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UNITING EARLY CHILDHOOD SCREENING AND MONITORING TO INFORM INTERVENTION  
PRACTICES

by  
Jo Ann Iantosca

A Thesis  
Submitted to the Faculty of Graduate Studies  
through the Faculty of Education  
in Partial Fulfillment of the Requirements for  
the Degree of Masters of Education at the  
University of Windsor

Windsor, Ontario, Canada  
2012  
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UNITING EARLY CHILDHOOD SCREENING AND MONITORING TO INFORM INTERVENTION  
PRACTICES

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## **AUTHOR'S DECLARATION OF ORIGINALITY**

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## ABSTRACT

The earliest years of life have a tremendous impact on the realization of children's potential. Early involvement in play-based learning positively affects child brain development during sensitive periods that peak before school-age. ECEs can facilitate this development by being responsive, documenting children's progression, and planning appropriately. The *Early Childhood Education Act* has no standardized procedure regarding the observation, monitoring, screening/reporting of children. Grounded in Vygotsky's socio-cultural theory, this thesis provides insight into current documentation and assessment practices that ECEs use in childcare, as well as how they are following up on concerns. The researcher designed a *Pre-Intervention Developmental Report*, to record identified concerns, take observations and plan for follow-up, connected with two highly used instruments, the ELECT and the ASQ-3. This research emphasizes a need for a framework and screening that accounts for all children and is built on the inclusivity of children from different cultures and with diverse abilities.

Keywords: early years study; ELECT; ASQ; screening tools; developmental skills

## **DEDICATION**

I would like to dedicate this thesis to my parents, Jim and Deb Iantosca who have been supportive in all of my current and future educational endeavors. I would also like to dedicate this thesis in memoriam to my Nonna, Grace Iantosca who would have been pleased to share this achievement.

## **ACKNOWLEDGEMENTS**

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I would like to give further acknowledgment to the management and staff at the research site for helping me to expand my practical knowledge over the past few years, as well as for supporting the progress of my research.

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# CHAPTER I

## INTRODUCTION

Early childhood educators (ECEs) in Canada are becoming ever more accountable for childhood outcomes, and for providing meaningful experiences for children, based on a deep understanding of human development. Holding a position within childcare has not been any more revered than caretaking, however the impact that early childhood educators have on young children, has been shown to pervade social, emotional, cognitive and other aspects of adult life (Best Start Expert Panel on Early Learning, 2007). Quality care in early childhood, in part, has been to observe the development of skills and provide programming based on children's needs, as well as use tools to screen for concerns. It has been shown that screening tools, such as the Ages and Stages Questionnaire (ASQ-3), can help detect early delays during these sensitive periods of brain development (Bricker & Squires, 2009). Unless children are screened early enough and regularly, there may be a missed opportunity to identify specific areas of weakness, areas of current strength, and potential delays. Otherwise, ECEs and parents must rely on informal observations which may be inadequate and misinterpreted, and therefore fail to note specific functioning in cognitive and other domains.

The ASQ-3 screening tool has been supported by the Best Start Expert Panel on Early Learning and used by many ECEs in Best Start educational programs in Ontario Early Years Centres. After a child is screened by an educator, it assists them in referral measures to aid in identification of children by psychologists, so that children may receive early intervention services, such as working with a speech and language pathologist, or going through applied behavioural analysis. The importance of these and other tools that allow ECEs to access information about children's developmental skills is not only for referral, but they can also help ECEs plan for further supports within their classrooms, and offer assistance to families. In Ontario, one of such documents is the *Early Learning for Every Child Today (ELECT)*, a framework used for monitoring children that contains indicators of each skill, based on similar developmental trajectories, and offers strategies for further adult-child

interactions. The ELECT document supports child development from infancy to school age and is now combined with the kindergarten curriculum, emphasizing that developmental monitoring is important to address in years prior to school-age. In fact, use of both screening tools to identify concerns, and the ELECT to document progression, are recommended by the Best Start Expert Panel on Early Learning (2007) for dual uses. In Canada, where over 50% of families use some form of childcare (Bushnik, 2006), ECEs are working with these children daily. It would be beneficial then, if these educators and parents used such instruments to monitor and also assess children in order to advance skills in early childhood, rather than waiting to fill in developmental gaps already instilled in children when they reach school age. There can be a positive impact made by ECEs who are willing and able to intervene based on what they know about children in their care.

These developmental concerns are of such interest to the Ministry of Child and Youth Services and the Ministry of Education, that they have developed a method to assess social and academic concerns of Canadian children in schools. The Early Development Instrument (EDI), which also assesses domain risk for communities and regions, allows researchers to obtain data about the readiness of Canadian children to learn at school as well as potential risk factors in the community. Based on teacher-reports, which are categorized into domains (similar to that of the ASQ and ELECT), including those of a societal nature, this instrument is used to obtain data of children in schools within a particular city, but is not used to calculate the needs of individual children, nor to intervene based on developmental data. These data are currently being used to provide services to whole communities showing concerns (Janus & Offord, 2007). This tool has already been successful in establishing need and gaining services in some communities, such as offering more speech and language services after identifying the needs of groups of children, however this thesis is more focused on direct influence of individual risk and how ECEs can intervene based on individual reports, therefore will focus on developing a method that aligns the use of both the ASQ and the ELECT.

### **General Statement of the Problem**

Although the literature discusses differences, and demonstrates attempts to combine various screening tools and assess their linkage among domains and outcomes (Briesch et al., 2010, Feeney-Kettler et al., 2010,

Bauchner et al., 2009), few attempts have been made to align screening and monitoring, so that ECEs may become better able to identify atypical concerns and link them to typical development. Although it is not the intent of the ELECT to provide outcomes, instead seeing children’s development as a continuum whereby children acquire these skills at different rates. These possible skills are given in order of progression and it is possible to relate these skills to those that are identified as needing support from a screening tool. This thesis is not arguing for what is generally typical or atypical of all children, but only for ECEs intervention through the measurement and focus on children’s individual needs. There is much agreement on childhood milestones and developmental domains in both of these tools and in others, there has yet to be created a method of aligning connections between a screening tool, the *Ages and Stages Questionnaire*, and indicators of milestones, which is the basis for the *ELECT* document in Ontario. This may be due to the intent of each tool, seeing as the *ELECT* was not meant to assess developmental outcomes of children, rather it is often a developmentally typical reference tool for educators who would document informally.

Many educators, particularly in early childhood, are trained and expected to work with more than one tool, which is also considered to be best practice. At face value, it seems that the developmental domains of the *ELECT* and *ASQ-3* each fall into similar categories, (see Figure 1), however little is actually known about how the *ASQ-3* questions fit into the particular *ELECT* indicators and vice versa.

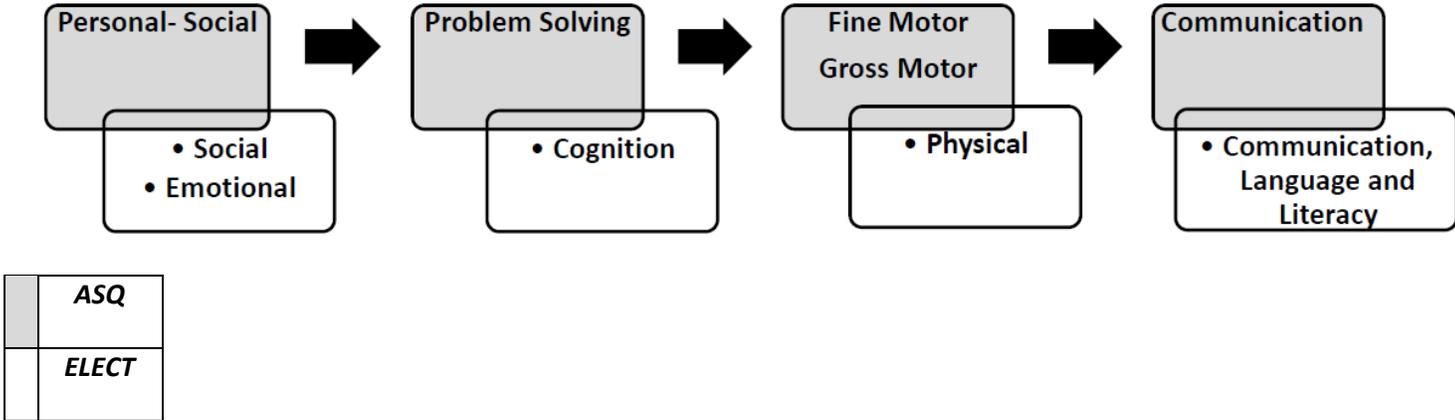


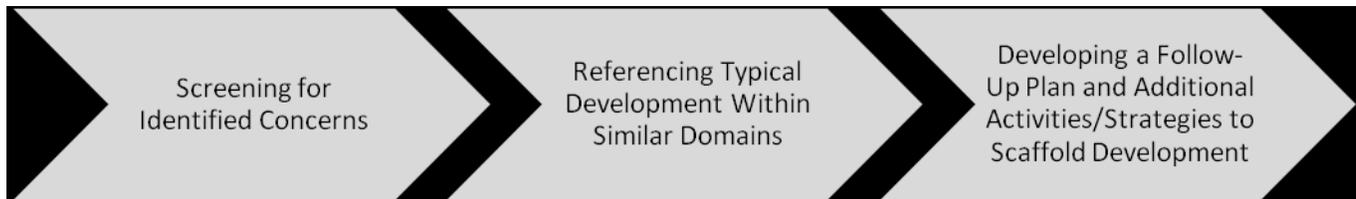
Figure 1. Interconnectedness between developmental domains.

**Significance of the Study**

This thesis gains insight into current documentation and assessment practices that ECEs are using in childcare, as well as why and how they are using such instruments. This study was undertaken by the researcher, because to her knowledge, there did not exist support mechanisms for the ECEs that would help them align screening and monitoring tools. Although alignment of more than one tool is complex and may not entirely connect, the process of looking for similar skills and strategies offered on more than one instrument was assumed by the researcher, to further support documentation and planning.

The researcher decided that a support mechanism in a form of a matching tool may allow for intensive follow-up on identified needs of children. The investigator designed methods and a *Pre-Intervention Developmental Report* (see Appendix B) to record identified concerns, take observations and plan for follow-up, connected with two highly used instruments, the ELECT and the ASQ. The created *Pre-Intervention Developmental Report* guides educators to consider the alignment of the ELECT and ASQ, in an attempt to reference atypical to typical development through systematic observation (Bordignon & Lam, 2004), leading to specific and intentional follow up, rather than what is often assumed by ECEs through their individual knowledge of the children, which is important, but it is not a valid measure of children's developmental needs. Screening and monitoring children are used for different purposes, however these instruments (i.e., ELECT and ASQ) are both recommended for use together.

Although the Individual Family Service Plan (IFSP) or Individual Program Plan (IPP) is available for documentation of goals, as well as strengths and needs of children, the IFSP/IPP document does not aid ECEs in referencing the progression of skills, next to a typical developmental continuum. The implication is that the identified problems found after initially screening a child are not referenced against what is considered to be typical development, therefore with such an alignment tool the ECEs may be better able to identify specific developmental concerns and follow up on them. The outcome is developing strategies to scaffold concerns since they can be linked to typical development by referencing skills on a continuum of development (see Figure 2).



*Figure 2.* The procedure of scaffolding skills.

This would not mean that all activities in early childhood settings are planned to focus on one skill or one child necessarily, only that it is a skill focused on in addition to other programming and can be incorporated. As Bagnato and Neisworth (2004) suggest, many tests are used to gauge who receives services, after already being referred by a professional working with the child initially. This testing, explained by the authors, looks only at a deficit model, not looking at the whole child. This thesis creates a method by which to initially assess where a child is at developmentally, and where they are able to move to next. Although the issue of typical and atypical development has been disputed, this thesis does not argue that the way in which a child is developing is either normal or abnormal. Instead, the goal of this thesis is to argue that ECEs can have an impact on the individual needs and development of children, referenced through the lens of what is considered to be the normative standard of both the ELECT and ASQ.

Interventionists acknowledge that pursuit of improving specific outcomes for children during classroom planning can be enhanced by knowing exactly what individual skill is of concern, and needs further support particularly early on in development. This was noted by the Early Years Study 3 (2011), authored by McCain, McCuaig, and Mustard (2011):

the brain is more receptive to stimuli during earlier stages of development. For example, children who are dyslexic have difficulty with language and expression that handicaps their learning and work. They tend to have sound sensing and speech functioning distributed more on the right side of the brain instead of on the left. Intensive stimulation with phonemes by 6 years of age can lead to reformation of the

neural pathways to left side of the brain, indicating that neural plasticity, including neurons and neural pathways, is sufficiently malleable at this age that normal function can be restored. (p. 33)

Matching, rather than combining the tools, would not change their purpose, but may provide a continual and cumulative look at how children develop. No one tool was changed or altered for the purposes of this thesis, although a methodology for alignment of root skills are explored and further assessed by the ECEs in this study.

This thesis research was developed with a broad audience in mind, including parents of young children, early childhood educators, directors of childcare centres, researchers and developers in child psychology. It emerges from the established need for consistency or ease of interpretation between instruments to aid in analysis of child development, particularly the ELECT and ASQ by way of a matching piece. Although this study is looking at matching the ELECT and ASQ with ECEs working with younger populations, it can be extended to include school-aged children. Directors of the current settings should see a benefit of such an approach for the parents and children in their care, professional development of their staff, and researchers should continue to maximize the usability of these particular tools, by aligning their use in efficient and applicable ways for ECEs.

## **Purpose**

The purpose of this research was to (a) assess what tools for the assessment and monitoring of children (i.e., tools such as the ELECT and the ASQ) are currently being used by ECEs (b) the extent to which ECEs use such tools together, as well as (c) the methods that are used in childhood centres to follow up with children who are raising concerns. It was also examined, (d) whether or not these tools allow for ease of interpretation between them and (e) if the participants found it useful to use one tool to inform the other, and if so, why they did.

The participants rated the strength of connection between the two developmental tools after an attempt was made by the participants to match the ELECT root skills with the ASQ screening questions. A connection and analysis of the connection was partially developed alongside the aid of ECEs. Although it is recognized by the researcher that the ASQ and ELECT are not of a perfect fit (see Chapter IV), it was more important to the

investigator that the following methods were considered to be purposeful, in that they provide a method for organizing identified concerns, aligned with developmental goals and a plan for enhancing skills in childhood. This could be of particular use of enhancing sections of the Individual Family Service Plan (IFSP) or Individual Program Plan (IPP), including the follow-up measures. This IFSP or IPP can be further passed along in a report to Early Learning Kindergarten Programs (if the parent so chooses) as the children move into the Ontario school system, from a childcare environment. Participants also gave practical recommendations, and offered insight into the use of the matching tool. This thesis proposes that the ASQ be done with families to determine developmental risk, and be matched with domains and skills on the ELECT that can be fostered by both the parent and the ECE. It was not the intent of this research to suggest that we might measure individual children's fullest potential, however ECEs can document and monitor their development to gain an understanding of what comes challenging or easy for each child, and provide a balanced but enriching experience for individual children.

### **Research Questions**

Based on my initial attempts to connect developmental skills from multiple tools, particularly the ASQ and ELECT, it seemed that it was difficult to make that connection and decide what should be done to enhance developmental outcomes of children. Anecdotal evidence from the researcher's history in early childhood pointed out that a few ECE sites actually use documentation practices or instruments to assess their environment or the children, for the creation of goal planning. Therefore, this research was undertaken to ask the following questions:

- (1) What strategies do ECEs currently use to interpret their documentation and screened findings?
- (2) What challenges does the alignment between the ASQ and ELECT present for the ECEs?
- (3) How well does the ASQ and ELECT achieve consistency within their developmental domains and skills, as perceived in a rating scale by the participants?
- (4) Do ECEs find the alignment of screening and documentation tools meaningful and if so, to what extent?

(5) Do ECEs think it is possible to encourage skill development with the Pre-Intervention Developmental Report?

A strength of this type of research includes the use of a qualitative methodological approach. This presents a difficulty in generalizing the findings, however the purpose was to access an in-depth understanding the ECEs perception of matching of the ELECT and ASQ, and using the *Pre-Intervention Developmental Report*. Additionally, this research used convenience sampling due to the accessibility of participants at this research site, and their appreciation for involvement in the study to advance their understanding and skills in early childhood practices. Specifically, this site provided for the opportunity to work with participants who knew both the ELECT and ASQ well.

Qualitative methods, particularly the use of focus groups and open ended questionnaires were used in this research. Training and a focus group were done with seven participants initially. They were asked questions about their ECE current practice with screening and monitoring tools on site; they were also administered a questionnaire to gain more detail. The training was about informal and formal documentation practices that would be used in tandem for the study, to gage alignment of identified needs, anecdotal evidence and developmental skills, and learn if a merging of these techniques could be used to develop intervention activities for children. A tool, namely the *Pre-Intervention Developmental Report*, developed by the researcher was introduced, and ECEs were asked to use it in their practice. This tool encouraged the alignment of the ELECT and ASQ, in order to recognize identified needs from the screening tool and align it to typical developmental indicators on the ELECT, whereby ECEs were asked to create goals and intervention activities based on their formal and informal documentation. A second focus group was needed to obtain perceptions of the tool after its use, and a second open ended questionnaire was administered for further insight and detail. The qualitative data obtained were placed into various themes and analysed.

## **Framework**

The study of human development, which is complex and interdisciplinary, has recently led the direction of teaching and learning for those within the field of early childhood education and early learning. Educational

theories including that of Vygotsky and Bruner were chosen in order to further explore their application to early learning, particularly when analysing children's identified concerns and establishing a need for enhancement of their developmental skills.

Vygotsky's (1982) socio-cultural approach and his concept of the *zone of proximal development* are instrumental in guiding this framework. Vygotsky had the idea that children's social world, particularly in early childhood, helps to determine their learning, and that thinking should be challenged and extended by an educator in order to enhance children's mastery of a set of skills. Therefore it is the learning with a partner, which enhances a child's natural ability to develop, which Vygotsky would call *mediation*. Learning first happens on a social level, meaning that development of cognition is influenced by our social environment, until a child can do these tasks on their own. This is further substantiated in today's current educational climate by the Early Years 3 (2011):

Encounters between people are fluid and never the same twice. For this reason, it is important for all educators to be reflective practitioners, sensitive to children and knowledgeable about how they develop. Skilled ECEs match their interactions and responses to what is required to best assist a child's learning. They provide children with scaffolding, the kind of assistance that helps children to reach further than would be possible unassisted. (2011, p. 54)

Bruner (1976) also did a study that noted the importance of children first comprehending a task before they can complete it, extending the notion that *scaffolding* and social learning are needed before achievement can occur. Vygotsky also had great interest in children with disabilities, and noted that without socialization efforts and instructional methods of learning, children could be at risk of falling behind.

When Vygotsky (1978) discussed a child's level of support on a task, he was referring to what a child should be assessed on, which is the future potential of that child, that is to be led by the child and yet intently guided by the educator. Therefore it is what children can do with a level of assistance that should be measured, not what they can only do by themselves. Unfortunately, there is little methodology behind Vygotsky's theory

regarding what level of assistance and how supports should be carried out. More information about techniques used in education are provided regarding Bruner's method of *instructional scaffolding*.

Today, we have a firm reference of potential development of skills provided by the ELECT document. Vygotsky might say that these potential skills could help early childhood educators to see what direction a child might go, so that educators can remain a step ahead in interpreting development, and therefore become a better scaffold for the child's learning. Vygotsky (1982) believed there should always be a cognitive connection made during social interaction with children, since any interaction without extending a child's learning is considered as less meaningful. Educators then, should have a plethora of knowledge and a plan to enhance a child's natural abilities, that cannot be mastered without some guidance. Vygotsky's idea of guiding children cognitively through social means is much like the High/Scope approach mentioned in Chapter 2, under the Review of Literature, and it was a contributing factor to the development of this thesis.

Bandura's *Social Learning Theory* (1977) also fits with Vygotsky's theory for this framework, in that transmission of knowledge and learning can occur when there is attention and internal motivation causing a child to focus on a particular instance that a child can learn from. This also means that learning can occur by watching the performance of a task in a non-verbal but symbolic way. The idea of *reciprocal causation*, or the way in which behaviour can influence the environment, which influences the person or vice versa, holds great importance in early learning, since children can often comprehend and eventually practice what they have observed.

There are many perspectives of child development, including the psychodynamic, cognitive, and learning theories, as well as the humanistic, ethological, biological and contextual views. This theoretical framework will stem from a dynamic interaction of all perspectives associated with nurture; therefore this thesis will not attempt to understand how genetics directly impacts development. There will be a particular focus on the developmental psychopathology perspective, which posits that abnormal and typical development reciprocally inform one another to the extent that development or lack thereof in one or more domains, can have a vast effect on the next typically referenced root skills. This cumulative and continuous effect may influence a

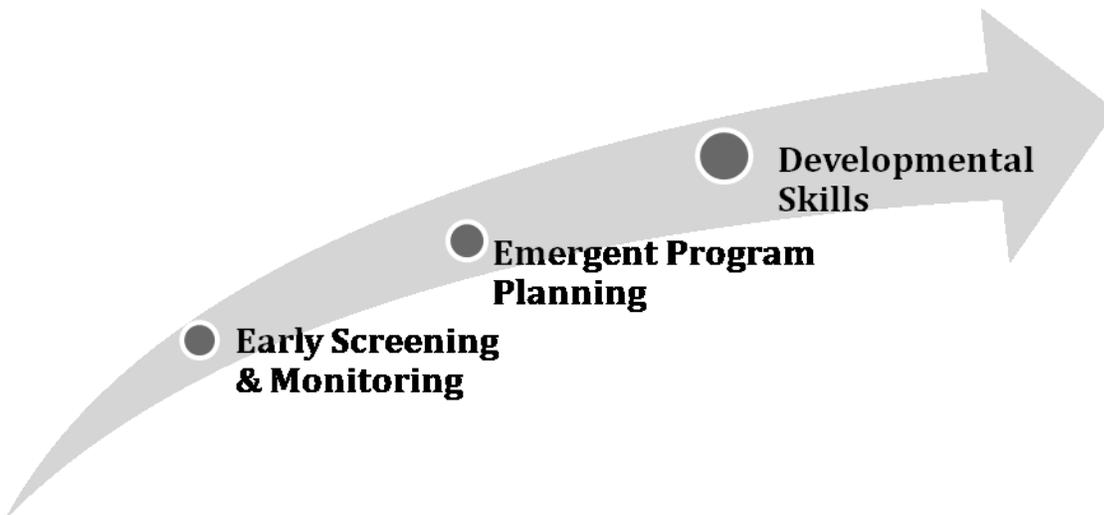
child's development in atypical ways; however this perspective also takes into account many other consistent and powerful variables including the child's surroundings, background, and genetics. In concordance with current themes mentioned by Kail and Zolner (2007), it will be mentioned that development is considered dynamic, cumulative, and usually continuous, however sometimes discontinuous, seeing as children can affect individual aspects of their development due intrinsic motivation to build on their experiences, regardless of their early experiences with their caregivers nurturance. This is particularly important to consider, as developmental pathways are not fully cultivated by parental or caregiver efforts and individual children tend to choose their own developmental pathways due to potential genetic predisposition or interest. This framework will not side with studies done by stage theorists, even with the use of a screening tool in the research. Instead stages will be referenced and matched against a continuum of development from the ELECT, so that the future potential of children can be enhanced. Vygotsky would likely disagree with testing current skills rather than potential skills; however this research will examine a method for identifying current levels of development with a screening tool, against potential levels of development referenced on the ELECT that can be enhanced with support. In this way, Vygotsky's socio-cultural theory still holds true, as educators will still be able to reference what a particular child can do with help.

Many stage theorists do allow ECEs to gain insight into the typical phases children move through, which helps them develop understanding as to why children act how they do at certain age, however this approach is too structured and often proven to be untrue for all children. It is the belief of the researcher that children have a right to determine their own developmental progression, but that it also should be monitored and referenced against a set of skills achieved within an age range so that all children can be given opportunity to reach their unique potential.

## **Conclusion**

This research examined the current use of screening and monitoring tools by ECEs, as well as their rating of the connection between these tools, with the intention of showing how early screening can align with monitoring practices in order to lead program planning and increase developmental skills (see Figure 3).

Matching the indicators of one tool to another, the investigator proposed to develop a method to restructure interpretation between the instruments and offer strategies for recording anecdotes, different from what is typical in emergent curriculum settings.



*Figure 3. Effect of alignment and planning on development.*

## **Definitions**

The following definitions were not created to stimulate debate or conversation, rather they were created or referenced to inform readers and disambiguate several connotations that are often associated with these definitions or acronyms. I will refer to these key terms of use throughout this thesis.

ASQ: The Ages and Stages Questionnaire is a parent completed screening tool, for children one month to 5 ½ years old. This instrument is used to determine what developmental milestones their child is reaching.

Day Nurseries Act: Provincial licensing requirements of childcare in Ontario, used by ECE supervisors, operators, ECEs, and/or program staff.

ECE: Early childhood educators, who are responsible for caretaking duties as well as documenting, and programming for children in their care.

ELECT: Early Learning for Every Child Today is framework for Ontario early childhood settings.

[It] describes how young children learn and develop, and provides a guide for curriculum in Ontario's early childhood settings, including childcare centres, regulated home childcare, nursery schools, kindergarten, Ontario Early Years Centre's, family resource programs, parenting centre's, readiness centre's, family literacy, child development programs in Community Action Program for Children, Healthy Babies Healthy Children and early intervention services. (Best Start Expert Panel on Early Learning, 2007, p. 1)

Emergent Curriculum: This teaching philosophy is based on the premise that curriculum takes into account the developmental and subjective display of interest (in an activity or skill) that emerges from the child or student. The ECEs base their planning on these observations. In this way, each child's interest leads the direction of learning and his or her learning experiences are uniquely different (Biesta & Osberg, 2008).

IFSP/IPP: The Individualized Family Service Plan or Individual Program Plan (IPP) is a document that identifies the child's current point of development, strengths and weaknesses, as well as lists measurable goals to be achieved, how they will be accomplished, and with the help of which services or supports.

## CHAPTER II

### REVIEW OF LITERATURE

#### **Philosophies of Early Childhood Education**

Within the philosophy of *emergent curriculum*, it is important for young children to guide their own learning, especially in early childhood. Educators can plan based on what they overtly see the child is doing, document this behaviour (based on the ELECT), and then interpret it for planning. In effort to examine emergent curriculum, one might observe a child and document an anecdote. For example, a child may be using language to describe the movement of a butterfly, as it moves “up, down, under, and over a tree.” Instead of focusing on the butterfly itself, the developmental interest (due to neurological development) may actually be the spatial location of the butterfly, and language used to describe its movement. An ECE in this case would likely record this as cognitive and language development, and in some ways a social experience. To build on and extend this skill, the ECE would plan an activity or use a strategy referenced on the ELECT based on the domain or skill that this child is displaying. The Early Years Study 3 (2011) recognises this by stating that “Curriculum is not static. It is intended to respond to new knowledge and the changing circumstances of children, their families and communities” (p. 53).

Emergent curriculum is not based on objectives or outcomes coming from the educator, instead it allows children the freedom to express their own learning goals during play, from a social-constructivist angle. An ECE within an emergent curriculum believes that children can in fact guide their own learning. Emergent curriculum also takes from the Reggio Emilia philosophy, due to the encouragement of pedagogical documentation, and ability of ECEs to let children lead the direction of curriculum development (New, 2007). It is however, considered to have its own curriculum structure.

The Reggio Emilia philosophy aligns quite well with following the direction of children in play, just as in the constructivist framework, initiated by the works of Piaget and elaborated by Bruner (1956). Piaget believed that children experiment to discover their world, developing a schema of concepts and ideas which

change over time (Kail & Zolner, 2007). In concordance, the Best Start Panel on Early Learning (2006) state that play-based learning is a method by which kindergarten children should be learning socially, cognitively, and within all domains of development. Bruner (1956) further recognized the importance of all people actively approaching their own learning through experimentation, discovery learning, and project based learning (which is also a part of activities used in Reggio Emilia childcare settings) within social environments. These environments and experiences need to be structured in a way that would motivate and encourage learning, in a straightforward manner by scaffolding many learned concepts. The direction of such projects and discovery is motivated by the children's interests, as in emergent curriculum.

Vygotsky (1978) also spoke of challenge and motivation when referring to the zone of proximal development (ZPD). When children are exploring objects and their environment while in their zone of proximal development, according to Vygotsky, they have a natural curiosity to explore their environment and grow across all domains according to their own pace. This would be reinforced by adults providing commentary or materials to enhance the discovery, just as ECEs working from an emergent perspective would use the ELECT to enhance child's play with recommended strategies. The authors Bodrova and Leong (2007), also use Vygotsky's approach to early childhood education, through the *Tools of the Mind Curriculum*.

High/Scope methodology also happens to support emergent curriculum in many similar and specific ways. High/Scope uses a child observation record (COR) to determine what key experiences children are having, much in the same way that many emergent childcare rooms use indicators to document experiences. Both the Tools of Mind Curriculum and the High/Scope methodology use a child-centred and open-ended approach to learning and play, and adults both participate in, and plan on behalf of the child's cognitive interest and skill. In fact, Golbeck (2001) mentions that High/Scope methods are historically the only techniques that are both child- and teacher-initiated. In a study done by Barnet, Burns, Hornbeck, Jung, Thomas, Stechuk, and Yarosz (2008), the *Tools of the Mind Curriculum* was developed to aid ECEs in facilitating appropriate activities to meet the children's developmental needs and desires. Further activities created by the Tools of Mind curriculum have even been aligned with the Child Observation Record Indicators, much in the same way

ECEs were aligning behaviour-based questions from screening tools to monitoring tools, that list developmental root skills on a continuum for this research.

Such documentation leads and extends planning measures on the part of ECEs, requiring significant reflection as well. The documentation and evaluation of a teacher's philosophy and methodology are integral to teachers improving their skills (Brookfield, 1995), which also applies to the ECE profession, leading to enhanced developmental benefit for young children. Although there are standards of practice with a regulated body, that of the College of Early Childhood Educators (CECE), no one childcare centre is alike in implementing these standards. Some of these standards include acknowledgement of developmentally appropriate practice, including knowledge of theories that suit children's learning styles and needs, as well as a play-based curriculum and consistent observation and monitoring of skill development (CECE, 2011). Many centres still use "theme-based" learning due to the ease in planning curriculum, and this cannot truly be considered "play-based," or "child centred." Furthermore, few centres keep documentation of skills, but rather only document information about behaviours or incidents that happen in or outside of the classroom. The ELECT domain indicators are those root skills that need to be observed and planned for in order to be based on true interest and create developmentally appropriate play-based learning experiences.

### **History of Advocacy in Early Childhood Education and Current Issues**

Over the last decade, there has been a great deal of concern with the way Ontario's current system of early childhood education has been running. Many changes and new perspectives have been adopted, especially for preschool and school age children; however, there is still a great deal of work to be done in order to change the developmental outcomes of children for the betterment of the individual and society. Beginning with McCain and Mustard's (1999) report on the neurological development during the early years, it appears that early experiences have a lasting and cumulative influence on the later life outcomes, including academic achievement and overall contribution to society. Positive stimulation and interactions are deemed as critical in order for children to reach their full potential and improve development, and health related outcomes. Therefore programming must be attuned to the developmental continuum of early childhood in order to support these

indicators of skill. In a long-term study done on the Perry Preschool Program, Barnett, Belfield, Montie, Nores, Schweinhart and Xiang (2005), found that quality programming had a significant impact on future salary of children, as well as their academic achievement, behaviour and health related concerns, delinquency, and overall cost for social services and crime. Other studies that showed similar results were the Abecedarian Project conducted by Campbell, Miller-Johnson, Ramey, Pungello, and Sparling (2002).

McCain and Mustard continually emphasize that funding for early childhood should be as substantial as for post-secondary education, since early childhood education often determines later life achievements. Those who wish to enrol their children when they are infants or toddlers however, may not have the opportunity because of long waitlists. To further complicate the matter, subsidies for childcare in Ontario are available only to parents with high need, such as those who are living below the poverty line. Parents may have an opportunity to work while their children are being cared for, however many families without subsidies do not have this option. This has become of great concern, seeing middle income families with children share similar childhood risk factors and are seeking childcare that for them remains out of reach. The cost of childcare is also increasing due to preschool/school-aged children moving to the full-day early learning in schools, leaving the operators of childcare centres with less revenue to support infants and toddlers, which are of highest cost to support. This may further marginalize those families who already cannot afford to work and pay for childcare, and ultimately lead to the demise of childcare sites. This leads parents, educators and operators to ask, *who will support this age group?* Many children might not have the opportunity to flourish in a high-quality learning environment and they may miss opportunities for quality programming and screening or identification. Brain research shows that early intervention can stop and even reverse the delay of many cognitive and other developmental functions, including but not limited to autism as well as delayed cognitive functioning (Charman, Howlin, Magiati, & Moss, 2011). Missing such an opportunity is neglectful to families, as it is the right of every child to have such access.

Further studies done by McCain, Mustard, and Shanker in 2007, added to the findings associated with neurological brain activity and nurture in childhood. The authors continued to demonstrate a need for

investment in the early years after establishing that the lack of stimulating experiences in early childhood has a potentially negative effect on the overall socio-economic conditions of the future society. This report (McCain, Mustard, & Shanker, 2007) also outlines the various forms of childcare available in Canada and in doing so, they demonstrate how fragmented the current system is. In their efforts to amalgamate childcare into the school system, McCain, Mustard, and Shanker (2007) hope to bridge the gap between childcare and education. These efforts are a small step in beginning to create a universal program for childcare in Canada; however they have yet to offer an interconnected program for children under school age, which the authors believe is a critical point of development. They state that “regulated childcare is the anchor of Canada’s early childhood programs, although less than 15% of children attend. The majority of the programs focus on preschool children, with almost half of all spaces (357, 421) targeted at this age group. The demand far outstrips the supply” (McCain, Mustard, & Shanker, 2007, p.106). With the number of spaces limited for infants and toddlers, although there are many more spaces needed, most openings for childcare is geared towards preschool children, as it is far less to fund this group of children than it is infants and toddlers.

Almost at the same time, the Best Start Expert Panel on Early Learning (2007) developed the Early Learning for Every Child Today (ELECT) framework, created for all educators working with young children, in order to provide a basis for monitoring childhood skill development. This blend of neuro-scientific, psychological, anthropological and sociological-based recommendations had political and financial support from the Liberal government; in fact, they made a five year investment for the future of Ontario’s children and included the ELECT in the kindergarten curriculum. In turn, early childhood became the focus of school boards in Ontario, which then began funding full-day early learning throughout kindergarten classrooms in Ontario. Uniquely, these classrooms employ early childhood educators who have developmental training, to work collaboratively with the classroom teacher in developing a play-based curriculum (Pascal, 2009). In order to monitor the current progress in implementation of this new program, researchers are examining the regional disparities in school readiness across a variety of commonly known childhood domains. To gain better understanding of child development by school age in Canadian provinces, they use the Early Development

Instrument (EDI), however this tool is not meant to screen individual children. The purpose is to proactively gauge which domains are generally lacking and alter programming to fit the needs of each community (Mustard, 2008).

Whereas there is support for children at preschool and school age, many parents of children younger than four or five currently rely on Ontario Early Years Centres or private childcare within Ontario. In a recent report, McCain, McCuaig, and Mustard (2011) are advocating for more to be done about the current issues surrounding infant and toddler care. As mentioned above, many childcare options are no longer available and those that are, are usually private childcare sites. The quality of sites at this point must be a concern, since according to authors Melhuish, Sammons, Siraj-Blatchford, Sylva, and Taggart (2011) preschool learning environments that were rated as low by Early Childhood Environment Rating Scale-Revised Edition (ECERS-R), had a very little impact on the cognitive and behavioural scores of the children by 11 years of age. Furthermore, McCain, McCuaig, and Mustard (2011) discuss the implications of the government's focus on opening preschool spaces, whereas these classrooms have a limited focus on quality. Despite the scientific findings of both reports, including the report from McCain, Mustard and Shanker (2007), who state that children reach critical milestones before age of four, there is still lack of universal publicly funded childcare for infants and toddlers, and strong support for this demographic has yet to be seen. Very little focus on the program quality of preschool education was also mentioned, and I will be explaining in this chapter, in the section focused on the Day Nurseries Act, that program evaluation should be taking place.

### **Importance of Early Screening and Intervention**

Often children with delays go unnoticed until school age, where very little can be done to prevent a growing achievement gap (McCain, McCuaig, & Mustard, 2011). According to the Best Start Expert Panel on Early Learning (2007), even a small gap can have serious implications in the future, as these initially small risks early in life can accumulate or halt children from reaching their fullest potential. Findings from Fantuzzo and Rouse (2009) suggest that risks, and especially those which are identified as co-morbid, can develop a significant academic achievement gap. Fantuzzo and Rouse analysed several factors including childhood

poverty, maltreatment, and homelessness, as well as low-maternal education, and biological birth risks and found that integrated services and records of children were needed to obtain accurate data and provide intervention services. Although the collection of data through the EDI is aiding in this process in Ontario, a collaborative effort of early childhood educators, families and other practitioners is required to identify individual risks and prescribe intervention, as well as protective measures. Many children however, rely on limited services from the Ministry of Education once they reach school age.

According to the Council for Early Child Development, infants, toddlers, and preschool children arrive at sensitive periods of brain development before they reach school age. The Early Years Study 3 (McCain, McCuaig, & Mustard, 2011) defined periods in life where the window of opportunity for emerging abilities of the development of neural pathways was greatest, stating that “Early connections begin in infancy. Between age 3 and 5 years, the prefrontal cortex circuits enter a rapid period of development and make critical interconnections with the limbic system” (p. 37). And that, “Children with poor verbal skills at age 3 are likely to do poorly in language and literacy when they enter school, and many go on to have poor academic careers” (p. 39). Therefore in this case, they recommended that family practices, and in the same right, practices of ECEs should include more communication, focus more on oral literacy and involve much less stimulation from electronic means (such as TV).

Reasonably then, those working with children of this age should be educated in child development, and how to keep informal and formal documentation, as well as look for signs of developmental delay or mental health issues impacting development. They should have training and access to screening and monitoring tools in order to reference “typical” development on a continuum and plan for strengthening these root skills. This begs the question, how do ECEs recognize what level of development the children in their care are at, and how to scaffold skills, if it is not being intently measured?

Franklyn-Banton and Samms-Vaughan (2008) specifically focused on early screening and intervention for children with Autism. They mention that the majority of preschool children attend some form of early care and that early childhood educators may play an important role in identifying concerns. For children with Autism

Spectrum Disorder (ASD) these researchers promote the M-CHAT screening tool, which was originally designed for health professionals, and specific to children who may have Autism. However, educators are often more available to administer this assessment, and although they may not be as informed, which can cause a difference in results, they are still considered qualified. They promote public education about red flags for various developmental disorders, seeing that the earlier the identification and intervention, the better the developmental outcome will be. In Canada, a similar trend has been happening. Across Ontario Early Years Centres, and throughout a few other childcare providers, ECEs are administering screening tools to ensure that all children are developmentally on track. They are doing this for infants, toddlers, and preschool aged children. This is what was recommended by the ELECT framework, but many private childcare sites do not follow suit. According to Feeney-Kettler et al. (2010), the primary step should be to establish preventative measures including screening tools. In their study they mention mental health screening to combat against social-emotional disturbances that could result later in life. They also declare that more than one measure can be synthesised to provide a more accurate approximation of the child's socio-emotional development. The Best Start Expert Panel on Early Learning (2007) recommends that children should be screened by age three, before entering school. Its authors suggest that researchers should advocate for early identification, which will point out early signs of delay. Registered early childhood educators are required to screen for behavioural, social, emotional, or cognitive concerns, and monitor the development of their enrolled children; however there is concern over what is being done to follow up. Although the Day Nurseries Act (1990) is a set of guidelines that all licensed childcare must follow, they do not include any standardized screening tools, or any specific requirements for follow up on developmental concerns.

The Ministry of Education however, ensures that children in kindergarten are being monitored with the ELECT since it is connected to curriculum objectives in the Full-Day Early Learning Program, but leaves childcare centers without the same responsibility. In fact, children coming into kindergarten are being assessed to determine school readiness and regional risk by using the Early Development Index (EDI); however reaching such children earlier can provide a significant service at both the micro and macro levels. As the College of

ECEs certifies an increasing number of early childhood educators, this should be a requirement of service. Therefore, children at any level of risk during these early periods, due to such concerns, should be receiving screening or pre-intervention services early enough.

### **Early Childhood Educators Act**

As mentioned above, many children are left waiting for screening and identification, and even still many children who are identified are waiting for additional services, such as a one-on-one social service worker to be available in an early childhood classroom, or a respite care provider in the home. These services are only offered once a child is identified by a community agency or psychologist and limited funding is available when children are not in a publically funded setting, such as the Ontario Public School System. It is difficult enough for children attending school, funded by the Ministry of Education to receive a formal diagnosis, but in childcare, the situation is far more dire.

This being said, there is little guidance for ECEs, as to what they can do to provide meaningful experiences based on an identified concern, let alone learning about what concerns a child is eliciting in the first place. Therefore, if ECES were encouraged to use screening and monitoring tools together, as they are working with children daily, rather than waiting on identification and services, pre-intervention could be implemented immediately. It is important that ECEs plan activities based on what is developmentally appropriate, and what meets the needs and desires of children. It is the belief of the researcher that more understanding of these needs by ECEs can lead to informed planning measures which ECEs should become a part of. School boards across Ontario are now to include ECEs in their classrooms depending on teacher per students' ratio, establishing their importance and reinforcing that they have developmental knowledge important for early learning teams. In order to capitalise on the strengths of early childhood educators, they should be required to get involved in the pre-intervention process in their classrooms.

These educators are required to abide by the Early Childhood Educators Act as described herein:

2. Practice of early childhood education- the practice of early childhood education is the planning and delivery of inclusive play-based learning and care programs for children in order to promote the well-

being and holistic development of children, and includes, (a) the delivery of programs to pre-school children and school aged children, including children with special needs; (b) the assessment of the programs and of the progress of children in the programs; (c) communication with the parents or persons with legal custody of the children in the programs in order to improve the development of the children; and (d) such other services or activities as may be prescribed by the regulations. (Brown, 2009, p. 949)

Within this act, particularly part (b) mentions the need for assessment of childhood progression and programming, however it does not state that the ELECT should be used, nor any other required screening tool, such as the ASQ. Furthermore, there are several forms of programming which use various means to plan activities, some with higher quality programs than others, some requiring more accountability and documentation practices. High quality programs are often assessed using tools such as the Early Childhood Environmental Rating Scale (ECERS), however, this is again, not mandatory. Cook et al. (2010) recommended a consistent method of assessment be used in all settings so that interpretations do not widely vary between children and sites. The type of program offered should be required to meet many of these guidelines, but there is no requirement they use a standardized method. Regardless of the philosophy of the program itself, educators, managers and owner/operators should uphold the same responsibilities that school boards require of their administration and teachers, such as reporting about the children's skills and needs.

### **Programming for Pre-Intervention**

According to Bowman and Horton (2002), documentation should inform practice. In order to provide children with the most developmental programming and activities, ECEs need to document development, both formally and informally, through the use of rating scales and screening tools, as well as anecdotal evidence and a collection of works from the child. Although some programming may focus on a group of children, it should also support individual child's development. This current research does not advocate for focusing on one child over another, however it does look to the needs of the individual for intensive programming, in consideration while planning for the entire group. Of additional importance to this research is planning to support development of the whole child and not favouring one domain over another. In concordance with the Early

Years Study 3 (2011) curriculum needs to, “address the whole child and is often organized into broad categories with learning expectations for each: physical, social, emotional, communication/language and cognitive. This supports educators in observing the children and adapting activities accordingly” (p. 53). Plans can include a concurrent focus on multiple domains; in the way that teachers use cross-curriculum planning, for example with Science and Literacy, cross-developmental planning can also be done; ECEs can focus on Cognition and Communication, for example.

In the United States, many assessment tools are also being used in early childhood, and the National Institute of Child Health and Human Development (2002) have deemed it as important to use many tools that assess all domains deeply, and align with programming objectives. In Ontario, the ASQ is used at Ontario Early Years Centres, as well as the ELECT. Even those children who are at minor risk for such concerns, due to factors such as a lack of stimulation in a child’s environment can receive specialized strategies to enhance their development. Moreover, what is the basis for planning and exercising developmentally appropriate practice in the current system of childcare? There were no studies found that addressed the current tools being used by early childhood educators in Canada, and although US data showed varied evidence (Allen, 2007), there do not exist standardized measures or a requirement of practice. A publication by Briesch, Chafouleas, and Volpe (2010) also emphasizes the importance of screening, treatment and progress monitoring of young children’s mental, emotional and behavioural health, as well as their academic success, prior to identification of psychopathology when they get into the school system. High quality care becomes very important particularly for such children.

Briesch et al. (2010) developed a proactive conceptual framework that links together initial screening, interventions, and goal planning. In interpretation of Briesch and colleagues, on its own, screening does not inform intervention very well, and lacks continuity when being monitored due to a lack of goal planning. If developmental monitoring is consistent however, and goal planning is built into the methodology, more progress may be made.

It is well known that knowledge of skills and weaknesses of children within particular domains are of benefit to planning, since ECEs have the ability to intervene with strategies and activities. Feeney-Kettler et al. (2010) mentioned that although screening tools are important for identifying concerns, they should also be focused on positive attributes of children that support healthy development. Cook et al. (2010), specifically mention that universal screeners focus on developmental problems and do not take into account the interaction of more than one domain or area of interest, yet development in one area is likely affected by a variable from another domain. This distinction is related to the concept of the continuous and transactional development which is difficult to identify without informal documentation of skills being displayed by a child. For example, when a preschool child is interested in drawing a picture of his or her family, they must use their attention regulation skills, fine motor abilities as well as other domains. It is the belief of the researcher, that ECEs can plan cross-developmental activities that merge more than one domain and skill. Cook et al. (2010) also mention the importance of linking screening to specific activities that will promote development in the domain that is of concern.

If a child is presenting developmental concerns, the ECE or caregiver should be able to reference next developmental steps. This reference might provoke the ECE to plan how to foster this skill from one developmental point to the next. One such example is the concern over self-regulatory skills of young children, which can be nurtured and encouraged by ECEs. If this developmental skill is at risk, such a child may continue to lack regulatory skills, thereby affecting many facets of that child's life. ECEs may foster this skill by using strategies from the ELECT, after first screening for the observed concern. This is how Ivrendi (2011) found that children with low scores on behavioural regulation were less likely to develop number sense, seeing as they were unable to control their impulses and concentrate. Having the ability to know what a child is struggling with developmentally and intervene based on this risk, has implications for future development and in this author's study, on research. The authors DuPaul, Kern, Lutz, Shapiro, and Thomas (2011) also did a study to establish the significance of documentation and screening as means for childhood social assessment of Attention Deficit Hyperactivity Disorder (ADHD), with the same goal of preventing future social rejection by peers, as it

leads to damaging outcomes in the future. They too attempted to correlate indirect and direct measures in order to aid teachers in determining typical or atypical social behaviours in a variety of situations. This preventative approach is one that has become more recognized, as acknowledgement of concerns can lead to earlier intervention. Methodologies were further recommended to be used together for more accurate results.

If there were an established match between screening questions and a continuum of development, one may be able to specify which particular root skill is of concern. This is unlikely to be succinct, since a screening tool, such as the ASQ, often references lower functioning skills to measure what a child should be able to do well whereas the ELECT references the progress of root skills over time. Each should have similar domains, and do show some alignment, however it is the method and training of using more than one tool that become important for the development of a follow-up strategy. Along the way, the ECEs must relay this information to parents and professionals, such as psychologists; however, without background knowledge about which specific developmental skill is of concern, ECEs must use trial and error to identify how they can assist the child best. Ways in which childcare professionals can capitalize on children's strengths and build on their weakness is by monitoring, documenting, and planning for these root skills, as well as screening for developmental concerns before the school age. Activities that facilitate development or intervention before attending school may increase readiness in several domains if screened and further monitored properly, proactively impacting the future of individual children and thereby decreasing future risks. Programming for a broad range of activities after screening them, remains important from a very young age, and there are many programs to choose from when considering childcare. Brain research also demonstrates that growth in each developmental domain requires consistent activity or it may be reversed, leaving less potentiality for growth later on (McCain, Mustard, & Shanker, 2007).

Programming that is attuned to development, particularly if it documents children's skills and uses their current skills to plan for the development of future skills, is likely the most effective, given reference to the Perry Preschool Project. One must take into consideration the various *Philosophies of ECE* as mentioned in this literature review, as well as additional studies that show their effectiveness, such as the High/Scope Perry

Preschool Project (Barnett, et al., 2005). This project began in 1962 by offering programming to the experimental group of disadvantaged children in Detroit Michigan, whereas the control group received no programming. The researchers chose African American children known to be at-risk of school failure and living in poverty. In High/scope, the programming is based on observation of developmental indicators and consultation with parents. The classroom is made into play areas that include among else, space for the art and dramatic play. Teachers work with the children to plan, do, and review their activities. The teachers engage the children with interactive strategies and support their progress, as well as socio-emotional development and conflict resolution. They do both whole group and small group activities. The results revealed that by age 14, the program group was significantly more committed to school, far more likely to graduate from high school, had more employment as well as a higher earning potential, and they had much lower crime rates. The economic report showed that each dollar invested in the program per participant had a \$16.14 return, according to 2008 dollar amounts, since the government gained through what was considered to be typical for resident's savings and education, welfare and crime costs. Since this and many other programs that reference developmental progress have been effective and aligned adequately, the focus of this thesis is not advocating for this type of programming, but rather that there be consistent developmental screening and referencing with more than one tool, to aid in the creation of follow up plans on specific developmental skills that incorporate anecdotal evidence even before school age.

The literature is not united in this conclusion. Lowenstein (2011), for example, differs in opinion, stating that ECEs and programs do not have as significant of an impact as previously found, and that the excitement that has been generated by longitudinal studies, showing that programming and early intervention have implications for children's future salary or health, for example, are exaggerated and often done with underrepresented populations. Lowenstein researched various studies which are often used to back-up current programming and found that they are based on a number of outdated and inapplicable findings. Lowenstein (2011) states that these programs justify themselves based on studies that were done with low-income families, that these long term results cannot justify the effects of this programming on all children. The conclusion is that

many prior studies should be replicated, and that in order for true change to occur in developmental outcomes, these children will need consistent follow-up into school-age, prompting the need for particular services in education as well as more research regarding exactly what follow-up measures are needed.

In concordance with Lowenstein (2011) however, prudence must be exercised in defining accountable outcomes that should result from such investment, such as that mentioned in the report done by Pascal (2009), that grade three and six standardized grades will improve, for example. This outcome has yet to be demonstrated, and it is not necessarily possible to align development to academic achievement in kindergarten to the future of standardized tests. Yet evidence in Pascal's report is substantial, and after a review of articles supporting the report, many have come to fruition in the last decade, including that of many long-term studies. Furthermore, Ontario's five-year plan is established within the school system in kindergarten, potentially substantiating Lowenstein's claim that follow-up is needed even after childcare to keep true to the potential that these initial programs present.

Feeney-Kettler, Hemmeter, Kaiser, Kratochwill, and Kettler (2010), mention that intervention services are not always available, especially to those without insurance, and that although screening shows a need for intervention, it cannot be afforded. There are however, early identification and intervention services available to parents, according to the Early Years Study 2. The authors explain that numerous services including child assessment are offered, but children must wait an extended period of time on a waitlist and then after assessment they must be eligible. Often children are only accepted if they are at severe risk in one or more domains and fit criteria in the current Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). In Canada, many parents avoid the waitlists and pay out of pocket for these assessments, since every board of education has a limited number of professionals to diagnose. This demonstrates the need for ECEs to step in and intervene with practices and materials to assist all children with their development particularly those with moderate to severe risk, while children with serious concerns wait for more intensive involvement from their community agencies.

The ELECT framework suggests that even minor risk can accumulate and is still reason for concern. And although comorbid disorders resulting from various childhood factors have a significant influence (Fantuzzo & Rouse, 2009), for typically developing children who are screened, families can become more aware of appropriate developmental outcomes, and capitalize on their child's development. Cappa, Durkin, Gottlieb, and Maenner (2009) surveyed many families in countries around the world in order to determine the rate children with disability; in many low and moderate income countries, the rates appeared very high. Although the study did not include Canadian children, the authors certainly raised the issue of equality of treatment as a fundamental freedom for all children, regardless of disability; many researchers have identified as these disabilities presenting themselves in the early phases of childhood (Best Start Expert Panel on Early Learning, 2007). Consequently, the supports ought to be available immediately after childhood screening done by the ECE or other practitioners, and preventative measures should be put in place regardless of diagnosis according to the Diagnostic and Statistical Manual of Mental Disorders (DSM). Perhaps it would be wise to take the advice of authors Cameron, Kopechanski, Lefort, and Janus (2007), who further discuss how documentation of children from various services does not get communicated, even between preschool and school. Lowenstein (2011) also found that there was inconsistent follow-up; therefore it may be promising to send this documentation from childcare, much like a student record, from childcare to the school.

### **Screening and Monitoring Instruments and their Design**

*Early Learning for Every Child Today (ELECT)*. The ELECT is a general framework and monitoring system for use by childcare providers or those working with children, developed by the Best Start Expert Panel on Early Learning (2007). This framework aids in identifying typical developmental indicators from birth to the age of eight. With this tool, early childhood educators learn where each child stands in their development, by observing them and taking anecdotes of their learning. The principles behind ELECT include: (a) early child development sets the foundation for lifelong learning, behaviour and health; (b) partnerships with families and communities strengthen the ability of early childhood settings to meet the needs of young children; (c) demonstration of respect for diversity, equity and inclusion are prerequisites for optimal development and

learning; (d) a planned curriculum supports early learning; (e) play is a means to early learning that capitalizes on children's natural curiosity and exuberance; and (f) knowledgeable and responsive early childhood practitioners are essential to early childhood settings. The ELECT also delineates the difference between assessment, evaluation and monitoring. The Best Start Expert Panel on Early Learning (2007), suggest that all of these methods should be used, and that such tools can work together to add to planning curriculum, monitoring development, identifying developmental concerns and having discussion with families. Moreover, "the Continuum of Development is not a tool to assess children's progress against a set of benchmarks or child outcomes. Nor is it a screening tool to identify developmental difficulties" (p.22). With proper utilization of this tool, and especially if it is used to monitor development, it is understood that all children will vary along the continuum regardless of age. This is precisely why age brackets in the ELECT overlap in time. It can also be used for programming based on developmental outcomes as well as interests of each child. Rosen (2010) specifically addressed the interest and right of preschool children to have democratic involvement in their own curriculum. By taking observation and planning curriculum around the developmental skills of children, we are allowing very young children, even infants and toddlers, the opportunity to "voice" their interests based on the skills they display and practice, within the environment they are in. Activities that are child-centred and *emergent*, which also foster developmental domains are extremely important in the early years.

*Ages and Stages Questionnaire (ASQ-3)*. In addition to informal methods of documenting development, including anecdotes, screening is a valid means of formal assessment. A commonly known tool being used by Ontario Early Years Centre's across Ontario is the Ages and Stages Questionnaire, which requires parents to be involved in administering the tool, while ECEs facilitate and score the results. Having families involved in learning about their child's strengths and needs is an effective way for ECEs to communicate about children (Best Start Expert Panel on Early Learning, 2007), as well as potentially increase awareness and ultimately outcomes for children in their home environment (Albritton, Klotz, & Roberson, 2003). This screening tool has five domains of measurement, similar to that of the ELECT, including Communication, Personal-Social, Problem-Solving, Fine Motor and Gross Motor. The psychometric properties of the current ASQ-3 include a

research sample of 15,138 children that reflect the current population of the United States, however Canadian data have not been used in developing this tool, which must be taken into consideration. The concurrent validity of this tool, as represented by measuring the ASQ-3 against professionally administered and standardized assessments, ranges from 74% – 100% on the various questionnaires, with 86% overall agreement. The sensitivity or ability to identify children with delays, ranges from 76% - 100%, with 86% overall agreement, and the ability to identify typically developing children, ranged from 70% – 100%, with 85% overall agreement. Lastly, this tool allows for cut-offs if the question is not ethnically appropriate.

*The Nipissing Checklist for parents.* Another tool used in the Healthy Baby, Healthy Children Program advocated by the McCain and Mustard report (1999), was the Nipissing Checklist for parents. This screening tool evaluates seven developmental categories that are based on more critical skills including vision, hearing and other domains alike to other screening tools, however, the ASQ-3 is more comprehensive and also relies less on a face value report, therefore it is more valid. In their report, McCain and Mustard discussed a “readiness to learn” measure, which assesses five domains related to children’s development at the time they enter the school system, including physical health and well-being; social competence; emotional maturity; language richness; and general knowledge and cognitive skills. These are the five domains represented in both the ELECT and ASQ-3 tools.

*Brigance.* The Brigance is often used across Ontario Schools to assess children that are demonstrating needs. This screening tool often informs Individual Education Plans (IEPs). The complete early childhood system includes a screener, developmental inventory relevant to Ontario curriculum and readiness activities.

### **The Connection of Instruments in Literature**

As mentioned above, DuPaul et al. (2011) established that indirect and direct methods of assessing children should be used in tandem to promote accurate data regarding the assessment of children. The Best Start Expert Panel on Early Learning (2007) recommends the use of various tools be used together as well. Conversely, more than one screening tool are typically connected or measured against each other to check for a similar outcome. In a study done by Bauchner et. al. (2009), the ASQ and the Parents Evaluation of

Developmental Status (PEDS) instruments were reviewed and found to have only 67% agreement overall, although both tools are becoming increasingly used in pediatrics. PEDS was said to have less of a predicative value due to a lower specificity and sensitivity, and it was recommended that professionals use an additional tool; however there were no data to support this approach. Although the lack of evidence to support using more than one tool is concerning, the Best Start Expert Panel on Early Learning (2007) is firm in encouraging the use of more than tool, since their framework is not a method for screening. The secondary tool used in the Bauchner et al. (2009) study was the ASQ, however since the formats of the ASQ and PEDS vastly differ, there is a possibility for incorrect identification within the same populations. Since both results depend on the caregiver's response and each was formatted differently, it may have yielded different results.

Cook et al. (2010), declare that inputs from more than one source, such as the teacher and caregiver may produce more consistent findings; therefore parents need to play a role in screening their children. There are different approaches to obtaining feedback from parents; the PEDS did not have skills-based questions like the ASQ, instead they were in the form of open questioning which allowed parents to elicit concerns with variances and freedom of response. Bauchner et al. (2009) discussed how parental feedback is not always accurate and that skills-based questions or checklists may allow for less interpretation and for more consistent findings when comparing results from two tools.

From the studies mentioned in the literature review, it can be concluded that universal screening tools are somewhat limited, and although a combined use of one or more tools has been suggested, it may not be effective. After initially exploring connections between the tools, I found that the link between many domains and indicators of skills based on the ASQ-3 questionnaire may not be a perfect fit with the ELECT, which would likely be true of many forms of developmental assessment. This research provides insight into the practicing ECEs' ratings of connectedness between the tools after attempting to use the *Pre-Intervention Developmental Report*. The following chapter will discuss the qualitative method by which this study was conducted, including two focus groups and questionnaires, administered before and after the use of a researcher developed support mechanism to aid ECEs in connecting skills from the ASQ and ELECT. There was a

particular focus on assessing the current practice of screening and monitoring tools used by ECEs, as well on the connections made by ECEs, between the ASQ and the ELECT.

## CHAPTER III

### DESIGN AND METHODOLOGY

This chapter will include a brief overview of the background of this study and the reasons for choosing a specific methodological approach. Further detail will be provided regarding the set up of the study, including the selection of participants and the site, as well as the focus groups and questionnaires administered.

Before obtaining approvals and selecting participants, the researcher took it upon herself to comprehensively align the two tools based on her interest of referencing more than one tool in her practice. The results found from that attempt, is part of the guiding methodology and it is presented before the results done with participants are shown. With the participants, the methods selected are qualitative, including the use of two questionnaires and two focus groups. The site is located in a diverse urban setting, and supports newcomer families with learning English, gaining employment and also in coordinating youth programs, including caring for children. In the initial focus group participants, who are seven female ECEs, are given a questionnaire and asked about their current use of the ELECT, ASQ and other tools and are given training on the *Pre-Intervention Developmental Report* developed by the researcher, to aide in the alignment of tools. ECEs are asked to use the tool and rate its capacity for assisting in this alignment before meeting for the second focus group, where another questionnaire is given.

As a childcare advocate, ECE college instructor, registered ECE, and certified teacher, many of my experiences with young children have led this investigation. This research idea came to me while I was working as a practitioner in child-care, whereby my duties did require significant documentation of anecdotes about children, as well as occasional screening. It was not required for ECEs to develop a report or portfolio of children so that families could view their progress, but I had often found that to be important, so I used the ASQ, as well as ELECT anecdotes to develop portfolios for children, eventually alerting me to the cross between these instruments. It is during my work that I became convinced that it is critical that ECEs are given methods to intervene before these children reach school age, when there could be such a drastic impact on the ability to learn between infancy and preschool. I concur with Daniels and Hedegaard (2011) that it is the

educator who should be responsible for reporting and intervention that are based on the knowledge of the child's unique background.

### **Description of Qualitative Research Procedures**

Use of qualitative methodological approach is common in educational studies, as they often need to take into account the views of participants. Focus groups, for example, are meant to gather information from people with a common understanding or experience (Creswell, 2008). In the present research, a series of two focus groups were conducted to discuss and analyse familiar methods of documentation and assessment implemented in childcare settings and with childcare staff. In the first focus group the researcher posed questions to participants about their use of documentation and methods of assessment, as well as provided training on use of the *Pre-Intervention Developmental Report* as a method of documentation for this research. Furthermore, a brief training on the use of the ELECT and ASQ was given. The participants were then asked to use in practice for a week, the methods explained in the training and the *Pre-Intervention Developmental Report*, and meet for the second focus group, where they brought their collaborative expertise to analyse what they found in the way of connections between the ASQ and ELECT. Besides rating the perceived connection between the tools, participants were asked to provide feedback to the significance of understanding connections, or having a dependable means to interpret more than one tool.

To obtain further information from each participant, an exploratory questionnaire was administered at the beginning of focus group one, and at the end of focus group two. Since there were a limited number of participants, seven in total, more in depth information was sought out by providing open-ended questions with specific response options as well. In the first questionnaire, participants were asked to provide detailed information about their current use of screening tools and early childhood monitoring, whether or not they found them important to use, and how they would typically follow up on concerns that were either identified or noticed, based on their developmental knowledge and experience.

In focus group two and through another questionnaire, the researcher asked specific information about the participants' use of the given tool, its implementation in practice, and alignment between the tools. The

participants had to choose a child in their classroom to observe. Participants also assessed the ease of interpretation between more than one tool and result of understanding concrete connections between documentation, screening, and monitoring. The alignment between the two tools was important to understand, as it could guide ECEs in developing activities to scaffold development through the use of strategies and activities to enhance areas of concern. The questionnaire also asked participants to edit, add, change, or remove any piece to the *Pre-Intervention Developmental Report*. The reactions of participants to the use of the proposed methods by the researcher were analysed and transcribed.

The first questionnaire introduced the topics of screening and monitoring, and followed by asking about the use of more than one instrument. The second questionnaire collected the final information on the use of the method and the *Pre-Intervention Developmental Report*. The flow of the questionnaires, training, and final evaluations were significant in establishing a complete understanding of the potential connections between tools, and their rationale of use together.

## **Set-up of the Study**

### **Context and Participants**

The context of the study took place at a Children's Program and Services department in Windsor, ON, which has several departments and locations, and is funded by Citizenship and Immigration Canada. The place of this study was the main site, and the target population consisted of early childhood educators with a range of experience from two to five years working in a newcomer environment. The call was issued through the Director of the Centre to volunteer to participate in the study. There are approximately 10 childcare staff members spread amongst the infant, toddler, and preschool and after school program rooms, with an actual sample of about 7 female participants who consented to partake in the study for both the first and second focus group. The ECEs have had prior experience with the ELECT and ASQ, and due to the nature of their experience with screening and monitoring, this site and these participants were selected.

The choice of this setting was due to overwhelming interest in participation in research regarding early childhood screening and monitoring, as well as the researcher's previous involvement with the site. The

researcher also determined that there is a need to support ECEs who care for many children and families showing potential risk factors. As Keels and Raver (2009) point out, there are many significant barriers to language minority children. Although children at this site were not intently measured, the benefit of receiving training to document and analyse both tools, may assist ECEs in bridging a developmental gap within many domains.

### **First focus group meeting**

The first focus group began with an introduction to the study, followed by obtaining participant consent. The first half of this focus group was much like a workshop, as the participants received brief training on both instruments, the ASQ and ELECT, particularly on how these instruments were matched. Participants were then trained on the use of a methodology and a *Pre-Intervention Developmental Report* to connect the tools, as well as training on collecting follow up goals and anecdotes. They were given the following directions for completing the *Pre-Intervention Developmental Report*:

1. Use a completed ASQ to gain information on potential red flags;
2. If red flags are apparent, consider referral according to policy and procedure within child care site;
3. In the meantime, if this screener shows a domain question scored as *sometimes*, or *not yet*, use the Column 1 on *Pre-Intervention Developmental Report* to record what domain and question it is;
4. Use Column 2 to list what identified problem was found, and under what domain it was found;
5. Examine the ELECT and attempt to find a developmental skill on the continuum that aligns with the identified problem skill from the ASQ;
6. Use the ELECT and ASQ strategies to develop a goal and plan (add this information to an Individualized Family Service Plan if possible);
7. Take anecdotal evidence on the development of this outcome.

The participants were then prompted to write about their experiences with using a wide range of assessment and monitoring tools, by asking questions located on the *Informal and Formal Assessment Questionnaire* (see Appendix A).

After this focus group ended, the participants handed in the questionnaire. They were asked to use the *Pre-Intervention Developmental Report* after filling out an ASQ of any month, without including any identifiable information for the child.

### **Second Focus Group Meeting**

Prior to beginning the second focus group, the participants were asked to employ the described methods and the *Pre-Intervention Developmental Report*, and to complete a questionnaire regarding the purposefulness of identifying specific concerns based on the ASQ outcome and the matched ELECT indicators of skill. The site purchased a set of the ASQ, and each participant used the screener to align with the ELECT. After a week's time, the participants brought back the completed tools and discussed the technicalities of what they have found. A discussion during this second focus group was led by the researcher and later transcribed. This focus group lasted 1.5 hours, followed by impromptu questions from the researcher, after learning information from the participants. Information collected regarding the actual data from the screening tool is arbitrary to the study itself, since it was not essential to identifying the purposefulness of matching outcomes and developing follow up plans in childcare settings. No identifiable information regarding children was included. Participants were debriefed and there was additional time left for questions.

The following chapter consists of a detailed analysis of the findings and their pertinence to the research questions posed in Chapter One. Further information includes the current screening and monitoring practices of ECEs, and their perception on the importance of screening, monitoring, and aligning the two tools. ECEs also provide information on the challenges to using multiple tools, as well as their current follow-up procedures. A connection or misalignment between the ASQ and ELECT is explained, and ECEs use of the pre-intervention developmental report is recorded. Ultimately, findings from the *Pre-Intervention Developmental Report* are presented, including pertinent changes to this tool recommended by the participants.

## CHAPTER IV

### ANALYSIS OF RESULTS

#### **Researcher's Prior Attempts to Align Instruments**

In this study, I used a method of matching root skills to screening questions, with anecdotes, to integrate the tools. Lacking this type of reference and using a screening and monitoring tool separately, may allow for significant misinterpretation of what a child is able to do, due to a lack of referencing the tools. Combining these methods, as done in a study by DuPaul et al. (2011) will lead to more accurate results, assumingly because the rating scale is matched to a continuum, allowing ECEs to reference typical norms against a continuum of development over time.

Most elements of the ASQ-3 and the ELECT tools interconnect between their domains, and some indicators of skill, as described on the ELECT, pertain to specific screening questions on the ASQ-3. The ELECT has four categories on the continuum of development, such as infants, toddlers, preschool, and school-age, and each level of development has its own set of indicators. Similarly, the ASQ-3 has several questionnaires, suitable for children from one month to five and a half years old. Both the ASQ-3 and the ELECT serve a primary purpose. Although the ELECT should not be used as a set of benchmarks, as not all children go through all of these steps sequentially, it can be used for monitoring and to spot red flags or atypical development since it is a reference tool. The ASQ-3 should be used as a screening tool however, for identifying abnormal development; ASQ is used with a parent's input, as a professional interprets the results. Both tools can also be used to facilitate activities which may enhance developmental outcomes in identified domains in which children are not meeting milestones.

In order to determine the connections between the tools, each needs to be examined in detail to match skill and behaviour-based questions on the ASQ-3, to ELECT indicators. The ELECT categories on the continuum and developmental indicators are a similar match to the pertaining questionnaires of the ASQ-3, as there seems to be strong alignment for many domains and skills, although it may not be possible to find a faultless connection between the tools. For example, below it is possible to see a face value connection between

the social domain (1.1) on the ELECT infant framework (Best Start Expert Panel on Early Learning, 2007), and the ASQ 20 month screener in the Personal-Social domain, question 2 (Bricker & Squires, 2009).

ELECT DOMAINS	ELECT INDICATORS	ASQ-3 IDENTIFIERS
<b>1. SOCIAL</b>		
<b>1.1 Social Interest</b>	<ul style="list-style-type: none"> <li>• seeking adults for play, stretching arms to be picked up</li> </ul>	<b>20 MONTH: Personal-Social (Q2):</b> Does your child get your attention or try to show you something by pulling on your hand or clothes?

*Figure 4. Connectivity of skills between the ELECT and ASQ.*

If this research were to examine another part of each tool however, there may be more ambiguity in finding a good fit between ELECT indicators and ASQ identifiers.

The tool provided in Appendix B, as completed by the participants is an example of how the anecdotes can provide a snapshot of age related development based on the ASQ-3, against a continuum based on the ELECT, and identify specific domain related strategies for goal planning and intervention through activities suggested by both tools.

Some inquiry has been done by the researcher to interpret each tool and to offer potential connections between domains; however complications were faced in this attempt which may cause concern over using these tools together. Although it was never the intent of the researcher to create a screening tool based on the ELECT, rather a methodology and reference tool for educators to use when identifying needs and aligning them with children’s development, there was concern presented by the Best Start Expert Panel representatives that this would turn the ELECT into a screening tool. Given that not all children achieve every skill within each domain on the ELECT and sometimes move at different pace, the researcher intended to use the ASQ to identify needs and typical skills, as a reference for planning goals. An example of prior analysis (see Figure 5) included columns indicating achievement, based on the ASQ.

Name: \_\_\_\_\_

## Developmental Monitoring Tool

Date: \_\_\_\_\_

ELECT DOMAINS	ELECT INDICATORS	ASQ-3 DOMAINS	YES	NO	OCC	ANECDOTES	NEXT STEPS
3.2 Expressive Language Words	• combining words	20 MONTH:Communication (Q2): Does your child say two or three words that represent different ideas together, such as "See dog," "Mommy come home." or "Kitty gone"? (Don't count word combination that express one idea, such as "bye-bye," "all gone," "all right" and "What's that?") Please give an example of your child's word combinations:					

*Figure 5.* Monitoring tool developed during initial analysis.

Therefore, although this initial tool was not used during this study, the procedure of developing this tool helped the researcher to create another tool for this study, namely the *Pre-Intervention Developmental Report* (see Appendix B).

### Summary of Findings

This chapter aims to describe the findings of this study, in particular to identify and assess the way in which the proposed methodology and *Pre-Intervention Developmental Report* aided in scaffolding children’s specific skills, according to the participants. The aim of the research was to use the aligned ASQ and ELECT with the ultimate purpose of enhancing identified childhood skills through goal and planning measures of early childhood educators. Rather than including a score or mark as “yes,” “sometimes,” or “not yet” as the ASQ requires, the *Pre-Intervention Developmental Report* provides a more specific focus on ASQ questions that are identified as “sometimes,” or “not yet,” so that educators are truly referencing one skill-based question against a typical developmental skill and recording an anecdote on it to provide a more complete understanding of where the child was initially, what he or she was doing, with what materials, and with whom. It also provides a means for documenting the achievement of the skill.

The utility of aligning these tools into a separate instrument was done, and a method for supporting the alignment was explored in this study. This methodology has not been tested, and therefore the assumption that it will be plausible for all educators, has no substantial support in the literature; however this methodology and

separate instrument namely the *Pre-Intervention Developmental Report*, will be used by ECEs. Further support or disapproval for this technique will be enhanced and criticized by the responses of educators in this study.

The collected data were examined according to Christensen and Johnson's (2009) coding techniques, including open coding, whereby the open-ended questionnaires and focus groups are transcribed and particular responses are identified in each transcription, allowing participants to have a voice. Subsequently, the researcher used axial coding, where all open-ended questionnaires and focus groups are examined for generalized responses and concepts, followed by selective coding, where the information is analysed for promising evidence to support the thesis.

The results are based on the data obtained from two focus groups where a questionnaire was given to ECEs, one before the implementation of the *Pre-Intervention Developmental Report*, and one given after its completion. The following research questions guided this analysis:

- (1) What strategies do ECEs at this site currently use to interpret their documentation and screened findings?
- (2) What kind of challenges does the alignment between the ASQ and ELECT present for the ECEs?
- (3) How well does the ASQ and ELECT achieve consistency within their developmental domains and skills, as perceived in a rating scale by the participants?
- (4) Do ECEs find the alignment of screening and documentation tools meaningful and if so, to what extent?
- (5) Do ECEs think it is possible to encourage skill development with the Pre-Intervention Developmental Report?

### **Current Screening and Monitoring Practices**

After reviewing the various strategies of ECE and tools that are often used to monitor and screen children, the researcher wanted to examine the current practices of early childhood educators, before looking further into their approach of using more than one instrument.

*The first research question: What strategies do ECEs at this site currently use to interpret their documentation screened findings?* In the first focus group, the ECEs were asked what strategy they use in their classrooms, all responded by saying they use an emergent approach to curriculum, whereby they take documentation of developmental indicators and plan activities based on it. Subsequently, on the first questionnaire, participants were asked “Are you using informal or formal assessment in your classroom (e.g. documentation with the ELECT, using screening tools such as the Ages and Stages Questionnaire or the Nipissing)?” all seven participants circled *YES*. Given that all participants circled *YES*, they were asked “what informal and formal assessment do you use?” All seven participants responded by saying that they use observations to collect anecdotes, while referencing the ELECT on the children, as well as the ASQ. Six of the seven participants responded that they also used the Nipissing checklist.

Then participants were then asked to write “how often do you use each of the above informal and formal assessments?” They named the instrument or method, and circled whether they used it daily, weekly, monthly, or yearly. All participants wrote that they used the ELECT daily and the same was found for the use of anecdotes. It was brought to the attention of the researcher that they always use ELECT to guide their anecdotes.

As for the ASQ-3, all participants recorded that they used it monthly, but commented that they used it according to the recommendation on the ASQ, which was to assess children based on the next developmental testing month. As for the Nipissing, out of the six participants that responded “yes” to using the Nipissing, one did not respond, one said that she uses it yearly, and three said that they use it monthly. One participant who had stated that she uses the Nipissing monthly also commented that this is so because she had to use it more often than recommended because she used it on each child, and they all need to be screened at different times due to their ages. Others who also responded “monthly,” also agreed with this statement. The one participant, who listed it as a yearly screen, commented that it would be once a year per one child and all participants were also in agreement with this response during the focus group.

### **Importance of Use and Possible Alignment**

Before being shown possible alignment between the ASQ and ELECT, participants were asked “Do you believe that formal tools (such as the Ages and Stages Questionnaire), and informal documentation (such as the ELECT) look at similar developmental skills?” All 7 participants circled “yes”.

In order to acquire information about participants’ perceived importance of screening and monitoring tools, and their alignment, the participants recorded in response to the following question; “is there a purpose for understanding the connection between the ELECT and ASQ? If so, **why** would it be important to you as an early childhood educator?” All seven ECEs said “yes”, and all but two responded as to why they find them useful.

During this focus group, one participant explained that it was the ECEs job to observe and assess children so that they can see if there are any delays or problems. She also stated that ECEs base their activities on the ELECT so that they can guide children’s learning. Another ECE said that it allows her to see what stage of development the children are at, and plan activities that are developmentally appropriate. During this focus group, one ECE added that they are more able to find the children’s interests and skills, and then create the curriculum, which improves their skills.

*The fourth research question: Do ECEs find the alignment of screening and documentation tools meaningful and if so, to what extent?* Although all seven educators had deemed it important to see the connection between the ELECT and the ASQ, two did not record as to why it was important, while two other ECEs also listed that “screening for red flags” would make the connection between the two tools important, when it would only be necessary to use a screening tool to find out that information. It was therefore the assumption of the researcher that the ECEs had never attempted to align these tools before, and therefore did not respond. Further questions were asked during the focus groups to gain insight into whether the ECEs had ever had the tools side by side before. This inspired the researcher to pose the question “do you use screening tools to guide planning?” In response, two of the seven educators specified that planning for intervention with strategies and activities would be their ultimate purpose, which they would do based on the developmental continuum on

the ELECT. Another question was asked by the researcher: “have you attempted to align these tools before?” and the overall response was “no.” This was an answer to the research question four. Although the ECEs found it meaningful to understand how the ELECT and ASQ aligned after attempting to do so during focus group 1, continued research during this study would need to be done by then implementing the *Pre-Intervention Developmental Report*, so that the educators could attempt to align items on the ASQ to skills on the ELECT, since they had never truly attempted it before.

### **Challenges to Using Multiple Tools**

All the participants reported use of more than one informal or formal instrument to document or assess children, and that they found this important. Subsequently they were asked to record “what do you feel are some of the challenges to using **more than one** type of assessment?” One participant stated that it was time consuming and that in emergent curriculum the children are not accustomed to being told to do tasks that they are not particularly interested in. Another ECE made it clear that they have to find creative ways to administer the screens because they often follow the children’s lead within an emergent curriculum, and also due to language barriers since the children are from recently immigrated families, which complicates getting a response back on screening tools. “In an emergent curriculum setting,” as they stated, “it was difficult to establish procedures that are teacher-directed” and therefore, screening tools presented to them a genuine dilemma.

The ELECT, however, is the instrument they used to guide planning measures, and they found no imposition in observing skills and allowing children to express those experiences, from which they would create further plans.

The researcher asked a more specific question during this focus group to gain detailed insight into whether or not the participants had ever cross-referenced outcomes on one tool to another in order to find out more about the children’s level of ability in completing a task, or to find out what was considered to be typical. No participants admitted to looking at a question on the ASQ that was marked as “not yet” or “sometimes” and cross-referencing it to skills against the ELECT continuum of development, to see what was typical. They did say however, that they would always review the ASQ results, and decide to refer children based on concerning

evidence. They also stated that they wanted to know more about the assessment outcome done by the community agency that the child was referred to, so that they could better understand how to guide the child.

### **Follow-Up Practices**

As was eluded to earlier, participants often said that they would take action to assist children further when they identify a problem. Participants were asked “What do you do if the children in your centre are showing cognitive, emotional, social, physical, or language problems?”

Most participants wrote that they would observe the child more and document their observation with the ELECT, provide more activities to improve skills, talk to parents, and refer the child for professional assessment. Some participants also explained that they would bring in professional help after doing the ASQ, if there was a need. One ECE said that she would write a report to her manager with a copy of the ASQ done by the parents and the teacher. It was assumed that the manager would take the next steps for an early developmental assessment. Subsequently, the participants were asked to circle “yes”, “no” or “sometimes” to this question: “Do you plan goals and outcomes for children who demonstrate problems?” All 7 participants circled “yes”, and three participants commented that they work as a team with other agencies to provide the best activities for the child, as well as bring in other colleagues to observe and plan activities so that the child can benefit.

Following this, participants were asked to circle “yes” or “no” to the proceeding question: “If a child scored low in one domain (e.g., cognitive) on the Ages and Stages Questionnaire, do you think it would help to know which specific skill that they need to build on?” They were also asked to comment “why or why not.” All 7 participants circled “yes,” and their responses were recorded. Participants responded often times in agreement, saying “so we can know exactly which skill to help them with and what kinds of activities to plan for the classroom.” Another response was “Yes, because if we don’t know the exact skill than we can’t help that child to build on that skill.” In agreement, another response was “repetition, repetition- if you don’t know the needs of the child, you are not going to repeat activities that will improve their skills.” Two participants said that knowing this skill would help them to focus on improving it, since this is a problem to give more attention to

than to skills that are developing without concerns. The final question asked participants to circle “yes” or “no” in response; “Do you think that it is possible to use the ELECT strategies to support children showing concerns from a screening tool? All 7 participants circled YES to this question.

## FOCUS GROUP TWO

After focus group one, participants were instructed to use the *Pre-Intervention Developmental Report* and to bring it back into focus group two with the attached open-ended questionnaire.

### **Connection between the ASQ and ELECT**

There were mixed findings from the participants in regards to the connection between the ASQ screening question identified as either “sometimes” or “not yet” as outlined as step three in the methods of using the *Pre-Intervention Developmental Report*, and the ELECT indicator and root skill.

*The third research question: How well does the ASQ and ELECT achieve consistency within their developmental domains and skills, as perceived in a rating scale by the participants?* In order to find the answer to this question, the educators attempted to use the method of alignment provided by the researcher. One question asked by the researcher was “On a scale from one to five, how easy was to see a connection between the ASQ and the ELECT with this form?” (see Table 1).

Two of the seven participants reported a connective strength of 2 (on a scale 1-5) and mentioned that the ASQ and ELECT did not always match with this form; another two participants selected 3 (on a scale of 1-5). The rest of the results are as follows: one participant selected four, one participant circled five, and the final participant did not make any selection on the five-point scale. The participant that circled four out of five on this question noted that an ASQ question under the problem-solving domain is asking if a child recognized themselves in the mirror, where as that same skill on the ELECT would be under the *Emotional* domain, under “sense of self.” This is the first report under Appendix B, and is analysed further under the heading *Analysis of Recorded Alignment*. Another participant stated that “some questions are cut and dry there is a clear

connection,” yet another participant explained that one of the tools is less comprehensive in one area, and that sometimes it is hard to match ASQ question with ELECT indicators.

Table 1

*ECEs rating of the Pre-Intervention Developmental Report’s support in alignment*

<b>Level on the Scale</b>	<b># of Participants</b>	<b>Specific Comments Regarding the Form Use</b>
<b>1</b>	<b>0</b>	
<b>2</b>	<b>2</b>	“ASQ & ELECT were not written to coincide; many items do not match. I had to look thru the ELECT many times to try and find indicators that “might” fit in and make sense. Some questions are cut and dry there is a clear connection.”
<b>3</b>	<b>2</b>	“Sometimes it is hard to match ASQ question with ELECT indicators, because ELECT seems to be very general in some domains and there are many gaps.”
<b>4</b>	<b>1</b>	“An ASQ question under the problem-solving domain is asking if a child recognized themselves in the mirror, where as that same skill on the ELECT would be under the <i>Emotional</i> domain, under sense of self.
<b>5</b>	<b>1</b>	“ASQ only has 30 questions, 5 domains. ELECT has 55 domains and 287 indicators (preschool)... For example if your answers for all the ASQ questions are “not yet”, ASQ cannot cover all the ELECT indicators.”
<b>Did not select</b>	<b>1</b>	

\*The lowest rating of the alignment between the ELECT indicator and skill and the ASQ question is one, and the highest is five.

The participants' responses show that their answer was dependant on the particular domain on both tools, and whether or not the participants could find a corresponding ELECT root skill as to whether the participants thought that there was a strong connection. The participants in this study were very focused on the ability of the two tools to connect, however they did not elaborate on the Pre-Intervention Developmental Report's ability to foster a connection. This is elaborated more in this chapter, under the alignment or misalignment of the ELECT and ASQ.

### **Purpose of Referencing Developmental Skills**

In order to justify the reason for looking at connections between the tools, participants were asked the following question: "Is there a purpose for understanding the connection between the ELECT and ASQ? If so, **why** would it be important to you as an early childhood educator?" The responses by all seven participants were recorded as "yes, it is important to understand a connection between the tools used in the ECEs' practice." Some stated reasons such as an increased focus on those areas that need support, including those developmental domains and skills indicated on the ASQ, for example, one participant identified a child as having fine motor difficulty on the ASQ, and developed a goal and plan for intervention based on the ELECT. Their goal for intervention was to "support the child in learning/improving pincer grasp, hand-eye coordination," and their plan for intervention included " [offer a] variety of objects in containers with different sized tops, large penne noodles and pipe cleaners, [a] box with clothespins, large bolts and nuts, pegs with pegboard, [as well as] during snack use tongs to serve food."

Another participant elaborated; "As an ECE, [it] is useful to use ASQ on the child; it helps us to find the child's problems. After that we can use the ELECT to find the proper domain and indicators in order to improve on their skills. After we know where the child has difficulties we can plan activities that are related, to help them increase their skills." Other participants found it purposeful also, for the reason that early childhood educators would be able to better guide children in mastering their experiences.

### **Use of the *Pre-Intervention Developmental Report***

After finding out if there was a purpose for referencing questions on the ASQ to root skills on the ELECT, the participants were asked about the *Pre-Intervention Developmental Report*, specifically if they would use the form they were provided with during focus group one (see appendix B). They were asked to circle “yes” or “no”, and if “yes,” mention how often they would use it and for what population of children. All participants stated that they would use the form, but not necessarily with newcomer children, at least not with the ASQ, mostly because although they used the ASQ in their practice, they often do not include questions that do not apply to newcomer children, such as the fine motor section of the questionnaire that asks about tool use, such as a fork. By foregoing the use of certain questions on the questionnaire in the overall score, due to cultural sensitivity, they said that it becomes limited in finding out what skills are showing concern. In their comments, the participants criticised the ASQ rather than the *Pre-Intervention Developmental Report* itself, for lacking questions that pertain to newcomer children. One ECE stated that some questions pertaining to domains are not culturally sensitive. For example, some questions in the communication domain on the ASQ, would help identify a child at their centre as having a concern, but may not point to all the reasons for the concern. For the ECEs it was important to know what was causing this issue, and how they might help that particular child. Other ECEs stated that the ELECT continuum does not have enough indicators to express skills that newcomer children or children with disabilities present.

One educator said “The ASQ does not take into consideration children with different skills based on what they have learned & mastered in their culture. Also, with the push for emergent curriculum, the ASQ questions are very random and do not fit in very well with emergent curriculum.”

Based on the variance in responses overall, it seems important to the participants to be able to identify individual children’s needs and strengths, or their ZDP for relevant skills, and capitalise on each child’s potential (Berk & Winsler, 1995), however one must first document what cannot be done in its entirety without help, so that what can be done with help is revealed. Providing experiences that relate to a child’s emergent display of competency would be the overarching factor.

Some ECEs stated that it would be beneficial to reference more than just the ASQ to the ELECT using this form, including the Nipissing and the Brigance. One participant mentioned that they would use this report in more critical situations, where a child needs more support than usual, and yet another said they would use it alongside the ELECT and ASQ every month that they would usually screen the children. Some participants stated that it would not be beneficial to align other tools, since there was an overall lack of connection between the skills on these tools.

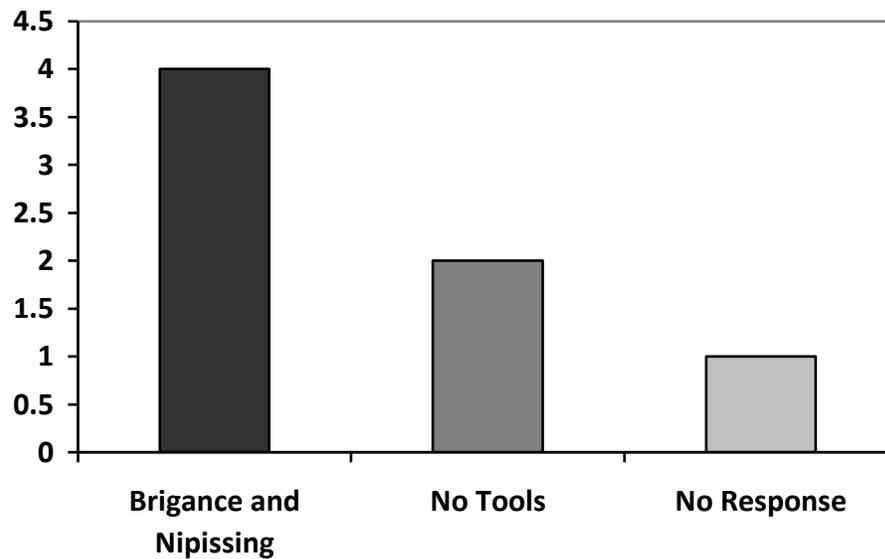


Figure 6. Additional alignment of tools to the ELECT.

### **Findings from the *Pre-Intervention Developmental Report***

The findings from every *Pre-Intervention Developmental Report* can be found in Appendix B, however only key themes that emerged from the data will be discussed in this section, including one example of the alignment between skills on the ASQ and indicators of skill on the ELECT, as well as the misalignment of skills between these two tools.

#### *Analysis of Recorded Alignment*

This example is being analysed in detail due to the need for selective coding, which requires a focused look into the qualitative data, in order to establish and confirm the thesis of this research. Moreover, this example is representative of common recorded findings from all participants, despite the variation in the

participants rating. A connection is found on all of the recorded *Pre-Intervention Developmental Reports* in the appendices.

*One example of the participant's alignment between ASQ and ELECT.* On the first *Pre-Intervention Developmental Report* in Appendix B, the first participant rated the connection of the ASQ to the ELECT as a 4, on a five-point scale. On this report, the ECE used the 33 month screener from the ASQ-3 set and determined that five questions (number 2, 3, 4, 5, and 6) in the communication domain were marked as “sometimes” or “not yet.” For example, question 2 asks, “Does your child make sentences that are three or four words long?”; Question 3 asks, “Without giving your child help by pointing or using gestures, ask her to ‘put the book on the table’ and ‘put the shoe under the chair’ Does your child carry out both of these directions correctly?”; Question 4 asks, “When looking at a picture book, does your child tell you what is happening or what action is taking place in the picture?”; Question 5 says, “Show your child how a zipper on a coat moves up and down, and say ‘See, this goes up and down’...Ask your child to move the zipper up... down”; and, Question 6 asks, “When you ask ‘What is your name?’ does your child say his first name, or nickname?”.

The problem that this participant identified in column two was that “Sometimes the child said what happened but just in simple way.” In column three, the participant aligned this identified problem as being on the toddler age grouping of the ELECT (i.e., in 3. *Communication, Language and Literacy* domain, and specifically in 3.2 *Expressive Language*). The potential indicator was “combining words and using common verbs and adjectives.” For the researcher, it was difficult to see what question on the ASQ related to the ELECT indicator which was further related to the identified problem provided by the ECE, due to a lack of specifics. This possibly underscores the importance of using this tool for one question per ELECT indicator. The ASQ question 2 relates to this item because it is probing the child to find their expressive language skills and how many words (3-4) they can combine; Question 3 however asks more about their receptive language skills, and also assumes that the child would comprehend directions in English. Question 4 asks the child to analyse a picture and tell about it, allowing the ECE to ask questions about what is happening in the picture. It requires the child to analyse a picture and describe it, calling on their expressive language skills, and it is interesting that

the interaction strategies on the ELECT relate by stating, “Invite a toddler to add to your description of a photo. ‘Look at Ned’s big hat.’ Pause. ‘What else is he wearing?’” This invites the toddler to notice details in the photo and respond in expressive language. This ASQ question seems to be the most appropriate after looking at contextual strategies on the ELECT.

This skill was determined as being in progress and the goals section stated “I will invite the child to add to my description of a photo, ex. ‘Look at the dog. (pause) What is the dog doing?’ This invites the child to notice photo and respond in [an] expressive [way].” This goal was also based on the ELECT recommended interaction strategies. The ultimate goal needs to relate back to the identified problem in order to ensure follow-up practices are successful. Consequently, the identified problem was that “Sometimes the child said what happened but just in simple way.” This skill needs to be scaffolded to encourage more expressive language skills, and done in an individual way, based on their socio-cultural experiences (Berk & Winsler, 1995). Perhaps the goal could be stated according to the ASQ, which is to guide the child so that they achieve YES to the questions that were identified in the 33 month questionnaire.

This participant’s response was more comprehensive, as was the final participant’s (7) *Pre-Intervention Developmental Report* in Appendix B. Other participants however, had some difficulty in identify needs and developing goals, as they remained unspecific and immeasurable over time. The plan for pre-intervention provided by participant one in Appendix B would (1) make available different books with color pictures, books with pictures and simple sentences on the bottom, and pictures with Velcro sticking on the wall; (2) read the books together and describe the pictures, and (3) repeat the words or sentences many times. This plan for pre-intervention needs to align with the identified problems (according to the ASQ) and the goal determined. The ECE in this case, will be able to best decide what to do to encourage achievement of the goal.

The anecdote aligned in Appendix B was, “During free play time in the book area, child 1 picked a book off of the shelf. He sat down on the carpet and began looking at the book. He pointed to the dog’s pictures and said: ‘Dog...ruff, ruff...’ This child’s ability to express his or her perception of what the dog might be doing in

this picture was not lacking, however the ability to use words to express ideas, such as what was asked in the questions number 2 and 4 on the ASQ was not available in this anecdote.

It was the researcher's conclusion that progressive documentation on this one skill will enhance the ECEs understanding on what the child is capable of doing. It would be wise to change the format of this *Pre-Intervention Developmental Report* to include the development of a skill, allowing for multiple anecdotes as they progress, with the guidance of an ECE or more knowledgeable other.

### *Analysis of Misalignment*

The first report in Appendix B also recorded some misalignment between the ASQ questions and ELECT indicators. Participants added that sometimes the tools do not match, or the questions are found under different domains. For example, the 33 month ASQ asked "when looking in the mirror, ask 'where is \_\_\_\_\_?' (Use your child's name). Does your child point to her image in the mirror?" In the ELECT, the respondent found similar item under the 2.4 Sense of Self under the emotional domain, in the Toddler continuum. Although this ECE was able to find this skill in a different area, it is not true that the alignment of domains (see *Figure 1. Interconnectedness in Developmental Domains*) would be without fault. This will be important to recognize when further training educators in the use of more than one tool in their practice.

The proceeding chapter will discuss additional findings, including the influence of emergent curriculum and the newcomer environment, as well as theoretical implications and implications for practice. Finally, there will be discussion over the changes to the Pre-Intervention Developmental Report and a section for future research.

## CHAPTER IV

### DISCUSSION

This chapter will provide discussion based on the research results, elaborate on limitations to the findings, present the theoretical and practical implications, as well as offer suggestions for future research.

After the first focus group meeting and the administration of a questionnaire, this researcher confirmed that all early childhood educators on-site were using informal and formal assessment tools to screen and monitor children in the centre. The ECEs also consistently used more than one tool in order to learn of any developmental concerns that the children may face. They used this understanding to informally assist the children in obtaining learning skills that were of concern through planning activities or working in small group settings, and they would refer children that they believed needed more support. Prior to this study, the participants had not yet tried to cross-reference between the tools, but believed that it was possible to see cross-over between domains on more than one tool. Based on their survey results, the educators believed that they would be able to use this alignment method to guide planning measures that may increase developmental skills that were showing concerns.

The educators were given training on the use of a method developed by the researcher to align the ELECT and ASQ-3. They were to complete the *Pre-Intervention Developmental Report* and describe the connection between the tools and the report's overall purpose in their classroom. The ECEs had mixed feelings about how well the two documents aligned, mostly finding that there was some general connection among skills regardless if there was a domain difference. For example, one ECE identified a child as being unable to complete a fine motor task on the ASQ, as it asked about "drawing a circle." Although this skill was not directly mentioned on the ELECT, they were generally able to connect this to the physical domain on the ELECT, and it matched well to the indicators such as, "using palmer grasp to hold crayons and brushes and make scribbles" and "scribbling expands to include lines and shapes." Other sections on the ASQ including the personal/social domain were more difficult to align, and often matched best with social and emotional domains on the ELECT. Some questions on the personal/social section on the ASQ were more related to life skill, for example, if a child

was able to bring a spoon to his or her mouth without spilling, on the ELECT this was a fine motor indicator, under tool use.

Each of the ECEs believed that there was a purpose for understanding and analysing specific skills in relation to informal and formal assessment. The participants recognized that pre-intervention was possible and purposeful, however they did not know how it would work within an emergent setting or with newcomer children, and how much time they would be able to commit to filling out this report for each child. ECEs offered some adaptation to the report, suggesting that columns should be altered to make it easier to use. Overall, this methodology and the *Pre-Intervention Developmental Report* were recognized as beneficial to the participants.

### *Early Intervention*

Based on to the Best Start Expert Panel on Early Learning (2007), who stated the importance of early intervention, and using both informal and formal methods, it was also the perception of the ECEs that there was a purpose to using tools, and participants promote that using more than one is purposeful when being used together. ECEs also gave reasons for wanting to know the aligned skills, stating that they would need to know what a child was capable or incapable of doing so that they could foster that skill. The Early Years Study 3 (McCain, McCuaig, & Mustard, 2011) acknowledged that childhood brain development has a window whereby it can be enhanced to its fullest potential.

In reference to the ECEs follow-up practices, and to answer the question posed by the researcher in the literature “how do ECEs recognize what level of development the children in their care are at, and how to scaffold skills, if it is not being intently measured?” the ECEs in this study recognized that it was difficult to complete individual paperwork on children, but that doing so created a stronger understanding of that child’s strengths and weakness. ECEs acknowledged the purpose as having the ability to foster skills that they knew needed support, or by Vygotsky’s theory (1982); acting as the more knowledgeable other.

### *Standard of Care*

As mentioned in the literature, under the *History of Early Childhood Education and Current Issues*, and in detail under the *Day Nurseries Act and Early Childhood Education Act*, there are no regulations for reporting on children's development by using a specific framework, or screening tool. It was found that the ECEs in this site were using up to three different tools for reporting on children in their centre and they discussed how using more than one tool can be challenging, including the amount of time it takes, as well as interpreting what can be done after the tool is completed.

A lack of uniform reporting may create discrepancy and inequality between childcare centres. All children have a right to a standard of care, and the Ministry of Education recognized this when they bound the ELECT into the kindergarten curriculum. As a part of the College of Early Childhood Educators (CECE), this standard should be recognized. With a requirement for pre-intervention and a specific method or screener that is standardized, ECEs may generate less risk for children later in life, which is particularly important as research shows that continuity can have a dramatic effect (McCain, McCuaig, & Mustard, 2011). Furthermore, accessibility to a system for educators to use when reporting on children before kindergarten may enhance accountability of the ECE profession.

### *Emergent curriculum*

Interesting findings that were not initially planned for in this study presented themselves and added more relevance to the particular context in which the study was organized. The site that was chosen uses a philosophy of emergent curriculum and in the focus group two, all of the participants mentioned and agreed that they had always found it difficult to screen children, seeing that the children themselves usually lead developmental planning at their site, therefore as the children exhibit these skills, the ECEs use this to guide them. They felt that asking children to complete adult-demanded tasks, such as "drawing a circle" was deemed a difficult task for participants.

In order to alleviate this dilemma and integrate this constructivist perspective with that of individual development, one might look to the Zone of Proximal Development (ZDP), whereby the more knowledgeable other provides support to a child's current level of competency by way of using strategies to build on

opportunities presented by the child (Berk & Winsler, 1995). Screening tools are a measure of current competency, but do not provide a view of what the child can do with help, a very important concept to Vygotsky when discussing assessment. Also important is the focus on the individual child, thus, the reason for its purpose for alignment to the ELECT. Berk and Winsler (1995) state that Vygotsky's ZDP, based on his socio-cultural theory, must be interpreted with an individual lens; children who are not viewed this way, are not being challenged to reach their fullest potential.

The individualised *Pre-Intervention Developmental Report*, created by the researcher, was developed as a means to capitalise further on these individual levels of development, while also creating a space for anecdotes to show progress and allow children to guide planning, since ECEs must document goals that build on the child's previous learning. "The idea of *emergent curriculum*- which means that early childhood educators make plans based on children's evolving interests and competencies rather than mapping out classroom experiences months ahead of time, is highly consistent with Vygotsky's theory, since this approach integrates child's spontaneity with flexible, but deliberate teacher guidance" (Berk & Winsler, 1995, p. 115).

Although Vygotsky's theory, according to Berk and Winsler (1995), was highly consistent with emergent curriculum, he also believed in the importance of knowing what a child cannot do without help, so that the more knowledgeable other could scaffold these skills. These skills occur spontaneously, and can be documented; therefore, ECEs should feel alleviated knowing that they are recording potential learning opportunities. Without following up on this information inside of the classroom, critical time to intervene may be missed. As mentioned by McCain, McCuaig and Mustard (2011), these children are in a stage of development that requires consistent and relevant brain stimulation to develop, and ECEs have this window of opportunity to engage children according to their individual needs.

Moreover, according to the responses of the participants during the second focus group, there was a general perception that identifying particular skills that needed advancement, although important, would be difficult, as ECEs are far more familiar with documenting typical skills rather than needs in an emergent environment. Since emerging skills were deemed as the true interests of the children and normally used to lead

planning measures, it would be difficult to base planning measures on a lack of skills, or atypical skills. This dilemma can be lessened by changing the structure of the *Pre-Intervention Developmental Report* to include anecdotes at the beginning of the report that display a child's emerging skill that is "sometimes" (in agreement with terminology from the ASQ) displayed, and adding a section to the end of the report, asking for an anecdote that displays mastery, showing that "yes" (in agreement with terminology from the ASQ) it is in fact achieved. Although this does not address what a child has "not yet" achieved, as identified on the ASQ, the emergent philosophy does encourage a wide range of developmental activities and materials, as well as the provocation and extension of concepts. Offering materials to a child to encourage what they have "not yet" achieved according to a screening tool would not necessarily be frowned upon. Equally, Vygotsky (Berk & Winsler, 1995) did not believe that all children have the same socio-cultural experiences and therefore certain screening questions and some of the indicators of skill on the ELECT may not be relevant to all children. Adhering to his theory and the philosophy of emergent curriculum may seem difficult from an interventionist standpoint, but it is a misconception that screening and intervention cannot occur in such a setting. It is possible for ECEs to encourage skills that have not been displayed by a child, through the use of materials and activities that create interest and internal motivation. It is also possible to scaffold development that has only "sometimes" been shown to emerge.

### *The Newcomer Environment*

Although the site chosen posed more challenges to using the above methods and *Pre-Intervention Developmental Report*, it was a worthwhile and enlightening experience. The ECEs involved stated that it was more difficult to record in a newcomer environment because although they knew the child may not achieve a milestone, they also knew it was due to cultural upbringing. This was the case when referring to indicators such as tool use. Moreover, it was anticipated by the researcher that these tools would be an asset for use in all settings, particularly in newcomer environments, in order to aid ECEs in identifying barriers to communication, which have a direct affect on socialization efforts and emotional development based on prior observations and experience.

The authors Bagnato and Neisworth (2004), explain that screening tools are often inapplicable to children with developmental disabilities, as it is not a fair measure, since it is based on norm-referenced test. According to the participants, it was also found to be mostly inapplicable to populations of newcomer children. They claimed that this was often true because the screening tools do not “catch” all that the child can do, since they express developmental skills differently, relating to children in their centre who are English Language Learners as compared to Canadian born children. If there was an infant for example, that was blind and unable see objects in his or her environment, they may not attempt to reach what they see, but for what they hear rather, indicating a different method to achieving a developmental milestone. Their summarized statement was contradictory however, as they were glad to know the child’s incapability’s according to the norm, as it informed them of how they might “close the gap” between what they can and cannot do. To further complicate this issue, with norm-referenced tests, Bagnato and Neisworth (2004) point to the problem of false positives, which they suggest occurs because the administration in a child’s natural environment is different from where it was initially validated. After reviewing the comments made by the ECEs however, one may be led to believe that false positives are coming from a child’s unique ability to express a skill that is not mentioned on the screening tool or documented in the continuum, because it is not considered a norm-referenced skill, which was true of the way one participant vocalized their observation after using the ASQ questionnaire. During focus group two, participant three under Appendix B explained that the child may not have been able to describe the picture that he drew, mostly because he didn’t have the language ability, but that he could point to a book of a common sing-a-long and recite it word for word, after first recognizing the pictures on the front cover.

The socio-cultural impact (Berk and Winsler, 1995) of each child’s upbringing is different in this newcomer setting also, lending this study to understanding more about the ways in which early childhood educators working with newcomer children differs from those working with Canadian children, particularly in relation to use of the ASQ and ELECT. One participant, when using the screening tool on a child, found that the questions suggested in the tool were not culturally appropriate. Though the ASQ allows for elimination of these items, when looking through the ELECT for a desirable match, the same skills were found on the developmental

continuum, indicating that the socio-cultural competence was important, even when an early childhood educator has multiple resources and tools to guide their planning and intervention measures. Therefore, not all screening questions, particularly for this site, were important to follow up on.

With this understanding, and by using informal and formal tools that allow for the elimination of questions or indicators, it would be important to base developmental competency on the parents and educators personal knowledge of the child. For example, in this newcomer setting, receptive and expressive language development in English was generally achieved within a different timeline than what was suggested by the ASQ, likely because the children at this site began to learn their first language before English and thus could not fully understand meaning, or express themselves in speech. Some educators chose to avoid such questions. The ASQ is available in other languages, and it was recommended to administer it in the initial language of the child. Some ECEs found it valuable to know however, what could not be achieved in English (i.e., meaning of words), so that they could mediate and create activities to stimulate this learning, based on referenced skill on the continuum of development on the ELECT.

This childcare site also attempts to screen children with the ASQ upon their registration to the classroom. One participant attested that since she did not know the children well enough, especially in the way of their cultural differences, it was difficult to assess them. Though screening tools are meant to be standardized and objective, this site felt as though understanding a child's mastery of tasks is difficult without first knowing them and hearing more from the parents.

In regards to content validity, or the ability of a tool to measure a social construct, and the instructional utility of norm-referenced screening tools, such as the ASQ, they may not be considered reliable or valid (Appl, 2000). These tools may not necessarily guide planning measures either, since the screen itself may not lead to understanding future functioning. By connecting the ELECT to various tools, however, there is some continuity that can be seen, since there is a future reference to progression over time. The next major concern however, is that the social construct that was said to have strong validity, may not be so for all children, particularly those at this site.

Vygotsky would declare that one's socio-cultural experiences will differ from another's; leading to different developmental processes (Berk & Winsler, 1995). This may be vastly true for this setting, being that one major problem with norm-references tools are that "...children with disabilities or from different racial or cultural backgrounds are not usually part of the standardization sample" (Appl, 2000, p.222). This may be the reason that the ECEs at this site are finding it difficult to find instructional utility and alignment between both the ASQ and the ELECT. All participants were questioning their current use of the ASQ-3 and even the ELECT for learning about the progression of children at their site.

### **Changes to the *Pre-Intervention Developmental Report***

The results of this study found that some changes were needed regarding the format of the Pre-Intervention Developmental Report. In Appendix B there are seven charts written by the participants, which were typed up by the researcher, and used for analysis of the procedure and functionality of the form. These changes are deemed as important by the participants as well as the researcher.

After hearing more about the recommendations from participants, it was also quite evident that not all lagging skills could be recorded on one sheet. Having to complete more than one developmental report for every question marked as "sometimes" or "not yet" was also deemed as too much paperwork according to ECEs. Based on this response, it has become ever more important that some skills be given precedence based on their identification with the ASQ. Therefore, although even small risk is important to identify, each identified skill should be rated according to level of need. Since these skills are being identified according to a point value on the ASQ, it would be functional for those skills rated as "not yet" and those domains that are showing a recommendation for referral, to be deemed as top priority for ECEs. Although direct intervention may not be an option in an emergent setting as discussed under the *Emergent Curriculum* heading in this chapter, it would be important to offer specific materials and activities to stimulate interest for those skills that have "not yet" displayed themselves. It still seems important not to ignore what is considered developmentally typical, when it cannot be achieved by a child, this can be done indirectly, or more directly depending on the philosophy of the

ECE. Skills presenting themselves “sometimes” are emerging and can be directly influenced according to an emergent philosophy. This is where goal planning can be focused, until it is documented as being mastered. Due to the absolute importance of having families involved in the screening process, according to Bricker and Squires (2009), it would also be beneficial to ask for parents’ opinion on fostering specific skills. Depending on the parents’ desires, ECEs may need to change their focus or goals, perhaps even giving more focus to those skills that are “not yet” presenting themselves, which may require direct goal planning as well.

Oddly enough, further comments made regarding the use of the *Pre-Intervention Developmental Report* include the addition of a space for anecdotes prior to screening in order to document the concern or “red flag” being observed by the ECE. Although the philosophy of emergent curriculum may not be upheld by writing about a deficit skill, it is the belief of the researcher that this is the starting point for planning and may enhance follow-up measures. The space for anecdotes at the end of the tool itself was recommended to remain, but to be used to reflect the child’s mastery experience of the goal. Perhaps three anecdotes, including a deficit view of what cannot be done, what has emerged, and what has been mastered can be created.

In the opinion of the researcher, there should have been additional criterion for establishing a match between the ASQ question and ELECT domain and indicator, rather than strictly following the alignment mentioned in Figure 1, *Interconnectedness in Developmental Domains*, since the domain alignment that was first offered by the researcher has not held as true.

### **Delimitations and Limitations**

The extent of this thesis research is delimited as it is only reviewing and matching two commonly used screening and monitoring tools for one particular research site in Southern Ontario, however there are many more of such instruments or sites to examine. The two tools chosen, although limiting, were functional and considered to be purposeful for alignment through the use of the *Pre-Intervention Developmental Report*. This site was chosen as familiar and accessible to the researcher, as well because the ECEs had experience using both the ELECT and ASQ, furthermore, there was interest by the site to participate due to the researcher’s previous involvement with the site. The choice of the research site provided unique challenges to using these tools, due to

the site's emergent focus and newcomer setting; however, the outcome of this study proved to be an important contribution to future research and theoretical implications. The researcher believed this site is a leader in the practice of documentation, as compared to researcher's experience at many childcare sites in the area. This site has also been responsible for holding professional development sessions for other ECEs in the area.

Delimitations also included that the research only focused on the purpose of aligning tools, a Likert-type scale and open ended questionnaire format was used and that the results could not necessarily be generalized to outside of ECE.

Limitations included that there was a short period of time available for research, and that there were a small number of participants who were all of the same gender. The small number of staff however, kept the focus group environment open, giving the participants' chance to voice their opinions. The participants were not chosen by the researcher, but by the manager of the site itself, however the researcher had worked as a colleague with some of the participants in the past. Although this may present some bias, there had also been some change in the staff at this site since the researcher was employed there. Although the study remained confidential, some ECEs may have felt unwilling to admit that they do not follow-up on children's concerns due to the researcher's relationship with the staff. At last, the qualitative approach used in design of questionnaires and focus groups served as a more effective method for contribution to the analysis and implications for this research. What is more, this research was conducted over the period of one month, which does not allow for a long term implementation of the proposed methodology, or in depth analysis of the usability of the ASQ and ELECT together to guide pre-intervention measures. Finally, no children were directly assessed to obtain data over time by the researcher, and therefore the *Pre-Intervention Developmental Report* developed by the researcher has no substantial validity.

### **Implications for Practice**

Based on past research, we know that intervention measures can be successful for a variety of children, and that even small risk can create a developmental gap. Development is known to occur in a progression very similar across many contexts; however it is also known that children come from various experiences which are

the basis for them to become more engaged by their own individual interests. With this past understanding, the research conducted for this thesis has a series of implications.

Firstly, the early childhood educators found purpose in alignment between more than one informal and formal assessment tool. The significance to this implication is that the ECEs believed they can guide children in enhancing their own development. From this research one cannot assume or generalize that this Pre-Intervention Developmental Report will enhance developmental skills among children, however, based on Vygotsky's socio-cultural theory and the perceptions of the educators in this study, it was possible for ECEs at this site to use this tool to aid in some form of aligned intervention based on their perception of its purposefulness and rating. This is further substantiated by Daniels and Hedegaard (2011) who discuss the ability of teachers to be the interventionists in their classrooms, as teachers deeply understand children's unique experiences due to their constant transactions with the children.

### **Theoretical Implications**

Lowenstein (2011) claims that studies (e.g., High/Scope Perry Preschool program, the Carolina Abecedarian Project, and the Chicago Child-Parent Center program) that are reflective of specific sub-populations of children (e.g., African-American; low SES) are not representative of the whole population, and that they should not be generalized in order to become the basis for the ECE programming today. Such studies had shown the drastic effects that high quality programming can have, particularly on some groups of children.

Although this was not the initial direction of this thesis, the limited findings of this study have shown that either screening or programming measures need to take into account the sub-populations as well, and how these children present their skills in different ways than the majority, who are currently the participants of norm-based screening. Children of newcomer families (especially in countries in which immigration is consistently present, as in Canada) should not be neglected in the guiding principles for changes to programming and intervention, which was reflected by ECEs in this study. Although the *Pre-Intervention Developmental Report* would be purposeful for Canadian children in other ECE sites, many items could not be aligned at the centre that was used as a research site for this study, since questions from the ASQ had to be voided because the child

had not previously learned these skills, unlike their Canadian counterparts. The ASQ recommended that these questions be removed from the scoring sheet, but the participant ECEs found that by so doing, there were lesser items to align. As a consequence, the tools used by the ECEs to assist in measuring a child's current level of development and monitor the skills that children can achieve, are not often pertinent.

The ECEs wondered how relevant the ASQ screening questions were, and how functional the ELECT continuum was for their centre. The participants further mentioned the importance of knowing what the children were unable to do yet, so that they can foster them towards it. The ECEs also restated that these children have a unique set of skills that are different from that of children born in Canada, and that many tools, including the ELECT, do not account for them.

Perhaps then, we should be looking into a new framework that accounts for all children and is built on the inclusivity of culture and those with diverse abilities. The ELECT and other tools could conceivably account for the different modes of learning, for example the way that a hearing impaired child learns will be different in that they cannot explore the depth of sound, however children with or without a hearing impairment both become capable of understanding their world through the use of one or more senses. Accepting this socio-cultural fact may enhance deficit thinking and enlighten the current framework.

In the same way that we map the possible skills of a general population of children by using a framework like the ELECT, it may be possible to map the unique abilities of the various other populations of children and provide an understanding of the potentiality of all children.

### **Future Research**

Ideally, the result of this research will be used in future development of a functional and complete developmental reporting system for individual children. Encouraging ECEs to align the similarities and practicalities of the ASQ and ELECT may create an all-encompassing monitoring system for all children, regardless of their development (as it can be used for facilitating planning for strengths of weakness). A matching piece would certainly not replace screening or monitoring tools, but aid the ECEs' effectiveness for the tool use with all children regardless of their developmental status. This may reduce the likelihood of over

and under referrals due to a better knowledge of skills on a continuum, however it will further allow the ECEs to intervene as best they can in order to increase developmental outcomes in particular domains if intervention services are unavailable immediately. Although planning based on development and emergent ideas can be difficult, anecdotes may also be recorded into particular domains, aiding in this alignment and helping to ensure developmentally appropriate practice. By matching each possible question on each month of the ASQ, to the domains and indicators of the ELECT, it may eventually be possible to reference what specific skill is of concern, what activities are needed to support this skill, and where this development would typically be headed next. This has yet to be done, however this study can be used to initiate awareness—it may be especially helpful for candidates in ECE programs who are beginning to learn how to document and plan. Ideally there would be created an alignment of multiple tools, including those that look for giftedness or different ways in which children represent their development, unlike the current normative screening and monitoring. All strengths and needs as well as goals and plans can be incorporated into an IFSP or IPP and can be passed on through a reporting method, into the school setting. The connection between the ASQ and ELECT may provide further insight for kindergarten classrooms, since the ELECT is already mandated for use in this setting and consistent support into school age is very important.

The research done in this study, points to the importance of intentional measurement and individualized follow-up, especially in childcare. To the same end, primary school teachers are required to report individually, and develop plans based on their findings. This will likely enhance the efficiency and completeness of documenting information for developmentally appropriate planning and practice done by ECEs in childcare centres. This will also ensure that parents become involved in their child's growth, as is a recommendation of the ASQ developers and parents will have the opportunity to learn strategies that extend and move their child's outcomes further. Some additions, however minor, may need to take place in order to compensate for a lack of relationship between domains within the ASQ and ELECT. Tools need to be carefully chosen. This matching of tools could provide insight into which milestones are typically achieved by a certain age, against a continuum which aids in the understanding that positive outcomes can still result regardless of whether children have

developmental delays or are typically developing. It may have the ability to identify a focused outcome for intervention, and match the skill with a stimulating activity supplied by the ELECT interaction strategies, or the ASQ user guide, by matching domain indicators or age group.

Although support has been given for Early Learning Kindergarten Programs, this thesis also advocates for yet earlier involvement in addition to follow-up into school age, since infants and toddlers currently have limited care. Further research can be done to look at ECEs current practices and advocate for ECEs involvement in pre-intervention reporting and planning.

More research and testing of a cross-developmental curriculum planning technique can be done, much in the same way that teachers merge Science and Literacy through the use of cross-curricular techniques. One recommendation from the researcher is that there be more training in this regard, to focus on multiple domains, since anecdotal evidence of the children often shows development in more than one domain, this could guide planning, especially in an emergent setting.

More training in the way of intervention and identifying needs and goals also seems important after reviewing the information given from participants on the *Pre-Intervention Developmental Report*. Although few ECEs are required to do any more than what a referral agency would recommend for the child in their classroom (since ECEs are not privy to the results of testing the children in their childcare centre), more training may increase self-efficacy on developing plans for pre-intervention. The tools are available, but more training is necessary to incorporate it into childcare settings.

Finally, the ASQ-3 data may be held against regional EDI data regarding school achievement. Ontario Early Years Centres (OEYC) across Ontario have been in discussion about taking individual children's data from the ASQ-3 screening tool and attempting to analyse these results with that of the regional EDI data, in order to find a link. Regional data do not provide a snapshot of each child's learning for early childhood educators, therefore this relationship will be noteworthy but complicated to interpret because the regional results within the EDI domains and the individual results of the ASQ-3 do not seem to have a perfect connection.

## APPENDICES

### Appendix A: Questionnaire 1

# INFORMAL AND FORMAL ASSESSMENT QUESTIONNAIRE

University  
of Windsor

1. Are you using informal or formal assessment in your classroom (e.g. documentation with the *ELECT*, using screening tools such as the *Ages and Stages Questionnaire* or the *Nipissing*)?

YES

NO

2. If you circled YES, what informal and formal assessment do you use? Please name the instrument (e.g. *ELECT*, *Ages and Stages Questionnaire*, *ECERS*, *Nipissing*, *anecdotes*).

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

3. If you circled YES, how often do you use each of the above informal and formal assessments? (Please name the type of assessment and circle how often you use it).

- a) Name of the informal or formal assessment (i.e. *ELECT*):

\_\_\_\_\_

DAILY                      WEEKLY                      MONTHLY                      YEARLY

- b) Name of the informal or formal assessment:

\_\_\_\_\_

DAILY                      WEEKLY                      MONTHLY                      YEARLY

# INFORMAL AND FORMAL ASSESSMENT QUESTIONNAIRE

University  
of Windsor

c) Name of the informal or formal assessment:

\_\_\_\_\_

DAILY

WEEKLY

MONTHLY

YEARLY

d) Name of the informal or formal assessment:

\_\_\_\_\_

DAILY

WEEKLY

MONTHLY

YEARLY

4. Do you find these assessment(s) useful, why or why not?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. IF you listed two or more informal or formal instruments, what do you feel are some of the challenges to using **more than one** type of assessment (*for example, trying to use both the ELECT and the Nipissing*)?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# INFORMAL AND FORMAL ASSESSMENT QUESTIONNAIRE

6. Do you believe that formal tools, (*such as the Ages and Stages Questionnaire*), and informal documentation, (*such as the ELECT*) look at similar developmental skills?

YES

SOMETIMES

NO

7. If you are **NOT** using the assessment and monitoring tools, why not?

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8. WHAT do you do if the children in your centre are showing cognitive, emotional, social, physical, or language problems?

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9. Do you plan goals and outcomes for children who demonstrate problems?

YES

NO

SOMETIMES

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# INFORMAL AND FORMAL ASSESSMENT QUESTIONNAIRE

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10. If a child scored low in one domain (*e.g. cognitive*) on the Ages and Stages Questionnaire, do you think it would help to know which specific skill that they need to build on? (*please circle*)

NO

YES

Why or why not?

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11. Do you think that it is possible to use the ELECT strategies to support children showing concerns from a screening tool? Please circle your answer. (*For example, could you use the Ages and Stages Questionnaire to find out if there are problems and use the ELECT strategies to help that child?*)

YES

NO

Appendix B: *Pre-Intervention Developmental Documentation Reports*

ASQ-3 Domain and Screening Question(s)	Identified Problem(s)	ELECT Domain and Indicator(s)	Goal(s)	Anecdote(s)
<p><b>QUESTIONNAIRE MONTH (i.e. 33 months):</b> <i>32 months</i></p> <p><b>DOMAIN(S) (i.e. Problem-Solving):</b> <i>communication</i></p> <p><b>QUESTION(S) # MARKED AS SOMETIMES OR NOT YET (i.e. #2, 4, 6):</b> <i>2,3,4,5,6</i></p>	<p><b>COMMUNICATION:</b> <i>Sometimes the child said what happened but just in simple way</i></p> <p><b>FINE MOTOR:</b></p> <p><b>GROSS MOTOR:</b></p> <p><b>PROBLEM-SOLVING:</b></p> <p><b>PERSONAL-SOCIAL:</b></p>	<p><b>AGE GROUPING (i.e. Infant, Toddler):</b> <i>Toddler</i></p> <p><b>DOMAIN (i.e. Cognitive, Emotional):</b> <i>Communication, language and literacy/expressive language</i></p> <p><b>INDICATOR(S):</b> <i>Combining words, using common verbs and objectives</i></p> <p><b>ROOT SKILL:</b></p> <p><b>In Progress</b> <input checked="" type="checkbox"/></p> <p><b>Achieved</b> <input type="checkbox"/></p>	<p><b>GOAL(S):</b> <i>I will invite the child to add to my description of a photo, ex. "Look at the dog. (pause) What is the dog doing?" This invites the child to notice photo and respond in expressive.</i></p> <p><b>PLAN FOR PRE-INTERVENTION:</b> <i>-provide different books with color pictures -books with pictures and simple sentences on the bottom, -pictures with Velcro sticking on the wall -read the books together and describe the pictures -repeat the words or sentences many times</i></p>	<p><i>During free play time in the book area, child picked a book off of the shelf. He sat down on the carpet and began looking at the book. He pointed to the dog's pictures and said: "Dog...ruff, ruff..."</i></p>

*\*Italics is used to represent the participants responses*

ASQ-3 Domain and Screening Question(s)	Identified Problem(s)	ELECT Domain and Indicator(s)	Goal(s)	Anecdote(s)
<p><b>QUESTIONNAIRE MONTH (i.e. 33 months):</b></p> <p><i>32 months</i></p> <p><b>DOMAIN(S) (i.e. Problem-Solving):</b></p> <p><i>Problem solving</i></p> <p><b>QUESTION(S) # MARKED AS SOMETIMES OR NOT YET (i.e. #2, 4, 6):</b></p> <p><i>NR:6</i> <i>Not able to describe the "picture" he drew</i></p>	<p><b>COMMUNICATION:</b></p> <p><b>FINE MOTOR:</b></p> <p><b>GROSS MOTOR:</b></p> <p><b>PROBLEM-SOLVING:</b></p> <p><i>Not able to describe the "picture" he drew</i></p> <p><b>PERSONAL-SOCIAL:</b></p>	<p><b>AGE GROUPING (i.e. Infant, Toddler):</b></p> <p><i>14 months-37 old</i></p> <p><b>DOMAIN (i.e. Cognitive, Emotional):</b></p> <p><i>1)Cognitive</i> <i>2)Language</i></p> <p><b>INDICATOR(S):</b></p> <p><i>1) Representation-identifying objects in photos</i> <i>2) Expressive language words-combining words</i></p> <p><b>ROOT SKILL:</b></p> <p><b>In Progress</b> <input type="checkbox"/></p> <p><b>Achieved</b> <input type="checkbox"/></p>	<p><b>GOAL(S):</b></p> <p><b>PLAN FOR PRE-INTERVENTION:</b></p>	



ASQ-3 Domain and Screening Question(s)	Identified Problem(s)	ELECT Domain and Indicator(s)	Goal(s)	Anecdote(s)
<p><b>QUESTIONNAIRE MONTH (i.e. 33 months):</b></p> <p><i>33 months</i></p> <p><b>DOMAIN(S) (i.e. Problem-Solving):</b></p> <p><i>Fine motor</i></p> <p><b>QUESTION(S) # MARKED AS SOMETIMES OR NOT YET (i.e. #2, 4, 6):</b></p> <p><i>2</i></p>	<p><b>COMMUNICATION:</b></p> <p><b>FINE MOTOR:</b> <i>Cannot string small item onto a string or shoelace</i></p> <p><b>GROSS MOTOR:</b></p> <p><b>PROBLEM-SOLVING:</b></p> <p><b>PERSONAL-SOCIAL:</b></p>	<p><b>AGE GROUPING (i.e. Infant, Toddler):</b></p> <p><i>Toddler over lapping with preschool</i></p> <p><b>DOMAIN (i.e. Cognitive, Emotional):</b></p> <p><i>Fine motor skills Pincer grasp</i></p> <p><b>INDICATOR(S):</b></p> <p><i>Adopting holding, palmer or pincer grasp</i></p> <p><b>ROOT SKILL:</b></p> <p><b>In Progress</b> <input checked="" type="checkbox"/></p> <p><b>Achieved</b> <input type="checkbox"/></p>	<p><b>GOAL(S):</b></p> <p><i>Support the child in learning/improving pincer grasp, hand-eye coordination</i></p> <p><b>PLAN FOR PRE-INTERVENTION:</b></p> <p><i>-variety of objects in containers with different sized tops -large penne noodles and pipe cleaners; Variation: insert pipe cleaners into play dough -box with clothespins -large bolts and nuts -during snack use tongs to serve food -pegs with pegboard -magnets on a magnetic tray</i></p>	<p><i>Child collected a few chips into one hand one by one.</i></p> <p><u><i>Fine motor</i></u> <i>-adopting holding from palmer a pincer grasp</i></p> <p><i>Child during snack picked up tongs and hold it with both hands, moves his hands in and out.</i></p> <p><i>Child stucked pipe cleaners into pile of play dough.</i></p> <p><i>Child picked up magnets using pincer grasp from magnetic tray.</i></p>

ASQ-3 Domain and Screening Question(s)	Identified Problem(s)	ELECT Domain and Indicator(s)	Goal(s)	Anecdote(s)
<p><b>QUESTIONNAIRE MONTH (i.e. 33 months):</b></p> <p><i>32 months</i></p> <p><b>DOMAIN(S) (i.e. Problem-Solving):</b></p> <p><i>Fine motor</i></p> <p><b>QUESTION(S) # MARKED AS SOMETIMES OR NOT YET (i.e. #2, 4, 6):</b></p> <p><b>Not yet able to use scissors, hold scissors in the right way</b></p> <p><i>6</i></p>	<p><b>COMMUNICATION:</b></p> <p><b>FINE MOTOR:</b></p> <p><i>Not yet able to hold scissors in the right way and use them</i></p> <p><b>GROSS MOTOR:</b></p> <p><b>PROBLEM-SOLVING:</b></p> <p><b>PERSONAL-SOCIAL:</b></p>	<p><b>AGE GROUPING (i.e. Infant, Toddler): preschooler</b></p> <p><b>DOMAIN (i.e. Cognitive, Emotional):</b></p> <p><i>Physical</i> <i>Fine motor skill</i></p> <p><b>INDICATOR(S):</b></p> <p><i>Cutting paper with scissors</i></p> <p><b>ROOT SKILL:</b></p> <p><b>In Progress</b> <input checked="" type="checkbox"/></p> <p><b>Achieved</b> <input type="checkbox"/></p>	<p><b>GOAL(S):</b></p> <ol style="list-style-type: none"> <li><i>Be expected to hold scissors with the thumb through one hole and the middle finger through the other hole.</i></li> <li><i>Open and close the blades while holding the paper with the other hand</i></li> </ol> <p><b>PLAN FOR PRE-INTERVENTION:</b></p> <ol style="list-style-type: none"> <li><i>Role model to show</i></li> <li><i>Hand over hand to teach</i></li> <li><i>Sorting the small stuff such as beans, beads, marbles...</i></li> </ol>	

ASQ-3 Domain and Screening Question(s)	Identified Problem(s)	ELECT Domain and Indicator(s)	Goal(s)	Anecdote(s)
<p><b>QUESTIONNAIRE MONTH (i.e. 33 months):</b> <i>33 months</i></p> <p><b>DOMAIN(S) (i.e. Problem-Solving):</b> <i>Fine motor</i></p> <p><b>QUESTION(S) # MARKED AS SOMETIMES OR NOT YET (i.e. #2, 4, 6):</b> <i>1,2,3,4,5,6</i></p>	<p><b>COMMUNICATION:</b></p> <p><b>FINE MOTOR:</b> <i>-not yet able to draw a single circle</i></p> <p><b>GROSS MOTOR:</b></p> <p><b>PROBLEM-SOLVING:</b></p> <p><b>PERSONAL-SOCIAL:</b></p>	<p><b>AGE GROUPING (i.e. Infant, Toddler):</b> <i>Toddler</i></p> <p><b>DOMAIN (i.e. Cognitive, Emotional):</b> <i>Physical/fine motor/making a mark</i></p> <p><b>INDICATOR(S):</b> <i>-using palmer grasp to hold crayons and brushes and make scribbles</i> <i>-scribbling expands to include lines and shapes</i></p> <p><b>ROOT SKILL:</b></p> <p><b>In Progress</b>     <input checked="" type="checkbox"/></p> <p><b>Achieved</b>        <input type="checkbox"/></p>	<p><b>GOAL(S):</b> <i>I will work with the child to achieve the skill</i></p> <p><b>PLAN FOR PRE-INTERVENTION:</b></p>	<p><i>While working on the skill?</i></p>

ASQ-3 Domain and Screening Question(s)	Identified Problem(s)	ELECT Domain and Indicator(s)	Goal(s)	Anecdote(s)
<p><b>QUESTIONNAIRE MONTH (i.e. 33 months):</b></p> <p><i>42 months</i></p> <p><b>DOMAIN(S) (i.e. Problem-Solving):</b></p> <p><i>Problem solving Fine motor</i></p> <p><b>QUESTION(S) # MARKED AS SOMETIMES OR NOT YET (i.e. #2, 4, 6):</b></p> <p><i>Fine motor 4,6 Problem solving 2,4</i></p>	<p><b>COMMUNICATION:</b></p> <p><b>FINE MOTOR:</b></p> <p><i>-child does not hold crayon or marker between finger and thumb like adult</i></p> <p><i>-child did not copy the (+) shape like the example</i></p> <p><b>GROSS MOTOR:</b></p> <p><b>PROBLEM-SOLVING:</b></p> <p><i>-child did not repeat two or three numbers in the same order all the time</i></p> <p><b>PERSONAL-SOCIAL:</b></p>	<p><b>AGE GROUPING (i.e. Infant, Toddler):</b></p> <p><i>preschool</i></p> <p><b>DOMAIN (i.e. Cognitive, Emotional):</b></p> <p><i>Communication Language and literacy physical</i></p> <p><b>INDICATOR(S):</b></p> <p><i>Skill 3.12 understanding of orientation &amp; familiar conventions of print</i></p> <p><i>-using paper and pencil to scribble</i></p> <p><i>Skill 5.3 fine motor skills</i></p> <p><i>-drawing</i></p> <p><i>-copying straight lines</i></p> <p><i>-copying triangles and crosses</i></p> <p><b>ROOT SKILL:</b></p> <p><b>In Progress</b> <input checked="" type="checkbox"/></p> <p><b>Achieved</b> <input type="checkbox"/></p>	<p><b>GOAL(S):</b></p> <p><i>-get child to hold crayon or marker properly</i></p> <p><i>-have child understand instructions and follow through</i></p> <p><i>-teach child how to copy shapes</i></p> <p><i>Teach child to be able to repeat simple sentences or instructions, rhymes or songs</i></p> <p><b>PLAN FOR PRE-INTERVENTION:</b></p> <p><i>-offer markers and crayons for free exploration (art)</i></p> <p><i>-threading beads</i></p> <p><i>-paper and pens in dramatic play</i></p> <p><i>-practice doing buttons and zippers while dressing and in pretend play</i></p> <p><i>-copy what child draws then encourage child to copy what we draw</i></p> <p><i>-play a silly game for following directions</i></p>	



YES

NO

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4. Are there other screening tools, or instruments that you would like to see in this format?

Please circle YES or NO and list the tools.

YES

NO

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_
- d) \_\_\_\_\_
- e) \_\_\_\_\_

5. What would you do to change the format of this form, please feel free to edit/add/change the form below, and leave comments:



**Office of the Research Ethics Board**

Office Use Only Protocol Number:
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### Request to Revise an Application to Involve Human Participants in Research

This form is to be submitted with amendments to previously approved protocols. Revised procedures should not be implemented until ethics approval has been received. Submit two (2) copies (**original plus one (1) copy**) of this form to:

**Research Ethics Coordinator, Assumption, Room 301**

#### 1. TITLE OF RESEARCH PROJECT

Creating a Matching Piece: Early childhood monitoring and screening unite
---

Date: September 29, 2011

Protocol Reference #: 29223

Original Approval Date:

Previous Renewal Date:

#### 2. INVESTIGATOR INFORMATION

##### Investigator:

Title: Ms.	Name: Jo Ann Iantosca
Department (or organization if not affiliated with U of Windsor): Education	
Mailing address: 75 Chestnut Drive, Chatham ON, N7M 4Z2	
Phone: 226-345-1179	Email: iantosca@uwindsor.ca

##### Level of Project

Faculty Research <input type="checkbox"/>
Post-Doctoral Research <input type="checkbox"/>
Student Research: Doctoral <input type="checkbox"/> Masters <input checked="" type="checkbox"/> Student Number: 101864886

##### Faculty Supervisor/Sponsor:

Title: Dr.	Name: Dragana Martinovic
Department (or organization if not affiliated with U of Windsor): Education	
Mailing address:	
Phone: 226-345-1179	Email: dragana@uwindsor.ca

The headings below correspond to sections of the University of Windsor Application to Involve Human Subjects in Research.

- Please check all boxes that apply to the sections you wish to revise or modify. On a separate sheet please explain these changes in detail.
- If the revision is related to a questionnaire or interview protocol, please submit the entire revised document and highlight the sections that are being revised or added.

### 3. OTHER RESEARCH ETHICS BOARD APPROVAL(S)

- a) Does the research involve another institution or site? Yes  No   
b) Has any other REB renewed the ethics approval for this project? Yes  No   
If **Yes**, please provide a copy of the approval letter with this application.

### 4. PROPOSED CHANGES

- a) Please describe the proposed study amendment or modification in the space provided below. Please specify if it is a **minor** (e.g., administrative change, including funding status) or **major** (e.g., addition of study method, participants involved in the study, recruitment process, risks, procedures, etc.) change:

Minor  Major

A submission was made to the REB two months back and the board has been waiting to hear back from the investigator about permissions from the publishers of the *Early Learning for Every Child Today* framework (ELECT) and *Ages and Stages Questionnaire* (ASQ). Due to a lack of formal permission from the publishers to adapt their instrument however, the research proposal has changed slightly. It was expected in the last application, that two instruments (one screening, and the other a monitoring tool for children) would be adapted in format, in order to be matched. Instead, a written explanation and rating scale will be used to assess connections between the tools, rather than changing the current format of either tool.

The purpose of this research is to evaluate ECEs perception of interpreting the use of more than one instrument to assess and document information on children. This research is being undertaken to ask the following questions; (1) What strategies do ECEs currently use to monitor, interpret and implement their screened findings and complete follow through? (2) How consistently is the alignment between the ASQ and ELECT done across all participants within all domains and skills as perceived in a rating scale by the participants? (3) Do ECEs find the alignment of screening and documentation tools meaningful and if so, to what extent? This report is outlined as follows.

#### Set-up of the Study

##### Context and Participants

The context of the study will take place one location. It will be conducted at a Children's Program and Services department in Windsor, ON, which has several departments and locations, and is funded by Citizenship and Immigration Canada. The place of this study will be at the main site, and target population consists of early childhood educators working in a newcomer environment. There is a sample of approximately 15 childcare staff spread amongst the infant, toddler and preschool and after school program rooms, with an expected turn out of about 10 participants for the study. Each participant has a various level of experience, ranging from less than one to over five years in childcare. The majority of participants will likely be females due to the fact that most of the ECEs at this childcare centre are female.

The choice of this setting was due to overwhelming interest in participation in research regarding early childhood screening and monitoring, as well as researcher participation with the site on a previous basis. The researcher also finds that there is a need to support ECEs who care for many children and families showing potential risk factors. As Keels and Raver (2009) point out, there are many significant barriers to language minority children. Although children at this site will not be intently measured, the benefit of receiving training to document, and analyse both tools, may assist in bridging a developmental gap within many domains.

### **Initial focus group meeting**

The following procedures will begin with an introduction and training on both instruments, the ASQ and ELECT, regardless of participant familiarity. Documentation for the research will also attempt to be standardized at this time, through the use of a formatted documentation chart (see below).



The skill is usually considered achieved once the ECE has seen children master this experience before, or if they are able to display the following skill according to the ELECT. In column two, the participant will reference what ELECT age level, domain, and root skill the anecdote falls under. This will be brought into the focus group two, where the group will discuss what (if any) ASQ screening question/s fit with the pertaining anecdote and ELECT domain and skill, and it will be documented in Column 3. In Column 4, the group will collaborate on what they believe will be the next root skill achieved, according to the ELECT. The participant that recorded the anecdote will fill out this form, whereas the rest of the group will be given a smaller rating scale (see focus group two).

The participants will then be prompted about their experiences with using a wide range of assessment and monitoring tools, by asking such questions:

1. Are you using assessment or monitoring (i.e. documentation with the ELECT) in the classroom? If so, do you find it useful, and why? What assessment and monitoring tools are you using weekly, or every couple months? What are some of the benefits and challenges to using assessment or monitoring tools?
2. If you are not using the assessment and monitoring tools, why not?
3. How do you interpret “red flags”? What resources do you use, and ways do you try to help children who demonstrate behavioural or other difficulties? Do plan goals and outcomes for children who demonstrate red flags?
4. Does the outcome of the ASQ have any repercussions in the classroom (i.e. do you follow up on concerns)? If so, what types of repercussions?
5. If a child scored low in one domain according to the ASQ, do you think it would help to know which specific skill that they need to build on?
6. Have you been able to find and use strategies, after finding out the outcome on the ASQ? Where do these strategies come from?

This focus group 1 will take approximately 1 hour. After this meeting is ended, the participants will be asked to collect one to two anecdotes, without including any identifiable information, other than the age of the child, which the anecdote falls under in the ELECT. They will be given a specific format by the researcher, which requires a reference to the ELECT continuum. Each participant will be assigned to one particular domain from the ELECT to observe from, so

that when the anecdotes are brought back in, all domains are reflected on. There are five potential domains, each within 4 different age brackets which overlap. For the purposes of this research, it is most important that the first three age brackets (up to age 5), are discussed, as well as the domains. It will be followed up on for the next focus group meeting.

### **Focus group meeting two**

Prior to beginning the second focus group with each site, the participants were asked to collect one to two anecdotes within an assigned domain. Assuming that 10 of the 15 participants will attend the second focus group meeting, approximately 10 anecdotes will be collected. Due to time constraints, one anecdote from each domain will be randomly selected, for a total of 5 anecdotes. This is the minimum number of anecdotes needed, however if there is additional time, the researcher may decide to review more with the participants. The site has purchased a copy of the ASQ, and each participant will have a copy of both the ELECT and ASQ in front of them for review.

Each participant will have already transcribed their anecdote onto an assigned and standardized documentation sheet provided by the researcher in the initial focus group. This will be projected onto a screen or written onto a flip chart for observation by all attending participants. No identifiable information, other than that of the children's age, will be revealed during transcription of such anecdotes, as children will be identified as child 1, child 2, and so forth (e.g., CH 1, CH 2). The age is required in this case in order to match the suited ASQ questionnaire to the ELECT skill that was noted during recording. Each participant will have a period of time to read the randomly chosen anecdote and the ELECT domain and indicator connected to it. The group will then work together to discuss the connection of this anecdote (based on the ELECT), to an ASQ screening question.

A rating by the participants in regards to their matched choices for each case (domain) through the method of a rating scale will be used. Each participant can discuss amongst the group, but decide individually on what ASQ screening question they believe matches with the anecdote. They will then individually rate the developmental connection (see below).

Case #: \_\_\_\_\_

ELECT Domain: \_\_\_\_\_

ELECT Indicator: \_\_\_\_\_

*Your choice* of connection to ASQ question #: \_\_\_\_\_

1. According to the discussed anecdote, is the developmental connection between the ELECT and your chosen matched ASQ question:

1	2	3	4	5
Very Weak		Moderate		Very Strong

Reasoning behind the choices will be transcribed based on the audio tape, for later analysis. If it is the conclusion of the participants that no such connection exists, or the connection is weak, then inquiry and recommendations will be discussed in the thesis. If the connection does exist according to participants, further exploration on the consensus between the chosen ASQ question and its rating will be reflected on in the thesis. Each anecdotal question and discussion between participants, as well as filling out of the rating scale will take approximately 10 minutes, taking a total of 50 – 60 minutes.

After each five or more anecdotes are reviewed, discussed, matched and rated, a series of questions will be asked in the form of a written questionnaire, in order to assess the purpose of this research. This will take approximately 15 minutes.

1. Is there a purpose for understanding the connection between the tools? If so, why would it be important?
2. Would you find it accommodating if the tools you use or you would like to use were associated, (i.e., without inconsistency) so that the **meaning** of one outcome on a screening tool (e.g., ASQ), could be easily interpreted on a monitoring tool (e.g., ELECT)?
3. For whom would a matching piece be most suited?

4. Are there other tools that you wish to be aligned? Which are these tools?

A debriefing regarding when the results will be available, as well as additional time for questions will conclude the final focus group, and will last an additional 15-30 minutes, for a total of approximately 1.5 hours for focus group 2.

b) Will the proposed amendment change the overall purpose or objective of the study?

Yes  No

If **Yes**, a new protocol may be requested by the REB.

c) Will the proposed amendment affect the vulnerability of the participant group or the research risk?

Yes  No

If **Yes**, please indicate the **new** overall risk level on the Risk Matrix below.

d) What follow-up action do you recommend for study participants who are already enrolled in the study?

- Inform study participants
- Revise consent/assent forms (please attach a copy with the changes)
- Other (please describe)
- No action required

## 5. RISK MATRIX:

By locating a protocol on the matrix, researchers can determine both the review type (i.e. delegated expedited or full) and level of continuing review (e.g. annual renewal or small possibility of site visit) appropriate to a project.

(Please consult the *Instructions for Ethics Review Protocol Submission Form.*)

Group Vulnerability	Research Risk		
	Low	Medium	High
Low	1 <input type="checkbox"/>	1 <input checked="" type="checkbox"/>	2 <input type="checkbox"/>
Medium	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
High	2 <input type="checkbox"/>	3 <input type="checkbox"/>	3 <input type="checkbox"/>

## 6. SIGNATURES

**My signature certifies that the above information is correct and that no unapproved procedures will be used on this study.**

Signature of Investigator:

Date:

AND (if applicable)

Signature of Faculty Supervisor/Sponsor:  
(for student or supervised research only)

Date:



## CONSENT TO PARTICIPATE IN RESEARCH-ECEs

**Title of Study:** “Creating a Matching Piece: Early Childhood Monitoring and Screening Unite”

You are asked to participate in a research study conducted by the Graduate Student, **Jo Ann lantosca**, under the supervision of **Dr. Dragana Martinovic**, from the **Faculty of Education** at the University of Windsor. **The results of this research will be contributed to a thesis.** You were invited to participate in this study because you currently use the ASQ instrument as well as the ELECT.

If you have any questions or concerns about the research, please feel to contact the Thesis Supervisor, **Dr. Dragana Martinovic at (519) 253-3000 ext. 3962.**

### PURPOSE OF THE STUDY

To aid ECEs in documentation and planning, as well as early intervention by monitoring the development of *children* before they reach school age, as the government is recommending use of ASQ and ELECT. This study has been designed to develop alignment of these methods.

### PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

1. Volunteer approximately 1 hour to meet with the researcher during an initial workshop/focus group;
2. Use the documentation tool, developed by the researcher, to record one to two anecdotes (about 1-2 paragraphs each);
3. Bring back this anecdote and participate in another focus group meeting for approximately 1.5 hours.

### POTENTIAL RISKS AND DISCOMFORTS

Although it is common for ECEs to record anecdotal information and observe children on a regular basis, this research should not impede other typical work duties. This study is not meant to detract from typical obligations, instead enhance what is typically being done daily (i.e., observation, recording, monitoring). There may be discomfort in providing additional time for the study, outside of work hours.

There are no significant physical or psychological risks to participants.

### POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The benefit to your participation is professional development regarding the use of screening and monitoring tools with children in your care. Additionally, your input will be collected and potentially used for extending developmental knowledge of other early childhood educators, researchers, and policy makers in early childhood.

In developing a more efficient monitoring and documentation tool, early childhood educators will likely experience greater developmental understanding of children in their care, leading to more appropriate planning, earlier intervention and greater developmental outcomes.

#### PAYMENT FOR PARTICIPATION

Remuneration will not be given. During the focus groups refreshments will be provided, however.

#### CONFIDENTIALITY

As mentioned above, there will be an attempt to conceal identifiable information that is obtained in connection with this study, however confidentiality cannot be fully guaranteed due to the fact that the site is relatively small. The “main site” of the New Canadian Centre of Excellence will not be mentioned in the thesis, allowing for assumptions that this study may have been conducted at any of the operational locations. It will likely be observed however, that the researcher is meeting with participants within the main site.

Information retained from the audio tapes and notes will be transcribed and included in the thesis. These transcriptions may be used for further research done by the investigator, Jo Ann Iantosca. Written notes and audio tapes made during focus groups/training or interviews will be retained only until January 2014.

#### PARTICIPATION AND WITHDRAWAL

- Withdrawal of participants (i.e., staff) before the focus group/s will result in no retention of data.
- Withdrawal after the focus group/s will result in retention of data, since there is a potential for data to be analyzed for improvement of the research.

#### FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS

The research findings will be made available to subjects. A bound copy of this study will be delivered to the New Canadians' Centre of Excellence by March 2012 for review of all participants, staff and management.

Date when results are available: March 2012.

#### SUBSEQUENT USE OF DATA

This data (i.e. transcriptions) may be used in subsequent studies.

#### RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: [ethics@uwindsor.ca](mailto:ethics@uwindsor.ca)

#### SIGNATURE OF RESEARCH SUBJECT/LEGAL REPRESENTATIVE

I understand the information provided for the study “Creating a Matching Piece: Early Childhood Monitoring and Screening Unite” as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

#### SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

\_\_\_\_\_  
Signature of Investigator

\_\_\_\_\_  
Date



#### CONSENT TO PARTICIPATE IN RESEARCH-The ECE Facility Management

**Title of Study:** “Creating a Matching Piece: Early Childhood Monitoring and Screening Unite”

You are asked to participate in a research study conducted by the Graduate Student, **Jo Ann Iantosca**, under supervision of **Dr. Dragana Martinovic**, from the **Faculty of Education** at the University of Windsor. **The results will be contributed to a thesis.** The staff were invited to participate in this study because they currently use the ASQ instrument, as well as the ELECT.

If you have any questions or concerns about the research, please feel to contact the Thesis Advisor, **Dr. Dragana Martinovic at (519) 253-3000 ext. 3962.**

#### PURPOSE OF THE STUDY

To aid ECEs in documentation and planning, as well as early intervention by monitoring the development of *children* before they reach school age, as the government is recommending use of

screening tools, such as the ASQ and the ELECT. This study has been designed to develop alignment of these methods.

## PROCEDURES

If you consent that this research is done at your facility, we would ask you to do the following things:

4. Allow all of your staff who volunteer to participate, to attend an initial workshop/focus group with the researcher, Jo Ann Iantosca, to discuss the proper methods of documentation, as well as answer questions about their experiences with documentation and screening (for 1 hour).
5. Allow these same staff to provide non-identifiable anecdotal information in the second focus group, in order to match it with potential milestone achievements (for 1.5 hours).
6. Allow the researcher to use a small meeting space for the focus groups for the total of 2.5 pre-scheduled hours.

## POTENTIAL RISKS AND DISCOMFORTS

There are no significant physical or psychological risks to subjects

## POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The benefit to your staff is professional development regarding the use of screening and monitoring tools with children in your care. Additionally, their input will be collected and potentially used for extending developmental knowledge of other early childhood educators, researchers, and policy makers in early childhood.

In developing a more efficient monitoring and documentation tool, early childhood educators will likely experience greater developmental understanding of children in their care, leading to more appropriate planning, earlier intervention and greater developmental outcomes.

## PAYMENT FOR PARTICIPATION

Remuneration will not be given.

## CONFIDENTIALITY

As mentioned above, there will be an attempt to conceal identifiable information that is obtained in connection with this study, however confidentiality cannot be fully guaranteed due to the fact that the site is relatively small. The "main site" of the New Canadian Centre of Excellence will not be mentioned in the thesis, allowing for assumptions that this study may have been conducted at any of the operational locations. It will likely be observed however, that the researcher is meeting with participants within the main site.

Information retained from the audio tapes and notes will be transcribed and included in the thesis. These transcriptions may be used for further research done by the investigator, Jo Ann Iantosca. Written notes and audio tapes made during focus groups/training or interviews will be retained only until January 2014.

## PARTICIPATION AND WITHDRAWAL

- Withdrawal of participants (i.e. staff) before the focus group/s will result in no retention of data, seeing as there is no relevant data to be analysed
- Withdrawal after the focus group/s will result in retention of data, since there is a potential for data to be analyzed for improvement of the research

## FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS

The research findings will be made available to subjects. A bound copy of this study will be delivered to the New Canadians' Centre of Excellence by March 2012 for review of all participants, staff and management.

Date when results are available: March 2012.

## SUBSEQUENT USE OF DATA

This data (i.e. transcriptions) may be used in subsequent studies.

## RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: [ethics@uwindsor.ca](mailto:ethics@uwindsor.ca)

## SIGNATURE OF RESEARCH SUBJECT/LEGAL REPRESENTATIVE

I understand the information provided for the study "Creating a Matching Piece: Early Childhood Monitoring and Screening Unite" as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

\_\_\_\_\_  
Name of Subject

\_\_\_\_\_  
Signature of Subject

\_\_\_\_\_  
Date

## SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

\_\_\_\_\_  
Signature of Investigator

\_\_\_\_\_  
Date

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