cognitive and emotional knowledges which enhanced the 'self' and produced confidence and capability for the child. Part of the task for the whole project was to help children give an account of their own learning and this involved their feelings and emotions as well as their cognitive development. No single specific skill or talent or behaviour could be learned but an awareness of others and of self was an essential and sufficient condition for critical thinking in the child.

For the teachers and parents, who were also key actors and agents in the project, the knowledge they gained about the school curriculum and the learning of their children was also a reflective challenge. This is because critical thinking argues that it is itself part of the world or reality (what Guess, 1981: 55, calls the "object domain") which it is trying to describe and analyse. This means that such knowledge has to be "reflectively acceptable" (ibid: 56) in that it can give an account of its own context, of its origins and an explanation of its usefulness and applicability by those who actually use it. In this work-based project the engagement of the leader-teacher(s) and the parents was explicitly organised on these grounds. So, if the transformation of learning that is required is to take place in the Palestinian kindergarten outcomes as types of learning is to be made real then it would be rational and reasonable for the agents of learning to adopt critical thinking. Such was the thinking which informed the partnership between parents and teachers and the fruitful relationship between children and their teachers.

5.7 Learning skills

The fifth framing question has directed our attention also to pedagogical issues. To develop learning skills, the researcher relied mainly on exploring and recording the capacities of the children, which included the subjective perception of the child's ability to function, and constitutes one of the central elements of his self-perception. In the child's early years feelings are constructed based on responses that the child receives from his environment

and according to how adults interpret his acts as well as the effort he invests in these acts. While considering this, the researcher found that in order to encourage independent learning, she had to create a positive and secure atmosphere to support the child and allow him to build high self-esteem (Aflatka, 2007). Parent 1 supported this finding in her responses during the interviews (see Appendix 2 Interview: 2.1).

According to Kaminski (2010), creating a flexible and supportive learning atmosphere that allows room for error is a prerequisite for both significant learning and personal empowerment of each child. I think that the area of early childhood education can be viewed as illustrating the idea of a self-fulfilling prophecy (Research Diary, 15/05/2012). This effect is created because the child's perception of his abilities often indirectly affects the degree of investment that he is willing to devote to his studies- this was reiterated by Parent 1 in her interview (see Appendix 2 Interview: 2.1, Q: 4). In this vein, a parent said to the child: "Yes, I believe you can do this assignment. I will help you but you need to solve it on your own eventually". This is true even when the perception does not match the reality. Children who feel that their teachers believe that they have high capabilities tend to invest more effort in order to justify these beliefs and thus they increase their chances for success (Research Diary, 08/04/2012). On the other hand, children who feel their teachers have low expectations of them, frequently tend to give up and accept the situation, so that a lack of willingness to invest significantly affects their performance. Therefore, the type of tasks offered to a child may have an effect on his ability to develop learning skills and capacity (Research Diary, 03/02/2012).

Monotonous or overly easy tasks, that do not constitute a challenge for the learner, or tasks that are too difficult may undermine his sense of ability. This is what motivated the researcher to adjust the level of the challenges placed before the child so that they were not beyond his capabilities, yet required an effort on his part to solve the challenge. This is because the frustration created by a challenge with a high level of difficulty can with time cause concern and eventually anxiety. On the other hand, a challenge that is too easy can create a situation where the child's ability exceeds these requirements and therefore he may feel boredom, which will increase with time. This matter made it possible for me, to direct my attention to ways that I feel can positively mediate learning such as offering reinforcement at the right time, reinforcement accompanied by an explanation and changing a task to enable success.

The explanation that accompanies the reinforcement serves as the mediation of criteria for assessing performance. According to these criteria, the child will be able to assess himself and his achievements with respect to the goals he set for himself. The explanation helps the child to focus on the processes that lead him to success and his previous mental activities. This is then a learning skill that can be demonstrated; it illustrates a measure of

independent learning and is an element of critical thinking which can be identified within the milieu of the kindergarten child.

In the interaction between the kindergarten teacher who is mediating with the child and the child itself, there can exist coordinated role reversal- this was also stated by Parent 3 in the interviews (See Appendix 2 Interview: 2.3, Q: 5). We can compare the relationship between the parties to a game of tennis or ping-pong between the teacher and the child, where the roles of initiator and responder alternately change; however, the teacher is committed to plan them and ensure their implementation. In addition, mediation brings organization and regularity into a world of enormous and fragmented stimuli. Mediation or mediated learning is the interaction between the kindergarten teacher and the child or the adult and child, whereby we transmit to the child the content of the thinking processes and information processing. The quality and efficiency of the mediation is affected by the characteristics and skills of the mediator. Accordingly, the educational and familial background of the person are predictors of academic or professional success (Chapter: 4). Learning ability is also affected by the social domain. Acceptance or rejection of the learner by the peer group (which was defined by Goldhirsh and Wagner (2004), as a social group made up of the same age and the same social status with common interests), strongly influences his achievements and self-esteem. For the most part, rejected children have problems with their social abilities or emotional intelligence, which was defined by Harpaz (2008), as the ability or skill of the person to identify, assess and manage their emotions and emotions of the others. Kaniel (2006 cited in Harpaz, 2008), clarified an important point here, which is that we can improve social functioning through educational programs that emphasize the need for cooperation, interpersonal communication, listening, and support. This was also supported by my findings (Research Diary, 01/03/2012) in this thesis which confirmed the significance of supportive, interactive and critically challenging teaching as key aspect of a child's learning experience. Quality mediation through an adult/the kindergarten teacher, equips the child with a better ability to utilize present learning opportunities and make the most of future learning experience. (See Parent 1 Appendix: 2.1, Q: 4).

Questioning skills

The objective behind asking questions is to prepare a thinking child to use self-directed learning. To embed this activity into the children's experience, the researcher encouraged curiosity and questioning. This goal is in accordance with Weinberger and Zohar's (2005) cited in Schuartzler and Zohar (2005), proposition that argued that attention must be given to children who are a source of curiosity and to curiosity, which motivates asking questions. However, they further emphasized that a good way to test a modern curriculum is whether children understand how knowledge increases from asking questions, so the true test is to develop a spirit of intellectual curiosity.

Asking questions is one of the basic skills necessary for an independent learner who is a critical thinker. Through the process of asking questions, the independent learner turns information into knowledge. He builds his knowledge to reach new insights through personal experience.

The teaching in the kindergarten using the lesson plans in particular and throughout the research in general was based on the basic principle that learning takes place by asking questions raised by the children. The skill of asking is a meta-cognitive activity or process, which promotes learning. Understanding can develop from investigative and critical questions that is reflected in the ability to criticize, generalize, apply and find connections and to use knowledge in new situations, all of which are activities that require activation and the use of knowledge.

The approach developed by Vygotsky (1987 cited in Suleeman 2008), strengthened the researcher's view of this issue within the project and gave it validity and reliability. This view is that knowledge is constantly developing and created through socio-cultural mediation. Vygotsky's argument is that all high-level mental functions develop from social relationships, and therefore social integration plays a central role in the development of cognition. The utilization of the potential for development is dependent on the full social interaction among the learning group or with individual learners where discussion and consideration, and giving and receiving feedback on the decision-making and learning process exists. Within the kindergarten, this process lets each child in the group be perceived as an important resource in the shared social development and cognitive learning processes. This style of thinking evolved from the educational theories of Vygotsky (1986 and 1978, cited in Suleeman, 2008), theories of cognitive psychology (Anderson, 2010) and social psychology (Dweck and Elliot, 2013; Jenkins, 2004) and underpinned the research strategy of the thesis.

The question-seeking teaching method in the learning group was organised through the provision of freedom and creativity in the organization of the material and the learning processes (see Suleeman, 2008). The process began by presenting a stimulus such as a problem or an idea (Research Diary, 15/03/2012), where the children dealt with the matter while raising questions on the basis of existing knowledge and information that they had gathered on the subject. The process required them to identify the problem and analyse the aspects required to resolve the problem with the teacher as mediator. The child is placed in the centre of activity and is allowed his own pace of learning and development that he can adjust for himself (Research Diary, 08/03/2012). The teacher's job is to develop a learning environment that invites the development of cognitive skills, which include critical thinking, questioning, and effective use of information by analysing data and drawing of conclusions. In the social area, the skills of conversation and discussion,

persuasion and in the decision-making processes, teamwork and division of tasks are developed. On a personal level, the child develops internal motivation, personal curiosity and the development of responsibility and independence – this was supported by, for example, Parent 2 in her interview (Appendix 2 Interview: 2.2, Q: 12). The thesis has thus argued that these qualities and characteristics of learning are crucial to the development of critical thinking.

Problem-solving skills

Over the course of the research, the teacher/researcher became convinced that children, who are good at problem solving, adapt better in the kindergarten because they experience less frustration (see Perkins, 2011; De Bono, 1998). The active practice of thinking skills such as the use of questions that guide thinking allowed children to experience skills that they learned and deepened the required learning content. Therefore, one can conclude that the difficulty in dealing with problems is the difficulty of choosing between various possible solutions. Hence, decision-making is a fundamental step in the problem-solving process.

We can therefore say that when solving problems, we must decide on the resources allocated to the problem at hand. Highly trained teachers allocate their time effectively, and assign due time to each task while less experienced teachers may not have developed time management skills to such a high level and therefore will produce less. Applied to the Palestinian kindergarten, problem-solving was a significant indicator of children's cognitive thinking capacities, as evidenced at Table 2 Synopsis 2, which evidenced the significance of children's learning processes within cognitive and skills dimensions of learning.

Research skills

Research can be identified as an independent learning process that the child undertakes in his development as a self-directed learner. The teacher/leader and kindergarten researcher developed lesson plans that incorporated the student as a researcher and as an active learner. This included giving children choices and autonomy to express creativity as advocated, for example, by Dewey (1993, cited in Taylor and Francis, 2007). Another example was the presentation of arguments, which also helped children's social skills and independent learning and thinking (Watkins and Marsick, 2003). The project demonstrated the existence and efficacy of a range of tasks, processes, pedagogies and learning outcomes associated with critical thinking and in which research skills, broadly defined played a role. These are summarised at Table 7 Synopsis 4.

Teaching with a research approach is a way of developing thinking processes that are nourished by curiosity and exploration, allowing children to learn about the ways in

which information is achieved and advanced (Alexander, 2006). The skills applied to the children during the implementation of the research activities through the various lesson plans in the research phase of the project can be divided into 3 stages. The first stage involved exposure to the research base level and includes the level of knowledge and understanding according to Bloom's scheme, which includes questioning, understanding data and instructions, grasping better ways and means of achieving tasks, and developing and formulating of hypotheses. In the second stage many of the research skills were implemented, and applied to concrete cases in the kindergarten. The analysis and synthesis of such learning are in accordance with the Bloom scheme that includes planning and execution of an experiment to test the hypothesis and examine the relevant variables. The third stage involved a summary activity and includes the level of assessment according to the Bloom's taxonomy. It included reaching conclusions together with appropriate explanations, examining the findings, outlining the process of the research, summarising the outline in view of relevant prior or particularly relevant knowledge, and examining additional new questions that were raised by the outline. These were of course aspects of cognitive skills shared by the schemes and conceptual frameworks of Piaget and De Bono whose works were also used to construct the framework of models for critical thinking and which is summarised at (Table 2 Synopsis 2).

It is also clear from the comparison of the research reported in this thesis with evidence from external and scholarly sources, that the findings of the study have strong external validity (see Fisher et al, 2014) and thus we can include this specific aspect of critical thinking within a positive assessment of outcomes. Research skills within the work-based project and the thesis played a significant role as part of the cognitive dimension of critical thinking.

Of course, these critical thinking and cognitive 'performance' skills outlined above are not exclusive. They are in fact amalgams of various skills and attributes of children. Furthermore, we cannot overlook the significance of the accompanying emotional and motor skills, which are dealt with below. The child's experience is hopefully never to be segmented and separated out into its constituent parts but for our purposes of analysis, this is sometimes necessary and helpful.

Development of socio-emotional skills

This aspect of critical thinking entails the verbal and non-verbal behaviour through which the child responds to and is impacted by the responses of others in an interpersonal context, for example, helping or investing effort in other children, listening and understanding, accepting rules, and communicating clearly. It is an important aspect of the tools and skills needed for critical thinking which are encompassed within the fifth analytical framing question dealt with in this chapter.

The research evidence showed that the young critical thinker is able to identify conflicting emotions, that is to say he/she can imagine two emotions simultaneously while being critical of himself or herself. This gives the child the ability to determine how he feels about himself and how he guides his actions, which helps him understand how others view him. This idea is validated by Bigge and Shermis, (1999), when they discuss emotions in the development of the social child. In the context of the research phase of the project, utilising this notion made it possible for the researcher to assert that the young critical thinker who receives specific and focused feedback from his parents and the staff of the kindergarten which is not critical of him as a person, is likely to see failure or criticism as something that depends on an external factor rather than as a failing in his own self. There are positive aspects of such a process in that the child will not be self-reproachful or will understand that he must try harder next time. This theory was supported by the parents during their interviews (see Chapter 4: 4.1). The critical thinker with the ability to understand his emotions and how to control them better knows how to show them and better understands the feelings of others (see Appendix 2 Interview: 2.2, Q: 5+3).

Young critical thinkers are not only influenced by complex and more mature perceptions and by sets of relationships but also from the skills that the child acquires under the guidance of his family and the educational environment. For example, he learns to say thank you and that he must wait in line and that the wishes of others can be paramount. These basic guidelines expand over time and through them, the critical thinker acquires social skills, and critical thinking attributes. These range from basic skills to resolving conflicts with peers and include the ability to share his possessions and recognise the significance of others. It is important to stress yet again that learning does not only occur through direct instruction (for example, it is forbidden to hit anybody), but also through imitation and observation and immersion in a complex environment which itself presents the child with greater challenges. We can tell the child it is not permitted to lie but if we tell him to say that he is younger than his age in order to get a discount at the playroom, it is likely that he will deduce that at times it is permitted to lie.

In order to improve personal responsibility, the researcher must change the dynamic between staff and between the parent and the child by encouraging communication to foster friendship, trust and to grant greater freedom. This encourages children's parents and staff to demonstrate their faith in the children, giving them self-confidence. By using linguistic mediation (verbalizing knowledge and discussions) and experience (concrete experience), the researcher saw positive results through issuing praise and positive feedback.

The findings of the project suggested, for example, that the child is motivated to develop personal responsibility skills when he is the recipient of love, acceptance, appreciation and

respect, along with good communication. Ideally, these feelings should come initially from the home. Teachers can approximate this by interacting with what he or she perceives as the “ideal child” so that children aspire to achieve this image. This is supported by Harpaz (2008), who argues that love can be instilled in the child in the context of kindergarten through observable respect and care. Acceptance can also come from the home or the school. This is best achieved by leading children by example through the educational leader's own self-acceptance (Harpaz, 2008), and by her showing respect for others. Dignity and respect are qualities, which reinforce and make love sustainable. Finally, good communication serves as the mechanism by which one can instil in children each of these elements. It is learned and developed through practical and hands-on experiences involving realistic, actual and concrete situations. The impact of the socio-emotional world should not be under-estimated in the shaping of a child's capacities for critical thinking and personal responsibility.

Development of fine motor skills as an example of a critical thinking skill

In answering the fifth framing question, which refers to the tools and skills needed to develop and practice critical thinking, it will be helpful to outline a worked example, which was one of the researched activities of the project. One of the significant findings of the research for this thesis confirmed the link that exists between thinking abilities and the drawing activities undertaken by kindergarten children. One of the most most significant achievements that the child can learn concerns the development, recognition and representation of visual symbols, in this case of people, houses, trees/woods and other objects from the environment. This accords with studies by Machover (1949), who referred to paintings as a projection, and established the idea that the figure drawn represents a theme, while the paper represents the environment that is examined. The child that has developed and grown to become a critical thinker was able to capture and represent various objects from his world. From the moment that the child was successful in assembling for himself the objects that he drew, he repeatedly drew them over and over as a safe way to express himself through the drawing, using a method that highlights his achievements in creating and finding the objects that he was asked to draw. The objects that the critically thinking child drew were routine and generally only varied after significant experiences related to the fixed painted objects. This notion has received support, lending validity and reliability through Melchiodi's studies (2004), who found that painting a tree, does not tend to change with other tasks. The research project took this notion and attempted to test it in relation to critical thinking skills. Ruth Beit-Merom's work (2009) reinforced the claim of personal meaning and symbolic potential of the 'concepts' of house, tree and person. These concepts or objects were chosen because they are known to everyone, including young children; they are easy to accept as subjects for drawing, they stimulate free expression and have an unconscious symbolic meaning. Beit-Merom claims that the advantages in choosing the drawing of a house, tree and person as opposed

to drawing a man, are that the drawing of a house, tree and person invite a much wider area for interpretation. Therefore, she enumerated the advantages by combining together the three tasks of drawing a house, tree and person. The advantages are that drawing the house can provide information about the child's family life, drawing the tree is considered a symbolic representation of oneself and drawing a person can reveal deep layers of the self and can expose unknown issues hidden beneath the surface. Kopp (1992) argued that, for the child, it is easier to attribute negative characteristics to a tree than to a person, because a tree is perceived as less close to him. In addition, it was found that contrary to drawing people, drawing the tree is not inclined to change with other tasks.

In the drawings of a child who is developing critical thinking skills, there is a major change in the way the construction of the drawing is expressed. Changes include detail, proportions, positions, and line quality. Such changes and factors had great significance for studies which dealt with the analysis of such drawings, and attributed importance to many of the details they contained and their integration in the perceptions of the children. (Lev- Wiesel, 2005).

The approach is generally systematic and is done as a process of analysis and synthesis of the findings with reference to the structural aspects of the drawing, such as line quality, position of the drawing on the sheet, proportions, degree of detail and accuracy and completeness. There was also reference to expressive aspects, namely facial expressions and postures of each figure on its own and in relation to others.

The present study showed that there are common features between what the child draws and his critical thinking and personal characteristics; this is in agreement with the work of Kaniel, (2006 cited in Harpaz, 2008) and Talmor et al, (2010), who argued that the method in which the child drew people exhibited what he already knew about the human body and how he saw himself in relation to others. As children became older and benefited from the kindergarten educational leadership model these understandings were manifested in different ways and with more complexity and detail. Furthermore, the use of a horizon line was taken as indicative of critical thinking, indicating a sense of security, and stability. Different characteristics of the home drawing indicated the presence of self-perception, confidence, willingness to change, and/or difficulty at home. The present study's findings have supported and validated the many findings of most previous studies that examined the links between critical thinking and motor skills development among young children (Wade, 2007; Ennis, 1996). The thesis provided detailed evidence of emotional and perceptual development in Chapter 2 (and see also Table 5 Synopsis 3, 76), in relation to the kindergarten children's drawing portfolios as part of the research paradigm's interpretist approach. In more general terms the evidence provided in the thesis on fine motor skills achieved the following:

- it links theoretical studies of child development to critical thinking skills
- it defines for the reader some specific and concrete skills such as drawing and representing symbolic objects in the external world
- it shows the child exercising control over how objects are portrayed
- it shows competency in the child
- it shows a sense of cognitive competence and emotional security.

It is not just the research studies that have supported these findings, but the actual practice and observations made in the kindergarten did this also and this made a significant contribution to our empirical understanding of young children's critical thinking skills in this specific context.

5.8 How can parents influence the child's development of critical thinking and personal responsibility?

The sixth aspect of the analytical findings addressed the question of how parents can influence the acquisition and development of critical thinking. The findings of the research phase and of the professional development of insight and engagement with the kindergarten in its community context suggest that the parents and kindergarten teachers influence the child's development of personal responsibility and critical thinking skills in many different but related ways. These include the following issues explored in the thesis and recorded in the findings:

- the opportunity to exercise parenting skills
- the kindergarten looks like a second family to the child
- the role of the parents in association with teachers in developing the child's self-efficacy.

The family plays a vitally important role in the growth of the child, as evidenced in relation to Palestinian cultures in particular by Dwairy's work (2011). This perspective is, within its context in the Palestinian kindergarten outlined in this thesis, re-inforced by the findings of the thesis. From early in the child's life, the family shapes his/her behaviour and identity, provides for him/her psycho-social protection and transmits the basic skills to interact with society. When bringing up a child, the parents can be significant agents of change, whose involvement or absence will determine the prospects of success of the educational staff in the kindergarten in dealing with the child's challenges whose outcomes may shape her future life course and opportunities.

The opportunity to exercise parenting skills

The project found that the opportunity for parents to exercise their parenting skills optimally depends on the quality of the partnership they build with the educational team.

The purpose of the partnership is to actively recruit the family to help realise the objectives of the personal educational program. Henderson, et al (2007), state that in order to achieve this goal, it is important that the educational staff have knowledge of the family and the child's place in it, so as to adjust the educational intervention to the pattern of the family system. Dwairy (2011), remarked on the significance of the Palestinian family structure and this has been resonances for this thesis in particular.

According to Greenbaum and Fried (2011), parents are the child's first role models and therefore it is their task is to set the daily routine of the child, such as a set time for reading a story and for providing a permanent playground area; this requires engagement and perseverance by the parents and the child. These considerations pushed the researcher to think about a personal project for each child whose contribution already had begun at the selection and planning stage of the project itself. This revealed to the children and others the validity of their opinion on the ability of education to contribute to the desired objective, what was important to them and how they perceived themselves. During the project, the children had many opportunities to deepen and challenge their initial insights about their commitments, capabilities, strengths and weaknesses. They also learned much about what gave them a sense of self-fulfillment in their activities. In this way, the personal project helped clarify the directions appropriate for children in their activities (Wood and Attfield, 2005).

The findings of the thesis suggest that the parents and teachers can encourage the child to develop personal responsibility and critical thinking skills by nourishing a sense of personal efficacy in the child. This means encouraging belief in the child's ability to succeed in his assignment. When feelings of self-efficacy of the child are low, the child has no motivation to learn and kindergarten may become a frustrating place where he mainly experiences criticism. Therefore, developing a sense of self-efficacy is vital to the success of the child and his development of personal responsibility and critical thinking skills. This development of the child's self-efficacy can be aided by the love and positive feedback shown to him by his parents and teachers- love is the essence of humanism in education as has been demonstrated in the results of this study. It is also clear from the findings of this project that parents play a crucial role in the socialisation of their children. If the intention is to inculcate critical thinking and personal responsibility within the child, then the kindergarten must engage with the parents in the context described and analysed in the forgoing chapter. This aspect of the project in fact infused a great deal of the whole practice of teaching within the kindergarten. As many of the findings reported in Chapter 4 in particular have shown, but also throughout the whole thesis, the parents' contributions to the results were crucial to the outcomes for their children and for the kindergarten as a social and community institution.

5.9 Summary of findings and analysis for Chapters 4 and 5

The findings presented in these two chapters represent a record of professional development and engagement in the kindergarten over a period of some 7/8 years. This was the period of registration for the doctoral programme that provided a framework for professional development focussed on the introduction of a curriculum designed to address a perceived under-achievement of Palestinian children within the Israeli state system of education. The initial concern was the deficit of critical thinking in Arab children and the early focus was on defining critical thinking in cognitive, emotional, personal responsibility and cultural terms and of finding viable leadership concepts in order to introduce it to the kindergarten. The narrative content of the work-based project as a whole, including within it the more specific and focussed concerns of the research activities reported at Chapters 4 and 5, shows clear evidence of the impact of teaching critical thinking skills. The findings of Chapters 4 and 5 are evidence of this, though of course they also testify to the wider concerns of kindergarten management and the impact of specifically cultural issues in the Palestinian community within Israel.

A concurrent focus to that of critical thinking was on the nature of leadership in the kindergarten since curriculum responsibility lay with teachers and the principal, as did that for partnership with the wider Arab community. The findings of Chapter 4 demonstrated the outcomes of the research phase, which focussed on the examination of relevant approaches or 'models' the models of leadership and the recorded impact they can have on critical thinking capacities. These models had been selected and assessed according to their use value in identifying and developing critical thinking and personal responsibility in the kindergarten context. A fruitful relationship between them was proposed and examined in detail. The implementation of curriculum change involving children, parents, teachers and the community was outlined and described within an analytical framework of 4 concept clusters or categories described above and presented visually at (Table 2 Synopsis 2).

Chapter 4 gives detailed descriptive and analytical narratives or stories across wide range of subject matter within the cognitive, emotional, personal responsibility and cultural contexts which formed the 'frame' of the work-based project. It developed and explored a model of teacher leadership types, which it took to be commensurate with the evolving critical thinking of the children in the kindergarten. The overall concern was to use models, which had at their centre, the child who was taken to be a thoughtful and potentially creative subject. The teacher was conceived as a creative catalyst for new experiences for the child and was expected to be a figure of trust and emotional security for the child. Relationships between the children and the teacher/leader are paramount in the research findings demonstrated in Chapters 4 and 5, whilst those with parents were also very significant for positive outcomes.

New types of relationships between staff and parents were called for and this required the recognition of the teacher's qualities and characteristics, which was innovatory for the Palestinian school system. Following the detailed analysis of the teacher's role in the experience of the parents, the findings in Chapter 4 set out the domains that the teacher must now operate in if she/ he is to engage successfully with critical thinking in the kindergarten. These include developing personal and inter-personal skills for advanced professionalism in kindergarten management; developing contact with the parents, which can be fruitful and yield positive outcomes; and being a creative curriculum practitioner and teacher who can devise new processes for learning based on questioning and problem solving approaches with the child at the centre of activity. This last point was illustrated in the research phase of the project by a specific drawing activity designed to identify and support specific thinking skills in the classroom and illustrating the model of leadership and curriculum change exemplified in this thesis.

The research phase of the project, reported on in Chapter 3, identified and explicated a range of themes and processes, which were drawn out from the different research techniques used (research diary, parental interviews, curricular plans, children's portfolios and documented accounts). These themes, identified within the research techniques, were in effect the means of facilitating and activating learning and they are, to use the earlier formulation, 'generative' and fruitful. Within the work-based project and in both Chapters 4 and 5 we can see the extensive range and scope of the processes/ experiences and the indicators of critical thinking, recorded and analysed in the thesis. Particular thinking skills are recorded but they are also often subsumed within general patterns of behaviour and activity where disaggregation of skills from other closely related activities is not possible within the parameters of a chosen methodology. Whilst this is not and cannot be an outcome of this project it can be recorded that the evidence of the findings in Chapter 4 and the assessments of the analysis in Chapter 5 indicate quite clearly that the relationship between the leadership function and actions taken in the kindergarten were productive and generative in the identification and development of critical thinking.

In Chapter 4, as one would expect from the narrowing of focus, which is introduced, the evidence shows that it was possible to demonstrate how individuals and even a cohort of learners had moved from a baseline level of performance in critical thinking to achieve a particular goal, skill or outcome. The example of the children's drawing portfolios is but one form of evidence of this. Emotional and perceptual development took place according to independent verifiers and the quality of detail in thinking and drawing by the children was enhanced. Perception and awareness were similarly improved.

In Chapter 5 the focus was on providing a detailed explanation of key analytical findings, though some re-telling of the empirical story of how the project conceptualised and activated its work and practice was also required. The method of reporting the findings was to pose 6

critical questions. They were critical because they themselves were required to be located and placed within their intellectual and professional contexts. The questions ranged across the issues of leadership models appropriate for the project, how and whether such models could facilitate the acquisition of critical thinking in young children, the nature of such critical thinking skills, the role of parenting in this kindergarten and the issue of professionalism for the reflexive teacher/leader. All of this was of course contextualised by the position of the kindergarten as a Palestinian 'experience' for children, teachers and parents within a state which has declared itself in religious/ethnic/cultural terms to be something other than this.

5.10 Findings covering cognition, the role of the self and language

Whereas Chapters 4 and 5 have dealt with the specific and generalised findings of the work-based project and the research phase of the project, it is helpful perhaps to also summarise those findings which related specifically to cognitive issues, the role of the self in critical thinking and the role of language and emotional contexts for learning. These were critical elements of the developing thesis throughout the project. The research phase of the WBP involving the use of the research diary, interviews with parents, a curriculum development project and the use of children's 'art' portfolios, attempted to show that a range of themes and experiences which facilitated learning could be identified and worked on within general categories of cognitive, emotional, cultural and personal learning. It was noted that specific and particular critical thinking skills for 3-5 year olds were difficult to identify if it was expected that specific outcomes could be predicted for specific inputs or stimuli. It was strongly suggested however, that particular skills and sub-sets of skills are subsumed within general patterns of behaviour. The research suggested that there were cognitive, emotional, social, psychological and experiential gains for the child and her/his family. The significance of emotional attachment, personal responsibility and a viable sense of self could not be over-estimated. (The details of critical thinking attributes and capacities are summarised at section 5.5 and at Table 7: Synopsis 4).

Self and self-regulation

One particular aspect of cognitive skill that re-appeared again and again in the research data and throughout the whole project was that of the development of self and self-regulation. In the list of attributes mentioned above we find: the ability to accept opposing views; verbal reasoning which is 'other' directed; appreciation of others' perspectives; and self-awareness. The development of a viable sense of self and personal viability in the face of challenges was a key thread of the thesis which derived from classical theorists of child development and from the attempts at transforming lives through learning by Teare (2013), cited in Zuber-Skerritt and Teare, (2013).

The capacity for 'self-regulation', according to Michael Crawford (2015: 15), is a better predictor of success in life than any other measure including intelligence quotients (IQ) and

socio-economic status. Self-regulation and self-control played an important part in the thesis and a range of dimensions were explored in the cognitive and emotional/ affective spheres.

The self and individuality

Much of the emphasis of the cognitive and curriculum development embodied in the study revolved around conceptualising the child as the centre of attention and concern. This was not the traditional focus of Palestinian childhood education and neither was the recognition of the intensely emotional context of learning in school with empathetic adult role models from outside of the close family and kinship network. The project meant operating with a westernised and 'liberal' sense of the individual 'self' who was capable of exercising choice and making decisions for herself as a child. The key assumption here was that there was something that was recognisable as what Crawford refers to as an 'authentic self'. The project believed that such a sense of self was available to all the children but that this had to be made; it was necessary to create an action learning environment in the kindergarten for all concerned to bring about the required changes in attitudes and behaviour. This was a central feature then of critical thinking in the kindergarten.

The idea of the self in this context is of course very problematic. In a conservative, authoritarian and collectivist environment there are many counter trends and values, some of which are embedded deeply in cultural norms and traditionally held beliefs. The researcher was aware of the problems of challenging traditionalist values and practices and tried to win acceptance from significant others in the community and most critically from the parents who always wanted the best for their children, however that was defined. What was at issue was the idea of creating a space for children to create for themselves a coherent sense of self. This involved seeking reflexive and thoughtful behaviour for children where often actions are not subject to rational scrutiny. Nevertheless, the evidence was brought forward and assessed in the project of how young learners could acquire the beginnings of an examined life.

The situated self

This life was of course part of a community; it was situated in its culture and society. It was in an environment which was stressful and conflicted. The selves that emerged in embryo in Deir Hanna were 'situated selves' (Crawford, *ibid*: 25) which related closely to their environment but it was this environment which constituted the self. The thesis has hoped to show that critical thinking skills are at the core of the process and that skill is a key element of this process "Through the exercise of a skill, the self that acts in the world takes on a definite shape. It comes to be in a relation to fit to a world it has grasped" (Crawford *ibid*: 25). The self that develops in the young child is part of the environment and she has to attend to that environment and the things and people in it. Crawford's arguments here are interestingly relevant in respect of critical thinking skills,

since he states that it is when we are engaged in skilled practice that we see the world as independent of the self and having a reality of its own (Crawford, *ibid*:27). When the child reaches towards this stage or acquires this skill it can be active in acting on its own world. The thesis hopes to have shown how such active engagement can come about in the kindergarten and that this involves a conscious attempt to develop cognitive and emotional critical skills.

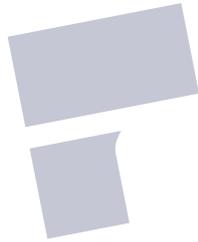
The role of language

The thesis considered the role of language mostly in relation to the work of Vygotski and the emergence of social and conceptual skills in the young learner. In the earlier stages of learning factual and propositional knowledge is used through language for instructional purposes. This experience plays a vital role in directing the child's attention towards its proper object-the world around it and the people who were in it. The curriculum stages of the project recorded and explored this dimension of learning through bringing familiar things to mind, through critical questioning, through exploratory play and through deductive and inductive reasoning. Eventually the processes and the objects brought to children's attention became 'second nature'; they were known and recognised and became part of the sub-conscious mind of the child.

This learning was also connected to learning with and from others by conversations and language, by reading books and stories and by being involved in classroom play. This was effectively a form of triangulation-being with others in a frame of mind which was open to experience and learning. As Crawford has stated "For experiences to become part of the secure, sedimented foundation of a skill, they must be criticized. Other people (and the resources of language) are indispensable" (Crawford, *ibid*:63).

Language is of course the medium of critical thinking skills. It is also the substance of communication. Cognition and metacognition often happens in conversations which have a significant and organised purpose. This was precisely the purpose of introducing critical thinking skills into the kindergarten-to give a framework and organising purpose to educational change. The developing child has to learn by formulating hypotheses and by testing these. This means formulating action plans, considering risks and monitoring outcomes so as to change things if they are not working. This is what was happening with the narratives and stories related in Chapter 4 as evidence from the curriculum plans and lessons. The stories of 'Ward and the Spring' and the Earthworm encapsulate these cognitive processes. The children had to get beyond what was perceptually present and develop a mental image of what could or should happen if they carried out a certain action. They needed a mental representation or a concept to express their capacities for coping. We can recall here the children's drawing portfolios which expressed their mental and cognitive capacities and extended their understanding by calling on them to be drawn

out of themselves towards a more skilled future self. Picturing their future selves required critical skills of examining self and others in social and emotional settings and the use of appropriate language skills. These early steps on the road to critical thinking though conceptually complicated were lived out in the daily practice of the kindergarten.

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Chapter 6 : Conclusion

This thesis and the work-based project of which it is a part and out of which it grew as part of my professional practice is based on a set of educational values and beliefs. These values and beliefs are central to my understanding of my work and practice as a kindergarten principal and as a person who needs to be reflexively involved in both work and self-development. The fundamental point for my understanding of the work presented here is that learning and teaching can make a difference to the lives and futures of children. This I believe to be true for all children, everywhere but in my own particular case, the kindergarten in the Palestinian community in which I live and work, it is particularly significant. In this place and in this culture there are challenges, which are specific to the time, the place, the community and the culture. Obviously, I have not been able to assess and research all of the conditions and variables, which impact on the overall social and cultural and psychological environments in which the kindergarten and its children are immersed. I believe, however, that I have identified a sufficient number and range of factors concerned with leadership in the kindergarten and the potential and actual impact of critical thinking for the young child, to be of some significance. I hope to have explored and explained that in this particular context that Palestinian educators need to take account of and commit to a professional practice which can sponsor and develop critical thinking in young children.

There are of course very many aspects of the work which have been raised yet cannot be reported on in detail. This is the nature of a project which lasted several years, covered a variety of activities, engaged with dozens of people, both young and older and addressed some challenging objectives. However, there are equally some aspects of the work which it is hoped have been clearly demonstrated and are indicated in the summary that follows:

- Teachers and teacher-leaders should teach children to take control of their own lives. This is the case even for young children in the kindergarten. The areas in which such control can operate are bounded by many constraints, including those imposed by genetic, social, psychological and cultural experiences.
- A life, even a young life, should be reflexive wherever possible. It is reflection in its different forms and stages, which creates viable personal and social identities. The kindergarten stages are crucial to this idea of identity formation.
- Children grow by engaging in instrumental, interpretive and critical learning. Each of these three forms of knowing or learning are available to the kindergarten child and it is the task of the teacher and the leader to organise and provide this.
- Critical thinking is not a preformed list of attributes or a mode of organising of thoughts or facts, which can be applied to a problem. In a way, critical thinking for the kindergarten child is based on the idea that the curriculum is a question. The child

must become a questioning person who is not willing to let others make up his/her mind for him/her.

- Critical thinking is a mind-set, which is not neutral. It seems to assert the value of social justice and fairness. Such values are rooted in attitudes and awareness towards others which are learned and the recognition of difference and diversity and its validation within the actions of the self towards 'others' are crucial.
- Critical thinking involves the extended mind where the sense of self is extended into the world of others. This is a cognitive and emotional process, which tests the capacity of the teacher and requires the teacher to form with the child a social sense of itself and to create common experiences with positive mutual recognition.
- There are both cognitive and emotional biographies at work in kindergarten experience and the link between them is constructed by the leadership and teaching staff. Attending to and capturing such experience in positive and fruitful ways is 'pedagogy 'in different words.
- Classroom and home-based skills which develop awareness and memory are closely linked to the imagination of the kindergarten child, which is why critical thinking as defined and explored in this thesis is linked to creative play and to personal growth and development.
- Critical thinking helps children look to the future because it provides a pathway away from the past by opening up questions and possibilities in the vital and formative periods of growth and development for the child. It is the task of the teacher to help form memory and identity within the relationships with other children, with teachers and within the family and community.

This summary of concerns cannot hope to do justice to the wide ranging and more deeply experienced concerns of the participants in the thesis narrative. Yet hopefully some of the key elements have been captured in the detail contained in the earlier chapters along with some of the lived experience and sense of change that was developed by the project.

Early attempts to shape the project were guided by ideas and concepts of critical thinking derived from studies of older learners and were therefore generalised in character. At the early stages also, critical thinking was differentiated from what was seen as a category of personal responsibility that it was thought young children should develop. The capacity of these concepts to be adapted for use in the kindergarten project was an early issue to be resolved. The solution to this issue was through accepting a starting point, which put the experience of the child learner at the centre of the work. Paulo Freire had argued that we can identify 'generative words' and concepts which can be used for problematizing experience and for teaching critical thinking skills. These generative words such as dialogue and dialogic teaching, self-direction and building confidence in the learner suggested critical thinking for young children should have content rooted in the direct

experience of the child (Freire, 2000 and Shor, 1980: 126). These words and concepts became the indicators of content for this project and were organised for the purposes of the whole work-based project within the 4 fundamental categories which shaped the learning and teaching which is at the heart of the project. These categories were:

- cognitive concerns
- emotional concerns
- personal responsibility and personal viability
- cultural and environmental concerns.

These generic areas were 'problematised' and provided a framework for examining a large number of actions by leader/teachers in the kindergarten over the period of the work-based project, some 7/8 years in total and which are described in the thesis chapters. By problematisation I mean critical questions, rooted in professional experience and reflection, were asked within a thematic and coherent cluster of ideas. The 4 categories also proved a means of clustering the many themes and processes which shape the actual and practical learning of critical skills. These were summarised in leadership terms (Table 1 Synopsis 1), for critical thinking (Table 2 Synopsis 2) and for personal responsibility (Table 3). As can be seen from these synopses, there are a very significant number of themes, processes and issues connected to the notion of critical thinking. These were derived from not only the 4 fundamental categories but also from the theoretical insights suggested by the key authors and sources of 'theory' also recorded at (Table 2 Synopsis 2) and explored in the literature review chapter of the thesis.

The generative words/ themes and the fundamental categories were the basis of the research phase of the project. The case study approach allowed the different methods to draw on the most appropriate techniques and concurrently to draw on the key themes and actions, which were commensurate with the nature and character of the activity being researched. Therefore, Table 2 Synopsis 2, for example, records a long list of indicators (in the region of 40 in number) of critical thinking which are drawn from the complete range of research methods carried out in the research phase.

There is thus no single, comprehensive and definitive set or list of critical thinking skills and attributes for kindergarten age children; neither could there be. This is because the task of conceptualising and examining critical thinking for young children in particular runs up against the nature and characteristics of its subject matter as follows. In the experiences of young children, it is immensely difficult to separate out from each other the cognitive contexts and the emotional or affective ones. In the methodology of the research tasks undertaken for this thesis, this meant there was a challenge in specifying the exact impact of specific pedagogic inputs on the development of specific critical

thinking skills. It seems clear that the holistic nature of children's 'being' can be seen as an inhibitor to establishing correspondences or correlations between a stimulus and a response. The child under observation may not be aware that the researcher is interested today in her cognitive skills, and that the emotional impact of her mother having been perhaps a little less than fully supportive due to the child's obdurate behaviour at home, should not be brought to bear in the classroom today! What the researcher observes may reasonably be a 'gestalt' or a whole-person response and what is being observed is actually a process which is an amalgam of many factors and conditions. The cognitive processes and experiences of the child are also a felt experience; they are an emotional immersion for children and they do not always deliver up a 'granular' and specific result, which can be attributed and read off from a corresponding series of well-orchestrated inputs.

Implications for policy and practice

The current training of teachers, and in particular, kindergarten teachers in critical thinking and personal responsibility is inadequate. Based on the comparison of my classroom with the control group, it is apparent that targeted educational leadership training can have a significant impact on the learning outcomes of children. Based on the activities described herein, I recommend that teachers focus on targeted activities to promote critical thinking by establishing lesson plans for the construction of knowledge by the learner, as well as by incorporating a variety of teaching methods that deliberately reveal the thought processes of children. This should include giving children the opportunity to learn from and reflect upon their mistakes and embedded perceptions, which form an essential part of the process of understanding and as a starting point to the learning and teaching process. In particular, I recommend the following recommendations for practitioners:

First, I recommend that teachers should become more engaged in the idea of developing critical thinking for children in kindergarten. As seen in my results, children experience thought processes through structured lesson plans and acquire habits of persistence and consistency in their search for understanding and knowledge. In addition teachers should be helped to show children how they can learn better and stay committed to finding the right solution to their problems in their own circumstances. It is the role of an effective educational leader to develop and implement such plans and provide teachers with opportunities get to know themselves deeply as learners, to deepen their knowledge and understanding across disciplines, and to become familiar with their capabilities, as well as their difficulties and weaknesses. There are several approaches that I employed in this study and indicated in the findings and I recommend these to other scholars and instructors seeking to replicate my results.

Second, according to the results of my study, I recommend that the curriculum for training children for critical thinking should be developed, assessed, evaluated and measured by a

reflective diary/hjournal. During the course of the research it proved to be vital, not only for monitoring and evaluating the results of the activities, but for myself as a teacher and for applying my methods. I used my journal to identify which methods I employed and which activities that I implemented that appeared to be effective for the development of critical thinking and personal responsibility, as evidenced by the pupil's performance. It also proved helpful to reflect on the school's management and navigation, integration and engagement with parents and helped to ensure that I adhered to all the appropriate ethical standards, thereby limiting professional liability.

Using this tool would help teachers to get a better understanding of the processes their children go through. Many studies have validated the use of a journal as an evaluative tool for research (Bryman, 2008: 224-228) and showed positive results arising from the implementation of self-assessment skills in the context of teaching, the professional perception of teachers and their stance and efficiency. Therefore, it is vital in my view that future training programs use this kind of analytical and evaluative tool in professional pedagogical work.

From this I conclude that the teacher's professional self-awareness is a main factor in the evaluation of oneself and one's abilities and that self-evaluation helps focus on selected targets in the teaching process, and thereby contributes to one's professional development. The development of self-understanding through writing a personal, professional and reflective diary gave rise to an approach of critical regard to my practical experience, my stance and beliefs. Writing the diary allowed me to look at the processes I went through with new eyes, to test them and improve them. In other words, the reflective thinking I did on my work and expressed in my personal diary proved to be the primary source of learning about the learning process itself and the backstage of the experiences I went through.

Messages for stakeholder groups

The findings and conclusions of this study address the following stakeholder groups:

Parents: Based on the results of this research, the teacher must initiate and maintain close and frequent communication with parents. This is essential to the child's proper development and function and it also naturally nourishes and strengthens the positive experiences of parenthood. Parents should be a leading factor in the process of teaching critical thinking. As a kindergarten manager during the course of this research, I made great efforts to communicate frequently and deeply with parents in order to promote mutual trust and respect. I believe this made the children feel more safe and able to deal with the challenges we set for them in the kindergarten because they were set by a team. Parental involvement meant that children were not threatened by new challenges. This can result (and to some extent, was proven by the research) in the emergence of a

positive self-image, especially in children with learning disabilities and/or learning or social difficulties.

Children: Children in kindergarten face many challenges. I believe that one of them is learning how to adopt and use critical thinking. By doing so I believe they could gain in personal development and also gain skills for better endorsing the society of Israel as a democracy. This is not an easy task for children since it involves different kinds of learning in a more demanding way. However, with the assistance of parents and teachers, this mission could be accomplished. In one sense this objective underpinned the logic and rationale for the work-based project and helped organize the ethos and practice of the kindergarten. Children were at the centre of the project and this cannot be over-stated.

The wider village community: The results of my study suggests that teaching critical thinking in kindergarten requires the involvement of many people, including parents and other players and factors in the village. Therefore, an important influence of this study lies in the fact that the authorities in the village will be recruited to this task as 'trainee teachers' and likewise for other kindergartens in the village. The community of the village should address this issue by convincing parents to take part in this program and thinking about new ways for enhancing critical thinking of children, not only in kindergarten.

Palestinian authorities/Israeli authorities: In addition, I recommend to authorities both in Israel and Palestine that they should address the results of the current study and implement its conclusions in the appropriate educational systems and sectors. Therefore, educational and community authorities should allocate money and recruit people in order to guide teachers about how to develop critical thinking among young children. I believe this is a strategic mission in order to contribute to a better adjustment of children in society. I believe, in addition, that it would provide a platform for the wider community to begin to adjust to the requirements of an expanding and globalizing world where the future for young people is likely to be very different from the past experienced by their parents and families. Critical thinking may be one amongst many strategies for learning which could help bring about changes in attitudes and perceptions which are needed if the future is to be better, more equitable and more tolerant of the emerging pluralism and diversity which characterizes Israel, Palestine and the surrounding region. And of course we must also remember the diaspora of peoples that has spread around the globe in recent decades, which itself reminds us of the changing character of our societies. Surely our learning and our pedagogy for younger learners must also reflect such changes and if this is so then this thesis hopes to have made a contribution to this progressive ideal.

Implications for educational leadership and management

I recommend for policy makers, and especially for the Ministry of Education, that they undertake to train schools' supervisors and principals how to teach teachers critical

thinking for children. Specifically, I advocate the approach by Mercer and Littleton (2007) that argued there are three stages of learning that incorporate direct instruction (using the same methods employed in this research, e.g. peer-sharing and question-asking) and teaching about critical thinking, which takes a global view of critical thinking processes by providing opportunities for children to make comparisons, to undertake analysis and to draw appropriate conclusions. This approach illustrated the importance of the teacher in setting the tone for the classroom and his/her role in creating an open learning environment.

An agenda for action and change

During the development and implementation of the program for enhancing teaching skills for teachers, I suggested to them that they ask questions that provoke critical thinking, including predictive questions such as: What would happen if? What will happen at the end of the story? What is the beginning of the story and where does it take place? What happened before the beginning of the story? Such questions also provoke speculation and the raising of ideas that stimulate the imagination. These questions were asked in cases where I wanted to quiz them on major concepts that provoked varied meanings and insights in the context of learning disciplines and different subjects.

In addition, I recommend that the teachers' training program will be driven from the approach that the teacher is in fact a mediator of knowledge. According to Zohar (2004), cited in Schuartzner and Zohar (2005), mediation involving teacher-child interaction includes a socio-emotional component as well as an instructional component. It is clear from the available research and I believe from my work presented in this thesis that that in order to learn successfully children need an emotional environment with characteristics such as acceptance, responsiveness, sensitivity and a variety of experiences rich in stimuli that develop critical thinking and are concurrent to development. This is supported by Shonkoff and Phillips (2000), who emphasized the emotional components of the interactions between the teacher and their significance for the child's development. Further, they posit a trend in early childhood education in recent years, which suggests that emotional issues carry considerable impact for academic success, shifting attention towards the instructional component of these interactions. Therefore, an effective teacher must organize the kindergarten so as to enable children to cope optimally with learning challenges, such as tasks that encourage them to come in contact with knowledge and ideas, to develop skills that will enable them to acquire new insights and to improve their understanding, knowledge and personal capacities.

Reflection on the study's limitations

This study has several significant limitations. First, the sample size is relatively small. Future studies should gather many more subjects so as to be able to generalize from the conclusions of this study and from a far wider and deeper sample. Moreover, the study was

conducted in one single kindergarten, so it is not very representative of all kindergartens in Israel. Other studies should in time elaborate the exploration and assessments made in this thesis to many other kindergartens. Finally, this study mainly focused on the perspectives of children. It is recommended that future studies would also relate to the consequences of interventions through the perspectives of parents and other important figures in the educational system and across the cultural field. The following list enumerates some of the issues and themes I was not able to explore and develop in depth in my thesis and as such provides perhaps an implicit agenda for future work and thought. This was of course one of my original intentions as critical thinking asserts that learning can have no artificial borders and constraints if it is to be progressive and transformative:

1. I was unable to explore in detail how theories of leadership impact on specific teachers in their classrooms. (There was only limited time and capacity to do this).
2. Critical thinking was limited to the application of broad models of critical thought so that specific and focused critical thinking skills tended to be subsumed within what children were doing in terms of stages or phases of development. So for example, the specific characteristics of personal responsibility could not all be followed up and researched.
3. The breadth of the research data (research diary, interviews, curriculum analysis, children's portfolios and drawings) meant that a very broad scope was attempted in the thesis. This has certain advantages in that the generic contexts can be brought within the work and this facilitates our understanding. Without it we would not discover the meaning of learning and personal development for young children within their Palestinian heritage and culture. On the other hand, the plurality of themes and issues and the number of 'social actors' involved can multiply until there are too many for adequate exploration and analysis. One can only mention the number of possible children, their parents, their relevant families, the school staff, the educational authorities responsible for kindergartens in Israel/Palestine, the local and community authorities and the wider community activists. It is difficult to claim to have done adequate justice to this range of interests and 'voices', though the attempt was made to do so in good faith.
4. In order that the new model of growth and development is to be relevant to the kindergarten teacher and to the children, and possibly to outside practitioners (facilitators, consultants, etc.), to help its growth, its definition and focus, the processes of this study requires professional skills and previous experience. The untrained kindergarten teacher may have difficulty with exposing things she would rather not deal with, especially in difficult or tendentious areas such as special educational needs or severe learning difficulties. The researcher in this study attempted to overcome this obstacle through extensive research and by following the examples set forth in the literature.
5. Another difficulty is finding the right research field and the action suitable for doing the research. Doing this kind of research requires a departure from the standard organization of activity in kindergarten. For this reason, the research could

be complicated by a lack of precedent set forth by the implementation of previous lesson plans. The researcher attempts to overcome this barrier by inviting children to participate in a private discussion and to be given the opportunity to bring up topics of their choice.

6. Action research, according to Koshy (2005), must be available for public scrutiny. This is a prerequisite. Those engaged in research and those working in the field do not receive any incentive for their investments. Therefore, it is very difficult to expect them to work on research over a long period of time and stand by all the rules and dictates presented to them. It must be remembered that those involved in the research must invest in the stages of preparation for the study including team meetings, feedback and preparing the field for research.
7. In addition to the complications which arise from the participation of other parties in the research, it is also important to again emphasize some of the potential risks and pitfalls which arise when utilizing action research. Action research, like all qualitative studies, is prone to issues of subjectivity which can compromise the reliability and validity of the study by other scholars. I addressed these issues, as indicated above, through structured interpersonal interactions with other parents and employing outside, objective help to analyze aspects of the study, such as children's drawings and comparing them with a control group of a separate kindergarten.

A summary in bullet point format of follow-on work from the project and the wider impact of the research.

Curriculum and pedagogic practice(s):

- Development of child assessment checklists for classroom use.
- Development of reflective dialogues between kindergarten leaders and teachers/supporters.
- Development of 'own-learning' and 'self-development' checklists for kindergarten staff and community supporters.
- Use and extension of critical thinking development questionnaires for use with kindergarten parents.
- Preparation of 'critical thinking' skills lists (granular and generic) which may emerge to form a checklist of critical skills development for children 3-5 arising from the study.

Practice with pupils:

- Create new lesson plans around the most successful experiences and interventions for critical thinking.
- Devise practical classroom activities and teaching strategies that have a demonstrable impact on children's independence, autonomy and critical thinking skills.

Future Outcomes:

- Development of a model of the development of children's critical thinking and/or independent learning with specific reference to the Palestinian context(s).
- Design an audit/assessment tool for critical thinking/independent learning for the age range 3-5 years.
- Dissemination to the wider forum of teacher educators in universities of lessons learned and methods used and evaluated.

The wider Influence of the research:

- Publication of an article in local, regional and possibly international journal(s) explaining the significance of the WBP and research.
- Consideration of the stages necessary for publication including creating a specific focus for the topic which might generate public interest, consideration of the audience, assessment of length, presentation and layout of any publication.
- Dissemination of the project's outcomes to other kindergartens in Deir Hanna and in the wider region.
- Dissemination of material via appropriate journals and newsletters to professional colleagues on the topic of critical thinking.
- Offer a presentation of key objectives and methods, and findings to the Israeli Ministry of Education and Culture.
- Consideration of which elements in the thesis might comprise a book proposal, including a draft chapter.
- Investigation of any market research available on reading demand for work on early childhood in comparable and also distinctively different communities.

Professional development

Organisation of workshops within the school district and related communities using the Checklist of Independent Learning Development 3-5 arising from the study of 'Developing Independent Learning in children aged 3-5' (Anderson et al, 2003). This would be done in conjunction with a synopsis of the thesis' findings and methods and specific Deir Hanna worksheets prepared from the key findings of the project.

The checklist statements would seek to cover the following areas of children's attributes and skills related to critical thinking and self-directed independent learning:

Emotional

- Can speak about own and others behaviour and consequences
- Tackles new tasks confidently
- Can control attention and resist distraction
- Monitors progress and seeks help appropriately
- Persists in the face of difficulties.

ProSocial

- Negotiates when and how to carry out tasks
- Can resolve social problems with peers
- Is aware of feeling and others and helps and comforts
- Engages in independent cooperative activities with peers
- Shares and takes turns independently.

Cognitive

- Is aware of own strengths and weaknesses
- Can speak about how they have done something or what they have learnt
- Can speak about planned activities
- Can make reasoned choices and decisions
- Asks questions and suggests answers.

Motivation

- Initiates activities
- Finds own resources without adult help
- Develops own ways of carrying out tasks
- Plans own tasks, targets and goals
- Enjoys solving problems.

Reflection on my own learning and development

The results of this study, together with my personal education experience show that effective professional development incorporates a variety of development tools such as peer learning, academic studies, professional development courses, cooperation in group workshops, training, research and self-analysis and examination. These tools should be in harmony with the professional development of the school's staff as a whole. As an elementary school teacher and as a kindergarten manager for this study, I was able to organize weekly staff meetings at which I explained the goals of the study and how we would incorporate the tools used week after week. These goals included the integration of these methods with external constraints such as, for example, individual needs, institutional goals, and the Ministry of Education's policies and curriculum standards concerning critical thinking and personal responsibility. In addition, parents underwent similar 'professional development' in educational leadership through private and group sessions, in which the study was explained and in which their role was examined and prescribed.

As a kindergarten teacher who lives in an Arab Palestinian community, when I began to understand how pedagogical leadership could assist in creating a more 'critical thinking' reality and set of practices in the context of our traditional values, the concept of these values infused my work and characterised my sense of self-awareness and my personal

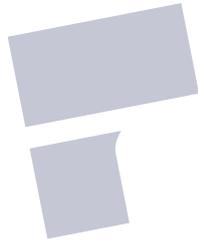
values. This was allied to a sense of moral and communal values which was able to recognise emotional factors and capabilities in the learning processes. The models of leadership approaches or types, (summarised at Table 1 Synopsis 1) was an attempt to portray a range of relevant characteristics. Then, I began to develop my own reflexive ability to change situations and learning practice with the children, so that I could adapt and lead educational changes through developing myself, therefore, I realized that I needed to be educated for a more broad and critical mode of thinking in order to adapt myself to democracy and the challenges of modernity. By designing teaching methods that address the development of skills combined with various learning content, and through the use of experiential learning environments that encouraged my self-study, I was able to enhance my skills and capacities. In addition to this, the carrying out of research and problem-solving activities required me to develop my own skills in using tools and equipment. This helped me to increase my ability to analyse arguments, to provide justification or to provide support for a statement, to ask questions, to design and implement curricula and pedagogy in accordance with previous processes and to assess the reliability of information sources and accuracy of an observation. This allowed me to control my feelings, develop logical and positive thinking of my own and to be, I hope, creative and supportive of others involved in the process. I became more aware of my thinking of myself as an autonomous person (it means I believe not letting others make up my mind), and developed a more positive response to the world's challenges, characterized by taking on responsibilities, learning new skills and feeling purposeful.

I consider that I have an increased ability to set goals, improve others' strengths and foster my co-workers' need for autonomy and I have respect for their individual values. These characteristics improve my performance, strengthening and creating greater confidence in the relationship between my colleagues, my co-workers and my partners in professional life.

The output of this process was also reflected in the implementation and assimilation of the learning processes at school and at home, which is characterized by active learning through processing and interpretation and the integration of new knowledge into one's individual experiences and previous knowledge. I was aware of the problems of challenging traditionalist values and practices and tried to win acceptance from significant others in my community and most critically from the parents who always wanted the best for their children. Added to this, is the fact that I do not simply take things at face value but I try to look for the under-lying causes and conditions which make it so. For me, the knowledge I gained about the school curriculum and the learning of the children was also a reflective challenge. This is because critical thinking argues that knowledge itself is a part of the reality which it is trying to describe and understand. In this work-based project my engagement was explicitly organised on the grounds of knowledge as a reflective

activity which could be useful and acceptable to those who need it and need to use it. Therefore, I was expected to think critically by understanding the complications of my role and the expectations others had of me.

As teacher-manager of the kindergarten I aspired to encourage and lead my school to a more versatile and responsive learning approach. By giving children skills such as encouraging them to accept personal responsibility, encouraging them to think critically, giving them the ability to critique, assess and draw conclusions, developing their capacities for problem solving and independent thinking, encouraging the making of intelligent, discretionary decisions, supporting their collaboration with peers and caring for his/ her environment, my approach to educational leadership I sincerely hope proved to be successful.

 pdfelement

Bibliography

Abu-Asbeh, K. (2009) '*Arab Education in Israel: Between the Discourse of Struggling Identity and Low Achievement*', Adalah's Newsletter: Haifa. Vol: 63, 1-3.

Adair, J. (1983) *Effective Leadership: A Self Development Manual*. UK: Gower Pub Co.

Adalah, Report. (2011) *The Inequality Report: The Palestinian Arab Minority in Israel*. Haifa: Adalah-The Legal Centre for Arab Minority Rights in Israel.

Aditya, R.N. House, R.J. and Kerr, S. (2000) *Theory and practice of leadership: Into the new millennium*. Industrial and organizational psychology: Linking theory and practice. Oxford, UK: Blackwell (130-165).

Aflatka, Y. (2007) *Foundations of Educational Administration: Leadership and Management in Educational Organizations*. Haifa: Pardes.

Alexander, R. (2006) *Towards dialogic teaching: Rethinking classroom talk*. (3rd ed). Cambridge, UK: Polity Press.

Alger, G. (2008) '*Transformational leadership practice of teacher leader*', *Journal Academic Leadership*, Vol: 6 (2), 2575-2580. doi: 10.1016/j.sbspro.2011.10.503.

Al-Haj, M. (1995) *Education, empowerment, and control: The Case of Arabs in Israel*. Albany: State University of New York Press.

Bakri, K. (2017) *The Killing of Women: A Silent Society...and No Security*. Israel: Arab 48. <http://www.alhayat.com./Articles/17082392>. June.15th.2017.

Amit, K. and Bar-Lev, S.H. (2013) '*Motivation to Lead in Multicultural Organizations the Role of Work Scripts and Political Perceptions* ', *Journal of Leadership and Organizational Studies*, Vol: 20 (2), 169-184.

Anderson, J.R. (2010) *Cognitive Psychology and Its Implications*. New York: Worth Publishers.

Anderson, H. Coltman, P. Page, C. and Whitbread, D. (2003) *Developing Independent Learning in Children aged 3-5*. Faculty of Education, University of Cambridge, UK. (Paper delivered at Earli 10th Biennial Conference, Padova, Italy, August 2003).

Anderson, R.A. Crabtree, B.F. Steele, D.J. and McDaniel, R.R. (2005) '*Case Study Research: The view from Complexity Science* ', Vol: 1 (5), 85-669.

Armour, K. (2011) *Sport Pedagogy: An Introduction for Teaching and Coaching*. UK: Routledge.

- Astington, J.W. (1993) *The child's discovery of the mind*. Cambridge: Harvard University Press.
- Avolio, B.J. (2007) *Full range leadership development*. (2nd ed). London: Sage.
- Barker, B. (2007) '*The leadership paradox: Can school leaders transform student Outcomes?*', *School effectiveness and school improvement*, Vol: 18 (1), 21-43.
- Bass, B.M. and Riggio, R.E. (2006) *Transformational Leadership*. (2nd ed). Mahwah, NJ: Lawrence Erlbaum.
- Beaudoin, S. (2012) '*Using Responsibility-Based Strategies to Empower In-service Physical Education and Health Teachers to Learn and Implement TPSP*', University de Sherbrook, Vol: 14 (2), 161-177.
- Beit-Marom, R. (2009) *Psychological tests, Theory and practice*. Tel Aviv: Open University Press.
- Benham, J. (1995) *Fostering Self-Motivated Behavior, Personal Responsibility, and Internal Locus of Control in the School Setting*. University of Southern Maine: ERIC. <http://files.eric.ed.gov/fulltext/ED386621.pdf>.
- Bennis, W. (2007) '*The Challenges of Leadership in the Modern World: Introduction to the Special Issue*', *American Psychologist*, Vol: 62 (1), 2-5.
- Bensimon, E.M. Neumann, A. and Birnbaum, R. (1989) '*Making sense of administrative leadership: The "L" word in higher education*', ASHE-ERIC Higher Education Report, Washington, DC: George Washington University, Vol: 12, 23-107.
- Berk, L.E. (2006) *Child Development*. (4th ed). Boston: Pearson/Allyn and Bacon.
- Bhatt, C. (2004) *Doing a Dissertation in Seale*. (2nd ed). *Researching Society and Culture*. London: Sage Publications.
- Biemiller, A. and Meichenbaum, D. (1992) *The Nature and Nurture of the Self-Directed Learner*, *Educational Leadership*, October 1992.
- Bigge, M.L. and Shermis, S.S. (1999) *Learning theories for teachers*. (6th ed). New York: Harper Collins Publishers.
- Bingham, M. and Stryker, S. (1995) *Things will be different for my daughter: A practical guide to building her self-esteem and self-reliance*. New York: Penguin Books.

Bjorkland, D. (2000) *Children's Thinking: Developmental Function and Individual Differences*. Wadsworth: Belmont.

Blaikie, N. (2007) *Approaches to Social Enquiry: Advancing Knowledge*. (2nd ed). Cambridge: Polity Press.

Bloom, B.S. (1956) *Taxonomy of Educational Objectives book 1: Cognitive Domain*. (2nd ed). New York: Addison Wesley.

Bourdieu, P. (1974) 'The School as Conservative Force', in Eggleston, J. (ed) *Contemporary Research in the Sociology of Education*. London: Methuen.

Bowlby, J. (1951) *Maternal Care and Mental Health*. Geneva: World Health.

Bowlby, J. (1959) *Child Care and the Growth of Love*. London: Penguin.

Bowlby, J. (1969) *Attachment and Loss: Vol. 1*. London: Routledge.

Branco-Weiss-Institute, (2003) tools and strategies for raising options. Israel. <http://www.brancoweiss.org.il/1056/388.htm>

Brown, T. and Jones, L. (2001) *Action Research and Postmodernism: Congruence and Critique*. Buckingham: Open University Press.

Brown, F. (2002) *Play work: Theory and Practice*. UK: McGraw-Hill.

Bruner, J. (1983) *In Search of Mind: Essays in Autobiography*. New York: Harper Collins.

Bryman, A. (2008) *Social Research Methods*. (3rd ed). Oxford: Oxford University Press.

Burns, J. M. (1978) *Leadership*. New York: Harper and Row.

Bush, T. (2011) *Theories of Educational Leadership and Management*. (4th ed). London, UK: Sage.

Camazine, D. Deneubourg, J.L. Franks, N.R. Sneyd, J.T. and Bonabeau, E. (2001) *Self-Organization in Biological Systems*. New Jersey: Princeton University Press.

Cassin, L. and Cromer, N. (2010) *Analysis in Qualitative Research*. Beer Shiva: Ben Gurion.

Chozre Mankal, (2011) Israeli Ministry of Education.

Cohen, L. Manion, L. and Morrison, K. (2011) *Research methods in Education*. (7th ed). London: Routledge.

Colbert, R.D. Russ Vernon, J. and Pransky, K. (2006) '*The School Change Feedback Process: Creating a New Role for Counselors*', in *Education Reform Journal of Counseling and Development*, Vol: 84 (1), 72-82. doi: 10.1002/j.1556-6678.2006.tb00381.x.

Coles, M.J. (1993) '*Teaching Thinking: Principles, Problems and Programs*', *Educational Psychology*, Vol: 13 (3/4), 333-344.

Conger, J.A. and Kanungo, R.N. (1987) '*Toward a behavioral theory of charismatic leadership in organizational settings*', *Academy of Management Review*, Vol: 12 (4), 637-647.

Conrad, D. and Hedin, D. (1985) '*Instruments and Scoring Guide of the Control of reinforcements in intellectual-academic achievement situations*', *Child Development*, Vol: 36, 91-109.

<https://www.scribd.com/document/252553802/Instruments-and-Scoring-Guide-of-the-Experiential-Education-Evaluation-Project>.

Copple, C. and Bredekamp, S. (2009) '*Developmentally appropriate practice in early childhood programs serving children from birth through age 8*', *National Association for the Education of Young Children*. Washinton, DC, Vol: 2 (2), 205-410.

Coursen-Neff, Z. (2005) '*Discrimination Against Palestinian Arab Children in the Israeli Educational System*', *International Law and Politics*, Vol: 36, 749.

Crawford, M. (2009) *Getting to the Heart of Leadership*. London: Sage.

Crawford, M. (2015) *The world beyond your head: How to flourish in an age of distraction*. UK: Viking-Penguin.

Crystal, D. (2015) *Making a Point : The Pernickety Story of English Punctuation*. London: Profile Books.

Darmoni, D. and Levy, N. (2007) *Critical Thinking*. The Centre for Educational Technology Citizenship Team. Tel Aviv: Mofet.

Dasborough, M.T. (2006) '*Cognitive asymmetry in employee emotional reactions to leadership behaviours*', *The Leadership Quarterly*, Vol: 17, 163-178.

Davies, D. Shamshoum, R. Nyland, J. and Clarke, E. (2016) *Monograph, Beyond the boundary: is there something called real knowledge? ALARA-Action Learning, Action*

Research Association. ISSN: 1839-1168.

De Bono, E. (1998) *Parallel Thinking*. Harmondsworth, Middlesex: Penguin

De Bono, E. (1998) *Guide for Creative Thinking*. Kinneret: Yehud Published.

Denham, S.A. Way, E. Kalb, S.C. Warren-Khot, H.K. and Bassett, H.H. (2013) '*Preschoolers' social information processing and early school success: the challenging situations task*', *Vbl: 31 (2)*, 97-180.

Denscombe, M. (2008) *The Good Research Guide: For Small-scale Social Research Projects*. (4th ed). Open University: Milton Keynes.

Denzin, N.K. and Lincoln, Y.S. (2005) *The SAGE Handbook of Qualitative Research*. (3rd ed). SAGE Publications.

Dewey, J. (1993) *The Political Writings*. Debra Morris and Ian Shapiro (eds.). Indianapolis: Hackett.

Donaldson, G. (1983) '*Confirmatory factor analysis models of information processing stages: An alternative to difference scores*', *Psychological Bulletin*, *Vbl: 94 (1)*, 143-151.

Dwairy, M. (1997) '*A biopsychosocial model of metaphor therapy with holistic cultures*', *Clinical Psychology Review*, *Vbl: 719-732, (7)* 17.

Dwairy, M. (2004) '*Parenting styles and mental health of Palestinian–Arab adolescents in Israel*', *Transcultural Psychiatry*, *Vbl: 41 (2)*, 233-252.

Dwairy, M. (2006) *Counselling and Psychotherapy with Arabs and Muslims: A Culturally Sensitive Approach*. New York: Teachers College Press, Columbia University.

Dwairy, M. (2011) '*Perceived family and school rejection and adolescents*', *Psychological States*, *Vbl: 2 (06)*, 535.

Dweck, C.S. and Elliot, A.J. (2013) *Handbook of competence and motivation*. (1st ed). Guilford Publications.

Dunn, J. (1988) *The Beginnings of Social Understanding*. (15th ed). Oxford: Basil Blackwell.

Elliot, J. (1995) '*What is Good Action Research? Some Criteria*', *Educational Action Researcher*, *Vbl: 2*, 10-11.

Ennis, R.H. (1996) '*Critical Thinking Dispositions: Their Nature and Assessability*', Informal Logic, Vol: 18 (2 and 3), 165-182.

Erikson, E.H. (1993) (first published 1950) *Childhood and Society*. NYC: W.W.Norton.

Fisher, Y. Magen, N. and Abu Nasra, M. (2014) '*Sectorial Perceptions of Parental Involvement: Similarities and Dissimilarities*', Social Sciences Research Journal, Vol: 1 (7), 66-85.

Flick, U. (2011) *Introducing Research Methodology*. London: Sage Publications.

Franklin, R.D. (1963) Use expectations about internal versus external reinforcement related to N variables. *Dissertation Abstracts*, 24, 1684.

Freire, P. (1972) *Pedagogy of the Oppressed*. Harmondsworth: Penguin

Freire, P. and Shor, I. (1987) *A pedagogy for liberation*. Basingstoke: Macmillan Education.

Freire, P. (2000) *Pedagogy of the oppressed*. (30th ed). London: Bloomsbury Publishing.

Froebel, F. (1889) *Autobiography of Friedrich Froebel*, trans. Syracuse, NY: C.W. Bardeen. cited in Strauch-Nelson, W. (2012) 'Transplanting Froebel into the present', *International Journal of Education through Art*, Vol: 8(1), 59-72. doi: 10.1386/eta.8.1.59_1.

Fuchs, D., and Fuchs, L.S. (2006) *Introduction to response to intervention: What, why, and how valid is it?* *Reading Research Quarterly*, 41(1), 93–99. cited in Tilly, W. D. (2008) 'The evolution of school psychology to science-based practice: Problem solving and the three-tiered model', *Best practices in school psychology*, Vol: 1, 17-36.

Gardner, H. (1983) *Frames of mind: The theory of multiple intelligences*. (3rd ed). New York: Basic Books.

Gilad, Y. (2011) '*Development of Educational Leadership – Now!*' *Studies in Education, Society, Technology and Science*.
<http://www.gilaad-consulting.co.il/>.

Goldhirsh, A. and Wagner, A. (2004) '*Let's think about it guide for fostering cognitive processes in the kindergarten and the promotion of children with developmental difficulties*', Jerusalem: Ministry of Education.
<http://meyda.education.gov.il/files/PreSchool/mabatim16.pdf>

Graves, N. (ed.) (1993) *Learner Managed Learning: Practice, Theory and Policy*. Leeds: Higher Education for Capability.

Goldring, E. (2008) School leadership development practices: The need for a potent. Jerusalem: Avney Rosha Institute.

Greenbaum, C.W. and Fried, D. (2011) Relations between the family and the early childhood education system. Israel: Jerusalem.

<http://education.academy.ac.il/Admin/Data/Publications/Family>.

Guess, R. (1981) The Idea of Critical Theory. UK: Cambridge University Press.

Gunter, H. (2012) Leadership and the Reform of Education. Bristol: Polity Press.

Guron, Y. (2009) Leadership Teachers. Israel Teachers' Union–Educational Leadership. Hod Hachinuch into the 21st century.

[https://www.itu.org.il/?/CategoryID25.04.2014\).1497=\)](https://www.itu.org.il/?/CategoryID25.04.2014).1497=)).

Habermas, J. (1972) Knowledge and Human Interests. (2nd ed). London: Beacon Press.

Hackman, J.R. and Wageman, R. (2007) '*Asking the Right Questions about Leadership*', American Psychologist, Vol: 62, 43-47.

HaCohen and Zimran, A. (1999) Action Research - Teachers Investigate their Work Completely. (3rd ed). Tel-Aviv: MOFET.

Hargreaves, A. and Fullan, M. (2012) Professional capital: Transforming teaching in every school. New York: Teachers College Press.

Harpaz, Y. (2005) '*Towards Teaching and Learning in a Thinking Community*', Journal of Illinois: SkyLigh. <http://cse.proj.ac.il/kenes2005/communities.doc>

Harpaz, Y. (2008) '*The Third Model: Teaching and Learning in a Thinking Community*', Tel Aviv: Workers' Library, Vol: (20), 177-202. [http://yoramharpaz.com/articles/education-goals/the-third model/](http://yoramharpaz.com/articles/education-goals/the-third-model/)

Harris, A. (2004) '*Distributed Leadership and School Improvement*', Educational Management Administration and Leadership', Vol: 32 (1), 11-24.

Henderson, A.T. Mapp, K.L. Johnson, V.R. and Davies, D. (2007) Beyond the bake sale. The essential guide to family-school partnerships. New York: The New Press.

Hey, C. and Oates, R. 'The Enabling Practitioner' Chapter 5 in Oates, R. and Hey, C. (Eds)(2014) The Student Practitioner in Early Childhood Studies: An essential guide to working with children. London: Routledge.

Higgs, J. (1993) *The Teacher in Self-Directed Learning: Manager or Co-Manager?* Chapter 14 in Graves, N (Ed) (1993) *Learner Managed Learning: Practice, Theory and Policy*. Leeds: Higher Education for Capability.

Holmes, J. (1998) *John Bowlby and Attachment Theory*. London: Routledge.

House, R.J. (1977) A 1976 theory of charismatic leadership. In J.G. Hunt and L.L. Larson (Eds.), *Leadership: The cutting edge (189-207)*. Carbondale, IL: Southern Illinois University. Google Scholar.

House, R.J. Hanges, P.J. Ruiz-Quintanilla, S.A. Dorfman, P.W. Javidan, M. and Dickson, M.W. (1999) '*Cultural influences on leadership and organizations: Project GLOBE*', in W.H. Mobley, M.J. Gessner, and V. Arnold. *Advances in Global Leadership*. (eds). Stamford, CN: JAI Press. Vol: 1, 171-233.

Human Rights Watch (HRW) (2001) *Second Class: Discrimination Against Palestinian Arab Children in Israel's Schools*. New York: HRW.

Hurst, V. and Joseph, J. (1998) *Supporting Early Learning-the Way Forward*. UK: McGraw- Hill Education.

<http://gpseducation.oecd.org/CountryProfile?primaryCountry=ISRandthreshold=10andtopic=PI>.

Inbar, D. (2009) '*Educational Leadership in an Age of Contradictions*', *Hod Hachinuch*, Vol: 83 (4), 52-54.

ISLLC (2008) *Educational leadership policy standards*. Washington DC. Council of Israeli Preschool Educational Practice (2010).

Israeli Central Bureau of Statistics - CBS, Search results Deir-Hanna resolution. (2015) Profile (2008 census). Internet explorer CBS.gov.il. Code=492 (accessed 28/12/2016). http://cbs.gov.il/reader/?MIval=%2Fpop_in_locs%2Fpop_in_locs_h.html&Locality.

Israeli Central Bureau of Statistics (CBS), *Statistical Abstract of Israel* (2009), No. 60, Tables 2.2, 2.8, 2.10. This figure does not include the Arab population of occupied East Jerusalem or the occupied Golan Heights.
http://cms.education.gov.il/EducationCMS/Applications/Mankal/ChipusPashut/Search.htm?REFE_GUID={E37F71F1-0365-4BF5-8ABE-C065861E9D65}. (accessed in 24.03.2016).

James, K.T. Mann, J. and Creasy, J. (2007) *Leaders as lead learners - A case example of facilitating collaborative leadership learning for school leaders*, Management Learning, Vol: 38 (1), 79-94. doi: 10.1177/1350507607073026.

Jenkins, R. (2004) *Social Identity*. (2nd ed). London: Routledge.

Johnson, A.P. (2005) *A Short Guide to Action Research*. (2nd ed). Boston: Allyn and Bacon.

Kagan, S.L. and Bowman, B.T. (1997) *Cultivating Leadership in Early Care and Education*. NAEYC. NW: Washington.
<http://www.waynecc.edu/sherryg/wp-content/uploads/sites/10/Cultivating-Leadership.pdf>.

Kahn, J. (2013) Can emotional intelligence be taught. Magazine: New York Times.
http://www.nytimes.com/2013/09/15/magazine/can-emotional-intelligence-be-taught.html?pagewanted=all&_r=0

Kaminski, A. (2010) Support and Empowerment as Necessary Conditions for the Development of Educational Leadership. *Multidisciplinary Thinking in Humanist Education*. Sapir Dictionary, (1997) Open University Press: Kavim Manhim.

Katz-Kurland, C. (2006) Organizational learning as a result of the leadership and vision, and its contribution to the investment of effort, the satisfaction of the teachers and academic achievement in elementary schools. Haifa: Israel.

Kemmis, S. (2006) *Participatory Action Research and the Public Sphere*, Educational Action Research, Vol: 14 (4), 459-476.

Kohlberg, L. (1973) *The Claim to Moral Adequacy of a Highest Stage of Moral Judgment*, Journal of Philosophy, Vol: 70, (18): 630–646.

Kopp, C. (1992) Emotional distress and control in young children. In N. Eisenberg and R. A. Fabes (Eds.), *Emotion and its regulation in early development*. New Directions in Child Development. Vol: 55, 41–56. San Francisco: Jossey-Bass.

Koshy, V. (2005) *Action research for improving practice: A practical guide*. London: Paul Chapman Publishing.

Kouzes, J.M. and Posner, B.Z. (1995) *The leadership challenge: How to keep getting extraordinary things done in organizations*. (4th ed). San Francisco: Jossey-Bass.

Kroeger, J. and Cardy, T. (2006) *Documentation: A hard-to-reach place*, Early

Childhood Education Journal, Vol: 33 (6), 389–98.

Lam, L. and Zvi, Z. (2008) *Contradictory Logic in Teaching*. Tel Aviv: Workers' Library.

Lasry, D. (2010) *'From Survival to Creativity'*, Hod Hagan: Histadrut Hamoriem, Vol: 74 (3), 32-38.

Lee, J. (2005) *'Effect of leadership and Leader member exchange on commitment: Leadership and Organiation'*, Development Journal, Vol: 26 (8), 655-672.

Leithwood, K. Jantzi, D. and Steinbach, R. (1999) *Changing leadership for changing times*. UK: McGraw Hill Education.

Leithwood, K. Day, C. Sammons, P. Hopkins, D. and Harris, A. (2006) *Successful school leadership: What is it and how it influences pupil learning*. A report to the Department for Education and Skills. ISBN: University of Nottingham.

<http://webarchive.nationalarchives.gov.uk/20130401151715/http://www.education.gov.uk/publications/eOrderingDownlo>.

Lev-Wiesel, R. (2005) *'Dissociative identity disorder as reflected in drawings of sexually abused survivors'*, The Arts in psychotherapy, Vol: 32 (5), 372-381.

Lichbach, M.I. and Zuckerman, A.S. (2009) *Comparative politics: Rationality, culture and structure*. (2nd ed). UK: Cambridge University Press.

Lillard, A.S. (1998) *'Wanting to be it: Children's understanding of intentions underlying pretense'*, Child Development, Vol: 69 (4), 981–993.

Lillard, A.S. (2005) *'Playful Learning and Montessori Education'*, American Journal of Play, Vol: 5 (2).

Lincoln, Y.S. and Guba, E.G. (1985) *Naturalistic Inquiry*. Newbury Park, CA London: Sage Publications.

Lipman, M. (2003) *Thinking in Education*. Cambridge: United Kingdom

Livni, E. (2003) *Military leadership development portfolio in the Israel Defense Forces*. School for the development of leadership, education of soldiers and youth. Israel: Defense Forces.

Lizabeth, A. (2013) *Ethics in Medicine*. Seattle, WA: University of Washington School of Medicine. <https://depts.washington.edu/bioethx/>.

Lyons-Ruth, K., Easterbrooks, M. and Cibelli, C. (1997) '*Infant Attachment Strategies: Infant mental lag and maternal depressive symptoms: Predicators of internalizing problems at age 7*'. Development Psychology, Vol.33, 681-92.

Machover, K. (1949) Personality projection in the drawing of the human figure (A method of personality investigation). U.S: Government Printing Office.

Mackenzie, S.B. Podsakoff, P.M. and Rich, G.A. (2001) '*Transformational and Transactional Leadership and Salesperson Performance*', Academy of Marketing Science Journal, Vol: 29 (2), 115-135.

Macleod-Brudenell, I. (2004) Advanced Early Years Care and Education. (1st ed). Harlow: Heinemann.

Macleod-Brudenell, I. and Kay, J. (2008) Advanced Early Years. (2nd ed). Harlow: Heinemann.

McGhee, P.E. and Crandall, V.C. (1968) '*Belief in internal-external control of reinforcements and academic performance*', Child Development, Vol: 39, 91-102.

McKinsey and Company, (2007) How the world's best-performing schools come out, in: McKinsey Report, (2008) Hod Hachinuch Publications.

McMillan, J. and Schumacher, S. (2006) Research in Education. (6th ed). Boston: Pearson Education.

McNiff, J. and Whitehead, J. (2005) Action Research for Teachers. London: Fulton.

Mark-Bell, R. (2013) '*Charismatic Leadership Case study with Ronald Reagan as Exemplar*', Emerging Leadership Journeys, Vol: 6 (1), 66-74.

Marzano, R. (2002) Dimensional Thinking. Jerusalem: Branco Weiss Institute Press (Hebrew).

Mason, J. (2000) Qualitative Researching. (2nd ed). London: Sage Publications.

Mason, P. (2007) '*Constructing theories of change, methods and source*', Evaluation, London: Sage. Vol:151-170, (2) 13.

Matas, L., Arend, R. and Stroufe, L. (1978) '*Continuity of Adaptation in the Second Year: The relationship between quality of attachment and later competence*'. Child Development, Vol. 49, 547-56.

Mayring, P. (1983) *Qualitative Content Analysis: Bases and Techniques* (cited in Flick ,2011) (*Qualitative Inhaltsanalyse: Grundlagen und Techniken*). Weinheim: Deutsche Studien Verlag.

Mayring, P. (2000) *Qualitative Content Analysis*, *Forum: Qualitative Social Research*, 2000, 2:1.

Mayring, P. Glaser-Ziduka, M. (2003) 'A Qualitative Oriented Approach to Learning Emotions at School' in Mayring, P. and Rhoeneck, C. (Eds) (2003), *Learning Emotions*. New York: Lang.

Matveev and Lvina, (2007) *The perception of intercultural communication competence by American and Russian managers with experience on multicultural teams*. Dissertation: Ohio University. Ann Arbor, MI: UMI Dissertation Services.

Melchiodi, C.A. (2004) *Understanding Children's Drawings*. Guilford Press.

Mercer, N. and Littleton, K. (2007) *Dialogue and the development of children's thinking: A sociocultural approach*. London, UK: Routledge.

Mertens, D.M. (2005) *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches*. (2nd ed). Oaks London: Sage.

Michelle, N. (2008) '*Rethinking Educational Reform*', *Mofet Institute Monthly*. 31: 3-4.

Middlehurst, R. (1993) *Leading academics*. UK: McGraw-Hill Education.

Ministry of Education (2010) *Educational Practices in the Kindergarten. Guidelines for the Educational Staff*: Publications Division, gov.il. <http://meyda.education.gov.il/files/minhalcalcala/facts.pdf>.

Ministry of Education, Culture and Sports (2014) *Program Framework for the Kindergarten*. Jerusalem.

[http://cms.education.gov.il/EducationCMS/Units/PreSchool/KishureyHaim/Pirsumim / BouYeladimMesahakim.htm](http://cms.education.gov.il/EducationCMS/Units/PreSchool/KishureyHaim/Pirsumim/BouYeladimMesahakim.htm).

Moamar, T. (1979) *Daher al-Omar*. Nazareth: Alhakeem.

Molavi, S. C. (2013) *Stateless Citizenship: The Palestinian-Arab Citizens of Israel*, Chicago: Haymart Books.

Montessori, M. (1907) *Voices that Rise from the Past*. London: Helneman. cited in Lillard, A.S. (2005) 'Playful Learning and Montessori Education', *American Journal of Play*, Vol: 5 (2).

Moyles, J. (1989) (ed) *The Excellence of Play*. Maidenhead: Open University Press.

Mukherji, P. and Albon, D. (2009) *Food and Health in Early Childhood*. London: Sage.

Mukherji, P. and Albon, D. (2015) *Research Methods in Early Childhood*. (1st ed). London: Sage.

Nevel, V. (2011) *Expert Leadership rules within an education setting*. UK: Birmingham, City University.

http://www.ejtn.eu/PageFiles/6343/Education_%20Management_Adult_Ed-2011.pdf

Newby, P. (2010) *Research Methods for Education*. ICBN: Longman.

Newman, M. (2006) '*Teaching Defiance: Stories and Strategies for Activist Educators*', Boston: Northeastern University, Vol: 27 (1), 295.

Norman, A. (2011) *The professional role of key persons using symbolic gesturing and their perspectives on its value in supporting the emotional relationship with infants in day nursery*. University of Southampton, PhD Thesis. http://eprints.soton.ac.uk/210917/1.hasCoversheetVersion/cd1version_whole.pdf.

Northouse, P.G. (2013) *Leadership: theory and practice*. (6th ed). London: Sage.

Nussbaum, J. and Yechieli, T. (1995) *Misconceptions and Conceptual Change in Teaching of the Sciences*. Tel Aviv: Mofet Institute of Education in Israel.

Oates, R. and Hey, C. (2014) *The student practitioner in early childhood studies: an essential guide to working with children*. UK: Routledge.

Oates, R. and Yates, E. (2016) '*Huthwaite play project*', Department of Education and Childhood, University of Derby.

<http://hdl.handle.net/10545/621078>.

OECD (2014) PISA (2012) '*Results: Creative Problem Solving: Students' Skills in Tackling Real-Life Problems*', (Volume V), PISA, OECD Publishing. <http://dx.doi.org/10.1787/9789264208070-en>. (accessed 15.12.2014).

Parry, K.W. (2003) '*Leadership, Culture and Performance: The Case of New Zealand's*

Public Sector’, Journal of Change Management, Vol: 3 (4), 376-399.

Paul, M. (2008) The Importance of Fostering Thinking in the Educational System. Beit Shemesh: Pisga Centre.

Pearce, J.L. and Randel, A.E. (2004) *‘Expectations of Organizational Mobility, Workplace Social Inclusion, and Employee Job Performance’*, Journal of Organizational Behavior, Vol: 25, 81-98.

Perkins, D. (2011) Learning Game: How Seven Principles of teaching can change education. Bne - Barak: Hapoaleem Library.

Piaget, J. (1954) The Construction of Reality and the Child. New York: Basic Books.

Piaget, J. (1972) Psychology and Epistemology: Towards a Theory of Knowledge. Harmondsworth: Penguin.

Piaget, J. (2001) (first published 1923) The Language and Thought of the Child. London: Routledge.

Pleasant Valley Community Schools (2014) <http://www.pleasval.k12.ia.us/studyskills/parentresponsibility>.

Regev, D. and Ronen, T. (2012) *‘The image of the special education teacher as reflected in drawings made by teachers in training in Israel’*, British Journal of Special Education, Vol: 39 (2), 71-79.

Reiter, S. (2011) *‘The Learning Environment as a Challenge to Development’*, Issues in Special Education, Vol:18, 87-93.

Robertson, J. Martin, P. Borradaile, L. and Alker, S. (2009) Forest Kindergarten Feasibility Study. Creative STAR Learning Company and Forestry Commission Scotland. Scotland: Aberdeenshire.

<http://www.educationscotland.gov.uk/Images/Forest>, 1-38, 20.

Rodd, J. (2013) Leadership in Early Childhood: The Pathway to Professionalism. UK: Allen and Unwin.

Rogers, C. R. (1969) Freedom to Learn. Ohio: Merrill

Rogers, A. (1992) Teaching Adults. Buckingham: Open University Press

Rogers, C. (2003) *Client Centred Therapy, its current practice, implications and theory.* (new ed). UK: Robinson.

Sabar Ben-Yehoshua, N. Doshnik, L. and Bialik, G. (2007) *Who Am I to Decide Their Fate? Ethical dilemmas of teachers.* Jerusalem: Magnes.
http://www.magnespress.co.il/PDF_files/miani.pdf.

Sabar Ben-Yehoshua, N. (2009) *Informed Consent - Principle that Helps or Deceptive Principles in Qualitative Research in Education.* Jerusalem: Mercaz Shananim and Magnus.

Said, E. (1978) *Orientalism.* NY: Random House.

Saldana, J. (2013) *The Coding Manual for Qualitative Researchers, (2nd^{Ed}),* London: Sage Publications.

Sanders, A. Oates, R. and Kahn, T. (2008) *Hard to Reach? Engaging Fathers in Early Years Settings.* UK: University of Derby.
www.pre-school.org.uk/fathers/ Saunders A, Oates R, Kahn T (2009) *Hard to Reach?*

Santrock, J. W. (2004) *A Topical Approach to Life-Span Development.* (2nd ed). New York: University of Texas at Dallas.
file:///C:/Users/%D7%9E%D7%99%D7%A1%D7%95%D7%9F/Downloads/Santrock_TOPAPLSD2e_preface.pdf.

Schon, D. (1987) *Educating the Reflective Practitioner.* San Francisco: Jossey Bass.

Scouller, J. (2011) *The Three Levels of Leadership: how to develop your leadership presence, know how and skill.* Oxford: management books. ספוטנה תיתחת

Seitz, H. and Bartholomew, C. (2008) '*Powerful portfolios for Young Children*', *Early Childhood Educational Journal*, Vol: 36 (1), 63-68.

Shamshoum, R. (2015) *Dancing in Nazareth : Explorations in the Therapeutic Arts as a Basis for Personal and Community Development.* University of Derby: Doctorate in Education 2015.

Sherer, M. and Enbal, B. (2006) '*In the shadow of dispute: self-esteem of Jewish and Arab youth in Israel*', *International Journal of Intercultural Relations*, Vol. (30): 287-309.

Shin, S.J. and Zhou, J. (2003) '*Transformational Leadership, Conservation and Creativity: Evidence from Korea*', *Academy of Management Journal*, Vol: 46 (6), 703-714.

Shkedi, A. (2003) *Words That Try to Touch - Qualitative Research - Theory and*

Application. Ramot: Tel Aviv University.

Shkedi, A. (2004) '*Narrative survey: A methodology for studying multiple population*', Narrative Inquiry, Vol:87-111, (1) 14.

Shonkoff, J.P. and Phillips, D.A(eds)(2000) '*From neurons to neighborhoods: The science of early childhood development*', (ed). Chapter 9, Nurturing Relationships. Washington, DC: National Academy Press: 225-266. <https://www.nap.edu/read/9824/chapter/1>.

Shor, I. (1980) Critical Teaching and Everyday Life. Boston: Sternglass.

Silins, H. and Mulford, B. (2002) '*School as a Learning Organization*', Journal of Educational Administration, Vol: 40 (5), 425-446.

Siraj, I. and Hallet, E. (2013) Effective Leadership in Early Years Sector: The Eleys Study. Uk: sage publications ltd.

Stenhouse, L. (1975) An Introduction to Curriculum Research and Development. London: Heinemann.

Stogdill, R.M. (1974) Handbook of Leadership: A Survey of Theory and Research. N.Y: Free Press.

Strauch-Nelson, W. (2012) '*Transplanting Froebel into the present*', International Journal of Education through Art, Vol: 8(1), 59-72. doi: 10.1386/eta.8.1.59_1.

Strange, J. M. and Mumford, M. D. (2002) '*The origins of vision: Charismatic versus ideological leadership*', The Leadership Quarterly, Vol: 13 (4), 343-377.

Suleeman, J. (2008) A Vygotskian Perspective on promoting critical thinking in young children through mother – child interactions. Australia: Murdoch University. <http://researchrepository.murdoch.edu.au/713/2/02Whole.pdf>.

Sullivan, A. (2001) '*Cultural Capital and Educational Attainment*', Sociology, 2001, Vol35: 893. Sage and British Sociological Association.

Talmor, R. Sharon, A, and Kayam, A. (2010) '*Attitudes of Teachers Towards Students with Special Needs Compared to Their Attitudes Towards Regular Students*', Issues in Special Education and Rehabilitation, Vol: 25 (1), 5-21.

Taylor and Francis in Zorn, D. and Boler, M. (2007). Rethinking emotions and educational Leadership. International Journal of Leadership in Education. ISSN 1360–3124 print/

ISSN 1464–5092 online © 2007 Taylor & Francis. <http://www.tandf.co.uk/journals>

Teare, R. (2013) 'Personal Viability- the Journey to Self-reliance and Financial Independence' in: Zuber-Skerritt, O. and Teare, R. (eds.) *Lifelong Action Learning for Community Development: Learning and Development for a Better World*. Rotterdam: Sense Publishers. (99-132).

Thornton, A. (2005) '*The artist teacher as reflective practitioner*', *International Journal of Art and Design Education*, Vol:166, (2), 24-174.

Tilly, W. D. (2008) '*The evolution of school psychology to science-based practice: Problem solving and the three-tiered model*', *Best practices in school psychology*, Vol: 1, 17-36.

Torrence, D. (2013) '*Distributed Leadership: challenging five generally held assumptions*', *School Leadership and Management: formerly School Organisation*, Vol: 33 (4), 354-372.

Tosey P. (2008) '*Innovations in Constructivist Research: NLP, psycho-phenomenology and the exploration of inner landscapes*', *The Psychotherapist*, Vol: 37 (0), 5-8.

Tuval, H. (2003) '*Learn to Play and Play to Learn the Kindergarten Experience to Foster Literacy Among Preschool Children*', *Hestadrot Hamorim: Hod Hagan*, Vol: 20, 20-31.

Vygotsky, L. (1978) *Mind in Society*. Cambridge MA: Harvard University Press.

Vygotsky, L. (1986, original work published in 1934) *Thought and Language*. (A. Kozhnhin translated). Cambridge MA: MIT Press.

Wade, T. (2007) *Guidelines for Critical Thinking*. Beer Sheva: Ben Gurion (University of the Negev).

Walkup, J.T. Albano, A.M. Piacentini, J. Birmaher, B. Compton, S.N. Sherrill, J.T. and Iyengar, S. (2008) '*Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety*', *New England Journal of Medicine*, Vol: 359 (26), 2753-2766.

Waters-Adams, S. (2000) '*The relationship between teachers: understanding of the nature of science and their science practice: Four case studies from an urban primary school*', Ph.D. thesis, UK: University of Plymouth, Vol: 28 (8), 919-944.

Watkins, K.E. and Marsick, V. (2003) '*Make Learning Count! Diagnosing The Learning Culture in Organizations*', *Advances in Developing Human Resources*, Vol: 5(2), 12-29.

Winter, R. and Badley, G. (2007) '*Action research and academic writing: a conversation*', Educational Action Research, Vol: 15 (2), 253-270.

Wood, E. and Attfield, J. (2005) *Play, learning and the early Childhood curriculum*. (2nd ed). London: Sage.

Woolley, J. and Wellman, H.M. (1994) '*Young Children's Understanding of Realities, Nonrealities, and Appearances*', in Child development, Vol: 61(4), 946-961.

Zuber-Skerritt, O. and Teare, R. (2013) *Lifelong Action Learning for Community Development : Learning and Development for a Better World*. Rotterdam : Sense Publishers.

<https://www.sensepublishers.com/media/1708-lifelong-action-learning-for-community-development.pdf>.

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Appendices

Appendix 1 : Research Diary

The basis for the collection of data that I used was my personal research diary. The data was collected in Arabic since that is my mother tongue and the language of the study's participants. The language is rich in metaphors.

My research diary is a small notebook where I note things I want to remember. Daily notes of personal activities, thoughts and emotions. For me, the research diary is a memoir; a book in which one writes thoughts, emotions and different feelings we experience during the day, and sometimes my dreams at night. The diary is a record of actions that have happened and is a record which is written down in order not to forget the events and happenings of the day. These thoughts, feelings, dreams and actions are recorded in my own words. At times writing in a diary is used to secretly communicate with somebody things that happen to us at certain times and are special in our lives. The writing in the diary was done at least once every day or even more often on any given day or night.

I believe there is a need to keep a research diary for the development of understanding the learning model, and the learning in the field as outlined in this thesis. This is then both a personal and a professional record of my experience and thoughts. It is a vital part of the process of reflection and subsequent analysis and understanding of the things that have happened which seem of significance.

Recording my reflections was not easy. Sometimes I rushed to the diary to record my impressions and thoughts and at other times I was lost in inner contemplation for hours searching for meanings; 'turning over' thoughts and memories.

Although it is a personal document, it is helpful if we bring it into a meaningful relationship with professional and communal issues and themes. Therefore, I decided to use it as both a personal and professional record and testimony to my work, my aspirations and hopefully my achievements. It was divided into several units and sections that proved to be particularly useful, and that made the theoretical sections easier to understand. My research diary also includes the methods of work and research techniques I used. It also recorded how things that were experienced in the group or individually, and if any assignments were sent home with the children. I believe that the work of parents with the child is part of taking responsibility, and I noted in the diary how the work affected me and how I reached conclusions about everything happening in the kindergarten.

In understanding personal development, my diary is important as a unit of perception and insight, through different stages of the research. I must emphasize that the approach to

writing a log must be fair and must discern between failure and success.

The idea of reflection, is vital in analyzing superficial and the more significant meanings of events and issues that are not easy. The continuity of recording events is important; these events can be criticized and thought about in great detail. Therefore, through the training of research and writing a research-based work, I also believe that my work was carried out and completed in a humane and professional manner.

Data analysis and their interpretation in this research diary was based on the characteristics of the analysis and the design of categories that were selected according to the research questions.

Mechanisms used to analyse and organize data

The research diary was a multi-dimensional method for both conceptualising and carrying out research and research-related tasks. A large number of ‘mechanisms ‘were involved and these reflected the diverse activities and the length of the whole work-related project which was in the order of 8 years in total.

An indicative account of the content range of the diary is given in the thesis at pages 82-86. This material was translated from the original language of recording which was Arabic and covered professional, work-based objectives, literature reviews focused on leadership issues in the kindergarten and the notion of critical skills being used in the classroom. A whole set of on-going curriculum interventions and lesson plans was recorded along with thoughts and observations on teaching practice skills both for myself and for my teaching colleagues. Reviews of colleagues’ performance as well as that of my own practice were included as were the management themes and issues of the day as they evolved throughout the project. Some specific project elements were included in the diary including the analysis of drawing skills and the development of emotional aspects of learning. The diary as a whole was a form of on-going assessment of the progress I was observing as a teacher-leader in the kindergarten.

The mechanisms used to analyse the array of data was as follows:

- **Abstracting, taking notes and summarising**

I used the diary recording scheme to record and take notes under main key headings which had been identified in the evolving frameworks derived from the literature search and my supervisors’ comments. Citations and quotations were recorded for future use and references for sources were entered alongside discussion notes for main ideas and arguments. An initial attempt was made to structure the notes around contested ideas and also complementary ones.

- **Filing and retaining notes**

The diary was used to keep full informative notes on the respondents and contacts who were part of the research project and to maintain a link with the on-going work-based project which was much longer than the focussed research phase. The diary entries helped me return over a long period to key questions and thus helped to identify key themes and questions which emerged during the action research phases.

- **Using good research habits**

I attempted to ask myself regularly whether I had kept my literature search up to date and whether I had reviewed my own practice and recorded changes of significance. I also tried to return to key sources and to write up current material. The diary involved on-going critical analysis –that is, awareness of the diverse context of the kindergarten and its problems and issues and experiences. Only this could help me search for alternatives and different possibilities which I believed critical thinking for young children offers.

- **Triangulation**

The mode of research was fundamentally qualitative and I believe came within what we understand as ‘action research’ which uses triangulation, which means some three or more methods may be used to find and assemble data. I used a diary to record the on-going impact of my note-taking, to correlate the thematic relevance of data from interviews with parents, to construct an analysis of curriculum developments and pedagogic plans and to help analyse children’s portfolios of written work and classroom performance. The diary helped me to identify developing patterns of data which were drawn from several sources. The information from the different research methods threw new light on issues and problems and facilitated a critical approach to my own self-development. The diary enabled aspects of the action research process to be more successful than otherwise might have been the case so that experience, observation, reflection, evaluation, planning and acting could be recorded and could be sustained over a long period of time. The process and substantive content of the diary enabled me to examine and question the decisions I had taken, it allowed me to focus on the importance of relationships in the kindergarten and it helped me establish and maintain a knowledge base for the decisions I had to make across the wide range of issues facing the kindergarten. The diary became a key resource for reflection within what was practitioner action research.

- **Analysis of interviews, narratives, interactions and experiences**

The diary was used to identify the categories and themes which were selected to argue the case for critical thinking skills development. The interviews and recorded conversations plus the reflective accounts of events, incidents and experiences within the kindergarten circle itself all yielded data. Narratives and reportage plus synthesised accounts of official educational policy documents were also used to inform descriptive accounts which were captured as sources of data. All of these were to evolve into a more conscious attempt to support the notion of critical skills as a key component of the

progressive kindergarten that the leadership envisaged and explored.

Interview data and both reported and recorded conversations were treated as statements which could be ‘clustered’ and categorised. Views and experiences were handled by a simplified and condensed version of what Mayring (1983) and Mayring and Glaser-Ziduka (2003) refer to as inductive content analysis (see for example Table 5, p.77 above and Flick, 2011 :136). This employs what is in effect a key words in context approach which allowed events and experiences and the conditions under which they occurred to be described and then transcribed and then (later) analysed using critical realist concepts (ibid, p.77). A form of coding was used to paraphrase and condense this material so that key themes could be identified. This was referred to as the emergence of themes in the research though it was a form of what qualitative researchers might call ‘coding for themes’ or thematisation. Overall topics were identified, for example, in the interviews and in the curriculum planning processes. The topics were viewed as grounded in the perceptual and experience framework of the respondents as they had dialogues with the researcher. The topics were shaped and encouraged by the ‘structured’ approach derived from the analytical frameworks focussed initially on leadership and then on critical thinking skills as defined in the thesis. This helped define the material that was relevant to the research questions and this material was located in the 6 methods and activities listed in column 2 of Table 5 (p.77 above) which maps the approaches to data taken in the thesis.

Themes and coding

Descriptive coding at the start of the process enabled topics and themes to be identified and ‘coded’ using the range of sources indicated at Table 5, though the research diary was crucial in allowing the data to be brought together in summary form. This method allowed me to summarise the content of the various types of evidence and to find paraphrases which could help with the need to generalise and then to analyse the material. I used sources and ideas from outside any particular text to explain and explore a given theme just as I used theoretical sources to highlight issues that arose throughout the project.

The development of themes did not include the use of quantitative content analysis because I thought that this would carry the danger of reducing the meaning(s) of the material and data to a question of frequencies and sequences. The data was of vital importance but I wanted to try to go beyond the data in the sense that I was looking for insight and analysis that conveyed complicated meanings for a specific type of culture, i.e. Palestinian experience within an Israeli school system which is itself surrounded with cultural and social issues.

The recording of participants' ‘voices’ and feelings was in their own language and idiom. This might be termed a form of ‘in vivo’ coding and it was important to note that the

research diary was done in Arabic the language of the respondents and participants so that an ‘insider’ approach was necessary. The diary also used what are effectively ‘analytical memos’ (Saldana, 2013:49) and these are self-made notes to the writer/researcher about the status and validity of remarks and evidence such as statements which have to be re-read and checked against the categories or codes and amended as necessary. The research diary was in use for an extended period though it had intensive phases as the thesis took form and shape. The procedures for condensing interview material and for abstracting themes from the range of data sources had to have a measure of flexibility to reflect the nature of the research questions and the topic itself. The diary helped draw together not only first thoughts but field notes, notes from texts, notes from transcribed interviews, analysed data from documentary sources and very importantly from an action learning and research point of view, the questions which arose throughout the project. The diary enabled the categories of data and the themes they generated to be tested against the concepts used in the frameworks for leadership and critical thinking. As a key to moving from the descriptive stage to the analytical stage the research diary was crucial to the whole project and in particular for the summarisation process of the research phase which is reported in the thesis.

Reflexivity

An important aspect of the research diary concerned the use of ideas about the ‘self’ as an appropriate object of study and research. This is a part of the intended outcomes of the doctoral programme. The research diary was used to capture ‘reflexivity’ and in particular to examine aspects of my practice within the kindergarten. A key starting point was to try to position myself as an enabling practitioner who would try to find and use the enabling aspects of my environment, which included cultural features such as deference to authority figures. I wanted to question this and to use what has been called the ‘potentiating environment’ (Hey and Oates, 2014: 80). I wanted to use the community’s engagement and values for educational development for their children to produce an inclusive environment which had the child at the centre of concern. I knew we needed to use the positive aspects of a close and secure (if also restrictive in some senses) community environment which offered security but also to challenge and change learning practices and thereby release potential.

As a kindergarten teacher, kindergarten principal and researcher, I was, like any other person, at the beginning of a new journey in life. At first I was afraid of how I would succeed on the journey. At times, I felt I was sinking and could not stand up, sometimes I felt I was on the go all the time since the campaign process was close to my heart and sometimes I had to muster all my strength to cope with the journey. During the journey, I got to know people who led me to a ‘magical world’ and imparted to me great knowledge and insights which they had accumulated during their academic work. It is from them I

received knowledge as well as the direction of the path in how to educate and instruct. I learned that if I want to lead changes I must understand that I must invest time outside of work hours. In order to have the greatest chance of success, I had to first learn to recognize the importance of staff and the people who are part of the system which I wanted to change. There were those who taught me that learning does not end at the gates of the kindergarten but extends beyond learning hours. I learned by meeting people face to face and then through 21st century technological means, such as email, internet forums and beyond. The road was wonderful, as on the way I learned to recognize the development of a range of abilities including the cognitive, social and emotional attributes of children in my case. This was expressed through the collaborative learning experience that took place in the kindergarten, whether through skills of providing and receiving training, whether in the use of media, whether it was addressing problems, whether with the development of habits of group work, whether through social interactions, or whether through work habits and interpersonal communication.

I learned the importance of family and its role in the development of children, and that the more the family invests in the child the more the child develops and grows. I learned that my duties and abilities as a kindergarten teacher have an effect on the children. I amassed great knowledge, bit by bit, about critical thinking through the curriculum. I was especially pleased to see how a child with special needs and limited capabilities can utilize critical thinking intelligently to construct knowledge and empower his own personality. I was happy to see how I was able to interest the children in learning, exploration, analysis, development and creation.

As a kindergarten teacher I acquired methods and ways, tools and skills in the development of the child as a critical thinker. I gained a practical, theoretical and educational outlook for the kindergarten, and thus I was perceived as the central, professional, authoritative and single figure in the eyes of the parents and staff in it. I think I became who I now am, the principal, who knew how to lead the kindergarten to success. Practical, theoretical and educational knowledge gave me the strength and confidence to change my workplace and practice. I had learned how to build secure communications with parents, staff and children, from a clear, confident and shared democratic standpoint, all the while also recognising the limits of my culture and traditions. As a principal and kindergarten teacher I knew that the cornerstone of good educational service is knowledge and the desire to learn. Hence, I hoped to be the first designer of a future kindergarten, the one in which I work, which obliges me to be committed to work, to see myself as a source of change and see the kindergarten as a place where everyone involved can get support and support others.

Most importantly, I learned that the challenge in the kindergarten was to examine the

possible ways to build the cooperative capabilities of the parents of the children, and explore how parents can take part in the development of the model for dealing with learning goals, always having the objective in mind that: “Every child is a critical thinker”. At a mid point in my project I noted that:

“This is the time of great change as I must work with parents to support the development of the model in the kindergarten. Together we have the ability to influence, and we must utilize this ability to adjust the kindergarten for constructing the model that provides for the children’s education and learning that is suitable to their needs and not a kindergarten to which they must adapt themselves. (My research diary, 22/01/2012).”

This approach was strongly linked to the idea of action research. My research diary was then a research tool which offered me a voice as a researcher as well as a practitioner. The diary enabled my personal writing to be at or near the centre of the research and therefore for the social and cultural context which impacted on my own experience to be a significant part of my analysis (see Mukherji and Albon, 2015:198). This approach means that the diary is both a method and a resulting text in its own right. The text was therefore a form of journal which tried to capture on-going processes of reflection and learning and ‘created’ new aspects of data. It was both a tool for on-going work and a product which highlighted the possibilities of the data and insights and experiences it had captured. For those who see writing itself as central to action learning and research (for example Brown and Jones, 2001) the diary represents an evolving understanding throughout a project or process rather than a fixed point where there is an agreed understanding of an issue. This was the case for my use of the diary where I hoped to create and construct a reality of critical thinking in the kindergarten. At the beginning, there was no critical thinking to reflect on and so the diary helped me to build this. The interviews, data capture and documentation I used could not capture all I wanted to explore. The diary helped me to conceptualise and organise and to use emotional data, memory data and aspirational data to deepen and extend my project. This is what I meant when I recorded in my diary that I wanted to go beyond the data and I recognised that for myself as well as for the children that forming relationships and being inquisitive go together.

Visualisation

Since the research diary was one of the most significant methods and practices of the project it is worth noting, I believe, that the research topic and its range of content matters was not easily reduced to the confines of a single approach or method or of a single document. The diary itself was an intermediate method for the generation of an organising system for a range of themes and issues, some of which were dealing with concrete matters

of data and evidence and some of which were dealing with concepts and theoretical approaches to issues and themes. The list of tables at page 6 of the thesis indicates the scope and reach of the 'visualised' aspects of the thesis and these helped me to express the elements of arguments and themes in the research which were often complex and sometimes contradictory. The diary was of course annotated in my own style in Arabic and this helped greatly in the task of labelling and drawing together themes. The diary of course allowed me to also use free writing and where desirable to use creative means to bring together different material. The diary allowed me to create a coherent account of my work which had much variety in it and to do this over a long period of time.

Using the diary as an organising tool

The diary helped me organise the process and content of the work-related project which was the foundation of the research phase and the writing up of the thesis. In summary, there were several stages which overlapped in this process and these have been compressed in the diagram on timing and phasing which appears in the thesis at page 19. In summary outline the following stages were constructed (and I believe such a process can be traced from Paulo Freire's approach to the generation of learning programmes designed to help learners change their own lives).

Stages:

Secondary sources for investigating ideas – libraries, government departments, literature, university staff/supervisors, Freire-Pedagogy of the Oppressed, 1972 as a guiding source, action research and action learning explored with colleagues

Primary sources for investigation – professional context, the kindergarten itself, community organisation and people, children themselves and parents, finding and using experts, problem and issue definition, finding the proper research questions through constructive dialogue

Finding co-workers and co-researchers – meetings with staff and community representatives, discussions with parents and families, training of co-workers and professionals, research proposals and justifications for the University, ethical issues formulated and addressed, empowering where possible those who were involved

Building codifications and thematic ideas – selecting and clarifying issues and themes to be explored, curriculum and pedagogic lines of investigation and development outlined, sequences of activity negotiated and agreed

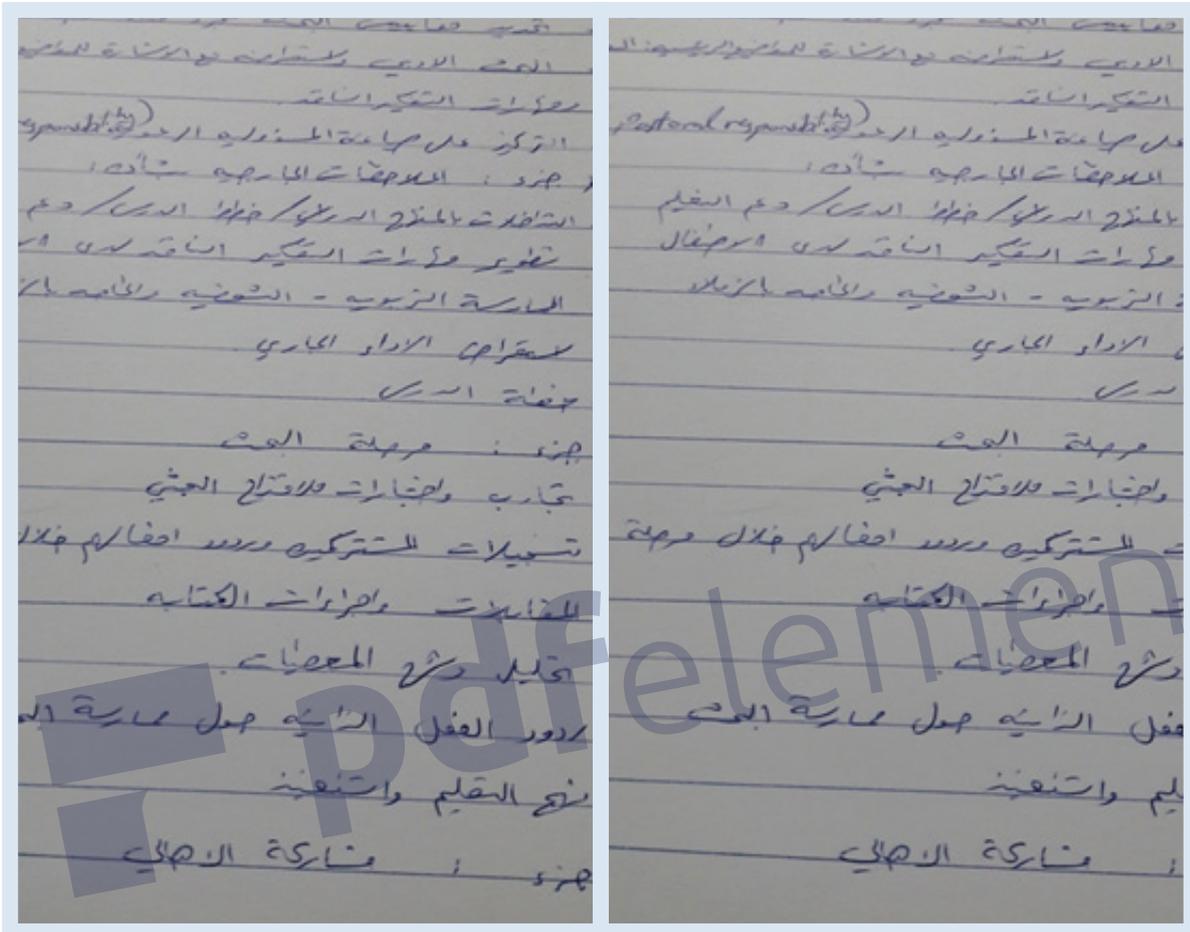
Decoding and synthesising – discussions in appropriate groups, themes identified and clarified, 'questions as the curriculum' explored, consideration of data and evidence collection

Building a curriculum and learning programmes – constructing a thematic programme for critical thinking skills with children themselves, managing dialogue with children and parents, engaging the community as participants

Action and outcomes – assessment of learning outcomes and achievements,

community involvement in celebration of achievements, discussion of future plans and activities, personal outcomes identified, thesis writing and presentation(s), discussions of future action and investigations.

Figure 1 : Research Diary-illustration



Appendix 2 : Interviews

Preparation for the interview

I conducted interviews to understand the background and basis for the purposes of the study, and to gather information to help develop future research tools. Respondents were asked to express their thoughts about the child, his behaviour, his practice of solving social problems, the type of questions he asks, what he has acquired during the period of his stay in kindergarten, the influence of the child on the family home, whether the child has led a change in the behaviour and attitude of his parents towards him, and the motives that drive the child to independent study. In this interview parents were asked to express their personal opinions about what has happened in the kindergarten because of the introduction and the development of the model and to describe their impression of the influence of the model on their children and on themselves in the home and in the community. In the interviews most of the questions were open-ended, and the answers were written in full.

I prepared questions in advance, but during the interviews, the conversation broadened to other places and veered away from the questions I intended to ask. I noticed flexibility with reference to the respondents' answers. Interview appointments with the parents were made in advance in the kindergarten.

The interviews were conducted in a pleasant and friendly atmosphere, and created a sense of trust, full cooperation and openness and frankness. The documentation of the interviews was done by simultaneous transcription. I chose the open interview study because it fits the scheme.

Open questions in interviews were analyzed using content analysis. The statements were coded and analyzed through the qualitative method. In one case (Question 1, "changes in the achievements of the child at the end of the year" - an open question) requires a more complex analysis.

Types of processing

It was decided that the analysis of the responses to this question (1) would be done in a different method than that of other open questions. The reason is because this question was essentially different from other questions in the interview. In other questions, (even open ones), the respondent is targeted to a specific issue (such as behaviour while playing, his desire to read or participate in another subject), and the answers received also specify a single specific issue. This question, in essence, is more comprehensive and its very nature "invited" the parents to explain the basic assumptions and internal processes which are the basis for their relationship with their children. In order to analyze the answers, I have implemented steps that represent the qualitative method.

The unit of analysis was the written answer (including some statements). In the first phase the answers were read sequentially in an attempt to find similar components. We identified ideas related to educational approaches used in kindergartens version of what Mayring (1983 and 2000) and Mayring and Glaser-Ziduka (2003). All this was in order to fully understand the thought processes of the parents, their faith in the model of a critical thinker (in which they had been trained) and their expectations of their work with the children at home and later on in the kindergarten. The parents were therefore asked to model the teacher wherever she goes and with everything she does with the children in the kindergarten. In short, the parents would complement the work of the kindergarten teacher at home, despite the fact that in the beginning it was difficult for parents to get this theme and develop it with the children, because most parents and people think that this is only a little boy and what can we do with him!! They simply fulfill the child's desires and keep him quiet, peaceful and disciplined and do not interfere or ask. In short, the child gets everything without clarification or explanation. Therefore, I decided to create a continuing education program for parents so that I can help develop the thoughts of parents and convince them about what we are going to do to develop their children in kindergarten and beyond. I also asked them to sit with their child 12 minutes every day and talk, discuss and develop a theme specific to him and his inclination. Eventually we will reach a point where the child presents his subject to all the children and parents which will lead to an increase in his self-confidence and encouragement to meet and talk in public, which will reduce the fear of the crowd, for we are mostly in an Arab rural society that notices if we are small children or if we are adults.

The findings of this stage were exposed to the logical structure of critical leadership which accompanied the answers, a structure that exists or is implied in every answer, even if not openly (later we will discuss the identified structure). In the second stage the answers were summarized to the inclusion of the concept or the general concepts, and examples were presented for explanation or for the details of the interview.

For example, the following answer:

“I think that the achievements of the child at the end of the year told me a lot about the learning, and the atmosphere afforded the child. First of all, before any learning, whether it is for leadership or for critical thinking I was able to conclude that I must first give the child a fun and comfortable atmosphere. They like the kindergarten and I felt that after you, as a kindergarten teacher, gave him a pleasant platform, only then did his learning begin to flow. It all began in an atmosphere of fun, serenity without pressure.” Summarized as follows:

Create a pleasant and comfortable atmosphere as a precondition for learning and critical thinking and leadership. Emphasis must be placed on the recognition of the unique needs of the child.

Or the answer: “The achievements of the child at the end of the year led me to believe in giving equal opportunities and options to each child according to his ability and understanding and to the encouraging and strengthening of the “strong” areas of the child, and developing the weak areas individually in each child. Individual attention, a lot of warmth, love and personal example, increase in every child the natural curiosity and desire to learn, to lead and think critically, and propel him into a good and confident person who will be beneficial to himself and all those around him.”

Summarized as follows:

To provide equal opportunities and possibilities for each child. Encouragement for suitable development, while providing warmth and a personal example. Encourage curiosity and the desire to learn, to think critically, which will lead towards promoting the child as a confident and beneficial person to all those around him.

In the third phase those themes that repeated themselves with great frequency were examined with respect to the perception of the “change” of the child at the end of the year. These themes were organized in the analysis chapter.

Semi-structured interviews with parents

2.1 Interview number 1 Parent of Child X

Question number 1: What can you tell me about the changes in the achievements of the child at the end of the year?

Answer: Listen my dear, as a mother, I cannot believe that this is the same child who entered kindergarten early this year. The truth is that he changed in some ways from the moment he entered kindergarten until he left at the end of the year. I will start with the changes in his behaviour which are completely different. He has become a child who is courteous, polite, obedient, listens, asks, checks, clarifies, assumes, concludes, estimates, weighs, claims, reasons, considers others, respect others, feels with everybody and is concerned that everybody around him should be happy, expresses his opinion without fear. When he wants to say something he asks everyone to listen to him and he knows how to ask. It seems to me that I live in a house with a young man in the form of a small child. In terms of achievements, I always relate to my colleagues at work, and the team I work with, how pleased and surprised I am by the knowledge he has acquired and the questions that he asks. The questions he asks are of a high level of interest and concern about the subject he is asking about, for example, when the children learned about winter, the subject aroused in him love, caring and concern about the environment. After a while, when he returned home, he called out to me as he sat by the window watching the rain come down and asked me: “If there were no rain and no heaven, how would we live.” Believe me, when I think about him and the level of his questions, I mainly attribute

it to the design and the environmental organization in your kindergarten, which affects the knowledge, the depiction and behaviour. In addition, with him, you automatically feel his sensitivity, that he developed a sense of competence, a degree of independence and self-esteem. Not only this, but he is characterized as having great determination in achieving the goals he sets for himself or that we place before him. For example, when his aunt brought him a gift, a pedagogic game (puzzle of 32 pieces), he did not leave it until he finished putting it together. You did not see how he dealt with the game, how he tried, how he assembled it, how he concentrated, how he talked to himself and how he thought, it was truly amazing. It is not only I who says these things, but all of us in the neighbourhood and those associated with him point out the differences between him and his peers. Due to my son's advances, many neighbours contacted the council and asked to have their children enrolled in your kindergarten.

Question number 2: Why do you think that he has changed to become different from children in other kindergartens?

Answer: The truth is that with you everything is different, and again I say this not as flattery but as the truth. First, let us begin to appreciate the kindergarten from the outside.

It seems that the existing physical atmosphere in your kindergarten is not as in other kindergartens, at least not in our village. It encouraged my son to be alert, sensitive to care for the environmental, confident and a person with self-esteem. And it is different when I go inside. If we look at the organizational educational environment, with you everything is in place and organized which makes it very convenient for the children to browse and move around. The most important thing is the fact that you yourself are in the kindergarten, you receive my son, myself and his father with a smile all the time. You constantly encourage him, praise him, you teach from all your heart and do not waste time and utilize the time for the benefit of my son and the other children in the kindergarten. You never mentioned a negative point about our children and would always say to us that he is excellent, he is good, but there is one small point that needs improvement. This so that as parents we can try to raise him from the point he finds himself now and promote him to a better place. I aspire to take him to places that you never dreamed he would ever reach. He has it; if you work simultaneously with him and me, I guarantee you he will be a star among his peers. And today I support every word you said at the time. In short, the style that you have cannot be found in any other kindergarten. You are different in all aspects; personality, appearance, security, character, order, encouragement, patience, attentiveness, respect that you give, the care you give to each child, you feel for them, listen to them, the value that you give them, the conversations that you conduct on the kindergarten level, both individually and collectively. The environmental design and your method of teaching is all an experience. Your activities and experiences are taught through

initiative and guidance, and your direction of learning and thinking processes, arouses curiosity in the children and helps them express the hidden capabilities in each and every child, taking into account the capabilities inherent in each and every one of them. If you ask me the truth, I can only say that in your personality as a kindergarten teacher you are like the people living in the UK and in the Western countries.

Question number 3: In what way are these changes reflected in the child's behaviour at home and outside the home?

Answer: If I start with the changes that began at home, there is something amazing that characterized him during his stay in the kindergarten. For example, before he entered into kindergarten, whenever someone came to visit us with their son, my son would run around in a wild manner and not share his toys. Today, he is totally changed. He speaks, calls him into his room and plays with him. If for example, he would see a child crying, he would disregard him, however, he would not do that today, he would immediately turn around and ask him: 'What is happening to you? Why are you crying?' He has respect with regard to himself as well as others. Sometimes when he sees that I am tired, he says to me, 'Mother let me help you, you get some rest.'

Question number 4: How is this child different from the other siblings with respect to his behaviour in playing, his relationship with you and his willingness to read or participate in other learning?

Answer: There is a very noticeable characteristic about him and that is his determination and consistency. He is not prepared to start putting together a game and not finish it. If he gets stuck in the middle, he will try many times until he reaches the point where he is happy and is able to continue. At times he will consult with his big brother, me or his father but that is hardly ever. Most of the time, he trusts only himself. With reference to his relationship with us at home, he is generally very calm, modest, loves others, accepts them and engages in conversation and dialogue with everyone. He has a strong desire that we all be happy with him. He really cares about it, because often he turns around and asks me, for example, 'Mother, do you love me? Mother, are you pleased with me? Mother are you proud of me?'

With reference to reading stories and participating in learning, he cannot sleep without me reading to him a story. If not myself, then his father, and if not his father than his older brother. I always looking for alternatives to satisfy him. I must also mention that when his brother sits down to read to him and help him with his homework, he sits down next to him and begins to look what his brother is doing and asks about his work. Sometimes he goes off and gets me a notebook with a pen and asks me to prepare for him a mathematics problem so that he can solve it because he wants to read like his brother.

Question number 5: What did you experience when your son was in kindergarten? How does it affect you? How has it affected your behaviour towards him?

Answer: In truth, I have experienced an interesting experience that initially I would ask myself and in talking to my husband, “What is this chatter that this kindergarten teacher is saying, what is a child that leads. What is a child that thinks critically? But today, you have led me to believe in him and his abilities even though he is a little child”.

Today I am very pleased and proud to have a genius, I constantly talk about him to others and call him to come and tell people certain things. In short I am proud that he gives me the feeling that I have a special asset today. I feel that I have a great man in the house who is responsible for his actions and his words. If I want to tell you how it has affected my behaviour at home, I must tell you that I used to be a nervous person. Every small thing made me nervous regardless how small it was. I wanted everybody in the house to do what I wanted- after all I took care of everything. Today I am different from what I was. I am more open to my needs and theirs, I listen to them more, invest more time in them, sitting with them and raising a subject and discussing it. I became a much more passionate mother because of the sensitivity he has. I rely on my son and am not worried constantly about him, giving him responsibility and empowering him. The truth is it was not me. Today everything has changed, especially in the atmosphere of the home. It is not only him that it has affected, but also the rest of the family at home.

Question number 6: Does the child asks questions and offer answers in the family environment and beyond? Give an example? Is there another example?

Answer: The truth is it is very noticeable with him. He is constantly asking questions and has no rest or breaks from questions. Often, when sitting and playing with his puzzles, for example, when holding a doll, he begins to question it and simultaneously answers the question. For example, “Do you want me to read you a story? Have you ever heard the story of the three butterflies? I will tell it to you, so listen. Look at the cover, what do you see? Oh the beautiful paintings, what else? Well done. Now the author. Do you know what the name of the author to the story? Kwaniss, Alufah, you have an excellent memory”.

There is also another example. Once in the evening I was very tired, so I had a nap and fell asleep. When I woke up I heard someone talking in the playroom, I got up and walked slowly and listened to the voices. I thought there was someone else with my son and was surprised to find that he was alone holding a conversation while playing a pedagogical game, and playing with his voice and using different tones of voice. You know what it is, he was imitating your voice and actions and how you speak and encourage him. He uses words of encouragement, claps his hands and rewards. I am sure that if I told you how he was sitting in the same fashion as you do and how he would use the level of questions that

you use, you would not believe. In short, he is an amazing child and we are all amazed by him.

Question number 7: In what way does your child try to solve social problems with his friends or his relatives? Has there been any change? Give an example.

Answer: When he encounters a problem with his brother he used to shout, cry and turn to me, asking me to step in and beg that the outcome of my intervention should be to his benefit; if not, he started to cry. Sometimes he would smack him. Today he does not let himself get into such a state that he will smack somebody. A few days ago we went for a walk and he saw the two children playing with each other and one of them hit the second when he took a part of his game. He turned to him and said: "You do not know how much that hurts, you shouldn't hit someone else, you have no mercy. Clam your feelings and ask politely. I am sure that he will answer your requests and you will get along together."

His whole attitude has changed for the better and he became polite and courteous. He conducts dialogue, knows how to explain situations, ask questions and use nice words.

Question number 8: Does he understand and relate to your feelings?

Answer: If I tell you how sensitive and caring he is, you would not believe me. Imagine that sometimes he will come and look at my face and asked me: "Mother, what is the colour around your eyes, do you not feel well." What do you tell such a child? Several times a day he comes and hugs me and says, "Mother, I love you, do you love me?"

Question number 9: Does he understand and relate to the feelings of others? Give an example.

Question number 10: Do you think that if a person is sensitive, he will only be sensitive towards himself? What do you think?

Answer: I see in him a child that is sensitive to everybody, whether towards himself, his mother, brothers and all those around him.

Question number 11: Can you give me an example of a specific incident when your son displayed his understanding of sensitivity to others.

Answer: Once we were sitting in the TV room, and that moment he wanted to sit down at the computer and play "cowboy." He went into the computer room and found his brother downloading information about his studies. He asked him: "How much more time do you need?" His brother replied: "I just started; I still need a lot of time." He then asked: "Is this work for tomorrow?" to which his brother responded: "Yes." So he said, "Okay, take

your time, but when you finish please call me.”

Question number 12: What were the tools that the child acquired in the kindergarten to develop his self-learning?

Answer: First of all, asking questions and solving problems. They gave him a tip: if he asks, he is looking for an answer. Searching for a correct answer requires him to search for sources such as people, internet and the encyclopaedia. In addition, he is a decisive and determined child who wants to achieve his goals. Determination does not come from a vacuum; he learned it from you and always shows this- everyone says this about you too. This increases the degree of motivation that you have, and he learned it from you through imitation. Before I end, I must mention that he learned some exclusive things from you, such as how to be an attentive and focused child. This was not noticeable before he entered your kindergarten, and in addition the issue of responsibility over his speech and actions, issue of discussion and development of a dialogue which you made him accustomed to.

Question number 13: What do you think motivates the child to self-learning?

Answer: In my opinion, encouragement is the basis of everything. The children receive praise and privileges for good achievements because it encourages them to have a positive attitude towards the task. If the child feels calm and serene, he begins to develop and advance to become a child with personal responsibility for his words and actions, and break open a way for self-study. I will not forget that I learned this from you. The tendency of talking to oneself can help children when they are learning: for example, when my son speaks loudly to himself with no intention of communicating with another person, it was obvious to him that he should do this when he was trying to solve a problem or perform a complex task, especially without adult supervision.

2.2 Interview number 2 Parent of Child XX

Question number 1: What can you tell me about the changes in the achievements of the child at the end of the year?

Answer: Listen, if I want to look back to the beginning of the year, my son acquired many of things, whether it was the acquisition of vocabulary words, writing, early maths and social skills. He asks more questions and is curious about everything, small or large, and does not stop until he receives an answer from me. He is more confident in himself, expresses feelings and cares very much about the feelings of others. For example, if he feels I am upset, he will ask and be interested in the reason why, because it is very important to him to see me happy. He is open to everything, even with food- he wants something new every day. He loves games of all kinds. If I talk about the emotional

development of a child, he is very well developed.

Question number 2: In what way are these changes reflected in the child's behaviour at home and outside the home?

Answer: He is concerned about how long it takes to buy new games. When we are outside the house in a park or likewise, he builds relationships with strange children, plays with them and is concerned as to whether they like him. He asks about anything new to him.

Question number 3: Are you happy that that he builds relationships with strange children?

In your opinion, is it a good thing?

Answer: Listen, we live in a country that is multicultural and diverse. Therefore, I would be very happy that my son is flexible and knows how to create connections outside the circle of the rural society in which we live. Besides, it gives me a good feeling about him and about his future. Just being an open and loved person will help him in life.

Question number 4: Could you elaborate a little bit and remind me how this will help him?

Answer: In my opinion, being accepted by everyone will allow him to progress rapidly in all areas of interest in his future career. Keep in mind, that the process of building a relationship with people will be easy for him and allow him much more success than other people.

Question number 5: How is this child different from the other siblings with respect to his behaviour in playing, his relationship with you and his willingness to read or participate in other learning?

Answer: Games: I feel he is more creative and diverse in the way he plays and likes different variety of colours. He asks about every detail, small or large.

His relationship with you: He is much warmer, closer and listens, it is important to him that both of us are happy and content. He pays attention to small details and if we are upset he is interested in knowing why. He responds to encouragement and strengthening. If he is punished, he wants to know why, and how.

He wishes to read or participate in other learning: As I mentioned earlier in order for him to be satisfied we must diversify, to allow for a variety of options as a way of learning, i.e. reading from a book or watching a movie or playing on the web.

Question number 6: What did you experience when your son was in kindergarten? How does it affect you? How has it affected your behaviour towards him?

Answer: My feeling was of fascination throughout the year of my work and my lifestyle even began to diversify. I made sure my sons were more independent. I took pains to answer their questions on every subject. I made every effort to find and buy more diverse games. This year was a serious makeover. In addition, I learned how aesthetics create a warm and comfortable climate and allows for personal expressions. All this is a way of providing meaningful activities for children in designing the environment.

Question number 7: Does the child ask questions and offer answers in the family environment and beyond it? Give an example?

Answer: He asks about everyone even those outside the family circle, for example, there is a boy in the family whose parents do not live together and are divorced. He constantly asks me how this boy feels and why is his father not with them. He suggests that his father and I help the parents to reunite and live together again, tells me what the boy does and shows concern for him.

Question number 8: In what way does your child try to solve social problems with his friends or his relatives? Has there been any change? Give an example.

Answer: At first he was being helped by me or his father. If anyone bothered him he would report to us. Lately, he handles this alone and is responsible for his actions. He utilizes dialogue with others, for example, if someone bothers him, he tells them explicitly that it is not appropriate and he does not want to play with them anymore, which forces the other to adapt to his standards.

Question number 9: Does he understand and relate to your feelings? Give an example.

Yes, to everyone's feelings but especially to me and his father, to such an extent that he notices when things are normal and when there is irritation. Many times he asks me "Mother, are you OK, who is bothering you, did I do anything wrong or did something happen at work or is father

He asks until I give him an answer. He may ask "are you sick?" and will not stop until he receives an answer. This child is really something, may God watch over him.

Question number 10: Does he understand and relate to the feelings of others? Give an example.

Yes plenty, for example, he has a brother defined as having a problem with attention and concentration and he is constantly interested in him. He comes to ask me "is it not true that TT is making problems? I am OK, I wait when he bothers you and I do not come and ask you anything." He also asks, "Is it not true that TT cries and I do not come and tell

you what I want when he is crying?”

Question number 11: What are the tools and skills the child acquired in the kindergarten to develop self-learning on his own?

Answer: The ability to ask questions, care and development of sensitivity to others' feelings, paying attention, ability to manage a conversation and dialogue, noticing little things, the ability to play with a variety of games, providing the opportunity to create something.

Question number 12: What do you think motivates the child to self-learning?

Answer: In my opinion, there are many factors. First of all, there is the model. You are a kindergarten teacher in the kindergarten and that is most of the time, your problem today is that you face the model. You do not teach him to learn things by heart and imitate but rather let him explore, ask him many questions, you lay out a variety of games, you allow a wide range creative material from which he chooses, he tests and decides what to deal with in order to create a special creation and so he learns everything accordingly. I say that environmental organization and design in the kindergarten also did its job in a number of things like making decisions, empathy to others and understanding, recognizing the need to help others, developing patience and imitating his model, which is you. In addition and with my involvement in activities of the kindergarten, I see, the child is a partner in activities and learning, so that you ask what he prefers, what he wants, how does he want things to look like. He gives of himself and this challenges him and makes him more independent and responsible for his actions.

2.3 Interview number 3 Parent of Child XXX

Question number:1: What can you tell me about the changes in the achievements of the child at the end of the year?

Answer: My son became an independent and serious student, who asks a lot of questions. He is intrigued about anything new, he therefore initiates many things consistently and with perseverance. He is determined to achieve his goal. He has the ability to say what he wants to say to others without fear or shame, and always says “I am responsible for what I say”. For example, a few days ago we were at my parents and we sat around the table and began to eat. Suddenly my son's voice was heard addressing his grandfather and said, “Grandpa why are you making noises when you eat and open your mouth, in kindergarten we eat this way, and not your way”. He has become more sensitive to what is happening around him.

Question number 2: Why do you think that he has changed to become different from

children in other kindergartens?

Answer: He has almost stopped fighting with his older brother and has started to become calmer. He solves problems through conversation and he is always focused on his conversational abilities, with a strong will to tell, explain and express his opinion. He has become self- confident, responsible and independent. He has a great effect on other children, both his own age and older. He has begun to paint meaningful paintings and has become interested in every subject and explored it. This shows the degree of curiosity that is aroused in him inside and outside of the kindergarten. He is an amazing child and I am very proud of him today.

Question number 3: In what way are these changes reflected in the child's behaviour at home and outside the home?

Answer: The way he communicates with us (father and mother). His relationship is very different from his older brother. He loves to kiss and hug us and is very concerned that we are happy with him. This it is also expressed in his relationship with his grandparents.

He is very concerned with their comfort and that they feel good. He always listens to them- when we go to visit them he immediately seats himself in his grandfather's lap and starts asking about his welfare and asks him to tell his short stories. He is very engaged with all of us.

Question number 4: How is this child different from the other siblings with respect to his behaviour in playing, his relationship with you and his willingness to read or participate in other learning?

Answer: He is very serious about achieving his goal and is very interested in getting the result that will make him and us happy. He is determined and invests a lot of time in solving the problems he encounters. He really wants you to be pleased with him and to give us positive reports about him.

Question number 5: What did you experience when your son was in kindergarten? How does it affect you? How has it affected your behaviour towards him?

Answer: I had many experiences but the most interesting experience was the project which we did at home, the building of a house from polystyrene (this is the house of the main character in the story 'A Rose and the Spring of Water' and it is the one he chose to sculpt). I worked with him for almost a week to produce the house and spent a lot of time with him. I saw that you placed a significant cognitive challenge for my son, and in this experience my son was required to use critical thinking. During the entire time of the

project he would ask questions, pose a problem, discuss the problem and seek solutions. Truthfully, he is very satisfied with the tasks you give him and it matters to him that he achieves excellent results. The tasks have strengthened him more and more, along with the relationship between us and made him a child who is more attentive and focused. It also led him to be a leader when reading the story by heart to all parents and their children without having missed a detail of the story. He has worked very hard and strengthened his language - every day he would ask me to read a story and when I finished he would go to his father and would then ask him. It must be emphasized that he imitates you and your personality. He identifies very much with the story, and the image of the rose.

Question number 6: Does the child ask questions and offer answers in the family environment and beyond it? Give an example.

Answer: What interests and intrigues him is the secret of the world. He always asks his father, "Is God the most powerful in the world? I think he is the greatest and most powerful and best of all. Isn't that true, father!"

Question number 7: In what way does your child try to solve social problems with his friends or his relatives? Has there been any change? Give an example.

Answer: At first he cried when he encountered a problem. But during the year he changed into a more flexible child and started conducting dialogues with his brother and his friends to solve problems. He always uses nice language, and here I must state that he has improved his language skills.

Question number 8: Does he understand and relate to your feelings? Give an example.

Answer: Yes. When I get angry at him for any reason, he notices my anger and approaches me and kisses me so that I will be pleased with him. He always does this when he wants to see me pleased about any matter or work that he does.

Question number 9: Does he understand and relate to the feelings of others? Give an example.

Answer: Yes. When he feels that one of his friends in the neighbourhood is angry, he suggests playing with his games and brings him home to play with him.

Question number 10: What are the tools and skills the child acquired in the kindergarten to develop self-learning on his own?

Answer: First he developed his memory whether it is short-term or long term. He also developed the language of dialogue and conducting of conversations.

2.4 Interview number 4 Parent of Child XXXX

Question number 1: What can you tell me about the changes in the achievements of the child at the end of the year?

Answer: Generally, he has made achievements in all areas. He has become an independent child, responsible for his actions. For example, when he wakes up in the morning he will not go down before he tidies his room. From a point of view of cognitively, there is nothing to say. For example, up to where can he count? Up to 98. He also reads many words and has developed his spoken language skills very well.

Question number 2: Why do you think that he has changed to become different from children in other kindergartens?

Answer: In your kindergarten the organization and design of the environment is different, which allows for the construction of knowledge through activity which is implemented in a range of new understandings and the existing practices. The attitude is different, the encouragement is different, it surrounds the child, and allows expression of opinion. The atmosphere promotes listening, it trains them to ask questions and search for solutions. It gives them courage, curiosity, leadership ability and conviction- you demonstrate this for the children.

Question number 3: In what way are these changes reflected in the child's behaviour at home and outside the home?

Answer: The programme has affected the child's behaviour outside the home as well as at home. He has acquired habits about how to treat others, how to respect and value them, how to conduct dialogue with them, and influence them. He learned how to relate to those around him and how to cultivate contacts with them. He is motivated to read stories and ask questions. I must say he always asks questions without shame or fear and is interested in many things.

Question number 4: How is this child different from the other siblings with respect to his behaviour in playing, his relationship with you and his willingness to read or participate in other learning?

Answer: The boy is different from his brothers in social games. He includes others, waits his turn in line, and his motivation for reading stories has risen. Every night he wants to hear a story in order to tell his teacher and become the king of the kindergarten the next day.

Games: He is excellent at playing games, determined to finish them.

His relationship with others: the relationship has improved and strengthened.

Wishes to read or participate in other learning: He is interested in exploring and every day, he wants to learn new things in kindergarten.

Question number 5: What did you experience when your son was in kindergarten? How did it affect you? How has it affected your behaviour towards him?

Answer: My son enjoyed socialising in the kindergarten. I experienced him being sociable, caring for others and accepting differences. It affected us at home. His brothers learned from him how to behave when they are angry. He would always tell them a story of Dansou and told his brothers how to act with others.

Question number 6: Does the child ask questions and offer answers in the family environment and beyond? Give an example.

Answer: Yes, and it stands out when he plays a game with the other children or with his brother. If he disturbs him or hits him then he would say: "You want to take the game away? Right! If you want to play, ask and say please let me play with you, because we do not hit, only ask nicely, and after asking we receive".

Question number 7: In what way does your child try to solve social problems with his friends or his relatives? Has there been any change? Give an example.

Answer: The way he operates today is very different from what it was. He used to hit, cry and scream and then turn to me or to his father and asks for our help. Today he solves his problems independently and is responsible for making decisions, conducts discussions, conducts debates, negotiates and seeks cooperation and calm.

Question number 8: Does he understand and relate to your feelings? Give an example.

Answer: This is a very noticeable characteristic of his. When he sees me, he immediately notices my facial expression and asks, "You seem to be happy today, why are you happy?" Or when he goes into the kitchen while I am working and cooking food, he immediately tells me, "Mother, you will get tired if you do it all alone. Let me join you and help you."

Question number 9: Does he understand and relate to the feelings of others? Give an example.

Answer: Yes, we have noticed this. As soon as he sees his brother crying, he asks him, "How can I help you to feel better?"

Question number 10: What are the tools and skills that the child acquired in the kindergarten to develop self-learning on his own?

Answer: Being attentive to others, relating to others and understanding emotions through body language. He asks questions and investigates any matter that attracts him. He accepts other children as they are in order to lead to the changes he wants to introduce.

Question number 11: What do you think motivates the child to self-learning?

Answer: He needs to develop social skills, concentration skills, listening skills and observation skills. He should be caring to others, understand them and acquire skills to investigate and ask questions.

2.5 Interview number 5 Parent of Child XXXXX

Question number 1: What can you tell me about the changes in the achievements of the child at the end of the year?

Answer: I think that the achievements of the child at the end of the year told me a lot about learning and the atmosphere my daughter experienced. Firstly, before any learning, whether it is for leadership or for critical thinking, the child must be given a comfortable and fun atmosphere. The kindergarten is a place which everybody likes and I felt that you as a teacher gave her a nice platform- only afterwards did she really begin learning from you. Everything started in an atmosphere of fun and the serenity and not of pressure, leading to changes in her level of personal responsibility, her emotional aspects and her social communication and dialogue.

Question number 2: Why do you think that she changed to become different from children in the other kindergartens?

Answer: With you everything is different. It is enough for us to see your smile in the morning, it says everything! Your patience, the degree of attention and listening that you give us and our children, your caring for all of us, the respect you give, the knowledge you have, the learning style that you imbue in her which is based on enthusiasm, experience, and indirect learning- all of these contributed to the changes in her. Your work is basically different and that is what gave me the push to involve myself and provide a comfortable place for learning at home. You taught her to be independent, to explore, not to be ashamed, to ask, to be humble and polite, respect others, to help others, to believe in herself and carve a way of learning according to her predilections, and to be responsible for her actions and words.

Question number 3: In what way are these changes reflected in the child's behaviour at home and outside the home?

Answer: My daughter has become the ideal daughter that any mother could ask for. She is responsible, independent, polite, well behaved, asks, enquires, makes judgments, evaluates them and selects for herself the most suitable response.

Question number 4: How is this child different from the other siblings with respect to her behaviour in playing, her relationship with you and her willingness to read or participate in other learning?

Answer: Her behaviour is characterized by the time that she invests in a game that she is playing, diligently trying to reach the goal of the game, and also in the way that she relates to the game. In terms of her relationship with us, I am very pleased with level of concern and care she gives us. I am satisfied by how she feels for me, her father and brothers. She is a girl that every family wishes to have as a daughter.

Her participation in her studies comes from questioning and interest. If there is something bothering her, she asks and begins to gather knowledge and information about the topic from a variety of sources. She begins to research the knowledge and compares it with what she sees and experiences. She enjoys reaching conclusions and results.

Question number 5: What did you experience when your daughter was in kindergarten? How did it affect you? How has it affected your behaviour towards her?

Answer: It is enough that I have learned how to relate to my daughter, to educate her, to teach her, to be a mediator rather than being responsible for all her actions. I have taught her how to achieve independence and imposed on her the responsibility for her actions and speech. Today I am very pleased with the behaviour of my daughter and myself, feeling happy with myself and with the results I receive from my daughter.

Question number 6: Does the child ask questions and offer answers in the family environment and beyond it? Give an example.

Answer: Asking questions is a prominent characteristic of her personality, she constantly asks questions, and allows no time for resting from asking. Everything stimulates her to ask about the topic. If somebody asks about something that interests her, you will not believe how she starts giving answers and to look for information and to ask more questions and to interact with him. For example, when you taught them about the silkworm, the subject really interested her. Once we were at my parents and there were two older men there, my father raised a question about the subject of the worm because he wanted my daughter

to lead the meeting with his friends in order to be proud of her. The way she began to talk about the subject, the way she started asking them all sorts of questions about the strawberry bush, which is the most favourite bush of the worm, and about the worm itself! She began comparing this worm to other types of worms, all from the knowledge she has acquired about them. The truth is I welcome her participation in the discussions.

Question number 7: In what way does your child try to solve social problems with her friends or relatives? Has there been any change? Give an example.

Answer: If someone asks her a question she responds with a question. She has patience, and a high level of attention and concentration, is relaxed, observes and thinks and only then does she respond. She always explains how she used to have difficulties but today is very developed. Take for instance this example: we were once at friends, where she met older people who discussed the problem of plant growth. She listened and watched them the entire time and concentrated trying to understand them. When she saw it was that the time came to be involved, she immediately joined the discussion and said, "In order for a plant to germinate properly you must give it soil rich with nutrients, water, light and air." Everyone was interested in questioning her further.

Question number 8: Does she understand and relate to your feelings? Give an example.

Answer: I cannot begin to tell you how satisfied I am with her emotions and attitude towards me.

Question number 9: Does she understand and relate to the feelings of others? Give an example.

Answer: The feelings of others are a very important matter to her. She always wants everybody to be satisfied and proud of her. For example, she always asks, "Are you happy with me; is what I am doing good? Does it bother you?"

Question number 10: What are the tools and skills the child acquired in the kindergarten to develop self learning on her own?

Answer: The degree of listening, independence, responsibility, her will to investigate and ask questions, to challenge and the internal motivation to lead.

Question number 11: What do you think motivates the child to self-learning?

Answer: The degree of intrinsic motivation that she has, the degree of readiness to initiate and lead, the matter of challenge and continued interest, the level of interest in the topic and if she likes the topic or not.

Question number 12: How do you see your daughter as a teenager?

Answer: I expect her to lead new projects and to initiate topics that promote issues in the society and environment in which we live. I see in her a special person who cares about people and the environment, and as a concerned person, with the ability to influence others and to lead to any goal that she thinks about.

Question number 13: What do you expect her to be at this level?

Answer: Listen, I really believe that everything that you give and develop in a child when they are small bears fruit when they get older. The base is childhood, just as the house, if you build a strong infrastructure it will be strong, so too, in my opinion, it is with a child. Another thing you should know, my child in this kindergarten strengthened her personality and her self-confidence. I never would have believed that she would come to such a state that she is in today. I must also tell you that I never expected my daughter to start a conversation with me and raise questions. The truth is I am so surprised by the change I see today with my daughter.

2.6 Interview number 6 Parent of Child XXXXXX

Question number 1: What can you tell me about the changes in the achievements of the child at the end of the year?

Answer: The achievements of the child at the end of the year led me believe in giving equal opportunities and chances to each child according to his ability and understanding, by encouraging, strengthening the “strong” areas of the child and developing the weak areas as much as possible, individually to each child. Personal attention and a lot of warmth, love and personal example will increase in each child the natural curiosity and the desire to learn and to think critically, and will promote him as a secure good person, for his benefit and the benefit of the environment. I am proud of him and happy that he is comfortable speaking in front of others. This I did not expect of him. Today he does not stop asking questions, compared to what used to be when I had to beg him to say a word to my friends.

Question number 2: In your opinion, what change has he undergone in order to reach this stage.

Answer: The change began with you in the kindergarten. He felt your love and therefore he constantly wants you to be pleased with him. This is what drives him to do everything without fear or hesitation. You encouraged and trained him, you looked at him as a special child and expected a lot from him, therefore, he did not want to disappoint you. My dear, everything was in your hands and you were the one who brought out his potential along

with me and his father.

Question number 3: In what way are these changes reflected in the child's behaviour at home and outside the home?

Answer: I told you that he was crying all the time and wanted me to do everything for him, and nevertheless he was not satisfied. That is all different today. He does everything so that I should be pleased with him, encourage him to really feel proud of him in front of others. Listen, for example, if he does not behave well at home I tell him, "If you do not listen to me, I will pick up the phone right now and call your teacher." He immediately approaches me and asks me not to do it. In my opinion, he does not want the picture that you have of him should become distorted. He loves you.

Question Number 4: How is this child different from his brothers with respect to his behaviour in playing, his relationship with you and his willingness to read or participate in other learning?

Answer: His behaviour is rather that of an adult than a four year old.. He communicates well with others and even with new people he has never met before. He has no difficulty with immediate communication with strangers; he flows. With respect to games he is very interested in pedagogical games, and spends time until he finishes. Any new game presents a challenge to him. With respect to reading, he does not agree to go to his room to sleep before I, or his father, have read a story to him. He very much likes to read stories and is very interested in them.

Question number 5: What did you experience when your son was in kindergarten? How does it affect you? How has it affected your behaviour towards him?

Answer: Shaping my son's personality was an excellent experience for me, how to reward him, how to encourage him, to promote him and how to continue your learning style at home with him. It was very interesting. It made me a more specialized mother and knowledgeable in matters of children's education.

Question number 6: Does the child ask questions and offer answers to the family environment and beyond it? Give an example.

Answer: From the point of view of asking questions he does not stop or give up. He constantly asks and asks. No matter where he is, whether at home or with friends or relatives, it does not matter to him, as long as he gets a satisfactory answer. Take for example, if someone comes to visit us at home along with him a boy his age, you will not

believe some of the questions he asks and enquires about. “What is your name? What is the meaning of your name? Who chose the name?” He really does a whole investigation.

Question number 7: In what way does your child try to solve social problems with his friends or his relatives? Has there been any change? Give an example.

Answer: The way to characterize him is through his dialogue. Take for example, when he once went to his friend to play, when suddenly a piece of the game broke in the hand of the other boy. He looked at the boy and said, “Had you held the game properly, you would not have broken it, but you were pushy and wanted to finish before me. Believe me, that is not how to play games. The main thing is to be relaxed, calm, to observe and concentrate so that game becomes more interesting. Do you understand me?”

Question number 8: Does he understand and relate to your feelings? Give an example.

Answer: He is very sensitive, capable of great emotional recognition and immediately detects if I am happy or sad.

Question number 9: Does he understand and relate to the feelings of others? Give an example.

Answer: I told you that his feelings are very developed. For example, we were once sitting with my brother-in-law who works as a consultant. He began telling about someone who is chronically ill and cannot work and has no income. His wife is a housewife and they have two sons. My son listened to the story and when it was finished he turned to his father and said, “Father, do you know that in a week there is a holiday so let us give them money to purchase holiday clothes and celebrate like everyone else. Please father, do not tell me no.”

Question number 10: What are the tools and skills the child acquired in the kindergarten to develop self learning on his own?

Answer: Sensitivity to others, understanding others and their needs, helping others, responsible for his actions, he consults, discusses, expresses opinions, conveys his thoughts and brings them to practice. He is attentive, concentrates, is interested and investigates, questions and responds and provides appropriate responses based on examination and investigation.

Question number 11: What do you think motivates the child to self-learning?

Answer: The encouragement and belief in his ability, his motivating inner drive, his burning flame to the desired direction and his love and appreciation. I have to be honest at

least to myself. My son, when he entered kindergarten was generally speaking terribly and knew absolutely nothing. Today, he is totally different; he talks, listens and is proactive. In the beginning he had none of these traits and I expected nothing from him because it was very difficult for him. When he began kindergarten, his speaking skills were not on par with his children of his age, whereas today I am very pleased with his progress and I am very proud of him, his kindergarten and kindergarten teacher, who is the basis of all that my son has gained.

Appendix 3 : Analysis of the lesson plans

I analysed the lesson plans which were implemented with preschool children in accordance with the conceptual framework derived from Bloom, De Bono, Piaget, Vjgotsky, Bruner and others (see Table 2 Synopsis 2).

Initially Bloom's (1956), taxonomy of critical thinking skills was operationalized for kindergarten students 3 to 5 years of age. There are six levels in Bloom's taxonomy requiring increasing levels of abstract thinking: knowledge, comprehension, application, analysis, synthesis and evaluation. In high school children and adults the acquisition of critical thinking skills was found to be transformative, to significantly improve scholastic achievement and to contribute to the school climate. The following schema was used to analyse the lesson plans used, for example, in about the story 'Ward and the Spring of Water':

Schema

Knowledge Students would be asked about the names of the story's heroes and events described in the story in their right order.

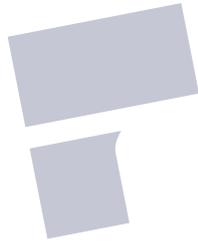
Comprehension Students are asked to describe and discuss the facts presented by the story. Enlarging on the text using the book's illustrations, by comparing different sites mentioned in the book such as the differences between the hero's house and the house of his grandparents, or that of his neighbours.

Application Students are asked to use what they have learned from the story and apply the newly gained knowledge to solve real problems they know about in their own household or problems they have heard about. They would illustrate and show the problems they have in mind and explain how their life would be improved if a solution would be found.

Analysis Students are asked to go beyond the facts presented by the story. They are asked to speculate about the motivation of the heroes, they are asked to investigate, infer and explain the actions of the story's characters.

Synthesis Students are asked to use existing facts from the stories the teacher reads to them and create (invent) a new story, change the ending or use their own name as they retell the story. Students are asked to draw the story, the houses the story's heroes live in, imagine details not mentioned in the story and more.

Evaluation Students are asked to select and judge the actions of the story's heroes. They are asked to debate decisions reached by the heroes and recommend alternatives. Those listening to the debate would have to evaluate the debaters on a set of agreed criteria. Lesson plans of this type have also developed tools for presenting an argument / subject and conducting of discussion. In addition they instilled a variety of social skills while developing an independently learning child who in the future will mature to become independent-minded and critical.

 pdfelement

Appendix 3.1 : Lesson plan 1

Date:

Subject:

Grade Level: Kindergarten 03 - 05

CT Skill: Developing Students' Critical Thinking Skills Through Asking Questions

Goals/ Objectives	

Body of Lesson: Opening Activities

Closing

How will the learning be assessed?
State specifically the evidence found in your assessment of student work that documents successful progress toward your goals and the standards.
Analysis and Reflection

Resources/Materials

Appendix 3.2 : Lesson plan 2

Date: Subject: Grade: Kindergarten 03 - 05

CT Skill: Developing Students' Critical Thinking Skills Through Small Group Dialogue

Time	Opening/Framing the Lesson/Introduction/Early Assessment	
	The Lesson Structure: Activities	

	Assessment	
	Homework	
Analysis and Reflection		
Resources/Materials		

Appendix 3.3 : Lesson plan 3

Date: Subject:

CT Skill: Developing Students' Critical Thinking Skill by Reflecting on Similarities Between Hero's Actions and Their Own.

Grade Level: Kindergarten 03 - 05

Goals: Students will ...

Analysis and Reflection

Appendix 3.4 : Lesson plan ('Ward and the spring of water)

This lesson plan will give preschoolers opportunities to communicate with a thought-provoking story, and develop critical comprehension and thinking skills that are theoretical knowledge- based from an article that discusses thinking strategies.

Acquisition of the reading ability and reading comprehension by the child is an ongoing process that lasts throughout his education process, a process that occurs in kindergarten, school, the formal education environment and the child's natural environment.

The kindergarten teacher, is required to continue the child's developmental process in an open and relaxed atmosphere, but at the same time take care that it remains within the framework of the kindergarten. In the educational atmosphere of the kindergarten, it would be allowed to ask anything, and why? because the kindergarten teacher believes that everything comes from someplace. Nothing comes from nothing. As the paper comes from the tree and glass comes from sand, so the answer comes from the question, and therefore, all the child needs to do is ask. In addition, it would be permitted to discuss anything with the presentation of a valid and non-biased arguments, which would address the way in which critical thinking develops, as a reflective and considered thought process that focuses on the deciding of what to believe and why to act?!

The method facing developers of the methods of reading instruction and the common approaches within the education system is to make the process of teaching how to learn full of pleasure and motivation, because “a person learns what his heart desires.” Therefore, the acquisition of reading in kindergartens occurs simultaneously in two channels: Listening to the kindergarten teacher reading, Guided reading by the kindergarten teacher, and we can realize this by creating, playing, drawing, writing, listening and reading.

Furthermore and why listening to the kindergarten teacher reading is important? For

several reasons. The kindergarten teacher wants to allow the children to have:

a pleasurable encounter with children's literature, exposure to the language of books, development of anticipation, reaction and reference to content.

The Language of Reading:

The kindergarten teacher reads the story verbatim, she does not simplify it and does not replace difficult words.

The Goals: Nurturing and enriching the language of preschool children, developing good conversation strategies that encourage language development, cultivating literacy the framework of the kindergarten, highlighting the connection between the spoken and the written language, identifying the meaning of a text, whose content is familiar and whose language is the same as that of the children, participating in the reading, and casual learning of the cues of the written language.

The principles of operating the story: With the help of the kindergarten teacher, every child can always succeed, what that child doesn't know yet, the kindergarten teacher completes. The kindergarten teacher will write down his ideas and thoughts because he can't do it himself yet.

The identity of the story ‘

The name of the story: ‘Ward and the spring of water’
The authors' names: Naif Farhat and Professor Michael Kreindler

The illustrators' name: Abd al-Salam Saba
Publisher: Dar Alhoda

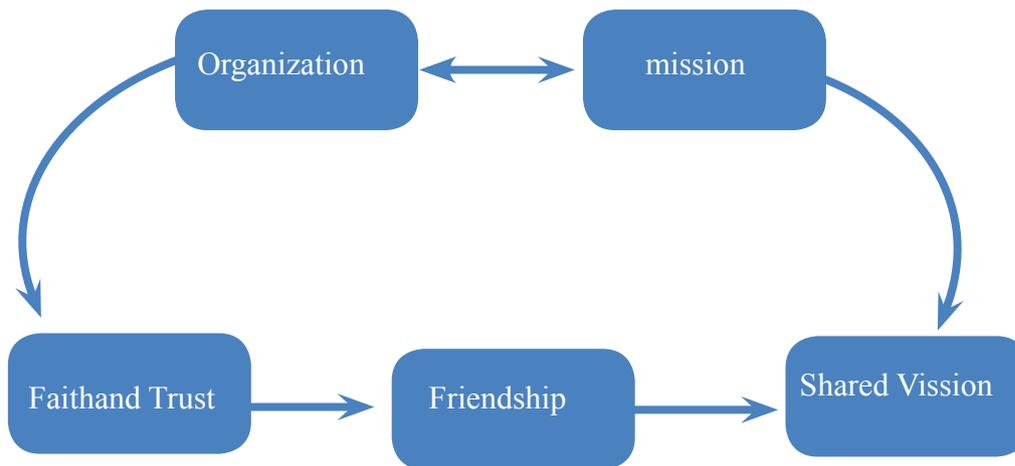
Editing: Ahmed Hamood

How to read: Reading will be divided into several sessions and each session will discuss a different matter, for example, the first meeting will be titled:

Familiarizing the children with the new story, a discussion of the terms of printing and enriching the vocabulary, concepts and sentences.

The kindergarten teacher shows the children the story, and asks what are the main parts? What number of main parts exist in the story? What information is available on the front cover? Listening to the answers, and continuing to ask what else? Displaying the image on the front cover.

At this point, the children are allowed to speculate as to the content of the story. According to the above chart:



The relationship between the illustration and the text, a dialogue between the verbal statement and the illustration.

The contribution of illustrations in children's literature: improved understanding of the text and a higher level of interest. The kindergarten teacher will emphasize the use of illustrations, because the illustration helps organize the thinking, organise the information, improve the understanding of who are the primary and secondary characters, and the understanding of the context of the narrative and the flow of the narrative. In addition, the illustration makes it easier for the child to reconstruct the story.

The questions asked about the front cover are:

What do we see on the cover? What's in the drawing? How does the nearest lady we see on the cover feel? What is she doing? Where does she want to go? Does she have children? How many children does she have? What are their names? How old are they? How does the child by the XXX feel? What is he doing? What do you want to tell him? Would you like to help him? Why? How old does he look? How does the other woman feel? What is she doing? Who do you think is the hero of the story? How do we know who the hero of the story is? What do you think the story is about? Where does the story take place? In what place? How do you know? Where is the name of the author written? Where is the name of the illustrator? Where is the name of the story? This is a discussion that is largely speculative. Identifying and understanding the role and significance of the front cover. The name of the story will be read to the children by the kindergarten teacher, followed by another conversation where the children speculate about the plot based on the name because the title already contains a word that is unfamiliar to most children, the kindergarten teacher will take her time on the word "XXX". First the kindergarten teacher will ask the children if they know its meaning. Who knows what the word "XXX" means? Where is it? Why do we use it? Can we find "XXX" in every village today? And where we can find it, close to home or away from it? The kindergarten teacher will produce a card with the word "XXX" written on it.

She will ask the children to listen, how many syllables in the word “XXX”? Let's try together, and use body parts, (put both hands on our head - first syllable. And move both hands on to the shoulders, for example - second syllable). What melody does the word “XXX” have? Try to think of other words that begin with the same melody. Now, look at the letter-toolbar - where the letter “X”? And “X”? And “X”? Let's count how many letters the word “XXX” has? Where is the number three on the numbers-toolbar? Who here has a three letters name? Let's check.

The story will be read to children continuously, and then, the children will be asked again about the illustration on the front cover.

The woman, the child, the second woman, the XXX and the place. The meeting ends with the reading of the entire story and the repetition of the questions about the illustration on the front cover.

Meeting number 2 : a deeper understanding of the sequence of the plot and the content of the Story.

The kindergarten teacher will start the session by reading the entire story, and then there will be a discussion on questions that are mainly to understand the story, and what happens between the lines. That way we can activate the children's background knowledge by encouraging and creating a discussion. When does the story take place? Where does the story takes place? Who were the human characters in the story? What happened to Razi, Ward's father? What did the mother say to the father seeing him coming back and leaning on a cane? What did the boy say to the father seeing him coming back and leaning on a cane? Why do you think so? Where did you learn that? Do you agree with your friend? Why do you, and why don't you? Let's introduce the character of Razi the father? Who went with him to the XXX? What did he want to get there? What for? Why don't they have a home water system like we have today? How long would it take Razi to go to the XXX and back? Where is the XXX? Why is it there and not closer? How do they fill the bucket with water? What does Ward look like? Does he look like his father or his mother? Is he different from them? Ward, father and mother, what is the name of the format they live in? (Family), introducing the concept of the family in front of our friends. How do you see your family? What do you feel about your family? Do you have brothers and sisters? How many? Do you have any pets? Why do you prefer this animal to the other? What is your favorite color? Why? Do you have any hobbies? What do you think came first, the story or the pictures? How long does it takes to create a book? Following these guidelines, every child will draw one of the characters from the story and with another reading of the entire story, the session is over.

Meeting number 3 : Connecting the concepts of the story (together and alone) to the daily life of the children.

The kindergarten teacher will begin the meeting by reading the entire story, followed by a discussion with groups of children around questions about their daily lives, while connecting the events in the story to the feelings and the situations they encounter. In other words, the purpose of the meeting is to deepen their understanding of the plot and explain the difficult words in the story. The story will be read to the children, and during the reading there'll be a discussion based on questions by the kindergarten teacher about the difficult words in the story and their meaning. Then we will focus on a block of words on each page. I will ask them to pick 4-5 words, choose one and add it to the wall. We use the same process we had with the word "XXX". After reading the story, to find out whether the difficult words were understood. The kindergarten teacher will play a game with the children, miming and facial expressions where the children have to guess what concept other children are presenting with another reading of the entire story, the session is over.

Meeting Number 4 : Discussion of a problem emerging from the story

The kindergarten teacher will begin the meeting by a shared reading of a story. At this time, the children are able to be active participants in the reading of the story, by finishing the sentences. Reading lines according to the illustrations and attempts to remember what happens next in the story. Later, the kindergarten teacher will conduct a discussion focusing on identifying the problem. We have a problem. What is the problem? The discussion includes presenting the facts, and the feelings of the children, mediated by the kindergarten teacher. Until we reach a point where we are all able to define the problem.

What do we do about the problem? We begin to gather information about the problem. What happened to Razi? What happened to Ward? Are the people happy that the XXX is so far from the village? Where will water come from if there is no XXX? Are all the people in the village aware of the problem. Are they willing to come together and solve the problem? What possible solutions are there? The children will raise and present different solutions to the situation, with the kindergarten teacher's guidance for selecting the most appropriate solution. They raise ideas, and with the kindergarten teacher's guidance the children will reach the point where they decide which idea is best.

After they chose one idea, they try to plan and reach a point where they can implement and begin designing the solution.

How do we let everyone know? Through what? What are the tools and the means through which we can inform all the people in the village? What is the functional difference between how people used to tell one another things then and today? What progress do

we see in terms of technology? Does this progress save time? How do we build it? What do we need to build it? What is the number of people required for the construction of the planning? How do you get people to reach a situation in which everybody shares in the design of the solution. After building the design, we start evaluating the solution. What are its advantages? What are its disadvantages? If we did this and not that, what would happen? The children are asked to think about a situation in which they could reach a situation in which they evaluated the solution and the building of the design. How would you feel when you would have success? What would you add? What else do you want to develop? And again, with another reading of the entire story, the session is over.

Meeting number 5 : the children actively read the story themselves.

The final meeting will be devoted to the joint reading of the story, in which the kindergarten teacher encourages the children to tell the story themselves, by using informative questions and looking at the pictures. The children read the story by recording it on a tape. The kindergarten teacher will work with the children on the illustration in sequence, according to the events in the story. Talking about their feelings using sheets with faces stickers, dramatizing images of a problem, stimulating discussion on what to say when we fall down, or when we help each other. And how can we say why I am tired? Or I feel bad for you. The story has direct speech - Who says what? Name the character? For example: We have a big problem, what do we do? Raia We need water to drink, to prepare food, to do the dishes, what do we do? Raia I'll take the bucket and go to the XXX alone. Ward Is there another use for water? Could we see the village in another way through the water? Ward What is the sequence of the narrative? Mentioned order of the characters' appearance? Child, mother, villagers.

On each page, we'll look for a word in the singular and a word in the plural. (village, father, mother, child, bucket, home, feet ...)

On each page, we'll look for a masculine word and a feminine word (live, has, taken, gone, ran into, returned, fell, hit, hurt...)

What do you think about what happened in the story? What would you have done in Ward's place? How would you act?

Create criteria for comparing the character and actions of the father and the character and actions of the son.

Compare our village today and the village in the story, refer to the water, the way they communicated their message.

What did you learn from this comparison?

The kindergarten teacher will consult with the children about how to make a thank you note for the boy who helped the village.

Conclusion: I, as a kindergarten teacher, believe that detailed and systematic preparations for the purpose of study, can be helpful to all kindergarten teachers in the field, both to legitimize and approve of the activities they've been doing for years, and in order to emphasize the importance of systematic work with a group of children, that enables the detection of the capabilities of each child.

Monitoring the child's progress and helping him/her advance further accordingly.

The child's actions after hearing the story: Activities that develop fine and gross motor skills: Name of activity: making three-dimensional objects from papier-mache The activity focuses on developing: cognitive, movement and tactile skills The purpose of the activity: developing creative and imaginative abilities Acquired vocabulary: papier-mache, XTC Acrylics, small bucket, large, smaller than, larger than, wide, narrow, circular, square, rectangular. Materials and tools: papier-mache, tube, XTC Acrylics, paintbrush The process of the activity: The kindergarten teacher asks the group of children to sit around the clay table, and ask each child to plan the bucket that he wants to make. After the planning comes the construction phase, the child will begin to build his bucket, as he wishes to build it.

The kindergarten teacher will guide and help the child with where to put the bucket to dry, and then he can color it as he wants. At the end, all the buckets are presented, compared and sorted.

Language development activities:**Name of activity: let's expand our vocabulary**

The activity focuses on developing: cognitive and language skills
 The purpose of the activity: The ability to link a word to an image
 Acquired vocabulary: a small bucket, a large bucket, a wide bucket, a narrow bucket, a bucket that is smaller than..., a bucket that is larger than...

Necessary tools and means: the kindergarten teacher will sit down with a group of six children. Put Q cards in front of them with different descriptions of a bucket - wide, narrow, large, small. Each child will have to match two Q cards - matched by word and image, not all the Q cards go together, and that is how the child can learn to recognize the shape of the image and the word.

Artistic creativity development activities:**Name of activity: a different kind of view**

The activity focuses on developing: tactile, movement and cognitive skills

The purpose of the activity: the development of artistic feeling in kindergarten children, and the development of a talent for planning and implementation

Acquired vocabulary: planning, implementation, Styrofoam, glue, wool, cardboard, colors, imagination and see-shells

Necessary tools and means: polystyrene balls, glue, paints, cardboard, moving eyes, cellophane, crepe paper.

The process of the activity: The kindergarten teacher puts everything on the table and asks each child to choose the type of bucket. After selecting one, the child puts his choice in a basket.

Activities for the development of communication skills: Name of activity: self -

expression The activity focuses on developing: tactile, social and cognitive skills

The purpose of the activity: the ability to communicate with self and express feelings

Acquired vocabulary: sad, happy, like, dislike, cry. Necessary tools and means:

Picture Q cards for the different bucket types. Each Q card has a face with a different facial expression, laughing, crying...

The process of the activity: The kindergarten teacher sits down with a group of children, puts the Q cards on the table and ask each child to choose a picture Afterwards, she'll ask them individually, why did you choose this picture? Does this picture reminds you of something? What do you feel now?

Activities for the development of social communication

Name of activity: presentation of the story ‘Ward and the spring of water’

The activity focuses on developing: emotional, physical, cognitive and social skills
 The purpose of the activity: the development of cooperation and mutual help
 Acquired vocabulary: waiting in line, play, success, cooperation, imitation, choice
 The process of the activity: The kindergarten teacher will explain the story to the group of children, and each child will choose a character to display, and each will get their turn, and they will practice to display their full turn in line.

Appendix 3.5 : Lesson plan (the puddle)

In order to expand the theoretical knowledge, we should read about de Bono’s Six Hats method. In this lesson plan I will use a blue hat, because it is the hat that symbolizes thinking about thinking. It’s used to examine the thought process and to analyze, plan, as well as reflect. Using the blue hat directed me to think about thinking, to examine thought processes critically, to control the thought process, to determine the questions that would lead to further thinking. The use of this hat calls for a halt in the discussion for purposes of clarification, and assessment both during the process, and after it’s over.

Introduction: It is worth noting that the word “puddle” and the words “playful mayhem”, both have the same root (in Hebrew). And since the kindergarten teacher must be youthful at heart, she will take the children outdoors, to meet the puddles. As the old adage goes, when do you know that you’ve gotten old? When you pass a puddle in your boots, but you don’t feel like floundering and splashing... because kids actually love to play in puddles.

This type of activity provides a sensory-motor experience for the children: they’ll walk through the puddles, walk around them and watch them closely.

The children will learn a variety of terms: deep/shallow, wide/narrow, clear/murky and so on. In addition, the children get to vent, by fooling around in the puddle. They need physical activity after rainy days, when they’ve been cooped up. But despite the playful mayhem, there should be boundaries - only in their winter boots, and only for a limited time. They will experience their own impact on the material - creating ripples in the puddle. They’ll experience creativity and get to know the terms of floating/sinking, by preparing little boats and sailing them. By returning to visit the puddle, the children will learn about continuity, changes and the causes of changes: Rainy days - the puddle grows; brighter days - the puddle shrinks.

The purpose of the activity: Getting to know the puddles, after the rain. An expansion of the subject “weather in the winter”. Encouraging the children to look at things from a higher perspective - what is the purpose of the moment? What is the plan for thinking

from here on? What's next? Encouraging the children to be in control of their thought process - to assess and to reflect.

Preparation for the activity: Informing the parents about the activity, so they can send their children in appropriate clothing and boots. And to also include spare clothing, including socks and slippers. 2-3 bottles or jars, a bottle of clean water, metal or plastic caps, pieces of cloth, pieces of wood and polystyrene plates, 2-3 sticks, 50-60 cm long, marked every 10 cm with a different color, in a waterproof marker

The activity

A preparation Talk: It's been raining the past few days, raining a lot. Outside, the rain formed puddles. We will speak with the children about the puddles they encountered on their way. We will encourage them to talk and express themselves, by asking questions: What did you see? Did you play and stomp around in the puddles?

I'll tell them that I'm planning on taking a walk to see puddles. Therefore, we'll try to think together, how we should prepare for a walk through the puddles. The children and I will write the parents a letter. We'll make boot-shaped cut-outs from paper, and write the letter to the parents on one side of the boot, and the children will decorate the other side. I'll recommended they use watercolors, close to our topic.

During the activity: We reached a puddle, first we can fool around in it for a bit. Otherwise, why are we wearing boots?! Now, we'll try to get to know the puddle. Let's think together, is it deep or shallow? We'll asked ourselves, how deep is it? We'll show the children the marked sticks that we brought. And ask: why did I ask you to bring these marked sticks?

I'll listen to them, and then explain to the children that we are going to measure the depth of the puddle with the sticks. Let's guess, if I dip a marked stick, how high do you think the water would get? Let's try, dip one of the sticks we brought in the puddle. See how high the water reached. And we'll measure the depth of 1-2 other puddles. Which is the deepest?

The puddle - is it large or small, wide and narrow? How do we measure? I listened with interest, emphasizing that this is our goal now. Let's hold our friends hands, and surround the puddle together. We'll count - how many children does it take to form a circle around the puddle? Why are we here? Where are we standing? What we are trying to do now? What's the next step? We'll try the same thing again, around a nearby puddle. Does it take more children to surround this puddle, or less? You should write down the measurements depth and circumference. So we can compare them with measurements that we'll take in our next visit to the puddles. What shape is the puddle? What does it looks like to us?

What does it remind us of? If I asked of you now to go back into the kindergarten and draw a puddle, what is the shape you would choose for your puddle? Why did you choose this shape and not another? We'll look into the puddle. Is the water clean and clear, like the raindrops? Let's look at why? We'll fill one of the bottles we brought. We'll compare the fresh water we brought from kindergarten to the water from the puddle. Which is murkier, the puddle water or the water brought from kindergarten? Which is mixed with the dust and the dirt, the puddle water or the water we brought from kindergarten? Let's look at the surface of the puddle again. Do we see ourselves? Our friends? The high tree that's on the sidewalk? What else do we see? And the image - it is as clear like the mirror we have at the kindergarten, or is it blurred? Why? We'll focus on the puddle again. Is there movement, or is it still and calm? Can we make ripples in the puddle? How? Let's try? We'll throw a pebble into the puddle. What happened to the pebble? What happened to the water? We'll follow the ripples - what happens to them? Take a look at the direction of the movement, is it expanding, moving away, vanishing? We'll try again. This time with a larger rock. What's changed? What else can we throw in? We'll try to throw in a little leaf. What happened to it? Let's look at the puddle and imagine that we have a little ocean. And we want to sail boats in it. What can we use? What tools we brought from home, can be turned into those boats? What tools would you like to try? We'll look at how the bottle caps, the pieces of cloth, the empty plastic bottle, the wood or the polystyrene... float? Can we sail boats made from stones, iron in the same way? If so, give reasons for that. And if not, why? (These materials are heavy and sink to the bottom of the puddle). Do we have a piece of paper or some old newspaper? Can we use that to make real boats by folding the paper? How? Let's try? Maybe we can make a boat from natural materials? How? Let's try? We'll take two leaves - a big one and a small one. We'll pierce the small leaf in the centre of the larger leaf. And we have a boat. Not just any boat - but a sailboat. What does that mean? Can someone explain it? Does anyone know any other types of boats? What are they? What characterizes our thinking? Was it was effective? What was successful about our way of thinking? How can we create more success? What were the difficulties? How can we address these difficulties? We really should revisit the puddle in 4-5 days. Check - did it grow or shrink, perhaps it even disappeared? We'll try to think together - why did these changes that we noticed in the puddle happen? What was the weather during these days - rainy or sunny? We can come back to kindergarten, we can read a book about puddles.

Appendix 4 : The portfolio of the child

This includes the child's work according to their choice and consent to put their products in the kindergarten. In short he is involved in selecting the best product that he has and having it placed into his portfolio. In other words he is aware of the quality of the products and selects the best one among them.

I used portfolios to help me document the development of the kindergarten children once exposed to the critical thinking skills I taught. I planned to follow their individual development and their development as an age cohort.

A **multi-sourced** portfolio provides the opportunity to evaluate the development of a variety of learning processes. The data sources are learning outcomes that could be texts, photos, drawings, tracings and decoupage art.

A portfolio that is **authentic** includes learning outcomes that the child selected (self-selected) and produced reflecting the skills learned during the programme.

A portfolio that is **dynamic** will be able to capture the child's growth and change. Such a portfolio allows for learning outcomes to be added at any point in time during the duration of the programme.

An **explicit** portfolio invites participants to create their own criteria for evaluating learning outcomes so that they can take responsibility for developing the quality of their learning outcomes.

An **integrated** portfolio shows evidence of the transfer of skills from school to the home and community. The child needs to learn that the critical thinking skills that are learned in kindergarten can be applied in real life situations outside the kindergarten.

The portfolio assessment process requires that the child assume responsibility for the quality and management of the portfolio. The kindergarten children were told by me repeatedly that the portfolio was theirs to do with as they please. If they felt that a certain product was not as 'good' as they wanted it to be they were free to produce one of better quality and substitute it for the piece they felt was not up to their quality standard. The transfer of responsibility is accompanied by reflection and self-evaluation, both meta-cognitive thinking skills.

The portfolio assessment process is multi-purposed in the sense that it evaluates the effectiveness of the programme at the same time it evaluates the growth and development processes the child experiences. The portfolio can be used as an effective communication tool between teachers and parents as the child moves from one grade to the next, or from one class to another. Portfolios were discussed with the parents frequently.

One type of learning outcomes for children aged 3 to 5 years that can be included in the portfolio is the drawing of the self, the drawing of the family, the drawing of a tree and the drawing of the home. These drawings were interpreted using the following assessment criteria: completeness of the drawing, position on the page, the distance between the figures in the family drawing, the complexity of the drawing (animals/ pets, birds, flowers, clouds, colors, etc...) and the narrative the child shared with me once the drawing was ready.

The portfolio made it relatively easy for me to demonstrate that the individual student or the age cohort had moved from a baseline level of performance through the achievement of particular goals and beyond.

When I contemplated the use of portfolios for assessing my children's development during and following the acquisition of critical thinking skills I was aware that subjective judgments were often the unwarranted target of criticism by opponents of this type of assessment. On the other hand, in educational settings, teachers using portfolio assessment techniques often chose to compare notes with colleagues who independently rate the same portfolio.

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