DOCUMENTATION AND GIFTED YOUNG CHILDREN: 
A REGGIO EMILIA INSPIRED STUDY

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Abstract

The purpose of the present study was to understand what the roles of documentation for gifted young children are, and how educators perceive, assess and promote children's giftedness through documentation. A questionnaire and interviews were used to gather data from fourteen early childhood teachers who adopted the Reggio Emilia approach in their classes in North America.

This study has resulted in a broad range of findings, among which are that documentation promotes gifted children to learn in depth by revisiting and remembering their work and by generating their interests. At the same time, teachers thought that documentation promotes gifted children’s metacognitive skills and social interaction with peers. In addition, documentation appeared to take various roles for teachers. Teachers could be aware of children’s capabilities, and prepare curriculum/projects for the next steps by observing, listening, and researching children’s thoughts and ideas during the procedure of documentation. In terms of teachers’ conceptions of giftedness in young children, teachers appeared to have various conceptions of giftedness rather than one common conception. Generally most of teachers in this study appeared to be aware of young gifted children. However, a few educators showed negative attitudes and definitions of giftedness which seemed to result in failure to identify gifted children and their characteristics in their class.

This study suggests that documentation helps teachers to recognize children’s potential, and to be ready for children’s further learning; also in this way, gifted children can learn deeply, interacting with peers through documentation. Findings also show that, in order for this to occur, there is need for teachers to be open to young children’s giftedness.
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Chapter One

INTRODUCTION

Research Problem and Relevant Theoretical Models

Gifted young children who are 3 to 10 years old are an underserved population in the current education system (Robinson, 1999). Since there are different definitions of giftedness (Hodge & Kemp, 2000) and unreliable assessment and identification measures (Robinson, 1999), and it is rare to find appropriate content and structure for young gifted children, there are many challenges in implementing educational programs for gifted children (Barbour & Shaklee, 1999). In this situation, adopting a ‘best practice’ in early childhood education (Newsweek, 1991), the Reggio Emilia approach, may provide a reference point for educators in meeting the needs of gifted young children. One of the main principles of Reggio Emilia, documentation - the observation of children and extensive record keeping, reflection on and interpretation of the collection, and planning (Chard & Katz, 1997) – has contributed to best practice in many early childhood classrooms. Documentation in Reggio Emilia is called ‘pedagogical documentation’ (Dahlberg, Moss & Pence, 1999). It takes a critical role in assessment, communication with children and planning curriculum in early childhood education. Currently, an increasing number of educators are adopting the Reggio Emilia approach in their preschools and kindergartens in North America. In current schools inspired by the Reggio Emilia approach, how do educators describe the functional relationship between the role of documentation and education for gifted young children?
1.1. Identification of gifted children

Researchers assert that early identification of giftedness and intervention is critical, since gifted young children need appropriate support that will fit them developmentally (Borland & Wright, 1994; Porter, 1999). Without environmental nurturing, some gifts and talents may not be developed (Clark, 2002; Horowitz, 1987). However, to educators in the current education system, it is a challenge to recognize and nurture gifted young children.

Currently, the most common standard for identifying gifted children in North America is a high score on an intelligence or academic achievement test (Sternberg, 1997). However, researchers have pointed out that this method has many limitations in identifying underserved gifted preschool and primary children. First, these tests measure only academic intelligence such as linguistic or mathematic abilities (Gardner, 1983). Since Gardner proposed the notion of multiple intelligences, researchers and educators in the gifted education field have widely accepted that giftedness can occur in non-academic fields such as interpersonal, musical, bodily-kinesthetic and naturalistic. Children gifted visual-spatially think in pictures; bodily-kinesthetically gifted children learn better with movements. Unfortunately, these types of intelligences and potential for learning are ignored in current traditional education.

Secondly, the characteristics of gifted young children should be considered. According to Silverman (1992), it is more reasonable to talk about potential giftedness or capacity in young gifted children rather than performance, determined IQ or past learned academic skills. In addition, the development of gifted young children is rapid and variable. For instance, one moment children's skills are not observable; then, cognitive or motor skills suddenly appear (Smutny, 2000). Existing IQ measures or assessment based on academic performance focus only
on the determined skills with outcomes in mind at a fixed moment in time, rather than potential over an extended period of time.

Young children who do not show an outcome or performance are often ignored in current gifted education even if they show potential. If we fail to detect various potentials of giftedness over time, children are at risk of having their potential to develop non-academic intelligences as well as fostering of other academic domains neglected.

Thirdly, the traditional identification methods for giftedness do not take into account context or culture. Young children are variable in this regard, and intelligence tests do not account for context or culture. Instead, intelligence tests require students to perform tasks out of context. IQ tests fail to assess the intelligence needed in daily life. However, Sternberg’s (1997) intelligence theory emphasizes context. He proposed the notion of successful intelligence which includes analytical, creative and practical intelligence. To turn capacities into accomplishment in a culture, these three elements of intelligence should be attained and balanced. In particular, practical intelligence refers to the ability involved in applying, using, implementing and putting knowledge into practice in a child’s own context. This includes practical tasks such as reasoning problems in daily life; solving practical mathematics problems; or planning routes using maps.

Intelligence tests take into account only analytical intelligence needed for academic life, and, to an extent, acknowledge creativity through measuring flexibility; however, there seems to be no desire to measure practical intelligence (Sternberg, 1997). Even when they measure analytical and academic domains, intelligence tests also are culturally biased, requiring familiarity with vocabulary, phrases, and social conventions in major cultures, such as North American culture (Chen, Krechevsky, & Viens, 1998).
There is a need for a new paradigm for identification of young children that considers multidimensional aspects of giftedness (VanTassel-Baska, 2003). This new paradigm would recognize the different ways in which students display giftedness. This recognition calls for more varied and authentic assessment than is currently used. Passow and Frasier (1996) suggest nontraditional measures such as observing students interacting with a variety of learning opportunities, instead of relying only on academic intelligence and achievement test scores for identification. A more complete picture of giftedness in young children would be required to go beyond intelligence tests or academic performance.

1.2. Curriculum for gifted young children

In addition to the current issues related to identification methods for gifted young children, the content of education for gifted young children has been pointed out as yet another challenge. Currently, in general classrooms, gifted children frequently feel unchallenged and underserved (Clark, 2002). They are at risk for boredom, frustration and depression (Dalzell, 1998). A pre-determined curriculum may be unchallenging and focus on the skills already mastered by gifted children (Cohen & Others, 1990).

Even in special classes or programs for gifted children, there are still challenges. The most well known and successful programs for gifted students are accelerated programs for advanced secondary school students (VanTassel-Baska, 2003). This traditional model influences the education of gifted young children, which is still strongly academic. Similar to the limitation of identification measures, these programs do not reflect the existence of non-academic intelligences. Most gifted programs currently focus on academic domains such as linguistic or
logical mathematical determinants rather than non-academic domains such as social skills, affective development, visual-spatial, music, arts or movement activities (VanTassel-Baska, 2004). Academic acceleration programs focusing on rapid speed often suffer from a lack of in-depth content and knowledge which is commonly associated with traditional disciplines (Margolin, 1996).

In addition, because gifted young children have diverse profiles and diverse needs, it is a challenge for teachers to adequately serve them. Even though these children have been selected according to an intelligence test, they display various levels of abilities in different domains of intelligence. Gifted children themselves are a heterogeneous group and one defined curriculum and content cannot satisfy the full range of needs (Tomlinson, 1996). Some gifted children have uneven development, making it difficult to adapt to school and society (Silverman, 1996). Existing gifted education focusing on academic abilities only cannot serve the needs of gifted learners in an effective way (Chen et al., 1998).

Another issue for young gifted children is that current educators tend to emphasize an adult vision of what gifted children need to know, a vision underpinned by adult assumptions about gifted children (Barbour & Shaklee, 1998). Even gifted educators assume that gifted children learn quickly and need complexity in their learning (Clark, 2002). As a result, curriculum is based on this assumption (Barbour & Shaklee), adopting acceleration or enrichment (Lewis, 2002; Maitra, 2000). However, these programs have been under debate. Opponents ask if gifted education is also beneficial to other children and what the uniqueness of gifted education is (Tomlinson, 1996). The reason for this debate may be that gifted young children have complex and diverse needs. Most programs tend to focus only on giftedness in academic domains assumed
by educators rather than the diversity apparent in gifted children. Bruner (1996) also indicated that educators tend to neglect children's point of view and interests when they plan curriculum.

Flexible, fluid content is appropriate for gifted learners (Kitano, 1996), rather than determined accelerated academic and/or complex content. Social constructivists suggest that educational content should begin from what children want to learn (Griffin, 1992; McKeough, 1992).

When students' points of view and their interests are considered in planning education, children can learn more meaningfully and engage in education more deeply (Bruner, 1996). In this way, children can have their diverse needs met. VanTassel-Baska (2004) and Tomlinson (1996) also suggest that the initial and sustaining focus of content for gifted children should begin with the children's interests, needs, and abilities. For curriculum differentiation, educators of gifted children might start from gifted children's points of view (Gallagher, 1997b).

Acknowledgment of the interests and abilities of gifted children needs to be the foundational base for developing the content of gifted education. Planning of the content should be based on systematic assessment of children's development (Barbour & Shaklee, 1998) and their interests and needs (Tomlinson, 1996). Education for young gifted children needs new methods and programs with the context focused on children's point of view.

1.3. Documentation in the Reggio Emilia Approach

Even though educators in Reggio Emilia do not focus entirely on gifted children, the educational practices in municipal schools of Reggio Emilia in Northern Italy may shed light on challenges in the gifted education field. Especially, the concept and practice of documentation,
one of the unique methods in Reggio Emilia, has contributed to education in many ways in representing children’s potential, assessing and evaluating children’s learning processes, and in providing the starting points of learning for students (Edwards, Gandini, & Forman, 1993).

Documentation refers to the observation of children and extensive record keeping, reflecting on and interpreting the collection, and planning (Chard & Katz, 1997). Documentation has been practiced in many classrooms in North America as a form of displaying children’s products; however, in the schools of Reggio Emilia in northern Italy, there is an intensive focus on documenting children’s experiences, thoughts, and ideas which uniquely contributes to early childhood education (Chard & Katz). Documentation in Reggio Emilia is called ‘pedagogical documentation’ (Dahlberg et al., 1999).

Documentation is the collection of a child’s work at several different stages of completion with photographs showing works in progress. It includes interpretation and comments written by the teacher, transcriptions of children’s discussions, comments, and explanations of intentions about the activity. Observations, transcriptions of tape recordings, and photographs of children discussing their work are also included in the process of showcasing a child’s development (Chard & Katz, 1997). Educators in Reggio Emilia display children’s work with great care and attention. Documentation has rich content and shows children’s learning to peers, teachers and parents. Documentation becomes a tool for communication as it tells a story (Dahlberg et al., 1999).

Documentation promotes communication and collaboration among children, teachers and families, creating a climate of inquiry and inviting meaningful dialogue (Chard & Katz, 1997). Goldhaber and Smith (1997) believe the practice of documentation encourages children to set
theories and, in turn, helps teachers to set theories about children’s theories. In addition, documentary displays suggest to children that their ideas, intentions and efforts are taken seriously. Documentation plays a critical role in continuous assessment in the development of children’s projects (Chard & Katz, 1997). Furthermore, documentation provides information about children’s learning and progress that cannot be demonstrated by formal standardized tests and checklists employed by educators (Chard & Katz).

The tool of documentation used in Reggio Emilia has been influenced and implemented in many classes in North America (New, 2003). A few studies describe the actual experience of the role documentation played in their own focused group. Authentic assessment is referred to as a useful function of documentation in Valkil, Freeman, and Swim (2003). Their commentary on documentation as authentic assessment of students with special needs suggests that it allows for children’s learning and development to be reflected in multiple forms, thereby supporting multiple ways of understanding of children with special needs. Documentation also captures the intellectual development of kindergarten children and helps teachers and parents to be engaged in their children’s education (Kocher, 1999). First and fourth grade elementary school students are encouraged to think critically about their learning and their works through the documentation (Donovan & Sutter, 2004). Also, documentation promotes teachers’ professional development. It creates a climate of inquiry, collaboration and advocacy among teachers (Goldhaber & Smith, 1997). However, these studies describe anecdotal experiences in a case-by-case fashion, rather than in concrete forms of formal study or examination using qualitative or quantitative methods.

The practice of documentation is rarely reported in the literature on education for young
gifted children. Furthermore, research on giftedness or talent of young children is rare. The Project Zero research team at Harvard University launched Project Spectrum, inspired by Reggio Emilia, at an elementary school. Researchers reported meaningful ways to assess in context and diverse giftedness among children (Gardner et al., 1998). However, their reports also are anecdotal and descriptive. Even though a few studies (Barbour & Shaklee, 1998; Fawcett & Hay, 2004; Hertzog, 2001) compared the commonalities in Reggio Emilia and gifted education, they did not focus specifically on documentation or actual practice. Fawcett and Hay (2004) used documentation as a tool for promoting creativity; however, the definition of creativity is ‘imaginative features’ in all children, rather than in a few talented children.

1.4. Research Questions

This study is intended to fill this gap in the literature and in the current education system regarding young gifted children. The proposed research is an exploratory study examining educators’ thoughts and experience in documentation regarding young gifted children. The specific research questions are: How do educators describe the role of documentation for gifted children? How do educators perceive and assess children’s giftedness, and how do they promote gifted children’s learning through documentation? What are the benefits and the challenges of documentation?

1.5. This study’s substantial and original contribution to knowledge

The proposed research represents a substantial and original contribution to knowledge because it examines the role of documentation for young gifted children with respect to the
investigation of its role in informing education for gifted young children. The research integrates intelligence theories such as Gardner’s (1983) multiple intelligence theory and Sternberg’s (1997) successful intelligence theory and compares social constructivist theories and Reggio Emilia pedagogy. This study also provides an overview of the Reggio Emilia approach in schools of North America, and draws from findings from several areas of research relating to the assessment of and educational methods for gifted young children’s intelligences and the role of documentation in the Reggio Emilia approach. An example of the practice of documentation applied to gifted young children is featured. Finally, the implications of how documentation could promote learning and planning the content in gifted education are discussed.
Chapter Two
LITERATURE REVIEW

Because this study is concerned with the role of documentation for gifted young children, this chapter is divided into two major sections, the first on documentation and the second on gifted young children. This chapter begins by providing an overview of Reggio Emilia's conception and practice of documentation. The history, definition, theoretical framework and role of documentation in previous educational settings will be featured. Then, roles of documentation, assessment and planning curriculum in gifted education will be discussed.

2.1. Documentation

Dahlberg et al. (1999) described documentation as the most important concept for the creation of reflective and democratic pedagogical practice. Dahlberg et al. suggested that the idea and practice of documentation has a long history; Swedish educators have done similar documentation work in educational practice. American educators also use documentation in collecting children's work, which means documentation is not new. In the United States, documentation in early childhood programs historically consisted of record keeping, observations of children, program evaluation, and other means of assessing children and program measures. However, more meaningful and influential practices of documentation are done in Reggio Emilia (Chard & Katz, 1997). Vecchi (1997) stated that the abundance of documentation in Reggio Emilia Schools cannot be compared to documentation in other schools. Documentation in Reggio Emilia is known for its unique contribution to early childhood education (Chard & Katz, 1997;
The primary question is, "What is the Reggio Emilia approach and what is unique about their documentation?"

2.1.1. The Reggio Emilia Approach and its guiding principles

The Reggio Emilia Approach is currently one of the most popular and influential approaches to early childhood education (New, 2003). The name, Reggio Emilia, comes from the city of Reggio Emilia in Northern Italy. After the Second World War, a small group of parents developed parent-run schools for 3- to 6- year-old young children at Villa Cella, a small village a few miles from the town of Reggio Emilia. Parents, teachers, and the community made collaborative efforts to construct schools that were different from traditional schools, which at the time "stick to authority, and its serving cleverness, pushing packaged knowledge" (Malaguzzi, 1998, p. 52). Under the leadership of Loris Malaguzzi, the people in Reggio Emilia urged the community to run their schools and open the first municipal schools. A series of national laws were passed between 1968 and 1971. These included the establishment of free preschools for children three to six years of age, and infant-toddler centers for children aged three months to three years. By the end of the 1970s, the schools for young children in Reggio Emilia had grown to nineteen.

Today there are twenty-two schools for children ages three to six, with 47% of children from the community in attendance and thirteen infant/toddler centers for children four months to three years of age, where 35% of children of that age group attend. From 1945 to the present, over more than 50 years, this educational system has developed its own innovative philosophy and educational principles and designs. Now educators call this unique philosophy, design, and
works the ‘Reggio Emilia Approach’ (Edwards, Gandini, & Forman, 1998). In 1987, educators in Reggio Emilia began to share their approach, displaying their exhibition entitled ‘The Hundred Languages of Children’ throughout Europe and the United States. Many educators in the world inspired by Reggio Emilia are currently trying to modify and adapt it (New, 2000).

In Reggio Emilia, educators thought schools should be places where children “could acquire skills of critical thinking and collaboration essential to rebuilding and ensuring a democratic society” (New, 2000, p. 3). The Reggio Emilia Approach emphasizes a few key concepts:

(1) ‘The image of the child.’ In Reggio Emilia, children are viewed as competent, curious, capable, creative thinkers, and learners (Rinaldi, 1998). ‘The image of the child’ is fundamental and basic principles stem from this image: “Children have rights rather than needs” (Dahlberg et al., 1999, p. 50; Smith, 1998, p. 204); “Children are rich in resources, they are eager to express themselves within the context of a plurality of symbolic languages, and they form the basis of ability as well as on conflict and error” (Rinaldi, p.114).

(2) Teachers as partners, nurturer, and guide. The teacher is a facilitator and researcher rather than an instructor in Reggio Emilia. Teachers are ‘listening’ to children rather than talking or teaching. ‘Listening’ means in Reggio Emilia being fully attentive to the children, observing and recording. Teachers discover the children’s thoughts and theories, and provide environments and occasions for discovery and learning (Edwards, 1998). For this, teachers conduct documentation, and discuss this documentation with other teachers. In Reggio Emilia, the primary teachers always work with a co-teacher, are related with other teachers and staff, and receive support from an atelierista and a pedagogista. An atelierista is a teacher trained in art
education who supports teachers in doing projects and documentation. The atelierista also takes
charge of the atelier in each school, the workshop or studio furnished with a variety of resource
materials that is used by all the children and adults in a school (Vecchi, 1998). The pedagogista
works with several schools and the central city administration (Filippini, 1998). The
pedagogista's main role is connecting with all the basic elements of the approach such as schools,
administration, parents, citizen and visitors.

(3) Role of parents. The parents’ role is essential in Reggio Emilia. The family is
considered the children’s primary educational experience. Schools rely heavily on parents’
participation. Parents are encouraged to be active in participating and sharing thoughts, ideas, and
perspectives with teachers and children. Many parents are willing to remain at school after work
to discuss and share their thoughts (New, 2003).

(4) Progettazione and long-term projects. ‘Progettazione’ is the Italian term used by
Reggio Emilia educators for the flexible planning concerning any aspects of the life of the school
(Rinaldi, 1998). In Reggio Emilia, projects and planning are not predetermined but emergent
according to children’s interests, perspectives and ideas. Educators in Reggio Emilia are reluctant
to use predetermined curriculum where the endpoint of children’s learning is decided. Teachers
are encouraged to follow children’s interests, not determined curriculum (Malaguzzi, 1998).
Educators discuss all the possible ways that the project could be anticipated to evolve through
documentation, considering likely ideas, theories, hypotheses, and choices of children and the
directions they may take (Rinaldi, 1998). Children are encouraged to explore as researchers for a
long period throughout the project. Adults allow enough time for children to develop their
thoughts, theories, and ideas.
Documentation. “If you walk into a Reggio classroom, you will see tape recorders on many of the tables; teachers taking notes and photographs of children at work; and large panels on the walls displaying images of children’s work, their words, and reflections from adults about how and what the children are learning” (Turner & Krechevsky, 2003, p. 42). Chard and Katz (1997) proposed that documentation is the most significant contribution of Reggio Emilia to early childhood education.

2.1.2. What is documentation?

Documentation has complex elements. The definitions vary depending on individuals and researchers. Previous traditional documentation methods are mainly based on the final products such as a panel or a collection of children’s work, whereas educators in Reggio Emilia tend to emphasize documentation as procedure or process rather than products. Educators in Reggio Emilia assert that documentation should be the ‘verb’ (procedure) rather than the ‘noun’ (products) (Goldhaber & Smith, 2002).

Rinaldi (1998) defined documentation as a “procedure that supports the educational process and it’s the process of reciprocal learning” (p. 120). She added that documentation is not a final product, but a procedure that maintains the educational process. Chard and Katz (1997) defined documentation as “observation of children and extensive record keeping, reflecting on and interpreting the collection, and planning” (p. 16). The definition of the research team at the University of Vermont also represents the procedure of documentation. They referred to documentation as “collecting, organizing, interpreting, and sharing children’s efforts to understand their social and physical worlds” (Goldhaber & Smith, 2002, p. 148).
Meanwhile, an atelierista (teachers who are trained in art education and support teachers to conduct documentation in Reggio Emilia) emphasizes products, defining documentation as "the written description, transcription of children’s words, photographs and now the video tapes to use everyday to be able to read and reflect critically, both individually and collectively, on the experience we are living, the project we are exploring" (Vecchi, 1997, pp.141-142). In addition to the procedure explained by educators in Reggio Emilia, documentation takes many forms such as handwritten notes, video and audio recordings, and/or photos which record what the children are saying and doing, the work of the children, and how the educators relate to the children and their work. This notion of documentation may be from the standpoint of persons who actually practice and support doing documentation appropriately.

Therefore, when documentation is referred to and conducted, it may be appropriate to consider both notions - interpretive procedures and products - rather than just one notion of procedure or products. According to Dahlberg et al. (1999), balancing the notion of documentation as having two important subjects, 'process' and 'content' – the procedure and an end product - is indispensable for the notion of documentation. Forman and Fyfe (1997) referred to documentation as “any activity that renders a performance record with sufficient detail to help others understand the behavior recorded” (p.241). They described documentation as a process of explanation of the depth of children’s learning and educational reasons for activities.

2.1.3. Documentation as a procedure

What exactly is the process of documentation? Forman and Fyfe (1997) referred to this procedure as ‘negotiated learning,’ explaining three categorizations – design, discourse and
documentation. 'Design' is a function of the record to communicate; 'discourse' is a reflection on what is said; and 'documentation' is any activity to record details to help others understand children's behaviors. Gandini and Goldhaber (2001) described this as a 'cycle of inquiry.' It may be explained in a few divided steps. Documentation begins with (1) observation and collecting and proceeds to (2) selecting and reflecting; (3) planning; and (4) exhibiting and provoking.

(1) Observing and collecting - By observing children with care and attention, educators can discover a way of seeing and getting to know children. To be able to closely examine and reflect, educators have to record what they see and hear (Gandini & Goldhaber, 2001). Dahlberg et al. (1999) differentiate the concept of 'child' observation from observation for pedagogical documentation. 'Child observation' is mainly about assessing whether a child is conforming to a set of standards. 'Observation' in the process of 'pedagogical documentation' is, in contrast, mainly about trying to see and understand what the child is capable of without any predetermined framework of expectations and norms. Therefore, documentation cannot be objective or neutral. Educators have to realize and admit that documentation includes individual feelings and values.

Observation starts with provocation. Provocations can be prior content of documentation such as drawing, photos, or panels or good questions. With observation, educators collect the data using multiple tools for children's multiple representations. Collections are the notes of children's dialogues, video taping, audio taping, photography, and children's work (Gandini & Goldhaber, 2001).

(2) Selecting and reflecting - Once collections are made, educators need to select and reflect. Educators read notes carefully and organize and transcribe the recordings. They highlight and select the transcriptions and photos they see as important. In doing so, educators are
beginning to reflect on what they have observed (Gandini & Goldhaber, 2001). Teachers reflect on selected observations together, compare points of view in order to construct various interpretations of what the teacher saw and heard while observing the children. This is a process of having an active discourse with children's minds and of working as a community of learners.

(3) Planning - One of the important steps in the documentation process is planning. This is critical because the curriculum in Reggio Emilia schools is emergent, based on teachers' reflections on documentation. Based on reflection, educators plan ways to extend children's play, investigation, and learning. They can examine the direction that children seem interested in, and the way educators can approach this and assist children. With this process, educators ask good questions (Forman, 1989), rather than give children quick answers, and provide the materials to support children's learning.

(4) Exhibiting and provoking - The fourth step is exhibiting and sharing with children, parents, teachers and the public. In this step, the written documentation becomes a new provocation and a source of communication. It provides a narrative about children's explorations and play, and teachers' reflections and interpretations as ways to support both the educators and children to extend the children's learning.

Documentation as provocation influences subsequent observation and data collection. These four steps are made in a circular pattern rather than a linear process. The procedure of documentation takes children, teachers, and parents back so that they can revisit what they did and discover new inspiration. The outcome of new inspiration is recorded and selected again as documentation. Forman and Fyfe (1997), who defined these processes as 'negotiated learning,' divided them into three components – design (record and provocation), discourse (reflection and
interpretation) and documentation (making products of documentation), and also saw these components are reciprocal rather than simple or one way.

2.1.4. Documentation as content

Documentation as content is material in many forms such as handwritten notes, video and/or audio recordings, or photos which record what the children are saying and doing, the work of the children, and how the educators relate to the children and their work. Goldhaber, Smith, and Sortino (2002) described specifically how student teachers conducted documentation. Student teachers used polaroids, audio tape recordings, and video prints to make a panel. Through this experience, they developed their own list of eight elements of document panels for convenience. The elements are: (1) focus on children’s engagement and intentionality, (2) determination of who the audience will be, (3) description of the context of observation, (4) inclusion of verbatim dialogue or detailed observation in the present tense, (5) description of children’s affect, (6) selection of visual components, (7) inclusion of enough information to be able to plan a follow up experience, and (8) consideration of the aesthetic presentation of the panel. This is a basic guideline for a student teacher’s practice; however, it is not the standard one. Educators inspired by Reggio Emilia do not usually set rules for documentation. In summary, multiple representations and multiple sources are valued for the process and content of documentation.

2.1.5. Theoretical framework based on documentation

The practice of documentation is based on constructivist and social constructivist
theories. These theories suggest that children are constructors of knowledge, have potential, and are powerful and intelligent (Malaguzzi, 1997). Children should be encouraged to learn in their own meaningful ways and to negotiate with each other in a context of symbolization (Gardner, 1983), communication (Tharp & Gallimore, 1988), and narrative and metaphor (Bruner, 1990). The practice of documentation is based on this epistemology (Forman & Fyfe, 1997).

Regarding the image of the child, historically, in Western thought, children are viewed as innocent and empty vessels. From this perspective, children are understood as beginning life with a ‘blank slate’. Therefore, the appropriate response to this understanding is that children need to be trained and educated with the knowledge of adults. Children, as a result, reproduce and transmit past knowledge, identity and culture. This perspective results in an understanding of children as ‘poor,’ weak and passive, incapable and underdeveloped, and dependent and isolated (Dahlberg et al., 1999). In social constructivist theory, children are seen as the constructors of knowledge, identity and culture. Children are understood as unique, complex and individual subjects (Dahlberg et al.). In other words, children are rich in potential, strong, powerful and competent (Gandini, 1997). Therefore, education should not be the vehicle for the transmission of knowledge from adult to child, taking the child as a passive receiver and reproducer (Dahlberg et al, 1999). Educational content should begin from what children want to learn (Griffin, 1992; Griffin, Case, & Sandieson, 1992; McKeough, 1992). When students’ points of view and their interests are considered in planning education, children can learn more meaningfully and engage in education more deeply (Bruner, 1996) than when only adults’ perspectives are considered in planning curriculum. In Reggio Emilia, through documentation, educators listen, observe, and record children’s thoughts, ideas, and theories. Young children and their work are taken seriously
(Forman & Fyfe, 1997). Children are encouraged to represent their plans and intended solutions; through communication they try to understand other people's words and intentions. Children share sufficient details to help each other understand their behavior and recorded dialogue. Active and competent children have ideas and theories that are not only worth listening to, but also requiring scrutiny, questioning and challenges (Dahlberg et al., 1999).

Through the documentation process, multiple forms of representation are valued. Malaguzzi (1997) stated that each child has 'a hundred languages' and a lot of expressions and potentialities which stimulate each other. The metaphor of 'hundred languages of children' refers to the concept that children have multiple ways to represent their ideas. The value of multiple representations is congruent with Gardner's (1983) statement that there are many different symbol systems that qualify as representation that children could use if the classroom culture would allow for it. Children can use their words, movement, drawing, painting, building, sculpture, shadow play, collage, dramatic play, and/or music.

Another fundamental theory is that "learning is a cooperative and communicative activity, in which children construct knowledge, make meaning of the world, together with adults and equally important, other children" (Dahlberg et al., 1999, p. 50). Vygotsky (1978) stated that social interaction plays a fundamental role in children's development. Knowledge is gradually constructed with other people by taking a reflective stance toward each other's constructs, and by valuing the power of each other's initial perspective in negotiating a better understanding (Rinaldi, 1998). In Reggio Emilia, every child is seen as a social being (Hewett, 2001). Children build their own knowledge through their relationships within the context of collaboration, dialogue, conflict, negotiation, and cooperation with peers and adults (Edwards, Gandini, &
In the procedure of documentation, children have opportunities to express their feelings and represent their ideas through active communication. This communication exists among children, teachers, and parents (Edward, Gandini & Forman). Documentation places emphasis on each child’s relation to other children, teachers, parents, his or her own history, and the social and cultural surroundings (Hewett, 2001).

As many social constructivists suggest, error, conflicts and differences are essential in the learning process in Reggio Emilia. According to Fullan and Miles (1992), error and conflicts are essential in order for a situation to produce structure, as it is not necessary that an answer be correct. They said conflicts and differences between new information and existing information create the motivation to learn. Especially, cognitive conflicts and disagreement provoke children to build higher order thinking, and provide the basis for learning within social interaction. Therefore, different thoughts and ideas should be welcomed and these conflicts should be observed, interpreted, and negotiated for further learning (Dahlberg et al., 1999; Rinaldi, 1992). In this way, children’s hypotheses and reasoning can be corrected and developed through a comparison of incorrect models and through the examination of their own errors as well as those of their friends (Rinaldi).

2.1.6. The role of documentation

The functions of documentation are often discussed in relevant literature. These functions may be listed in a few categorizations.

(1) Primarily, the process of documentation is a powerful educational tool for children. Children are stimulated by each other’s displayed work. A display documenting the work of a
group often encourages other children to become engaged in a new topic or to adopt a new representational technique (Chard & Katz, 1997). Documentation promotes children's inquiry and reflections and addresses or provokes their theories, questions, interests, and concerns (Dahlberg et al., 1999). Malaguzzi (1998) concluded that documentation helps children to become more curious and interested as they contemplate the meaning of what they have learned. In this way, documentation also enhances metacognitive activities among children. Children can realize what they are doing through documentation. Reggio children understand how they can learn with and from others. Teachers' documentation makes the children more aware of their learning (Gandini, 2002).

(2) Enhancing motivation and self confidence. Documentation displays can convey to children that their ideas, intentions, and efforts are taken seriously. Documentation encourages teachers to take children's hypotheses seriously. Taking children's work and representation seriously encourages children to approach their work responsibly, with energy and commitment, and to take satisfaction in the process and results. Through documentation, children can be helped to perceive themselves as authors or inventors. In this way, children can enhance their confidence and motivation (Katz, 1998).

(3) Authentic assessment. One of the important roles of documentation is authentic assessment. Authentic assessment takes "the role in the discourse of meaning making" (Dahlberg et al, 1999, p. 145). Rather than relying on some standardized measure of quality, documentation enables educators to take responsibility for making meaning and come to their own decisions about what is going on. Teachers can construct theories and hypotheses that are not arbitrary and artificially imposed on the children (Vecchi, 1998). Documentation provides information about
children’s learning and progress that cannot be demonstrated by formal standardized tests and checklists (Chard & Katz, 1997).

(4) Encourage parents’ and other citizens’ involvement. Documentation makes it possible for parents to be aware of their children’s experience in school. As Malaguzzi (1993) pointed out, documentation allows parents a quality of knowing about children’s experience and learning. Parents are encouraged to comment on children’s work; this contributes to the value of documentation. As they learn about the work in which their children are engaged, parents may be able to contribute ideas for field experiences, especially when they can offer help in gaining access to a field site or relevant expert (Fontanesi, Gialdini, & Soncini, 1998). The opportunity to examine a project’s documentation can also help parents think of ways they might contribute time and energy to their child’s classroom, such as listening to children’s intentions; helping them find the materials they need; making suggestions; helping children write their ideas; offering assistance in finding and reading books; and measuring or counting things in the context of a project (Chard & Katz, 1997).

Sharing and involvement are increased as documentation is exhibited to the public. Schools in Reggio Emilia are opened to the citizens with an exhibit of children’s work (Vecchi, 1997). This encouraged citizens to communicate with children, to think and learn about children’s study as researchers and to encourage them to accept children as other citizens.

(5) Tool for teachers’ study and awareness. Documentation is an important tool for teachers to study and focus on children’s plans and learning, and for teachers to determine their own role in children’s experiences. As teachers examine children’s thoughts, works and words and prepare to document them, they come to understand children’s learning and development
deeply. Chard and Katz (1997) state that this experience is not likely to occur from simply seeing test results. Through documentation, teachers can store interesting moments of their professional growth. (Rinaldi, 1998). Goldhaber and Smith (2002) have used documentation as a tool for professional development of student teachers.

(6) Planning curriculum and projects. One of the important features of documentation is its role in planning curriculum and giving direction to projects. Through the rich data made available through documentation, teachers are able to make hypotheses and flexibly support each child's further development and learning (Chard & Katz, 1997). Teachers and children can discuss the documentation together, reflect on the experiences and get ideas how to proceed further with the topic (Fraser & Gestwicki, 2002). In Reggio Emilia, for flexible planning and long term projects, this role of documentation is indispensable.

2.1.7. Challenges of Documentation

The challenges of documentation are described in many articles. One of the most frequently indicated challenges is the time factor. As teachers conduct documentation, they need time to plan, reflect, analyze, and interpret. Collection of the materials such as photographs and video tape and designing and producing panels are also time consuming (Fraser & Gestwicki, 2002). Actually, challenges can also be benefits because documentation requires a lot of experimenting and interpretive work on the part of educators. Documentation often leads to thematic work taking longer, rather than the pedagogue rushing to the end and jumping into new ideas (Dahlberg et al., 1999).

Another challenge is the limitation of space to exhibit the documentation. Teachers need
space for meeting with one another and parents to collaborate on the planning, design, and development of the documentation. Wide, flat surfaces are also needed for the large panels that often are a major form of documentation. Storage space is also essential, both for work in progress and for storing documentation that has been completed. Teachers and atelieristas also need to file these documentation artifacts (Fraser & Gestwicki, 2002).

Vecchi (1997) discussed other challenges. She added that documentation requires educators to have knowledge about various technologies. Keeping the balance between products and process is also indicated as a challenge. Goldhaber and Smith (2002) described that teachers in their study spent too much time creating the display of the collected information and too little time trying to understand and respond to the meanings of that information. In addition, funding for these tools is also frequently pointed out as a challenge in American schools which adopt documentation.

2.2. Education for gifted young children

In this section, current issues in the education of gifted young children and the rationale for adopting documentation will be discussed. Also, the current programs adopted in gifted education such as Problem Based Learning, portfolio and project approach will be overviewed and compared with documentation.

Currently, a rich body of literature agrees that gifted young children aged three to ten are among the most underserved population of gifted children (Galbraith, Delisle, & Espeland, 1996; Kitano, 1985, 1990; Robinson, 1999). There is also agreement that early identification and supports for young gifted children are critical (Borland & Wright, 1994; Clark, 2002; Porter,
It is also understood that without environmental nurturing, giftedness and talent may not be developed (Clark; Horowitz, 1987); therefore, it is important to open the possibility of existing giftedness in young children. However, there remain challenges to recognizing and nurturing gifted young children. What are these challenges and what causes them? To better understand the factors that lead to challenges of supporting gifted young children, it is important to start with the definitions and characteristics of gifted children.

2.2.1. Conceptions of giftedness for young children

There are numerous conceptions of giftedness ranging from a single intellectual dimension to multidimensional abilities. Currently, researchers and educators in the gifted education field have widely accepted the fact that giftedness is multidimensional (Gardner, 1983; Sternberg, 1985) rather than a single intellectual dimension (Spearman, 1927; Terman, 1925). Many researchers in gifted education limited their research to academically gifted children; however, contemporary theories and research have reached beyond cognitive abilities to describe giftedness.

The most famous researcher in multidimensionality in giftedness is Howard Gardner (1983). He proposed the idea of many intelligences such as linguistic, mathematical, musical, interpersonal, intrapersonal, bodily kinesthetic, visual spatial, naturalistic, spiritual and existential. Gardner does not limit the number of intelligences to seven or ten but opens up the possibility of the existence of other intelligences. He also asserted that these multiple intelligences exist in every person, and their relative potencies vary (Gardner). Even though multiple intelligence theory has been criticized because of a lack of rigorous empirical measurement and evidence
(Sternberg, 1999), and for being inductively based on literature review and phenomenon, this
theory opened up thinking about the multiple profiles and diversity of giftedness. Especially, the
inclusion of interpersonal and intrapersonal intelligences, which have been largely ignored within
gifted education research, is valuable. It is currently acknowledged that children have distinct
profiles of strengths and relative weaknesses.

Another multidimensional theory is Sternberg’s successful intelligence theory. This
theory is developed from his triarchic theory (Sternberg, 1999). Successful intelligence is defined
as the ability to succeed in life, given one’s own goals and one’s environmental context
(Sternberg). Sternberg emphasized the context of giftedness. He asserted that giftedness should
be defined and developed in one’s socio-cultural context. Successful intelligence directs people
to discern their patterns of strengths and weakness, to capitalize on their strength and to
compensate for or correct their weaknesses in their own environment. To turn capacities into
accomplishment in a culture, these three elements of intelligence should be attained and balanced
- analytical, creative and practical.

Analytical intelligence can be measured by conventional tests of academic abilities,
including analyzing, evaluating, critiquing, and comparing and contrasting things. In Gardner’s
(1983) theory, linguistic and mathematical intelligences are also included.

Creative abilities are domain-specific and involve creating, exploring, discovering,
inventing, and imagining. Practical intelligences involve applying, implementing and putting
these abilities into practice in one’s own context (Sternberg, 1999). In most cases, interpersonal
and intrapersonal intelligences are important practical intelligences. Sternberg proposes that these
three components of successful intelligence provide a basis for school achievement and life
achievement. However, even though he named the theory ‘successful intelligence,’ it is not clear what the definition of ‘success’ is.

Even though Gardner and Sternberg suggest the existence of educationally valuable theories in gifted education, they do not define giftedness in young children separately. Based on these conceptions of intelligences, Porter (1999) defined gifted young children as “those who have the capacity to learn at a pace and level of complexity that is significantly advanced of their age peers in any domain or domains that are valued in and promoted by their sociocultural group” (p.33). Similarly, Morelock and Feldman (1992) define gifted children as “children showing sustained evidence of advanced capability relative to their peers in general academic skills and/or in more specific domains (music, art, science, etc.) to the extent that they need differentiated educational programming” (p.302).

However, in Morelock and Feldman’s (1992) definition, it should be noted that when we refer to young children, ‘potential’ or ‘promise’ should be considered rather than evident performance. In adults, accomplishments and expertise can be discussed, but in young children it is more reasonable to discuss promise or advancement (Robinson, 1993). Since young children are not reliable when they show abilities, it may be difficult for some gifted young children to show sustaining evidence. The prodigies whose accomplishments are impressive to adults are reported to be very rare (Feldman, 1986). Silverman (1999) also asserted that it is more realistic to include potential when we refer to gifted young children.

2.2.2. Diversity of giftedness in young children

When educators identify gifted children and provide appropriate education, the various
characteristics of young gifted children should be considered. Without consideration of gifted children’s characteristics, we will miss the opportunity to identify and encourage them to develop their potential. However, identifying the characteristics of gifted young children is difficult in regular classrooms.

The characteristics of gifted young children are accounted for and identified in the literature. The most frequently referred to characteristics of gifted children are early cognitive development such as high verbal ability (Lewis & Louis, 1991), superior memory (Moltzen, 1996), metacognitive skills (Davis & Rimm, 1998) and keen perceptiveness (Smutny, Walker & Meckstroth, 1997). Young gifted children also have long attention spans and insatiable curiosity, and prefer older playmates (Tannenbaum, 1992; Robinson, 1993).

These identified characteristics give educators a guideline in the education of gifted young children; however, many researchers warn about the generalization of such characteristics (Clark, 2002; Porter, 1999; Silverman, 1994; Smutny, 1997). Many of the characteristics seem to describe those of cognitively advanced gifted children rather than diverse gifted children based on expanded multidimensional intelligence theories. It has been established that different kinds of gifted individuals develop different kinds of characteristics - strengths and weaknesses (Walberg et al., 1981).

Even among gifted children, there exists diversity of giftedness in type and extent (VanTassel-Baska, 2004). The differences in a group of gifted children are as broad as in any other group of children. For example, the reading level of seven-year-old gifted children can range from sixth grade to college level. In addition, the domains where children demonstrate giftedness vary (e.g. academic, artistic and interpersonal) (Porath, 1993; 1996). Children’s
giftedness may not be evoked in the traditional class environment but may shine in the context of play or other environments. Therefore, children’s abilities are discerned by the deep observation of performance and potential (Van Tassel-Baska, 2003). Passow (1981) concluded that the nature of giftedness should be explored through viewing responses to enrichment activities rather than through conventional tests or checklists. Therefore, a more complete picture of giftedness in young gifted children would involve observation of behavior in diverse classroom settings, anecdotal information from parents and teachers, and child products such as art work, diagrams, inventions, Lego buildings, or stories written.

In addition to young children’s diversity in giftedness, their variable and unreliable performances and development are other factors that contribute to challenges in serving them. Smutny (1999) described young children’s physical, social, and cognitive development as rapid and variable. Some children may experience developmental spurts at key points in development, revealing abilities that could not be discerned earlier. The interests of a student may be piqued at some stage, motivating him or her to develop abilities in relevant areas. Cognitive and motor skills come suddenly; one moment the skill is not observable, then it suddenly appears. For this reason, testing may work at one time and not at another (Silverman, 1999). All children have different rates of development in their abilities.

All of these characteristics of gifted young children show how giftedness is elusive in its manner and context of manifestation. Similarly, Whitmore (1982) pointed out giftedness is often hidden in regular classrooms. The most effective way to recognize and identify giftedness is to use a variety of approaches over an extended period of time. Children should be regularly reassessed for new opportunities (Van Tassel-Baska, 2003).
2.2.3. Social emotional characteristics of gifted children

Another major current issue in gifted education is the social emotional aspect of gifted young children. Generally, young gifted children tend to adjust well socially and emotionally (David & Rimm, 1998; Janos & Robinsons, 1985). Gifted children are more independent, intrinsically motivated and self confident than their peers (Davis & Rimm). Especially, children gifted in social and emotional domains seem to have exceptional abilities to understand and communicate with others (Porath, 1996).

However, there are individual differences in social emotional characteristics. Especially, Silverman (1993) asserts that there is uneven development between cognitive and social emotional development of gifted young children. “Giftedness is asynchronous development in which advanced cognitive abilities and heightened intensity combine to create inner experience and awareness that are qualitatively different from the norm ” (p.3). The more advanced the ability, the greater the discrepancy between cognition and behavior (Silverman, 1986).

Especially, it is important to note that highly gifted children often feel difference, frustration and boredom. Highly gifted children are also pointed out as exceptional from the point of view of positive social emotional adjustment. These children frequently feel isolated in school because of their unusual capacity which may actually make it difficult for them to relate to their peers. When gifted children have to learn again what was already mastered a few years ago, they often feel frustration and boredom (Galbraith et al., 1996; Gross, 1999; Silverman, 1986).

2.2.4. Learning and teaching for gifted young children

In practice, based on the conceptions and characteristics described above, new paradigms
for gifted education for young children are needed. It is difficult to find a program to fit the diversity of their needs. Considering the diversity of giftedness in terms of domains and abilities, there cannot be a single program or curriculum that is applicable for all gifted children (Kaplan, 1982). Instead, the curriculum should be fluid and flexible (Tomlinson, 1996). Giftedness for children should be explored and developed through diverse enrichment activities over a period of time (Passow & Fraser, 1996). To explore and express diverse giftedness, multiple representations are encouraged and valued in class (Gardner, 1983). Many different symbol systems should be allowed in school so that children can develop their own abilities in using words, movement, drawing, painting, building, sculpture, shadow play, collage, dramatic play, or music. At the same time, program planning decisions should be made based on systematic assessment of children’s development over an extended time period. Gifted education should be designed to address students’ needs and provide a role of evaluation and assessment during planning (Tomlinson, 1996).

For assessment and development of children’s potential, understanding children’s diverse points of view, interests and abilities is critical in gifted education. Educators can plan and decide the direction of the curriculum appropriately based on their understanding of children’s own perspectives, interests and points of view, rather than adults’ view of gifted children. Bruner (1996) suggested that one direction of education is to help children to understand “how people come to know what others have in mind and how they adjust accordingly” (p. 161). Therefore, educators should start from children’s points of view and interests when they plan curriculum. Bruner asserted that when children’s point of view and their interests are considered in planning education, children can learn more meaningfully and engage in education more deeply.
VanTassel–Baska (2004) and Tomlinson (1996) also suggest that the initial and sustaining focus of content for gifted children should begin with the children's interests, needs, and abilities. In this way, children can have their diverse interests and needs met.

In addition to understanding children's perspectives and their abilities, another important thing to be considered is the social emotional aspects of gifted children. Many gifted programs are criticized as lacking appropriate social interaction and emotional care (Kitano, 1986). Gardner (1983) said that the less a person understands his own feelings and the responses and behavior of others, the more likely it is that he will interact inappropriately with them and therefore fail to secure his proper place within the larger community. Many gifted students often fail to find their place and feel social emotional crises. Appropriate social interaction is needed both for diminishing the social emotional risk and for encouraging learning. Through a cooperative and communicative activity, children can learn and construct knowledge and promote their own development (Dahlberg et al., 1999; Vygotsky, 1987).

Another consideration for gifted young children is encouragement of metacognitive skills. Metacognition is planning, monitoring and evaluating our thinking processes and what we know. Metacognitive knowledge comprises knowledge about our abilities, how to use learning strategies, and when and why to use them. Gifted young children are known to have advanced metacognitive skills (Davis & Rimm, 1990). Even though there is a lack of substantial evidence of advanced metacognitive skills in gifted young children, it seems clear that encouraging metacognitive skills contributes to their increasingly sophisticated performances throughout childhood (Moss, 1990). Gifted young children are known to acquire some of their advanced skills in problem-solving by interaction with their parents. Parents of brighter children encourage
metacognitive strategies by setting up questions and problems and letting children derive their solutions rather than giving them the answers (Moss). In school, these should be the ways to encourage metacognitive skills for young gifted children. Appropriate social interaction and suggestion of problems and errors could be ways for encouraging metacognitive skills, as many social constructivists suggest (Fullan & Miles, 1992). Especially, cognitive conflicts and disagreement provoke children to build higher order thinking, and provide the basis for learning within social interaction.

2.2.5. Portfolios, PBL, Project approach and documentation in Reggio Emilia

To meet diverse needs and interests of gifted children, many researchers and educators looked for alternative ways to educate gifted children. These include portfolio, Problem-Based Learning and Project approach. They have commonalities and differences, discussed below.

(1) Portfolios. Portfolios are frequently compared with documentation. In gifted education, instead of traditional assessment or identification measures, portfolios are used as authentic and ongoing assessment tools. A portfolio is a collection of products and observations about the students. In addition, it includes a systematic compilation of the children's progress in all developmental domains, particularly in complex mental skills (L. Coleman, 1994; Shaklee & Viechnicki, 1995). Portfolios can offer evidence of advanced development, especially in non-academic, non-traditional domains (L. Coleman).

Because both portfolios and documentation use children's works and artifacts, portfolios and documentation have many commonalities. First, these provide authentic and ongoing assessment rather than focusing on outcomes. In conducting documentation or compiling
portfolios, the teachers' role is a facilitator rather than an instructor.

There are also differences between portfolios and documentation. Portfolios are not based on the questions, errors or conflicts of children. Portfolios are generally evaluated based on a traditional standard, so systematic teacher preparation and children's good and completed performance are valued. Objectiveness of portfolios is examined by comparing empirical data. The correlation between portfolios and traditional intelligence tests is frequently studied (Wright & Borland, 1993). Meanwhile, documentation is more subjective; it includes teacher's subjective interpretation rather than objectiveness (Dahlberg et al., 1999). In addition, social interaction and group learning is more emphasized in the documentation process. Forman and Fyfe (1997) also indicated that documentation focuses on several children rather than one child.

(2) PBL (Problem-based learning). PBL has the most similar theoretical frameworks to documentation. This approach is currently being explored with gifted students (M. R. Coleman, 1995). In problem based learning, the focus of the curriculum is ill-structured problems. Students are encouraged to solve problems through interactions among students. Therefore, conflicts, errors and problems are essential to this approach, and social interaction and negotiation are needed (Gallagher, 1997a). Based on the social constructivists' theoretical framework, and on the fact that real world problems are needed for both PBL and documentation, PBL and documentation have many commonalities. The teacher’s role in PBL is as a facilitator rather than instructor to assist the students in identifying appropriate questions and to guide the students in finding the information they need to answer these questions. In this way, teachers encourage students to develop higher order thinking and self-directed learning.

There are differences between PBL and documentation. Usually PBL is used for older
students rather than young children. The PBL approach generally is not based on the observation of children's works, dialogue, and behaviors. PBL, rather, uses problems suggested by the teacher, based on the content of curriculum.

(3) Project Approach. The project approach is very similar to Progetazzione, rather than documentation, in Reggio Emilia. A project is an in-depth study of a particular topic that one or more children participate in (Chard & Katz, 1989). Projects consist of exploring a topic or theme such as “going to the supermarket” or “Dinosaurs.” This approach is usually seen in early childhood curriculum.

Educators such as Chard and Katz are closely related to the Reggio Emilia approach. Also, the social constructivist theoretical framework is similar. There are differences in whether documentation is used or not; results are shared with the public; and the theme is emergent.

2.3. Reggio Emilia and gifted young children

In the Reggio Emilia philosophy, there is no clear definition of giftedness of young children. Malaguzzi (1998) was very cautious to talk about the different cognitive styles. He mentioned that ‘children have common gifts, potential, and competence (p.79).’ He urged educators to recognize the universality of children’s potential and cautioned concerning differences in cognitive style and strategies because children are too young to be defined. This attitude relates to McBride (1992) who mentioned that some teachers can be particularly unwilling to label children at such an early age, and tend to stereotype giftedness, focusing only intellectual or academic giftedness. At the same time, Malaguzzi added that the wider the range of possibilities educators offer, the more intense will be children’s motivations and the richer their
experiences. Malaguzzi seemed to focus on nurturing more rather than nature. In this regard, his conviction seemed to be related to Bloom (1964), who supported the environmental and experiential contributions to intelligences.

Meanwhile, some advocates for Reggio Emilia mentioned different aspects of special education. As educators rejected the construction of the child as 'at risk,' 'in need,' or 'in lack of' (Moss, 2001) "to move from the child as a subject of needs to a subject of rights" (Smith, 1998, p.205), a psychologist specializing in special education in Reggio Emilia, Ivana Soncini, discussed 'special rights' as a descriptor for children with special needs (Smith). Even though they don't designate gifted children as having 'special rights,' on a theoretical basis, educators in Reggio Emilia value differences and try to bring out as much potential as they can. From this perspective, each child is different and this is considered to be positive. Children try to figure out who they are and who others are in a small group, and that is considered positive (Smith, 1998).

Especially, for children who have 'special rights,' Reggio educators focus on their social emotional support. These educators always try to find a clue to the child's own preferred strategies for learning. In this sense, this perspective gives the possibility for gifted young children to develop their abilities and, to develop socially and emotionally.

In the gifted education field, Barbour and Shaklee (1992) argue that the most salient reason to adopt the Reggio Emilia approach in gifted education is the common image of children. Children are strong, powerful, curious, and full of potential. (Rinaldi, 1998; Passow, 1979). As discussed, gifted education for young children needs a new paradigm because of difficulties in identification, assessment, appropriate curriculum for diverse needs, and planning. This research will try to find the possibility for this new paradigm in classrooms where documentation is done.
Chapter Three

METHODOLOGY

The purpose of this study was to explore the role of documentation for gifted young children. In order to examine the role of documentation in gifted education, this study asked questions related to educating gifted children to educators who adopt the Reggio Emilia approach in their school classroom. Through teacher questionnaires and semi-structured interviews, the role of documentation for gifted young children was explored, and examples of documentation conducted in classrooms were collected and analyzed. In this chapter, information on the participants, questionnaire design, data collection procedure and analysis is presented and discussed.

3.1. Participants

The participants in this study were 14 educators of young children who have adopted the Reggio Emilia approach in their classrooms in North America. Educators were recruited through electronic mail. Teachers were asked to participate if they had adopted the Reggio Emilia approach in their classroom and had experience in conducting documentation.

According to New (2003), an increasing number of educators are currently adopting the Reggio Emilia approach in their preschools and kindergartens in North America. There are online interactive groups and organizations such as the North America Reggio Emilia Alliance and the Reggio Canada group web site. The investigator first mailed out the questionnaire and the consent form for the interview to the members in the Reggio Canada group. The Reggio Canada
group is a web community where educators, parents and students in Canada share their interests and information on the Reggio Emilia approach. Many teachers who adopt the Reggio Emilia approach for their children are members of this web community. Also, the investigator distributed the questionnaire and consent form to teachers known to be adopting the Reggio Emilia approach.

Four participants replied to the questionnaire, and ten participants agreed to do an interview. All interviewees were living in the Greater Vancouver area, Canada. The interview was semi-structured based on the questionnaire.

3.1.1. Descriptive data on educators, children and schools

Background information about educators, children, and schools was collected in the first section of the questionnaire and the first part of the interviews. The role of participants in schools, other jobs, information on schools (e.g., location, determined characteristics of school) and information on children (age, gender, ethnic background) are presented below.

Role of participants in school

All participants (n=14) had experience teaching in schools where the Reggio Emilia approach is applied. Participants were asked to check any relevant items of roles in schools (See Appendix A, question 1). Ten teachers (n=10) checked multiples, at least two items. They are taking other roles in addition to being a classroom teacher. Six participants were teaching as instructors in post secondary schools. Among those participants, one participant had a third role as a consultant for preschools. Three other participants had roles as school administrators; one participant was a studio teacher. One of the noticeable things is that the participants have a high
level of educational background. During the interview, nine participants stated that they had masters degrees.

Location of schools

Twelve participants responded that their schools are located in Canada. One participant was working in Arizona, United States. Another participant has experience in Monterrey, Mexico. Among the twelve Canadian participants, eleven teachers have experience in British Columbia; one participant was working in Alberta.

Figure 3.1.1. Locations of schools

Children's age

Participants reported children's ages in their school. Respondents checked multiples, as the questionnaire asked them to check all ages that apply. As Figure 3.1.2. indicates, most respondents worked with 2-to-5 year-olds. Thirteen teachers stated that they have 4-year-old children as students. For 3-year-old children and 5-year-old children, respectively, there were 11
responses. There were nine responses for two-year-old children.

The ranges of children's age were varied. Five participants (n = 5) responded that the children they worked with are 2 to 4 years old. Two participants reported that they have 1- to 4-year-old children with whom they work in schools. There is also a 4-to 6-year-old class, a 2-to 8-year-class and an 8-9-year-old class.

![Figure 3.1.2. Age of children](image)

**Ethnic and cultural background**

Participants checked ethnic cultural background of children. All had a variety of cultural backgrounds in their schools. Except for the school in Mexico, participants reported that children have multicultural backgrounds. Especially, teachers in Canada (n=12) reported that most of their children are White, Asian, or mixed (usually mixed White and Asian). There are 13 checks for White and Asian respectively (n=13) and 12 checks (n=12) for mixed. Following mixed, there are Hispanic (n= 8), Black (n =5), and native Indian children (n= 3).
Size of class and gender ratio

Thirteen participants reported the number of children in a class. They showed that there are an average of 20 children in a class (SD = 4.18). There were a minimum of 16 children and a maximum of 30 children in a class. One participant did not check the number of children. Most participants (n = 9) have a balanced gender ratio in their classes. Four participants reported that they have more boys than girls, and one participant responded that there were more girls than boys.

Other characteristics of students identified by teachers

Eleven teachers reported that their classes include children with special needs, including Down syndrome, autism or blindness. Nine participants in Canada reported that they have ESL children in their classroom.

Five educators identified that their schools are university-attached schools, and three participants stated that they are college-affiliated schools. One educator acknowledged that she
applied the Reggio Emilia approach for her own research. One class was the method class for college students in early childhood education. Another participant in Canada said her class was French immersion setting. The participant who had experience in Mexico reported that all children are Hispanics. Most of the educators reported that children are the middle class (n = 9); a few (n = 4) reported that children come from the upper middle class.

3.2. Instruments and procedure

A questionnaire and interview were used to collect data from the teachers. Questionnaires are used extensively in research because they provide an efficient way of obtaining information for research problems such as different instructional methods (McMillan, 2004). In this study, the questionnaire was also used as the basic guideline for semi-structured interviews.

3.2.1. Questionnaire

A questionnaire (Appendix A) was used to explore the role of documentation for gifted children. The questionnaire in this study was developed by the researcher after an extensive review of related literature (See Table 3.2.1). The questionnaire was pilot tested with two teachers who practice documentation. They gave the investigator feedback, especially regarding the geographic information in the questionnaire. Based on the feedback, a few changes were made. The questions were posed to teachers in multiple-choice, checklist, and open-ended formats.

The questionnaire consisted of a total of 13 questions, divided into five topics:

(1) Questions 1 to 6 focused on demographic information related to the teachers, schools and
children.

(2) Questions 7 and 8 focused on how educators conduct documentation.

(3) Question 9 focused on how educators define and assess gifted children in their classrooms. This question was intended to figure out how educators describe giftedness in young children, and how their definition of giftedness influences the identification of gifted children (Hodge & Kemp, 2000). Question 9 also was intended to relate to question number 10. Question 10 explored how definitions of giftedness influence the role of documentation for gifted children (Barbour & Shaklee, 1999).

(4) Questions 10 and 11 focused on how teachers think documentation influences gifted children. These questions were intended to discover how documentation promotes children’s development.

(5) Questions 12 and 13 asked about the benefits and challenges in conducting documentation.

Table 3.2.1. Questionnaire design

<table>
<thead>
<tr>
<th>Sections</th>
<th>Questions</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Background information</td>
<td>1-6</td>
<td>New (2003)</td>
</tr>
<tr>
<td>c. Definition of giftedness in participant’s class</td>
<td>9</td>
<td>Hodge and Kemp (2000)</td>
</tr>
<tr>
<td>e. Benefits and challenges of documentation</td>
<td>12-13</td>
<td>Fraser and Gestwicki (2002)</td>
</tr>
</tbody>
</table>
3.2.2. Procedure

At first, the questionnaire and the coversheet (Appendix B) were emailed out. The researcher recruited participants through direct electronic mail-outs to educators known to be adopting the Reggio Emilia approach and an advertisement (Appendix C) requesting participants in Reggio Canada group. Through the coversheet, the researcher notified participants that by completing and returning the questionnaire it was assumed that participants' consent had been given to use this information in the study. Two months were given for participants to complete the questionnaire.

Because the response rate was very low (16%), the researcher added the method of interview. Again, the researcher recruited participants for interviews through direct email and advertisement in the Reggio Canada Group. The consent form (Appendix D) was distributed. Thirteen educators responded to the recruitment for an interview; ten of them agreed to do an interview and made an appointment. Each participant signed the consent form before the interview was conducted.

3.2.3. Interview

In addition to the questionnaire by email, an interview was added. The investigator interviewed each participant based on the questions on the questionnaire, thereby allowing the researcher to have more responses and understand better the intent of participants. For recruiting, the researcher e-mailed the consent form (Appendix B) to the members of the Reggio Canada group and known teachers who are involved in the Reggio Emilia approach. The investigator asked whether they were interested in participating in an interview. Through email, the researcher
made an appointment with each educator. Each interview lasted on average 50 minutes, but they varied from 40 to 100 minutes. All interviews were held in the educator's schools or any place convenient for them. All interviews were audio taped and transcribed. Interviews were semi-structured based on the questionnaire. The researcher asked follow-up questions. For example, after the researcher asked "When do you conduct documentation, what tool do you use?," the researcher added, "What is the reason you are not using the video camera or audio tape any more?" Also, interview participants were asked to give specific details on the practice of documentation.

3.3. Data analysis

After the data collection was completed, the questionnaire responses and interviews were transcribed, coded and analyzed by the researcher. Questions 1 to 5 were analyzed for the description of participants. Responses of questions 2 to 5 were entered into the Statistical Package for the Social Science (SPSS). Descriptive analyses were used for summarizing the information.

Responses of question numbers 6 to 13 were analyzed using the Lincoln and Guba (1985) guidelines. At the beginning of analysis, the smallest piece of information was selected that can meaningfully contribute to an understanding that the researcher needs to have. This information was sometimes a sentence, sometimes a paragraph. At the second phase of analysis, according to Corbin and Strauss (1998), the information was analyzed with selective coding. Corbin and Strauss suggested selective coding to integrate major categories to build a larger theoretical scheme. As the selective coding was undertaken, the items of information were
compared across categories to discover relationships and to confirm findings. Some categories were collapsed or integrated. For each group of questions, a few major categories eventually emerged. Results of the analyses are discussed in the next chapter.
Chapter Four

RESULTS

Chapter Four presents the responses of the educators to the questionnaires and interviews. Following the demographic information from questions number 1 to 6 in Chapter Three, responses to questions number 7 to 13 are described in this section. Questions number 7 and 8 are multiple choices, and other questions are open-ended; these responses are described as quotations. The findings are represented as they relate to the research questions.

- How do educators conduct documentation in their schools? (Questions number 7-8)
- How do they define giftedness and have they ever observed giftedness through documentation? (Questions number 9-10)
- How do educators describe the relationship between documentation and gifted young children? How do they think documentation can help young gifted children to develop their abilities? (Question number 11)
- What are the benefits and challenges of documentation? (Questions number 12 and 13)

4.1 Conducting documentation in North American schools

This section deals with the inquiry of how educators conduct documentation in their schools. Questions number 7 and 8 asked teachers what kind of tools they use for documentation and what the procedures of documentation are.
4.1.1 Tools of documentation

Question number 7 is, ‘Do you conduct documentation as practiced in the schools of Reggio Emilia? If so, when you conduct documentation, what tools do you use?’ This is a multiple-choice question. Choices are (1) Video recorder, (2) Transcription of children’s dialogue (Pen and paper), (3) Audio recorder, (4) Digital Camera (5) Collection of children’s work (6) Other.

<table>
<thead>
<tr>
<th>Tools of documentation</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Video recorder</td>
<td>12</td>
</tr>
<tr>
<td>(2) Transcription of children’s dialogue (Pen and paper)</td>
<td>14</td>
</tr>
<tr>
<td>(3) Audio recorder</td>
<td>8</td>
</tr>
<tr>
<td>(4) Digital camera</td>
<td>14</td>
</tr>
<tr>
<td>(5) Collecting children’s work</td>
<td>14</td>
</tr>
<tr>
<td>(6) Other</td>
<td>Memory, email, running documentation, PowerPoint program</td>
</tr>
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</table>

All participants indicated that initially they had used all of the tools listed. However, as video and audio recorder appeared too time consuming or not appropriate in their classroom situation, two participants responded that they don’t record video anymore and six participants responded that they don’t use an audio recorder any more. Educators explained that audio/video recordings are time consuming to transcribe and sometimes the environment is not proper. Eight
participants said that they prefer transcription of children's dialogue using paper and pen rather than using a video or audio recorder.

We don't use video or audio frequently. Because the classroom is too noisy. In the past we tried to use a tape recorder or video, but it was not successful.

We have done those (video and tape recording) before a couple of years ago. It was just the work that became involved in transcribing. Tape recording and transcribing literally takes hours. So we found that it is easier to scribble things down.

A few educators replied that they have other documentation tools. Five participants talked about 'memory' as an important tool for documentation.

We transcribe children's dialogue, often during a group time. But not necessarily. Sometimes we are doing it after the fact. We will do a discussion and three teachers will use each other's memory and try to write down the actual things with children.

I will say the most important thing is actually the memory. The memory and the conversation among teachers and children. So very often in the afternoon the teacher will talk over the phone and discuss what happened at school and take a look...Kind of ongoing documentation is happening ...Even though it is not written down.

Besides memory, there was 'running documentation' for other documentation tools.

We also have the running documentation which we put in the binder, and so the parents
could get it easily. That is more like a running record so that parents could look at what was evolving in the classroom. Everybody could open it up, and have a look at it.

Also, an educator added using email for documentation, posting digital documentation on a listserv for families of children in the class. Another noticeable thing is such technical progress in the tools of documentation. Educators frequently used digital cameras (rather than film cameras), email, and PowerPoint for documentation.

4.1.2. Procedure of documentation

Question number 8 also asked about the procedure of documentation. "When you conduct documentation as practiced in the schools of Reggio Emilia, what procedure do you use?" This question had multiple choices: (1) Observation of children as informal watching, (2) note taking of children’s dialogues and behaviours, (3) Collections of children’s work, (4) Teachers’ discussion sharing reflection and interpretation on children’s learning process (5) Planning the next step of curriculum, (6) Exhibiting documentation (7) All of them, and (8) Other.

All fourteen participants responded that all items listed are applied for the procedure of documentation in their schools. Two participants checked (8) other and described meeting with parents to discuss observations and interpretations, documenting to get feedback, and discussing with colleagues from other schools.

All interviewees described their procedures in conducting documentation. Description of procedures is closely connected with the benefits of documentation. Here a few comments of interviewees regarding the procedures are introduced. Regarding (1) observation of children as
informal watching, interviewees said that they always watched, listened to, and observed children.

All the time we are watching how children are using materials, what they are doing and what they are drawing and how they are playing. So we are constantly watching. We do observation continuously of the children and we are so aware of what children are doing. Practicing documentation, I am impressed that the whole time we are so aware of what is happening. I am tuned in to understand what children say and what they do.

(2) Note taking is related closely with the tools for documentation. A participant described note taking as follows:

I can quickly go and get the camera or a piece of paper. And just record the documentation of what is happening, even if it is only a little. Sometimes what happens is, that grows into something much more and has really the potential to show what a child is thinking in the middle of a piece of work or in creating something spontaneously or making something and a little discussion is going on between the child and a teacher.

(3) Collection of children’s work. All participants said they collect children’s work such as drawings, artifacts, and so on.

We very much do that. Children know that their work is collected for the board and because we kept that for documentation, children let us keep their work. Because they know that, first of all, it will be favored, we treat their work with lot of respect and also
they understand their work is very valued by the teacher and by the school.

(4) Teachers’ discussion sharing reflection and interpretation. All participants discussed sharing reflection and interpretation of recording. Four participants responded that they even discuss after work.

After work, very often, we talk about what was going on... And always what happened comes up in the conversation. We often suggested this one will happen next time.

Very much... we often telephone at night. Because something has happened and what we could do about that to take this discussion further. There is lots of discussion often so that we can think about how we can draw the class.

(5) Planning the next step of curriculum. Fourteen participants reported that they planned the curriculum based on children’s interests.

We will bring documentation to the whole group of children for discussion and then we try to engage in the interests of the group. If the group is very interested, we might decide for children to find out more. We will rather pick up the interests of children in classroom.

However, three participants also added that they didn’t always plan based on children’s interests. Sometimes they adopt determined themes around special holidays.

We say we don’t predetermine the curriculum but we do, because you know, you have to
start the year somehow so you know what’s been successful and you have to make some
decisions what you are going to do…So we don’t have a set curriculum but we do have
things. During the years we found we do this little bit of Halloween, we will do a bit
around Christmas. We always do a few weeks doing Chinese New Year because it’s so
much part of our children, so we actually have a really fun time around that.

(6) Exhibiting documentation. All educators responded that they exhibit documentation.
Documentation is exhibited in many forms such as panels, video clips, small exhibitions, or
constructions. Two educators said that documentation had not been put for children in her school,
but for adults such as parents.

Mostly in the past, our documentation had been strictly done for the parents to educate
parents, to show them what’s happening in the room, help them to understand the learning
that is happening in our room. Because they want us to do ABC and numbers, sort of that.
So we used documentation a lot to help parents to understand what level of learning we
are doing.

One participant described her school’s unique way of evaluating and exhibiting - a ‘learning
museum’ session.

We have evaluation time in June, assessment session in June. This kind of evaluation was
given to parents. We try to promote children’s learning in each criterion besides the
productions. We called this production a learning museum. And parents came and
children interacted with parents in their learning museum. Parents can ask questions and
children can present what they are learning. So they were talking about graphics; they were talking about internal parts of a plane; all of them made points and showed the parents the learning procedures, not just the final production.

4.2. Definition of giftedness and gifted children in classes

This section presents educator’s definitions of giftedness and their experience with gifted children in their class. Questions 9 and 10 asked educators for their definition of giftedness and examples of gifted children in their class. The two questions are related to examine the relationship between their perceptions and awareness of giftedness in class.

4.2.1. Educator’s definitions of giftedness

Question number 9 asked educators, “How do you define giftedness in young children?” The responses of teachers who adopt the Reggio Emilia approach are divided into three categories. (1) Experience group, (2) Multiple intelligence group, and (3) every child is gifted group.

<table>
<thead>
<tr>
<th>Definition group</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Experience group</td>
<td>6</td>
</tr>
<tr>
<td>(2) Multiple intelligence theory group</td>
<td>4</td>
</tr>
<tr>
<td>(3) Every child is gifted group</td>
<td>4</td>
</tr>
</tbody>
</table>

First, six teachers define giftedness based on the children whom they have experienced.
They defined giftedness based on what they see in children in their class. They describe these children as "highly intellectual, highly creative, above the average, or superior." These six respondents were also aware of gifted children's social emotional characteristics. They said:

Children who think outside of the box, are highly creative, are often not very interested in teacher-led discussions (their thoughts are elsewhere), can be highly focused on areas of their particular interest, can hold several ideas in his/her head at once, generally very curious, demonstrate original thought, love to explore, quirky sense of humour, may have strong leadership potential, can be physically restless, can transfer knowledge/understanding across situations, thinks poetically or in metaphor, very independent, asks many questions....

I think learning very often comes easy for the gifted children. They pick up concepts very quickly. I think... they don't think the same way as other children as their age. Um... preschool can be hard for highly gifted children. Because they are not thinking in the same ways as the other 3 and 4 year olds are. Their thoughts and their ideas are more extensive and they look at things in different ways and like they can get in a lot of problems in preschool.

They would rather associate with adults in the classroom. Their relationship with the children sometimes suffers, because 3- and 4-year-old children, they like to play with trucks, water and .... Then the highly gifted children...they want to take it apart to see
how it works and they want to go deeper into different areas.

There are four participants in the second group. They defined giftedness based on multiple intelligences. They emphasized that gifted young children are those who excel in 'one area or some areas.'

When I am observing kids in a good setting, for example, I see someone that is building, constructing something above the average. I will say there are kids who have more potential, for example, linguistics, logical mathematical or spatial skills. I am not really sure one person could be gifted in everything. But if you do really recognize the potential of development, I think you could go very far away from everybody. You can go really high.

My current thinking is... that (giftedness) is domain-specific and culturally influenced. Gifted children's experience can be across the domains. It is not just based on traditional IQ.

I found some children have particular giftedness and ability in a particular area, not all of the areas... You can have a child who is verbally not very proficient yet but they can illustrate that idea by drawing or painting or by building things that they can articulate their words. The children at this very young age, you can see unevenness. But I also see that there are some children that come with lots of abilities that seem to span right across. Some gifted children are well-rounded; they are capable in many areas....
In the third group, when the definition of giftedness was asked, four participants responded as ‘every child is intellectual.’ One participant responded that she doesn’t define qualities of children, believing in all children’s creativity, intelligence and eagerness. Another participant replied that ‘this is something that we don’t identify in ECE.’ Two participants responded that all children are gifted. One of them said, “I think all children are gifted, they really are, even special needs children are gifted.” However, two participants among the four expressed that they have difficulties in defining giftedness.

I found this question is really challenging...Gifted children are much enriched culturally and linguistically in every possible way. They are incredibly full of general knowledge. And I will say it may be the matter of pace of learning. Some children sometimes learn very fast and there will be a specific area... It is hard to define... you know Malaguzzi said, every child is gifted... In the middle of the year without teaching, children recognize every one of eighteen children’s names on nametags without being taught. Maybe that’s a gifted child. My notion is probably every child has the gift...

4.2.2. Gifted children in participants’ classes

Question number 10 asked participants, ‘Have you observed giftedness in your class?’ Participants’ responses are divided according to their definition group - (1) experience group, (2) multiple intelligence group, and (3) ‘every child is intellectual’ group.

First, (1) Experience group provided examples of gifted children in their class. The six participants in this group are aware of the existence of gifted children and their difficulties as well. Participants in this group commented on gifted children’s social struggles or behaviours together.
This child offers creative ideas, often in very poetic, metaphorical ways... Sadly, a year later, his first grade teacher sees him as a behaviour problem, a “naughty boy” who won’t settle down and learn.

He just wanted to be close with teachers. He didn’t play with other boys and girls very much at all... he wanted the teachers’ attention most of the time because that was..., teachers are more his intellectual peers...He asked questions constantly and he wanted explanations. But once he is engaged in activities, he is very very talented.

We are working in the classroom, and a few of them are gifted. Quite often, not to put them in the box, they have difficulty socially. Maybe because, they think far beyond, I am not sure why.

Secondly, the participants in the multiple intelligence group projected their description regarding children’s abilities in various domains.

When he was creating this building, I can see he can keep proportions by doing this. I can see he can develop different areas, in that area I have seen a lot of interests in construction. For example, he was doing this kind of construction thing; he liked blocks and puzzles very much. He is also making maps and making designs and houses something like that. I would say he has potential to spatial skills. I am becoming aware of that.

I had to bring in that she was very very gifted in math. She was 4-year-old, and she went
on all the math books in grade 1 and she went through all the math books. So I’ve got the grade 2 books and I’ve got to the grade 3 books, then she was being challenged.

In the third group among four educators, two participants didn’t provide any examples; two participants who indicated ‘every child is intellectual’ provided their examples of gifted children.

A few children can really find their place in a class very quickly, that have a gift of being a very harmonious child. You know, that’s how I see a kind of giftedness. At the same time, we also get children, of course, artistically very gifted. Some children have a very artistic sense of color or line or know how to do things representationally at the very young age. Anyway, I found that is a hard question to answer the giftedness. You know, I had the children in the past, they have really understood and read stories to other children fluently at the age of three. That’s obviously gifted.

4.3. Role of documentation for gifted young children

Question number 11 asked educators, ‘How do you think documentation can help gifted children to develop their abilities and/or help teachers in supporting their development?’ All fourteen participants, including the participants who didn’t identify giftedness, responded.

4.3.1. Role of documentation for children

Participants responded that documentation enables gifted children to learn in depth (n=10), revisit their thought and work (n=10) and enhance social interaction (n=9). They added
that documentation also enables gifted children to value themselves (n=4). Documentation leaves evidence of their thinking and ideas (n=3), and documentation generates interests (n=3).

Table 4.3.1. Participants’ responses to how documentation can help gifted children

<table>
<thead>
<tr>
<th>Participants</th>
<th>1</th>
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<td>Revisit/remember</td>
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<td>Generate interests</td>
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In depth learning

Ten participants mentioned that documentation in class provides gifted children with in-depth learning. They commented on the shortage of previous schools – not providing in-depth learning in early childhood classrooms. Also, they commented that documentation enables gifted children to learn deeply.

I think it will further their ideas and their wants to investigate more, so I think this distinctly comes to deepen their knowledge, very much so. I think documentation stops
children and teacher jumping from one topic to the other. I think many classes do this, they do apples one week and next week they do a different thing. I think when we do apples, we investigate apples, children do they really sparkle their interest. I think the gifted child can focus more on their exploration of something... They are interested in something... I think you can extend that interest in a sense. It (documentation) expands the knowledge of their thought processes that they are involved in, and helps them to think of theories, how we can use tools....

There is a lot of benefits for very capable children. It is a wonderful way of focusing on their interests. And I think having in-depth learning rather that just here and there. You know how to explore something in-depth which I think is good for the child, because you really come to know something.

Social interaction

Nine participants indicated that, through documentation, gifted children interact with other children and all benefit.

He (a gifted child) was getting involved in, especially in the part of mixing the paints and he had to work with two other boys of his age. Because they were the paint mixers and he was excited about that and it was important to be with the children and cooperate...He kind of lost himself in the excitemetn of the project to actually cooperate with other kids. ...He was a difficult kid to be engaged with other kids. Social interaction was the biggest benefit for him, I think.
I think the values that underlie the process of documentation help gifted children see other children’s thinking and consequently help them learn to take others’ perspectives into consideration.

Regarding social interaction, three teachers responded that sometimes verbally gifted children are helpful in group discussion when teachers documented.

They have really good language skills at this age. They have really good social skills as well, especially with adults, and you know that connections... that you can use them to really move things along...”

Because they always bring in new ideas... I think that they are very intelligent. They were using that in our setting to learn and to help the project move along because they just always had the language. It’s also very difficult when you work with children that don’t have the language.

Participants (n=12) emphasized that social interaction is helpful to all children in the group. Many participants (n=12) emphasized that documentation is not only for gifted children but for all children in class. They indicated that they don’t tend to single gifted children out.

Group discussion is not only for gifted children. I am much more aware that everybody has something that they can bring in our offering. So I don’t tend to think of ...anybody being more special...
In group dialogue, I think for some children there are a lot of benefits for children when they have group discussion and group dialogue. So I would never do it only for gifted children. There is less thinking about, "Okay, this child is gifted or this child is slower." It is more about there is a kind of community, we are working constructively toward a particular goal, and they all do in their own way, their own particular languages."

Revisit/recall

Ten participants mentioned that documentation provides gifted children the opportunity to revisit their ideas and work.

Repetition is also very important. Because children always learn from their experience. They always learn...they can experience at a different level when they revisit. Some children do just basically try to. But the more competent child, they can represent their thoughts in a more detail when they revisit their experience.

They revisited. For example, we had a child with a real fish; she was still there. It was long after everybody had his or her turn, she just explored that fish. She looked and opened its mouth, opened its belly. She looked in and felt in, and she got the head and she dropped it and she dropped its tail and she was feeling the weight, because it was really big. She kept lifting it and letting it fall, lifting it and let it fall. So we took a whole series of photos of all these different things. She did very very early drawings, and we noticed that drawings had changed as she explored the fish more. She is getting more and more details as she revisits her work.
In addition, participants said that documentation makes children feel self-valued (n=4), generates interests (n=3), and leaves evidence of children’s abilities (n=3).

4.3.2. Role of documentation for teachers

Participants also responded that documentation is helpful for teachers to be aware of children’s abilities, capacities and interests and seeing the evidence of children’s abilities and thinking processes (n=10). Four participants added that through documentation they were aware of ESL gifted children. Teachers also added that documentation helps teachers to encourage children’s capabilities by preparing the environment (n=7).

Table 4.3.2. Participants’ responses to how documentation helps teachers with gifted children

<table>
<thead>
<tr>
<th>Participants</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware abilities</td>
<td>V</td>
<td>V</td>
<td></td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Aware ESL gifted</td>
<td></td>
<td>V</td>
<td>V</td>
<td>V</td>
<td></td>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Provide environment</td>
<td></td>
<td></td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>7</td>
</tr>
</tbody>
</table>

**Teachers’ awareness of children’s abilities**

Documentation helps teachers to be aware of children’s abilities. Eleven teachers stated that documentation is very helpful to find out children’s abilities and capacities. They provided examples of awareness of children’s abilities through reflecting and revisiting the ideas and thoughts of children even though the child showed behavioral problems.
Notice how many times this child offers creative ideas, often in very poetic, metaphorical ways...By documenting the conversation, I am able to reflect and revisit his ideas (as well as the others, of course). Sadly, a year later, his first grade teacher sees him as a behaviour problem, a “naughty boy” who won’t settle down and learn.

There’s obviously a bunch of behaviour issues going on... They don’t want to sit down; they don’t have trains. These two little boys actually have whole theories going on, and they are trying to play it out inappropriately in terms of the teachers and the other children saw it, because it’s too noisy...But if you are going on and talking to them, I can see that they have a whole big plan, they just don’t know about the appropriate way to play out that moment. So getting them down and thinking about their theories, where, what is the better plan for them to carry it out at that moment and how could they carry it on further, they have amazing ideas, They know about forces and movement. I would say these children are very gifted, you know, they are amazing printers.

Four teachers mentioned that they could be aware of ESL gifted children through documentation.

When we were documenting, I did think and realized how smart he was... The way he worked was amazing. I think he has spatial intelligence. He designed the drawbridge. He was a Mandarin speaker, but his beautiful drawings for the drawbridge, he didn’t need to speak English for that, right? All Mandarin, he could do the design, he could collect the materials, and make the drawbridge.
I think it is absolutely amazing because look at here, this little boy who did these knights. This boy had not much English, we would not be able to realize how he smart was. If we hadn’t documented it... it made us really see his capabilities. I would miss that in early days, before we did documentation. It gives them the opportunity to use their strength and show us what they are capable of doing.

Preparing the context

Seven teachers mentioned that they could be aware of children’s capabilities and interests so that teachers are able to prepare the context, including environment and materials.

You are probably a little bit more able to help a child’s interests. You can help them to flower. You can choose ways and materials that help children to think deeply through documentation. I think others can teach with things such as stories and songs... But they might be short in help.

I think we can plan more meaningfully. So the benefits of documentation to children automatically, as we are paying attention to them knowing how do they think, feel, what ideas they do have, we are going to make rooms much more meaningful.

I think the more closely you follow the aspects of the documentation, the more likely you are going to think more deeply about what children,... the more likely you are going to be able to come with a better understanding and better material for children’s learning.
4.4. Benefits and challenges of documentation

Questions 12 and 13 asked teachers about benefits and challenges in the use of documentation. Many benefits overlapped with the role of documentation for gifted children. In this section, only benefits that were not introduced in section 4.3. are presented.

4.4.1 Benefits of documentation

For the benefits of documentation, the most frequent response was the parents’ awareness and involvement (n=8). Six participants indicated that documentation enabled them to keep the level of excitement in teaching. Four educators indicated that documentation helped them to construct the image of the child. Two educators responded that they can remember children’s thoughts and ideas better though documentation.

<table>
<thead>
<tr>
<th>Benefits of documentation</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents’ awareness and involvement</td>
<td>8</td>
</tr>
<tr>
<td>Keeping the level of excitement</td>
<td>6</td>
</tr>
<tr>
<td>Constructing the image of the child</td>
<td>4</td>
</tr>
<tr>
<td>Enhance teacher’s memory</td>
<td>2</td>
</tr>
<tr>
<td>Other: ‘Documentation is very useful to teacher’s education,’ and ‘we could make a strong sense of community through documentation.’ and ‘It is neat to have the artifacts of all children’s work every year.’</td>
<td></td>
</tr>
</tbody>
</table>

First, eight educators indicated parents’ awareness and involvement as benefits of
documentation. They said that parents could be involved in school and understand their children's capabilities, philosophy, and development through documentation.

Because parents don't speak much English as their first language, so the parents were a little bit shy to come in to school. But this project pulled them in, and so much in. So they did the whole Chinese dragon for us. The parents get involved right away. They felt very much part of the program.

Parents don't understand that unless you document. Over and over again, documentation you produce for parents, that invites them, they had no idea that you were thinking or you knew that. They had no idea, but later they saw and read documentation, I see them understand children.

I found that always every year parents will comment they get to see their children's work, not just their own that goes home. So not that you want to compare other children, compare a child to another child. But I think it helps them to realize that there's the development. At three years old, they are not expected to be drawing the perfect little houses or things. It helps parents to see their continuity, because they have seen older children's work in the documentation and they can think 'Oh, yeah, that's where we are going or that's where we came from.'

Secondly, six participants mentioned that the ‘teacher can keep the level of excitement.’
They described that they can enjoy teaching children.

You know there is a lot of joy and the excitement .. I think both. I think it is both. As an educator you keep inspiring yourself and you keep the level of energy... I observed a number of years you feel empty in other classrooms. So I think for us it is so surprising to keep the joy and excitement. You are not going to have that empty feeling. We are very sensitive and very open, at the same time, we are very excited about what we are doing.

Educators also indicated that they can construct the ‘image of the child’ through documentation (n=4), and they could enhance their memory (n=2).

One very significant benefit to using pedagogical documentation has been an enhanced ‘image of the child.’ In my own research with parents, colleagues, administrators, and community members (having them view and respond to examples of documentation), there was an overwhelming response of ‘we really underestimate the intellectual abilities of young children, don’t we?’

Other benefits were that “documentation is very useful to teacher’s education,” “we could make a strong sense of community through documentation,” and “we can have the artifacts of the whole school year.”

4.4.2, Challenges of documentation

Question number 13 asked teachers about the challenges of documentation. The most frequent response was that “time is the biggest challenge in practicing documentation” (n=11).
Other responses are manpower shortage (n=5), parents’ pressure (n=4), “when there is no language of children” (n= 3), and shortage of space for keeping documentation (n=3). It also is hard to find teachers who can share the philosophy (n=2).

Table 4.4.2. Challenges of documentation

<table>
<thead>
<tr>
<th>Challenges of documentation</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Time consuming</td>
<td>11</td>
</tr>
<tr>
<td>(2) Manpower shortage</td>
<td>5</td>
</tr>
<tr>
<td>(3) Parents’ pressure</td>
<td>4</td>
</tr>
<tr>
<td>(4) Children don’t express language</td>
<td>3</td>
</tr>
<tr>
<td>(5) Space (Storage of documentation)</td>
<td>3</td>
</tr>
<tr>
<td>(6) Sharing philosophy with other teachers</td>
<td>2</td>
</tr>
<tr>
<td>(7) Other... cost, no mentoring for teachers, sometimes children don’t understand the setting, managing discipline, hard to essence the words down, gender separation in projects, sometimes teacher’s recording procedure is invasive.</td>
<td></td>
</tr>
</tbody>
</table>

Eleven teachers responded immediately that shortage of time is a challenge.

Time, time, and time!! The biggest challenge is finding enough time.

You need to have time to meet and care meeting and talk about it, yeah, very time consuming.
The second most frequent response \((n=5)\) was the ‘man power’ shortage to organize, transcribe, exhibit and store documentation. Four educators mentioned that they have difficulties with parent pressure.

Because parents are curious about their child, they still want each part of documentation and still want to see their children represented there. So that causes sometimes causes problems. What happens is this, we try to compromise, we try to have at least one item of a child, a photo, a drawing or a painting represented in the bulletin board. Then maybe not everybody will be quoted or talked about in the written pieces but we do. Why we had been doing this and what we had investigated....

There is sometimes pressure from parents to have documentation and their expectation... and that’s another challenge...

Another challenge is when some children don’t express themselves with any materials \((n=3)\).

Sometimes, you know, when a child does not say anything and had not contributed anything to conversation, is where we have to be careful...

We found that it is hard to document when a child does not have any language.

It was indicated that securing space for keeping documentation is one of the challenges
Keep those in portfolios in the back storage. It’s hard to keep things, especially things are not flat... Space is an ongoing problem.

Also other two educators said it is hard to find other teachers who can construct the philosophy of Reggio Emilia together.

The other challenge I encounter is finding interested colleagues to think together with and to reflect on documentation with. Teaching is often such an isolating profession.

We tend to teach behind closed doors.

Other challenges that each educator indicated were cost, no mentoring for teachers, sometimes children don’t understand the setting, managing children’s behavior, hard to summarize the words down, gender separation in projects, and the sometimes invasive recording procedure of the teacher.

4.5. Summary of results

Teachers indicated that they adopted documentation suggested by the Reggio Emilia approach. At the same time, there were a few differences in detail in procedures and techniques of documentation, depending on teachers’ needs and situations.

Teachers in this study had various conceptions of giftedness. The experience group and multiple intelligence theory group generally were aware of children’s giftedness and described the characteristics of giftedness in their class. The third group of people mentioned that ‘every
child is intellectual' and refused to define giftedness, though a few people in third group could provide examples of giftedness.

Teachers responded that documentation promotes gifted children’s in-depth learning by revisiting their thoughts and works, and enhances social interaction with peers. Moreover, documentation helps teachers to be aware of children’s abilities and to be ready for materials and context for learning. There are other benefits, such as parents’ involvement and teacher’s level of excitement. At the same time, challenges were mentioned, such as time, manpower shortage, and parents’ pressure.

These results will be discussed further with related research questions and literature review in the next chapter.
Chapter Five

DISCUSSION

Chapter Five presents the discussion about the main findings of the study in relation to the research questions as well as the issues dealt with in the literature review. The discussion of the findings is presented in accordance with the research questions. Also, some insights and implications for teachers and parents in educating gifted children and conducting documentation are discussed. The findings can assist teachers and parents by increasing their understanding of the practice of documentation and its role for gifted young children. Finally, the results of this study stimulate further study in the area of education for gifted young children and practices of documentation in regular classrooms.

5.1. Conducting documentation in North American Schools

Many educators who are inspired by the Reggio Emilia approach in North America (mainly in the western part of Canada) are currently conducting documentation in their schools. These teachers follow the techniques and process suggested by the Reggio Emilia approach. The usage of tools and techniques in North American schools is consistent with the description of documentation in the literature regarding the Reggio Emilia approach (Gandini & Goldhaber, 2001; Vecchi, 1998). Also, the procedure of documentation is congruent with the negotiated learning process suggested by Forman and Fyfe (1997). Participants follow the procedure of observation and collecting, selecting and reflecting, planning, and exhibition and provoking (Gandini & Goldhaber).
As the results showed, documentation was thought to be an adoptable element for teachers in North American classrooms (Katz, 1997). Breig-Allen and Dillon (1997) and Saltz (1997) also showed that, when inspired, educators try to implement the approach. At first, they put priority on documentation in their classroom to show children's learning. This may be because, among other principles of the Reggio Emilia approach, documentation is the most visible tool in the Reggio schools and all the procedures of documentation reflect the Reggio Emilia approach. Some teachers in the study mentioned that even though they did not understand the Reggio Emilia philosophy and method fully, they tried documentation at first, and then documentation helped them to understand the philosophy and to construct the image of children (Malaguzzi, 1998) as powerful and competent.

The results also showed that teachers kept the element of documentation and procedures suggested in the literature; however, at the same time, there are many different details in choice of techniques and procedures in documentation. For example, regarding tools of documentation, teachers preferred transcription of children's dialogue using pen and paper rather than video recorder or audio tape recorder. They were also developing their own unique documentation tools such as memory, 'running documentation' in a binder, posting of digital documentation on a listserv for families of children in the class, and PowerPoint for documentation. Regarding procedures of documentation, sometimes teachers predetermined curriculum around Christmas or Halloween. Some teachers did not share documentation with children. Also, the involvement of the community was relatively rare. Various differences and commonalities are described in Table 5.1.

There seemed to be many reasons for the differences noted in Table 5.1. First, different
contexts result in different documentation. As the cultural and historical background of schools in North America is different from the city of Reggio Emilia, the ways of documentation are different. As Gardner (1997) said, “No one could transport Diana school in Reggio Emilia to New England” (p.18).

For example, in this study, children, teachers and parents were found to be involved in children’s learning very deeply; however, the involvement of community was relatively rare. Meanwhile, in Reggio Emilia, schools are opened to the citizens with an exhibit of children’s work as documentation (Vecchi, 1997). The public are also involved in children’s learning. This difference comes from the historical context. While in Reggio Emilia people and children have historically a very strong sense of community and children are considered as citizens (Edward, Gandini & Forman, 1998), it is difficult to find this historical or cultural background in preschools in this study. Only one participant, whose preschool was located in a community centre, indicated the possibility of community involvement, saying, “At the hallway, it’s open to the community and people often stop and look at it.” Likewise, depending on each school’s situation, the procedure of documentation can be different.

The second reason for differences between the Italian and North American contexts is that educators in the study keep testing and developing new techniques and new elements of documentation in their schools to make documentation their own. As educators in Reggio Emilia are never satisfied with rote forms of learning and teaching (Gardner, 2001), teachers in this study showed that they are studying and researching their own ways of documentation. Teachers in this study were developing their own unique documentation tools such as memory, ‘running documentation,’ email posting of digital documentation, and PowerPoint daily documentation.
The third explanation is the practical constraints, especially in different tools and techniques. Participants in this study appeared to consider the time and manpower constraints in their schools and then to choose the techniques of documentation. They avoided the video or audio recorder, as viewing and transcribing video or audio tape is a very slow process. Also, the number of projects and amounts of documentation per year were not asked in this study; however, some teachers indicated that they do one project per year and sometimes they feel pressure from parents who ask them to document frequently. As teachers described the challenges of documentation, the situation of each school is different and sometimes they confront the challenges limiting documentation practice.

Since the Reggio Emilia approach was introduced in North America, many researchers and educators such as Breig-Allen and Dillon (1997) and Goldhaber, Smith, and Sortino (1997) applied documentation to diverse cultures in Canada and the United States. Adoption of documentation takes many forms. Sometimes the Reggio Emilia approach was adopted in demonstration schools or classrooms, resembling as closely as possible all of the important central premises of the approach (Lewin, 1998). Sometimes one or a few strands of the approach or insights derived from the approach were incorporated into their own context (Kantor & Whately, 1998). Most participants in the study showed the latter form of adoption. Teachers had made an effort to make this approach their own, spending several years (average 11 years) trying to figure out how to integrate the Reggio Emilia approach into their context. Educators in this study appeared to keep testing, adapting and developing their own ways rooted in local ways, rather than duplicating the practice of documentation in Reggio Emilia.
### Table 5.1 Comparison of documentation between Reggio Emilia schools and participants’ schools

<table>
<thead>
<tr>
<th></th>
<th>Documentation in Reggio Emilia</th>
<th>Documentation in participants’ school</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Settings</strong></td>
<td>In Reggio Emilia Municipal schools</td>
<td>In North America (mainly Canada)</td>
</tr>
<tr>
<td></td>
<td>Culturally homogeneous (Lewin, 1998)</td>
<td>Various school types (private/public/university attached/ lab preschools)</td>
</tr>
<tr>
<td></td>
<td>60 year history</td>
<td>Culturally diverse</td>
</tr>
<tr>
<td></td>
<td>10-12 year history</td>
<td></td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td>Children ages 0 to 5</td>
<td>Children ages 2 to 9</td>
</tr>
<tr>
<td></td>
<td>Ethnically relatively homogeneous (Increasingly diverse)</td>
<td>Ethnically diverse</td>
</tr>
<tr>
<td><strong>Teacher</strong></td>
<td>Have the service of an atelierista (studio teacher) (Vecchi, 1998)</td>
<td>Only one school has a studio teacher</td>
</tr>
<tr>
<td><strong>Tools (Techniques)</strong></td>
<td>Camera, tape recorder, slide projector, typewriter, video camera, computer, pen and paper... (Vecchi, 1998)</td>
<td>Mainly prefer pen and paper rather than tape recorder or video camera.</td>
</tr>
<tr>
<td><strong>Procedure</strong></td>
<td>Observation and collecting, selecting and reflecting, planning, and exhibition and provoking (Gandini &amp; Goldhaber, 2001).</td>
<td>Observation and collecting, selecting and reflecting, planning, and exhibition and provoking</td>
</tr>
<tr>
<td></td>
<td>“Negotiated learning” (Forman &amp; Fyfe (1997)- Children, teachers, parents, community involved deeply.</td>
<td>- planned together with predetermined curriculum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Children, teachers, and parents involved but community involved rarely.</td>
</tr>
</tbody>
</table>
5.2. Definitions and examples of giftedness in young children

Educators in this study who are inspired by the Reggio Emilia approach had various conceptions of giftedness, rather than any one common conception. Generally, educators in this study appeared to have clear definitions of giftedness and be aware of young gifted children in their own class. Especially, two groups of educators showed specific and clear definitions of giftedness.

The first group of educators defined giftedness based on their experience with gifted children in their classrooms, rather than being influenced by any theory. This group’s definition is consistent with the characteristics of giftedness in the literature. The definitions they referred to are high verbal ability (Lewis & Louis, 1991), superior memory (Moltzen, 1996), creativity (Borland, 1986), keen perceptiveness (Smutney, Walker, & Meckstroth, 1997), wider and deeper knowledge (Kitano, 1985), fast learning (Perleth et al., 1993) and insatiable curiosity (Tannenbaum, 1992).

In addition to these cognitive characteristics, educators appeared to be aware of gifted children’s social and emotional characteristics. These characteristics are various, and consistent with the literature. Teachers mentioned that gifted children in their class are independent (Clark, 2002), self-confident (Davis & Rimm, 1998) and motivated (Clark, 2002); have a sense of humour (Davis & Rimm); prefer older playmates (Clark, 2002); understand others’ feelings very well (Porath, 2004); have strong leadership potential (Clark, 2002); have uneven development (Silverman, 1986); feel isolated (Silverman); and can be considered wrongly as having behavior problems (Roedell et al., 1980).

The second group of educators appeared to define giftedness based on multiple
intelligence theory (Gardner, 1983). These educators tended to emphasize that they don’t only value academic giftedness such as linguistic or mathematical intelligences but they also value other intelligences (e.g., musical, interpersonal, bodily kinesthetic). It may be that researchers and educators have widely accepted that giftedness is multidimensional (Sternberg, 2004). In addition, as the metaphor of ‘hundred languages of children’ refers to the concept that children have multiple ways to represent their ideas, Gardner’s (1983) theory may appeal to educators. This group gave examples of gifted children who show superior abilities in one or more domains. Above all, participants in this group suggested the example of visual-spatially gifted children rather than mathematically, verbally, or musically gifted children. It may be that visual-spatial intelligence can be seen more clearly through visual documentation and traces of children’s work.

Some studies indicated that teachers were less effective at identifying gifted children than children’s parents (Hadaway & Marek-Schroer, 1992; Stevenson et al., 1976). Teachers’ ability to identify gifted children was lowest during the early childhood years (Jacob, 1971). However, the current study showed that generally these two groups of teachers were able to identify gifted children and were very aware of characteristics of giftedness. They could give specific examples of gifted children. They were also very aware of children’s social emotional characteristics. They also could identify in what domains children are highly able. Some educators in the experience group are aware of giftedness even among children identified by other teachers as having behavioral problems.

It may be that these educators were observing children closely and scrutinized children’s thoughts, ideas, and behaviors through documentation. Educators who are inspired by the Reggio Emilia approach are encouraged to listen to children’s languages (Edwards, 1998). As Passow
(1981) and VanTassel-Baska (2003) indicated, children’s abilities can be discerned by the deep observation of performance and potential rather than conventional tests or checklists. Denton and Postlethwaite (1984) support that teachers can identify gifted children better when teachers have time to observe these talents than when teachers do not have enough time to observe.

In addition, educators who are inspired by the Reggio Emilia approach are encouraged to have the concept of ‘capable’ children rather than ‘innocent’ or ‘needy’ children (Dahlberg, 1999). Regarding the ineffectiveness of teachers’ identification of giftedness, Delahanty (1984) reasoned that teachers tend to focus on weaknesses. However, educators in this study referred to the importance of a teacher’s awareness of children’s capabilities. Educators in this study appeared to focus more on capabilities of children and to be aware of how capable young children are through documentation. Many teachers in this study frequently referred to the positive image of children.

Another reason may be that children in this study were given sufficiently challenging activities, according to their interests, so that their talents and abilities could show up. Roedell et al. (1980) described the lack of opportunity for children in an unchallenging or lock-step curriculum to reveal their abilities. In this case, a teacher may not be able to realize the abilities of children since children do not have the chance to reveal their abilities. Tomlinson (1986) also asserts that the content of gifted education should be challenging and start with children’s interests and an open curriculum. Also, one of the reasons may be that teachers in this study were relatively informed of children’s development and referred to a list of the signs of advanced development. Teachers in this study have a high level of education; most of them had a masters’ degree and some of them teach at the college level.
It is also worthy to discuss the third group of teachers' responses. The third group of educators defined giftedness as "every child has a common gift (Malaguzzi, 1998, p.79)" and/or "all children are intelligent (Dahlberg et al, 1999, p.50)" and didn't define any characteristics of gifted young children. Two participants had difficulties in defining giftedness. However, they could provide specific examples of gifted children in their class. "Last year we had two children... two boys who are definitely gifted in the area of music. And the parts of the facts are that they loved music and they use all kinds of materials in the classroom to create music. Without being taught directly they had knowledge of patterns of music and rhythm." This may be explained by the fact that these educators kept in mind two of the mottoes in the Reggio Emilia approach, "Every child has a common gift" (Malaguzzi, 1998, p.79) and the "hundred languages of children." Because educators in the Reggio Emilia approach don't clarify these mottoes, some educators take them to mean that every child is gifted. However, it may be the Reggio Emilia schools’ motto, not these educators' reflections. When they see giftedness in their schools, they feel confusion at seeing the different cognitive styles in children.

Meanwhile, two other participants appeared to deny the conception of giftedness, as they expressed reluctance to accept the traditional definition of giftedness as defined by an IQ test. "This is something we don't define in ECE" or "I don't define children's quality, believing all children are capable." Cramond and Martin (1987) described some teachers who tend not to have positive views of giftedness. These teachers can be particularly unwilling to label children at such an early age, and tend to stereotype giftedness, focusing only on intellectual or academic giftedness (McBride, 1992).

In conclusion, educators who are inspired by the Reggio Emilia approach in this study
had various conceptions of giftedness rather than any one common conception. Because the Reggio Emilia approach does not provide a clear definition of giftedness, it may be that teachers were influenced more by known theories or experiences with researchers or gifted educators. However, most educators in this study appeared to be aware of the existence of giftedness in their classroom and gifted children’s various characteristics.

5.3. The role of documentation

The role of documentation for gifted children can be divided in two aspects. One is an educational role for gifted children and the other is the role of social emotional aspects of gifted children.

5.3.1. The role of documentation in the education of gifted children

First, this study showed that documentation takes a role in providing appropriate educational tools for young gifted children by enabling a deep level of learning, by revisiting and remembering their work, and by generating their interests. Above all, educators in this study mentioned that documentation helped children’s in-depth learning in topics that interest the children. “It is a lot of benefit for very capable children. It is a wonderful way of focusing on their interests. And I think having in depth learning rather than just here there.” They explained that this in-depth learning is possible by revisiting documentation showing what they did and what they are interested in. Documentation also generates interests for gifted children.

Many of the aspects of documentation as an educational tool are consistent with Chard and Katz’s (1997) discussion, even though they did not focus only on gifted children. Chard and
Katz indicated that documentation provides a powerful educational tool for gifted children, as it enables in-depth learning, enhances metacognitive activities, and provokes children's theories, questions and interests. In the gifted education field, many researchers (e.g., Tomlinson, 1996) have asserted that gifted children need to have in-depth learning rather than superficial and passive learning or packaged knowledge. Many enrichment activities and curricula in gifted education which refer to the provision of broader, more varied educational experiences to reflect the needs and interests of gifted children have been suggested (Braggart, 1994). For documentation, teachers in this study who were conducting projects said, “Children can keep their level of interest and do their own research.” Rather than being receivers, as researchers in a project, children can learn deeply what they want to learn (Dahlberg, Peter, & Moss, 1999).

Another educational role of documentation is enhancing metacognitive skills. Even though educators didn’t mention the words ‘metacognition or metacognitive,’ they indicated that one of the important roles of documentation is “remembering and revisiting” what they are doing and what they did. By revisiting and remembering what they did in documentation, children can plan the next stage of work, monitor and evaluate. This metacognitive role of documentation is consistent with Malaguzzi (1998) and Gandini (2002). They suggested that documentation helps children to contemplate the meaning of what they have learned. According to Moss (1990), parents of gifted young children encourage metacognitive strategies by setting up questions and problems and letting children derive solutions. These processes of setting up questions and letting children find solutions are consistent with one of the processes in documentation. In this study, teachers appeared to ask good questions and to encourage revisiting what children had done through sharing documentation. With this procedure, documentation appeared to enhance
metacognitive skills for gifted children. Rinaldi (2001) said that through documentation, children have the possibility to observe themselves from an external point of view while they are learning.

The second role of documentation for gifted children discussed by teachers is that documentation enhances social interaction of gifted children. In this study, gifted children’s reported social aspects varied, consistent with Clark (2002) and Davis and Rimm’s (1998) findings. Teachers indicated that some gifted children have very positive aspects; for example, gifted children are ‘socially well adjusted, understand others’ feelings very well, and show strong leadership.’ Meanwhile, some gifted children are observed by teachers as having difficulties socially and emotionally. ‘They often feel isolated from other children, and try to connect with adults rather than other children.’ ‘Some gifted children won’t play with other children with trucks, shovels, or trains.’ These negative social emotional characteristics are consistent with the literature (e.g., Roedell, 1986; Silverman, 1993). The uneven development of gifted children may make them vulnerable to social isolation.

Teachers mentioned, however, that documentation helped gifted children to enhance social interaction. For gifted children, sharing and seeing documentation appeared to help them to understand other children’s perspectives and interests. In addition, they were observed to become cooperative in doing projects that they are interested in.

The result regarding social emotional support is consistent with Edwards and Forman (1993). According to them, in the procedure of documentation, children have the opportunity to express their feelings and represent their ideas through active communication. Children learned through their relationships within the context of collaboration, dialogue, conflict, negotiation and cooperation. As social interaction is an integral part of the Reggio Emilia approach,
documentation takes an important role in enhancing social interaction.

Teachers in this study described that when they saw their work taken seriously in documentation, gifted children felt valued and their self esteem was enhanced. Regarding self esteem, Katz (1998) also said documentation encouraged teachers to take children’s hypotheses seriously and encouraged children to approach their work responsibly. In this way, children’s confidence is enhanced. Katz (1995) added that self esteem is most likely fostered when children are esteemed. Esteem is conveyed to them when teachers and peers treat them respectfully, consult their views and preferences and provide opportunities for decisions and choices. In this study, during the procedure of documentation, this atmosphere of respecting children in schools also might enhance children’s self esteem.

In conclusion, teachers mentioned that, through documentation, gifted children have more active social interaction than before. Also, documentation appears to enhance gifted children’s feelings of value and self esteem.

5.3.2. The role of documentation for teachers

The role of documentation for teachers can be discussed in two aspects. First, documentation appeared to help teachers to be aware of children’s abilities, capacities and potential. The second role of documentation for teachers is to provide and prepare curriculum for the next steps.

Regarding the role of documentation in recognizing children’ capabilities, teachers gave the example that they could be aware of children’s giftedness even when other teachers consider those children as having behavioral problems. According to Clark (2002) and Whitmore (1980),
sometimes gifted young children show behavioral problems. In this case, teachers in regular classrooms tend to recognize gifted children as only behavioral problems. However, teachers in this study could see children’s abilities, capacities, and potential despite their behaviors. “They just didn’t know how to experiment.” “This child offers creative ideas, often in very poetic, metaphorical ways. By documenting the conversation, I was able to reflect and revisit his ideas. Sadly, a year later, his first grade teacher sees him as a behaviour problem, a “naughty boy” who won’t settle down and learn.”

In addition, the teachers in the study appeared to be aware of ESL gifted children. Identifying ESL gifted children is one of the issues in the gifted education field. These children’s ability in spoken and/or written English may be limited. They often perform less well than native English speakers; therefore, ESL gifted children are often unrecognized and unidentified (Brooks, 1998). Even when young gifted children did not perform well verbally, educators in this study could recognize their abilities. “His beautiful drawings for the drawbridge, he didn’t need to speak English for that, right? All Mandarin, he could do the design, he could collect the materials, and make the drawbridge, so I think it’s just the idea about the hundred languages, is important for ESL children.”

Specifically, what kind of role does documentation take for recognizing children’s capabilities? What aspects of documentation make teachers in this study keenly so aware of children’s abilities? There are a few points that can answer these questions. First, it may be that documentation enables teachers to see children’s thinking processes, rather than outcomes or work, through documentation. Conducting documentation, teachers study and focus on individual children’s words, learning and thinking (Chard & Katz, 1997) rather than their final work.
Second, documentation is a powerful tool for deep observation and listening. Through observation and listening, teachers can recognize young children's potential. Documentation is visible listening; the primary task of documentation is listening and being listened to (Rinaldi, 2001). Third, children are provided with various materials and media through which they can express their languages. Fourth, through documentation, children are given enough time to explore and express themselves. VanTassel-Baska (2003) said the most effective way to recognize and identify giftedness is to use a variety of approaches over an extended period of time. In this case, documentation seemed to enable teachers to provide various approaches and enough time.

Another main role of documentation for teachers is that documentation enabled teachers to provide the learning context – environment, places, or materials. One teacher said that through documentation, teachers are more deeply involved with children's learning and teachers can come with a better understanding and better preparation. This role of documentation seemed to be indispensable because teachers do flexible planning and long-term projects. Thus, these teachers prepare and set the context and prepare what they are going to do next with children based on the content of documentation. Chard and Katz (1997) also described this role of documentation in planning curriculum and projects. They said documentation gives direction to projects. Teachers can make hypotheses and flexibly support each child's further development and learning. Fraser and Gestwicki (2002) also explained that teachers and children can discuss the documentation together, reflect on the experiences and get ideas how to proceed further with the topic. Based on documentation and discussion with teachers and children, educators decide the next step in the journey of learning (Rinaldi, 1998).

For gifted children's learning, this role of documentation in planning curriculum is
important. Because gifted children’s abilities, interests and needs are diverse (Kaplan, 1982), an optimal match of abilities to curriculum is needed. This role of documentation – setting the learning context and environment based on documentation – might be appropriate for gifted children in this regard.

5.4. Benefits and challenges of documentation

Teachers referred to various benefits and challenges of documentation. In addition to the roles of documentation discussed already, teachers talked about other benefits of documentation such as parent’s awareness and involvement and joy - keeping the level of excitement. It also appeared that there are various challenges such as time, manpower, parent pressure, space, and cost.

It is noteworthy that teachers indicated both benefits and challenges regarding parents. They mentioned that the benefit of documentation is parents’ involvement and the challenge is parent pressure. Teachers in this study indicated that documentation makes it possible for parents to be aware of children’s experiences in school. Teachers mentioned that sharing documentation is very important to allow parents to understand what teachers and children are doing in class. In addition, parents appeared to participate in discussion as experts in related fields, to help teachers to find materials, to make suggestions, to measure or count in the context of a project. This benefit is consistent with Malaguzzi (1998) and Chard and Katz (1997), who indicated that documentation allows parents to know children’s experience and learning and to participate in various roles. Meanwhile, teachers indicated that one of the challenges of documentation is parent pressure to exhibit new documentation more frequently and do something such as alphabet,
number or colors. Sometimes parents want teachers to do documentation about their own child and they read it only with regard to their own child. This challenge may be because parents don’t understand the Reggio Emilia approach or documentation well. In Reggio Emilia, the schools are created by a group of parents and they understand and share the school philosophy as members of the school community (Fontanesi, Gialdini, & Soncini, 1998). Meanwhile, in North American schools, the history of adopting the Reggio Emilia approach is short, and documentation and all activities in school are run by teachers, not parents. This different context may cause the challenge of documentation.

Other challenges such as cost, space, and manpower shortage are consistent with Fraser and Gestwicki (2002). The challenges seemed to depend on each classroom’s situation and context. However, the benefits of documentation seemed to predominate over the challenges, because educators had kept and tested documentation for an average of over 10 years, and were very enthusiastic about documentation.

5.5. Implications of the study

The results of this study provide some implications for educators in early childhood education working with gifted children. The findings can assist gifted children by increasing teachers’ understanding and practices in educating them. It may also assist professionals in gifted education, and parents involved in understanding, identifying, and nurturing gifted children. Also, the results of the study should stimulate further study in the area of gifted education for young children and practices in early childhood education.
5.5.1. Implications for identifying for gifted children

Generally, teachers in the study were aware of gifted children’s characteristics and could provide examples of gifted children. Through conducting documentation, they were found to be aware of their children’s thinking, capabilities and interests. When they documented, they were observing, listening deeply and reflecting children’s thoughts and ideas. This attitude of teachers made it possible for them to be aware of giftedness of children even when the children seemed, to other teachers, to have behavioral problems or were children for whom English was not the first language. To listen to and observe children’s capabilities and interests, the teachers in this study used documentation. This attitude may be the key to awareness of children’s giftedness. Curtis and Carter (2000) supported that, through documentation, becoming a keen observer is an important way of learning about each child’s learning and development. A number of researchers have stressed that children’s giftedness should be discerned by deep observation (VanTassel-Baska, 2003; Whitmore 1982).

Teachers in this study talked about the moment when they sit and write down children’s talk and discussion; at that time they realize and begin to think about and reflect on children’s capabilities, thoughts and theories. “Without documentation, I would miss it.”

Therefore, in regular classrooms, recording and writing down children’s words and ideas and reflecting on them is recommended for deep observation, even if it is not in the form of documentation. In addition to checklists or tests, deep and keen listening and observation are important in understanding young children’s capabilities and potential. When teachers really value children’s work, thoughts and ideas, it will be possible for them to be aware of and support young children’s development and learning.
It is recommended to observe, listen, record, reflect and revisit children's ideas and thoughts to understand them deeply, not only for teachers in regular classrooms, but also for educators of gifted children or parents at home. Rinaldi (1998) supported that when documentation is used in context, the process of observation and listening is very efficient for authentic assessment of children.

Also, in identifying gifted children through documentation, it is recommended that teachers should have positive conceptions of giftedness. In this study, when teachers accepted the various types of giftedness and the existence of potential in children, they were found to be more aware of gifted children, and appeared to help more eagerly. Apart from the Reggio Emilia philosophy, teachers who accepted the conception of giftedness in young children were found to be more aware of gifted children's characteristics, and their interests and needs in their class than the teachers who denied the definition of giftedness in young children. Teachers who denied the definition of giftedness or had a negative conception (i.e., the traditional meaning of giftedness) were found to fail to identify various characteristics of gifted children and also deny the possibility of the existence of gifted children in their class.

Researchers such as Borland (1978), Gagne (1994) and Roedell et al. (1980) found that teachers' perceptions and education regarding giftedness are very important in identifying and nurturing gifted children in regular classrooms. Therefore, teacher education regarding giftedness in young children is very important so teachers can be aware of positive perceptions and various definitions of giftedness. Otherwise, a young gifted child, even especially one who is academically gifted can be ignored even when documentation is used.

In recognizing and identifying giftedness, it is important to remember that documentation
cannot be the only way for identifying and nurturing gifted children. Whether documentation is reliable enough to use in making important decisions for children cannot be determined from this study, since documentation is subjective (Dahlberg et al., 1999), and teachers in this study tended to focus more on group than individual work. Therefore, documentation needs to be supplemented by standard measures.

5.5.2. Implications for gifted children’s learning

Teachers in the study mentioned that documentation promotes gifted children’s learning in their classroom. Through documentation, gifted children were found to be involved in in-depth learning; interact with peers; and revisit and reflect on their own and others’ ideas. When teachers document, they ask good questions (Forman, 1989), and are encouraged to reflect on children’s thoughts and to negotiate thoughts. It is especially meaningful that all of these processes were possible in the regular inclusive classroom.

Educators in the field usually have challenges in supporting and meeting young gifted children’s needs and interests in the regular classroom (McBride, 1992) as they are not able to have time or energy to offer a differentiated curriculum to gifted children or they don’t give extra attention to gifted children. However, this study showed that these fourteen teachers who are adopting documentation and project work in regular classrooms are working toward supporting and meeting their needs and keep the level of excitement.

In practice, teachers may consider adopting the Reggio Emilia approach of documentation and projects in their class. Teachers maybe spend one to two hours a day for projects, according to children’s interest in regular classrooms. When gifted children learn in
regular classrooms, it is important to follow their interests and research what they want to know, making learning visible and making meaning of learning. Even though projects in class were not only for gifted children, this study showed that teachers could generate children’s interests as teachers share documentation with children and promote in-depth learning. Gifted children could research their interests and develop their thoughts and theories. Teachers in this study also mentioned that these ways promote peers’ learning.

Therefore, teachers can encourage gifted children’s learning in regular classroom by:

- asking good questions (Forman, 1989)
- encouraging children to think and revisit their own ideas and thoughts
- encouraging children to consider others’ perspectives
- helping gifted children to generate their own interest.
- facilitating project work depending on children’s interests and ideas
- considering and following children’s interests and theories in planning curriculum.

5.5.3. Implications for parents

This study showed that documentation helped parents to be aware of children’s thinking processes and to understand what is going on in the class. However, some teachers seemed to have difficulties with parents. These difficulties are various. Some parents did not understand the Reggio Emilia approach and documentation; they only read documentation about their own child; and some parents pushed the teachers to teach the alphabet or numbers. Therefore, it would be important for parents to share the Reggio Emilia approach deeply and read documentation. Also participation and involvement in projects and classroom activities would be helpful to make
children's learning meaningful.

5.5.4. Implications for conducting documentation

In this study, the way teachers conduct documentation is different from Reggio Emilia due to the context of schools. When teachers conduct documentation, the content and tools of documentation cannot be the same as in Reggio Emilia. Rather than trying to implement a holistic approach into their context, it seemed to be more practical and beneficial to develop their own ways of documentation according to their situation. Without the atelieristas, mini ateliers, Remida recycling center (Remida recycling center offers several discard materials to schools for free), and community and city support in Reggio Emilia, the approach to and the content of documentation in classes cannot be the same. Instead, in North America, there are much more diverse cultural and historical backgrounds and diverse educational systems. In Reggio Emilia educators keep testing the techniques of documentation and changing and developing the procedure of documentation. Rinaldi (2006) said that Reggio Emilia schools should “not be a utopia, set in stone and uncontestable” (p.197), rather “there needs to be a constant relationship and dialogue between utopian thought and action” (Dahlberg & Moss, 2006 p. 20).

Documentation in North America needs to keep changing, developing, and having dialogues.

5.6. Limitations and further directions for study

This study is exploratory research. Several limitations of the study render the interpretation difficult. First, the number of participants is small and the selection was not random. Most participants’ schools were located in the western part of Canada. Therefore, it did not reflect
the population of North America. For future studies, participants should be increased and should include the experiences of schools in Canada, United States and Mexico.

Also, the characteristics of participants' experiences and educational level should be noted. Teachers in the study had experience in the Reggio Emilia approach averaging over 11 years. In addition, they had a high level of education, holding masters degrees and/or teaching in colleges. Therefore, the results cannot be applied to teachers who have just started to adopt the Reggio Emilia approach or who are new to teaching. Caution is called for in generalizing the results.

Second, in the study, the roles of documentation for gifted children were investigated by teachers' testimonies and their experience, rather than scrutinized by the content of documentation and gifted children's behaviors, thoughts, ideas and experiences. Therefore, the results reflected teachers' thoughts and opinions rather than the direct role of documentation, or children's or parent's opinions. Also, the definitions and descriptions of gifted children in this study were generated by the teachers; therefore, teachers may have included nongifted children in their discussions. In future research, direct research on the relationship between the content of documentation and gifted children would help to supplement our understanding of the educational role of documentation for gifted young children. Adopting standard measures for identifying gifted children would help to clarify the identification role and educational roles of documentation for young gifted children. Also, a follow-up study comparing gifted children's learning in classes where documentation is and is not conducted would clarify the role of documentation.

Third, in the current study, it is not clear to what extent teachers give attention to
individual abilities, interests and needs to develop children’s learning. In Reggio Emilia, documentation sometimes is practiced for each child’s learning and research and sometimes for group work. Even though the examples teachers gave in this study dealt with group rather than individual work, it is not clear to what extent documentation was practiced for individuals and for groups in the study, and how these two kinds of documentation influence each other. Extensive study observing the relationship between social interaction and individual development during the procedure of documentation would help us to understand the role of documentation for gifted children’s learning better.

Fourth, the study briefly described differences between documentation in Reggio Emilia and in North America in terms of techniques and procedures of documentation. However, it should be noted that with regard to the content of documentation and other details of procedures and techniques, there are likely to be more variations and differences within teachers and schools. Therefore, in-depth case studies should be conducted to extend this exploratory study to understand further meanings behind the practices of documentation regarding gifted children’s education.

Fifth, the current study, which focused on the role of documentation for young gifted children ranging in age from two to nine years old, showed that documentation had a positive role in the children’s recognition and nurturance. A longitudinal study that focuses on later development of gifted children after attendance at schools that use the Reggio Emilia approach would help reveal the educational role of documentation for gifted children.

Despite these limitations, this study represents one of the first examinations linking gifted education and the Reggio Emilia approach in terms of the role of documentation for gifted
young children. The findings suggest that documentation helps teachers to recognize children's potential, and to be ready for children’s further learning based on the children’s interests. Also, in this way, gifted children can learn deeply about what they are interested in, interacting with peers through documentation. However, in order for this to occur, there is a need for teachers to be open to young children’s giftedness. More extensive research in documentation in various schools is needed in order to provide useful knowledge for educators and parents who wish their gifted children to be identified and to have chance to develop their giftedness through documentation.
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Appendix A : Questionnaire

Research Questionnaire : Documentation and gifted young children

1. What is your role in your school? Please check any relevant items.
   (1)Teacher
   (2)Parent
   (3)Administrator
   (4)Teaching assistant
   (5)Other:.....................

2. Where is your school or class located?
   Country:  Canada
             Mexico
             USA
   Province or State:

3. How old are the children in your class?

   Age      0  1  2  3  4  5  6  Other

4. How many boys and girls do you have in your class?

   Gender   Boys -     Girls -

5. What is your children's cultural background? Please check all that apply.

   Ethnic background  White      Black      Asian
                         Hispanic    Native Indian  Other
6. Are there particular or unique characteristics of the students you teach that you could identify? (e.g. head start class, special education class, multicultural, ESL, affluent families, rural, urban etc.)

7. Do you conduct documentation as practiced in the schools of Reggio Emilia? If so, when you conduct documentation, what tools do you use? Please check all that apply.

   (1) Video camera
   (2) Transcription of children’s dialogue
   (3) Audio recorder
   (4) Digital camera
   (5) Collections of children’s work
   (7) Other:...........................................

8. When you conduct documentation practiced in the schools of Reggio Emilia, what procedure do you use? Please check all that apply.

   (1) observation of children as informal watching
   (2) notetaking of children’s dialogues and behaviours
   (2) collection of children’s work
   (3) Teachers’ discussion sharing reflection and interpretation on children’s learning process
   (5) planning the next step of curriculum
   (6) exhibiting documentation
   (7) all of them
   (8) other......................

9. How do you define giftedness in young children?
10. Have you ever observed giftedness, talent or unusual abilities in children in your class? If so, please give an anecdote or an example of what you observed and the situations under which you observed it.

11. How do you think documentation can help gifted children to develop their abilities and/or help teachers in supporting their development? Your answer can be as long and as detailed as you like.

12. Are there other benefits to using documentation in your classroom? If so, what are they?

13. Do you encounter any challenges in your use of documentation? If so, what are some of those challenges?
Appendix B: Coversheet

Documentation and Gifted Young Children: A Reggio Emilia Inspired Study

Principal Investigator: Dr. Marion Porath, Department of Educational and Counselling Psychology, and Special Psychology, UBC, 604-822-6045

Co-Investigator: Soyoung Lee, B.A., Masters student in Special Education, Department of Educational and Counselling Psychology and Special Education, UBC.

The result of the study will be used for co-investigator’s masters thesis. Further analysis of data may be presented at conferences or published in journal articles.

Purpose: This study asks you, as an educator inspired by the Reggio Emilia approach, to explore your thoughts and experience about the practice of “documentation” regarding gifted/talented children. This is an exploratory study in which researchers and educators seek and promote children’s abilities and talents through the documentation.

Procedures: A questionnaire with eight questions, requiring approximately 20 minutes of your time, is attached. Please complete and return the questionnaire by email to: or by mail to: Dr. Marion Porath, Department of ECPS, Faculty of Education, UBC, 2125 Main Mall, Vancouver, BC V6T 1Z4

Please know that by completing and returning the questionnaire it is assumed that your consent has been given to use this information as part of this study.

Confidentiality: Your confidentiality will be strictly maintained at all times. Your names and school affiliation are not required and will not be used for the purposes of the study. Any identifying information will be deleted, blacked out or altered to protect your privacy.

Contact information for the study: If you have any questions or would like to know more about this project, contact Dr. Marion Porath at 604-822-6045 or
Contact for concerns about the rights of research subjects: If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC office of Research Services at 604-822-8598.
Appendix C: Advertisement

Call for Respondents for Questionnaire

Documentation and Gifted Young Children

Are you an educator who is inspired by the Reggio Emilia approach? Have you employed documentation in your classroom as a form of observation, reflection and planning tool? Would you be interested in contributing to an exploratory study regarding the documentation and gifted/talented children? We are interested in knowing how documentation supports gifted/talented children in classroom. Information obtained from this study will provide educators with some insights to promote children’s giftedness and talent.

Procedures: As a participant in this study you will complete a questionnaire with thirteen questions, requiring approximately 20 minutes of your time.

Please contact: for a questionnaire.

Completed questionnaires can be returned by email to:

Or by mail to: Dr. Marion Porath, Department of ECPS, Faculty of Education, UBC, 2125 Main Mall. Vancouver, BC V6T 1Z4

Principal Investigator: Dr. Marion Porath, Department of Educational and Counselling Psychology, and Special Psychology, UBC, 604-822-6045

Co-Investigator: Soyoung Lee, B.A., B.Ed., Masters student in Special Education, Department of Educational and Counselling Psychology and Special Education, UBC.

Contact information for the study: If you have any questions or would like to know more about this project, contact Dr. Marion Porath at 604-822-6045 or
Appendix D: Consent Form

Consent Form

Documentation and Gifted Young Children

Principal Investigator: Dr. Marion Porath, Department of Educational and Counselling Psychology, and Special Psychology, UBC, 604-822-6045

Co-Investigator: Soyoung Lee, B.A., B.Ed., Masters student in Special Education, Department of Educational and Counselling Psychology and Special Education, UBC. This study is being done as part of the requirement for the co-investigator’s masters degree.

Are you an educator who is inspired by the Reggio Emilia approach? Have you employed documentation in your classroom as a form of observation, reflection and planning tool? Would you be interested in contributing to an exploratory study regarding documentation and gifted/talented children? We are interested in knowing how documentation supports gifted/talented children in classrooms. Information obtained from this study will provide educators with some insights to promote children’s giftedness and talent.

Procedures: As a participant in this study you will be interviewed, requiring approximately 50 minutes of your time. The interview is designed to gather information about educators’ responses to a questionnaire focused on the role of documentation in supporting young gifted children.

The interview will be audio taped and then transcribed. Only the investigator and co-investigator will have access to the tape. Your confidentiality will be strictly maintained at all times. Your names and school affiliation are not required and will not be used for the purposes of the study. Any identifying information will be deleted, blacked out or altered to protect your privacy. Further analysis of data may be presented at conferences or published in journal articles.

Your participation in this study is strictly voluntary. If you choose to participate, you have the right
to withdraw from the study at any time without penalty.

**Contact information for the study:** If you have any questions or would like to know more about this project, contact Dr. Marion Porath at 604-822-6045 or

**Contact for concerns about the rights of research subjects:** If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC office of Research Services at 604-822-8598.

If you are interested in participating in this interview, please sign both copies. Keep a copy for your records and return the other to me. Thank you for your cooperation.

------------------ I have read this consent form and I agree to participate in the interview.

Name:________________

Signature:______________

Date:__________________