

**The Understanding of Early Childhood Development that Alberta Kindergarten
Teachers Bring to Their Work When Administering the Early Development
Instrument (EDI)**

Jennifer Weber, BA, MSocSc

A thesis submitted in total fulfilment of the requirements of
the degree of Doctor of Philosophy

Faculty of Education and Arts
Australian Catholic University
Locked Bag 4115
Fitzroy Victoria 3065
Australia

August 2017

Declaration

This thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma.

No parts of this thesis have been submitted towards the award of any other degree or diploma in any other tertiary institution.

No other person's work has been used without due acknowledgment in the main text of the thesis.

All research procedures reported in the thesis received the approval of the relevant Ethics/Safety Committees (where required).

Acknowledgements

Thank you to my family, friends, and colleagues who have shown their support and offered their encouragement over the course of my PhD thesis journey.

At the outset, this thesis journey wouldn't have survived without the support and encouragement of my husband, Richard Rymarz, and our children – Edwina, Majella, Joachim, and Daniel. This thesis has spanned a lifetime for our family, and I am especially grateful for all their encouragement and patience with getting to this point in time. A special thank you to Richard, who has proven to be a source of encouragement and guidance in this work beyond what anyone should have to endure! Being both motivating and practical in his advice, and his unfaltering faith in my abilities was more than I could have ever hoped for or expected.

Special thanks of gratitude to my supervisor, Associate Professor Joce Nuttall, who has shared this journey from both close up and in person, across the continents of Australia to Canada, and to the various changes in location and focus. Her discipline and attention to detail has been a steady guide through this process and one that I will always appreciate.

I am particularly appreciative of my work colleagues, who have been generous in their time to listen to me and provide their support on a number of fronts along the way. To Joyce Clayton, Corine Gannon, Raelene Finlayson, Sue Lynch, Sue Grundy, Tania Brudler, and Suzanne Anselmo, thank you for your insights, encouragement, and understanding of what this work means for me in our professional endeavours across early learning and child care in the Alberta context and beyond.

Thank you to my friends who have been a part of this experience in different ways, including inquiring about my progress and listening to the various shifts and developments in this study, and have been generous in their time to listen and ask after my progress knowing how much this has meant to me. Across two continents, I am forever grateful to Jenny Green, Jacquie Robilliard, Jenny Reeder, Isa DiTrocchio, Daena Lamoureux, Jessica Lightfoot, Carol Quist, and Jennifer Lefsrud – your care, interest, and faith in my ability has been both a reassurance and constancy over the past seven years.

Thank you to Michelle Rochard – for the final proofing – thank you for your efforts, including attention to detail and professional approach to the final stages of this work are forever remembered. Along the way I have been reassured by your

encouragement and confidence in our timelines to get through the intensity in the final stages of detail.

Last, but by no means least, I would like to acknowledge the eleven participants who agreed to this study – Brenda, Caroline, Cathi, Crystal, Danielle, Denise, Grace, Kat, Kim, Michelle, and Stephanie – not only for spending the time outside your scheduled class time to talk with me about your teaching experiences and early childhood development, but also for being so generous to share with me your insights and knowledge. Your love for what you do and the passion for the early years are to be commended.

And there are two little people I wish to acknowledge, and they are the delightful Mathilde and Tobias! The granddaughter and grandson who entered into our world at the critical stages of this thesis. Who would have thought that two little people could be such a reminder of the miracle of life and the importance of the early years in such a way as through the privileged experience of becoming a grandparent?

The constancy through all of this work and over the years has been the importance of the efforts and dedication of adults in the lives of children to make a difference.

Contents

Abstract	ix
Chapter 1: Investigating the Experiences of Kindergarten Teachers in Alberta who Have Administered the Early Development Instrument (EDI)	1
The Early Development Instrument (EDI) – A Brief Overview	1
The Significance of This Study	2
Questions of what Influences Practices	3
What constitutes a Canadian approach to Early Childhood Education	4
Confining the Scope	6
The Canadian Context for Early Childhood Development: National Policy Directions	7
Canadian Public Policy and Early Childhood Development	8
The Relationship between Discourse and Policy	9
Pan-Canadian research and Population Level Data Collection	10
The EDI and Discourses of Vulnerability	11
Policy Responses to Issues of Addressing Vulnerability	12
Learning through play is supported by science.	13
Implementing the EDI	15
The Context for the Present Study: Early Childhood Services in Alberta	18
Contemporary Discourses Influencing ECD Policy in Alberta	20
Economic ‘Investment’ in ECD	21
The Relationship between Neoliberal Discourse and the ‘New Sciences’	22
The Core Story	25
Positioning the EDI within Contemporary Policy Discourses	26
Critiques of the EDI	28
Thesis Structure	29
Chapter 2: Literature Review	31
The Early Development Instrument	31
School Entry Assessment in Canada	34
Identifying Major Debates on the EDI and Locating My Study within These Debates	36
The Literature Concerning Practitioners and the EDI	41
Sociocultural Epistemological Perspectives on Teacher Knowledge	43
Funds of Knowledge	47

Translating Theory into Practice	52
Teachers' Expectations	54
Chapter Summary	55
Chapter 3: Theorising Teacher Knowledge and Practice from a Sociocultural Perspective.....	59
Social Constructionism	60
What is Mediation?.....	62
Key Conceptual Tools used by Teachers to Construct their Practice.....	65
Sociocultural Theory	69
Sociocultural theory and teacher learning	75
Chapter Summary	76
Chapter 4: Methodology	79
Rigour	79
Methodological Basis and Rationale for the Chosen Research Approach	81
Discourse as a Feature of Constructionist Methodologies	84
Discourse analysis.....	85
Discourse analysis as a research method.	86
Discourse analysis as a research tool.	88
Discourse analysis of interviews and focus groups.	90
Interviews	90
Individual Interview Questions for Kindergarten Teachers	91
Focus Group.....	93
Approach to Data Analysis	94
Participants in this Study	97
Pen Portraits of the Participants.....	98
Ethical Considerations	103
Chapter Summary	105
Chapter 5: How Teachers Access Dominant Discourses of Child Development	107
The Struggle to Locate Discourses of Child Development in the Teachers' Talk.....	109
The Discursive Shift from 'I' to 'We'	114
The Influence of Available Discourses of 'Atypical' Development and 'Screening'	117
Discourses of Development in the Context of Child Development Theory	119
Administering the EDI.....	123

Discourses and the Role of the School Authority.....	126
Chapter Summary	128
Chapter 6: Teachers' Alternatives to a Discourse of Child Development.....	131
Discourses of School Readiness	133
Discourses of Practice: 'Practical' and 'Inspired' Approaches	136
The Place of Professional Development in Shaping 'Practical' Approaches	138
A Discourse of Learning Through Play	141
Participants' Collaborative Discourses.....	145
The EDI as a Mediating Tool Within a Collective Discourse	148
Chapter Summary	151
Chapter 7: Discourses of Professional Values, Advocacy, and Ethics	153
Speaking from the 'I'	154
Negotiating Competing Discourses	161
Children as Capable.....	166
A Personal Ethic and View of Childhood	168
The Importance of Family and Community	172
The Relationship Between Discourses of Family and Community, and Administering the EDI	175
Advocacy and the EDI.....	178
Chapter Summary	182
Chapter 8: Conclusion.....	185
Aims of the Study	185
Summary of Key Findings of the Study	186
1. Developmentally appropriate practice discourse underpins the practice of kindergarten teachers.	189
2. Incorporating the EDI into their educational philosophy	190
3. What does this mean for teacher training and professional development?.	191
4. The role of school authorities in leading and shaping ECD approaches adopted in schools.....	193
Implications	196
The implications of the study's findings for policy and implementing the EDI.....	196
The need to focus on the insights of kindergarten teachers, policy makers, and school district leadership.....	196

Implications in relation to the methodological values of the study	198
Recommendations.....	198
Research recommendations.	198
Policy recommendations.	200
Practice recommendations.	202
Conclusion	204
Appendix A. Consent Form for Focus Group	207
Appendix B. Consent Form for Interview	208
Appendix C. Information Letter, Sept 2012	209
Appendix D. Discourse Interview Questions.....	212
Appendix E. EDI Script Sept 18 2012	217
Appendix F. Quotes for Focus Group	219
Appendix G. Alberta EDI Questionnaire 2012_2013	225
Appendix H: Ethics Approval.....	233
References	235

Abstract

Recent research into the abilities of children beginning school is powerfully influencing government policy and the provision of early childhood education in Canada. The Early Child Development (ECD) Mapping project, undertaken by the Offord Centre for Child Studies, McMaster University (Hamilton, Ontario, Canada) is one such body of research. The Early Development Instrument (EDI) is designed to gather information about developmental outcomes of children's prior-to-school experiences at the time of starting kindergarten (the first year of school). The EDI is administered by kindergarten teachers at the level of individual children, with outcomes reported at the population level. However, many kindergarten teachers in Alberta do not have formal training or qualifications in early childhood development. This project therefore sought to identify the discourses of early childhood development that kindergarten teachers in Alberta, Canada, employ in administering the EDI. The project employed Discourse Analysis, operationalised within broader socio-cultural theoretical understandings of teacher knowledge, to analyse interview and focus group material collected from teachers from several school settings in Alberta. The main finding was that the understandings teachers applied in administering the EDI conformed to a traditional developmentalist discourse, employing concepts such as 'appropriate', 'typical', and 'normal ranges' of development. It is argued that the teachers encountered these discourses when administering other tests designed to identify atypical outcomes and therefore attract program funding. However, these discourses were also held in tension with discourses of school readiness as well as other concepts drawn from curriculum models encountered during professional development activities. The study concludes that there is a need for careful consideration of the discourses teachers access to inform their practice when administering the EDI in order to ensure the validity of the EDI as a baseline against which subsequent population level outcomes can be assessed.

Chapter 1: Investigating the Experiences of Kindergarten Teachers in Alberta who Have Administered the Early Development Instrument (EDI)

This study aims to describe kindergarten teachers' understandings of early childhood development when they use the *Early Development Instrument* (EDI) (Offord Centre for Child Studies, McMaster University, Hamilton, Ontario, Canada) (Janus, Brinkman, Duku, Hertzman, Santos, Sayers, Schroeder, & Walsh, 2007), by asking teachers to describe their approach to development, learning, and early childhood programming for kindergarten children. Its objectives are to:

- Gain a greater understanding of early childhood discourses in use amongst kindergarten teachers in Alberta.
- Explore how Alberta kindergarten teachers acquire, consolidate, and use this knowledge as part of their early childhood practices. That is, what discourses are they accessing when they talk about the EDI in order to better understand the use of the instrument by Kindergarten teachers and its subsequent application to policy?
- Build on the research into the early childhood development discourses that kindergarten teachers bring to their work when administering the EDI by:
 - Examining the understanding of kindergarten teachers of early childhood development based on their use of the EDI through in-depth qualitative investigation of a small sample of kindergarten teachers in Alberta.
 - Analyse the early child development discourses of Alberta kindergarten teachers in the context of their use of the EDI.
 - Analyse these influences in the context of early child development discourses that might assist to better understand their applications to public policy.

This chapter begins this task by describing the policy and research context for the study, with particular reference to its political and geographical setting in the province of Alberta, Canada. The aim of this chapter is to set out and explain the choice of research focus and outline the context for the research question. It begins with a brief description of the EDI.

The Early Development Instrument (EDI) – A Brief Overview

Current research on early childhood development powerfully influences policy development, consequently shaping the type of programs and services available to

children prior to formal schooling. The research that is influential in government policies in Canada at present is that of the Early Child Development (ECD) Mapping research, undertaken through the Offord Centre for Child Studies. Kindergarten teachers are increasingly using tools like the EDI as part of ECD Mapping to gather information about the developmental outcomes of children (at a population level) at the time of their entry into kindergarten. The data collected through this process are then being used by government to engage with communities to better understand the types and levels of programs and services necessary to promote better developmental outcomes for children.

The EDI has successfully moved beyond a research application, and is recognized across Canada and internationally as a psychometric practice and a systematic approach to measure how prepared children are to learn and success in their first year of school. Because of the widespread recognition and use of the EDI, the data sources on children's development and health is now an important consideration to inform policy and program development across different jurisdictions.

While EDI data are being used to identify the strengths and needs within communities that inform how communities develop and implement strategies to address supports for children and young families. In addition to community strategies, there are a growing number of provincial government departments, including provincial government ministries including Health, Human Services, Education and Family Services now using EDI data to design and plan early childhood investment, policy, and program development as well as to engage with communities by funding the establishment of community coalitions. The Government of British Columbia also uses EDI data for program evaluation (Mort, 2009; Victoria, B.C.: Ministry of Education, 2008).

The Significance of This Study

The validity of the EDI, and therefore its relevance to policy development, is heavily dependent on teachers' understanding the discourses of early childhood development that underpin the instrument (Janus 2006; Janus & Duku, 2007; Janus & Offord, 2000; Kershaw, Irwin, Trafford, & Hertzman, 2005; Raos & Janus, 2007).

As the Early Development Instrument (EDI) is designed to gather information about developmental outcomes of children's prior-to-school experiences at the time of starting kindergarten (the first year of school), and is administered by kindergarten teachers at the level of individual children, with outcomes reported at the population

level. However, many kindergarten teachers in Alberta do not have formal training or qualifications in early childhood development.

This project therefore seeks to identify the discourses of early childhood development that kindergarten teachers in Alberta, Canada, employ in administering the EDI. The project employed Discourse Analysis, operationalised within broader socio-cultural theoretical understandings of teacher knowledge, to analyse interview and focus group material collected from teachers from several school settings in Alberta. This study has the potential to shed light on teachers' engagement with the EDI and therefore on its role in policy formation. In this context, the role of the kindergarten teacher in administering the EDI takes on significance not only for the purpose of the EDI data in determining measures of changes in developmental domains or trends in populations of children, but also in understanding what discourses of early childhood development kindergarten teachers are accessing when they engage with the EDI.

Questions of what Influences Practices

On the question of what influences such practices, the experiences of the wider early childhood education field and its approaches also become a source for consideration. These wider influences have started to have an influence within the Alberta early childhood community, a trend that becomes evident in the findings chapters later in this thesis. Not unlike experiences in other parts of the world, the perceived success of approaches like that of Reggio Emilia, creates practitioner inquisitiveness. As such approaches become incorporated into practice, it seems logical that they might impact on teachers' interpretation and administration of activities such as the EDI.

As a migrant to Alberta (from Australia in 2007), a number of questions arose for me, both as a new observer within a new cultural setting for early childhood programs, as well as a participant working within government. These included:

- How do early childhood practitioners learn about early childhood education when they have been educated with tools and concepts from other experiences (e.g., secondary education)?
- How do they take on board the distinctive tools and concepts of early childhood education?
- How is their practice subsequently informed by these new tools and concepts?

My own interest in these types of questions has been long-standing and commenced within the Australian context of early childhood. While there are similarities in the struggles and challenges that practitioners experience in their daily work between Australia and Alberta, there are vast differences in terms of their exposure to and exploration of contemporary theories and approaches, as ways of shaping and influencing practice. It may be that, within the Australian context, there has been a greater connection between research and practitioners.

It may also be that Australian practitioners have had greater opportunities to engage with the research, or perhaps they themselves undertake the role of researcher within their practice as a way of shaping the outcomes within those settings. Perhaps training and qualifications for early childhood practitioners have built the capacity for the profession that has laid the foundations for an authentic Australian early childhood approach. Answers to these questions are beyond the scope of the thesis but they do provide some of the context for my interest in Albertan teachers' understandings and practice.

What constitutes a Canadian approach to Early Childhood Education

What I have observed within Canada, and specifically within the Alberta context, is an underlying struggle to identify an authentic early childhood approach. Why do I suspect this? I speculate that the interest now evident in Alberta in approaches developed in other countries has been generated out of a sense of frustration that the practices that have been maintained over the last twenty years have not evolved or developed in a way that demonstrates a robust early childhood sector. As I work alongside many practitioners at both a policy and program delivery level, I notice the disruptions and struggles they encounter as they confront the demands and challenges that now emerge as a result of new expectations from a range of stakeholders. Through my work, and the contact I have established with both practitioners and policy makers, I have begun to appreciate the complexities of the early childhood experience, as people work in relation with each other and within the social, cultural, and institutional narratives of their early childhood settings. Colleges and practitioners are endeavouring to establish stronger connections with the child care centres they serve through training or have located on their campuses in alignment to offering courses in early childhood.

The main approach influencing early childhood practice is clearly articulated at all levels of government, education, academia, and practice as 'learning through play', and understandings of child development are firmly grounded in what is regarded as

‘developmentally appropriate’. This perspective not only underpins but drives the programming and planning of early childhood programs. Using traditional domains of development (social, physical, intellectual, cognitive, emotional), early childhood practitioners plan according to the social, emotional, and physical needs of the child. This has been the approach for at least twenty years.

However, as mentioned earlier there have been attempts in the last two years to engage with alternative early childhood approaches, including those most universally recognized such as the Reggio Emilia approach developed in northern Italy. However, I have observed that this approach has been subjected to the ‘learning through play’ test, to ensure that it is incorporated into and complies with pre-existing Canadian perspectives on what constitutes an appropriate early childhood experience. I have been struck by this very overt statement of what early childhood is for Canadian children, and have come to understand it as a defensive case being made in response to perceived pressure for ‘school readiness’, emerging as a point of contention between parents and early childhood programs. These issues were indeed to become evident in the present project.

In 2007, I was engaged by the Government of Alberta (Ministry of Children and Youth Services) to coordinate the first government-led early childhood symposium to consider the lessons learnt from the Reggio Emilia experience. The symposium, while aiming to reach 150 participants, attracted 400 registrants, and was led by Canadian academics from eastern Canada, where their work on early childhood – through research and practice – continues to influence international perceptions that Canada takes a lead on early childhood education.

One of the insights from the symposium for me was that, in attempting to identify approaches to early childhood curricula that best promote learning through play, there is the risk of a ‘franchise’ or ‘buy-in’ early childhood approach. There also exists animosity towards certain approaches that, while popular with parents, are strongly opposed by practitioners as well as government staff, including licensing officers. This resistance is based on a perceived authority of knowing what constitutes good practice as well as an opposition to approaches that do not conform to local expectations for early childhood programs.

One approach that continues to face this pressure is the Montessori approach, which has a strong presence in community based pre-school programs, and is highly sought after by parents as it is strongly identified with school readiness. However,

opposition voices regard Montessori as too formal and structured, and therefore not in keeping with an authentically Canadian early childhood experience.

This, of course, raises the interesting question of what exactly constitutes the ideal early childhood experience for Canadian children. Furthermore, what is regarded as acceptable to those who formally train early childhood staff as well as those regulate these settings? Again, these questions are beyond the scope of this thesis but they are threads that could be at least peripherally detected in the findings of this project.

The reality is that there has been little attempt to identify what answers to these questions may look like in terms of theoretical frameworks and cultural practices. There is very little evidence of attempts to identify elements of learning through play within, for example, Canadian aboriginal heritages. This is a serious oversight given that the various First Nations peoples, Metis, and Inuit have Canada's highest birth rates and continue to access Headstart programs for their children.

Confining the Scope

In confining the scope of this thesis, I have focused on my interests in how policy intersects with practices, including the experiences within the wider early childhood education field.

In considering the influences on my perspective as a policy professional and researcher, these have largely been shaped by socio-cultural theory. Over the past few years socio-cultural theory has gained influence in both educational and developmental psychology, as well as early childhood education in countries including Australia. A central tenet of socio-cultural theory is the acknowledgement of the co-construction of knowledge between the individual and social processes. Drawing on the work of Vygotsky, socio-cultural theory holds the potential to inform practice and research in a dialectic way, and overcome the divide in policy and practice that continues to undermine the development of an authentic early childhood approach.

Having now undertaken roles across three ministries, including the Ministries of Children and Youth, Education, and Human Services, I have had the responsibility and oversight on program design and policy development for key initiatives in early childhood development. This work has included the development of several key concept and ministry reports to develop a policy platform for government by engaging the various discourses and the range of research that might inform a distinctive Alberta approach to early childhood development.

I acknowledge the responsibility that comes with this work in developing policy documents, including the careful consideration given to the discourses being drawn on to platform a government strategy. Through this work I have also become very aware of the use of various discourses by stakeholders, researchers, and policy makers to engage with and influence public policy.

As I undertake this study my role as a researcher is therefore heavily influenced by the perspectives that I lend to the analysis, including my appreciation of the privileged position I occupy as both an observer and participant.

The Canadian Context for Early Childhood Development: National Policy Directions

Canadian child care policy is distinguished by the fact that there is no national strategy for child care or early childhood education. Each of the 14 jurisdictions of Canada that represent 10 provinces and 3 territories, have jurisdictional responsibility for a province-led early learning and child care approach and/or system. Provincial-led policy initiatives concerning early childhood development are distinguished by being federally led and by funding that focuses on child care and the increasing demand for affordable child care with rising participation rates of Canadian women in the workforce (Amoroso, 2010; Baker, Gruber, & Milligan, 2005; Barnett, & Ackerman, 2006). While there has been significant public debate in recent times, identifying the social and economic issues concerning government investments in early childhood development, there are clear delineations in authority and jurisdictional territory that contribute to the complexity with respect to which programs and services are implemented to support families and children.

In addition to the paltry attention to a national strategy for early childhood development, the Canadian requirements for early childhood training, including specializations in ECD for teachers, are generally acknowledged to be less than adequate (Goelman, Doherty, Lero, LaGrange and Tougas, 2000), and continue to be challenged as to creating a qualified workforce. Those provinces that have integrated child care and education have gained some traction with the status of teachers and practitioners by framing child care within the context of education. For instance, the Ontario government, in establishing a College of Early Childhood Educators (2013) as opposed to incorporating the profession into the College of Teachers, has increased the status of education and care professionals by embedding the profession within the context of providing for the educational needs of children.

Provincial jurisdictions take primary responsibility for education and child care, with the role of the federal government to transfer funds that are then used at the discretion of the provincial and territorial governments for early education and child care province-led priorities. The transfer of funds by the federal government to the provinces and territorial governments does not necessarily require the commitment that the funds be targeted for early childhood development, but is left to the authority of the respective government.

Apart from initial efforts in 1997 to establish a National Children's Agenda and a Social Union Framework Agreement in 1999, Federal-Provincial-Territory negotiations have established the National Child Benefit (1998), the Early Childhood Development Initiative (2000), the Multilateral Framework on Early Learning and Child Care (2003), Bilateral Agreements (2005), and the Universal Childcare Benefit (2006) with the intent to support the implementation of social programs and services.

While each province and territory funds and legislates for regulated child care programs that encompass preschools, day care programs, approved family day home, and out-of-school care, the policy considerations as to the purpose of these programs continues to grow as provinces increasingly focus on early childhood and child care being contextualized within an educational framework. This is due in part to shifts occurring in the role and purpose of early childhood programming, particularly that provided to 4 and 5 year olds accessing publicly funded kindergarten programming. Kindergarten programming is considered a public responsibility (Cleveland & Krashinsky, 2001; Friendly, Halfon, Beach, & Forer, 2013), while child care and early childhood for children younger than five is considered a family responsibility and a private concern.

Canadian Public Policy and Early Childhood Development

Policy discussions in Canada concerning early childhood development have engaged an economic discourse, focusing on the need to facilitate the participation rates of women in the labour market. This has resulted on a greater emphasis on child care provision and less on a comprehensive, universal approach to early childhood. While the federal government has focused its policy initiatives on providing the child care benefit and targeted interventions to address poverty and at-risk populations, including First Nations, immigrant and refugees, and military families. provincial jurisdictions have embarked on a greater emphasis on early childhood development, with particular attention to linking children's outcomes to early learning and education. For example,

the Ontario Government embarked on a restructure of early education and child care that now locates child care within an educational discourse, reflecting priorities for school readiness and developmentally appropriate practices. In 2013, with the launch of the Ontario Early Years Framework, the Ontario government set out a policy framework describing ‘a system of responsive, high-quality, accessible and increasingly integrated early years programs’ (Government of Ontario, Ministry of Education, 2013, p. 2).

The Relationship between Discourse and Policy

It soon becomes apparent that there is a specific range of discourses leveraged as part of building the case for justifying and addressing the policy issues concerning early childhood development. As identified earlier, growing economic concerns about recruiting women into the paid workforce have leveraged significant investments in Quebec, which remains the premium Canadian province for early childhood, with its successful ‘\$7 a day’ early childhood policy (Canada Without Poverty, 2012; Taylor & Gagne, 2006).

While the economic discourse has leveraged significant shifts in policy concerning early childhood development, particularly heightened demands for affordable child care, the growing influence of the success of engaging in particular discourses is beginning to become evident in how government policy is shaped. For instance, a greater emphasis on school readiness and developments in neurobiology and the neurosciences have been used to argue how the early years set the stage for long term emotional, behavioural, and social wellbeing for children and the importance of government and community investments to support children and families (Wastell & White, 2012).

The benefits associated with children’s development target particular attention on the reasons why these investments are important in preparing children for success in school, improving the wellbeing of vulnerable children, and enabling parents, especially mothers, to participate more fully in the labour market (Heckman & Masterov, 2007; Shonkoff, Boyce, & McEwen, 2009).

In 2013, developmental psychology continued to have a strong hold on the ECE field (Burman, 2008; Cannella, 1997; Dahlberg, Moss & Pence, 2007). Both neoliberal economic discourse, in which children are seen as investments for the future economic prosperity of the nation (Heckman, 2011; Humblet & Vanderbroeck, 2007; Kershaw, Warburton, Anderson, Hertzman, Irwin, & Forer, 2010; Moss, 2008), and neuroscience discourse, in which poor children’s brains

are viewed as needing appropriate stimulation by professionals before the age of the three lest they be doomed to a life of impaired functioning (McCain, Mustard & Shanker, 2007), are used to stress the importance of preparing children for school as early as preconception (Lally, 2010; Peterons, 2012). In addition, neighborhoods continue to be pathologized through widespread use of the Early Development Instrument, which measures “school readiness” based on teacher assessments of children’s abilities (Lehrer, 2012) (Iorio & Parnell, 2015, p. 5).

Iorio and Parnell (2015) focus on the need to reconceptualise readiness to critiques the constructs used to position early childhood development policy in broader government and public discourses as well as the impact of how the use of ‘surveillance and governmentality’ (Iorio & Parnell, 2015, p. 5) that targets at-risk populations through more sophisticated mechanism that are presented as ‘scientifically valid’ (Iorio & Parnell, 2015, p. 5), and can be remedied with the use of screens and measures. They argue that while these sophisticated tools are ‘framed as being beneficial to the children it targets’ (Iorio & Parnell, 2015, p. 5), underpinning this argument is the use of a range of discourses used to position early childhood education as an intervention to improve outcomes for children.

Pan-Canadian research and Population Level Data Collection

As part of a growing body of pan-Canadian research, the value of tools that measure early development at a population level in a uniform way across communities have been recognized as assisting planning at the local, state and national levels for needed interventions for young children and their families. Developed by researchers at the Offord Centre for Child Studies, the use of the EDI is an example of an increasing focus on measurement systems to inform strategies and policies aimed at optimizing child development. A summary justification of the EDI data identifies that:

Optimal development does not imply children must be rocket scientists or the next Mozart by kindergarten. Rather it implies children come to school appropriately dressed, nourished and rested; able to hold a pen, climb stairs and use the washroom independently; they get along with peers and are able to follow instructions; and they come able to tell a story, know at least 10 letters of the alphabet and write simple words. 29% of children in BC arrive at kindergarten struggling with these and other age-appropriate benchmarks. (Kershaw, Anderson, Warburton, & Hertzman, 2009; p: 6)

The EDI and Discourses of Vulnerability

An important research finding to emerge from EDI data collections across Canada has been identified through the research undertaken by the Human Early Learning Partnership (HELP) identifying that ‘While the highest risk of vulnerability is found in the poorest neighbourhoods, the largest number of children with developmental vulnerabilities are found across neighbourhoods that are home predominantly to the middle-class’ (Kershaw, Anderson, Warburton, & Hertzman, 2009, p. 13):

Consistent with these findings is research that shows the importance to early childhood development of factors other than low income. Clearly, policy responses based solely on parents’ income – or those targeted to poor neighbourhoods – are only one part of an overall strategy for tackling vulnerability in children. Profound influences on early childhood development are found in the environments where children grow up, live, and learn. These environments, in turn, are strongly influenced by socio-economic, civic, and family conditions. In Canada, inequalities in child development emerge in a systematic fashion over the first five years of life, according to well-recognized factors: family income, parental education, parenting style, neighbourhood safety and cohesion, neighbourhood socioeconomic character, and access to quality child care and developmental opportunities. (Hertzman, McLean, Kohen, Dunn, Evans & Smit-Alex, 2004, p. 44)

The EDI continues to grow in application as EDI data is used to set benchmarks against which governments measure objective outcomes designed to reducing vulnerability (Cohen & Friedman, 2015; Hertzman & Bertrand 2007; Janus 2006; Janus & Offord, 2007; Keating 2007; Janus, Offord & Walsh, 2001). According to Kershaw, Anderson, Warburton, & Hertzman, (2009), ‘The EDI has now been used in jurisdictions across Canada, the United States, Australia, Chile and several other countries, with the World Health Organization and the United Nations (UN) also exploring how to use the EDI to monitor international progress toward achieving commitments in General Comment No. 7 of the UN Convention on the Rights of the Child’ (p. 8).

Based on the early findings of EDI data concerning vulnerability, including the early identification of children at-risk, restricting intervention supports and services ‘for at-risk children in communities with a higher proportion of low-income and/or lone-

parent families inevitably means the exclusion of at-risk children living in other communities' (Doherty, 2001a, pp. 9-10) typically identified in terms of being more affluent. Researchers have identified that to have an impact on health, wellbeing and social competence at a population level, it is also important for early childhood development outcome measurements that communities are able to then use in accessing how policies, programs, community assets and the social setting for children and families can combine to have impact on the health and wellbeing of young children's development (Kohen, Brooks-Gunn, Leventhal & Hertzman, 2002; Conger & Donnellan, 2007; Irwin, Siddiqi, & Hertzman, 2007; Burger, 2010; Hertzman & Boyce, 2010; Walker, Wachs, Grantham-McGregor, Black, Nelson, Huffman, Baker-Henningham, Chang, Hamadani, Lozoff, & Gardner, 2011; Barnett, 2011; Cohen & Syme, 2013).

The need for communities to have access to early childhood development outcome measurements are identified as being important if there is to be an improvement on health, wellbeing and social competence within the broader community and In order to have an impact on health and wellbeing outcomes across the population, investments in early childhood development are considered there is also a need for outcome measures that will provide communities with data on how programs, policies, and social environments designed for young children can better align to support their development, health and wellbeing.

Policy Responses to Issues of Addressing Vulnerability

In recent times, there has been an increasing focus internationally on the provision of universal and full day kindergarten to address issues around school readiness, with limited attention to other children's services and the role they play in preparing children for life-long learning. While the importance of kindergarten cannot be underestimated, from a policy perspective a diverse range of community-based early years programs is important. Families need a balance between child care options and workforce demands, and this means providing flexible, affordable, and accessible options in quality early childhood programs.

Two significant contributions to the Canadian discussion on the importance and purpose of ECD have recently been identified through the publication of the Association of Canadian Deans of Education's *Accord on Early Learning and Early Childhood Education* (Franklin, McNinch, & Sherman, 2013), and the Council of Ministers of Education, Canada's (CMEC) statement on play based learning (2012).

Formed in 1967 by Canada's Ministers of Education, CMEC is an inter-governmental body with the purpose for government representatives to discuss policy issues, enable consultation and cooperation on mutually shared educational interests, and provide a mechanism for ministries to discuss and collaborate with national and international organizations focussing on public policy and education.

In 2011, the Canadian Ministers of Education identified ECD as a priority focus for CMEC, based on growing demands for full-day kindergarten and pre-kindergarten, EDI data indicating 25.4% of Canadian children 'experiencing difficulty in one or more areas of development' (ECMap, 2014, p. 6), and increasing public interest concerning quality, accessible, and affordable child care and the need to better align early learning programs (including kindergarten and pre-kindergarten) including preschools, day care services, and out of school care programs (Barnett & Fuller, 2006; Belfield 2005; Muttart 2012; 2013; 2014).

The range of discourses of ECD represented in these negotiations can be tracked through documents such as the Dean's accord and CMEC's statement of play based learning, noted above. These documents influence jurisdictional discussions at the policy level, as well as capturing the range of discourses that are engaging public discussions, as is evident in Alberta's public consultations on *Together We Raise Tomorrow* (Government of Alberta, 2013b).

To support CMECs priority for early learning, a pan-Canadian working group was established to identify shared priorities and to collaborate on public discussions on the importance of the early years. One product published in 2012 by CMEC, with endorsement of all Canada's provincial Ministers of Education, is CMEC's Statement On Play-Based Learning. The Statement is an example of how public-facing policy documents incorporate a range of discourses to frame the importance of ECD. For instance, CMEC situates the importance of play-based learning in a discourse of neo-liberalism, supported by a 'core story' of science and early brain development:

Learning through play is supported by science. The benefits of play are recognized by the scientific community. There is now evidence that neural pathways in children's brains are influenced and advanced in their development through exploration, thinking skills, problem solving, and language expression that occur during play ... Based on such evidence, ministers of education endorse a sustainable pedagogy for the future that does not separate play from

learning but brings them together to promote creativity in future generations.
(Council of Ministers of Education, Canada, 2012, p. 18)

As Franklin, McNinch, and Sherman (2013) point out, the purposing and positioning of early learning and care are often presented in inconsistent or contradictory ways, when considering the range of discourses that are used to engage public discussion on the importance of the early years, and the need for an early learning and child care system:

The purposes of early years' education and care are framed in multiple and even contradictory ways. For some, investment in the early years is seen in terms of enhancing human capital (i.e., enhancing future society capital by reducing poverty, health issues, and other social burdens), as well as preparing children for school success and productive citizenship. Others emphasize the importance of the early years as an aspect of a democratic society, where education is seen as a basic right and where early learning spaces are conceived as a 'meeting place.' For example, John Dewey (1902) imagined early learning settings as places for the creation of a community of inquiry where adults and children actively 'research' the world, co-constructing knowledge and understandings together. (2013, p. 1)

There are, however, some attempts at developing more cohesive and responsive models to early learning issues, evident in frameworks currently being implemented in Ontario and British Columbia, as well as the Healthy Child Manitoba Strategy underway since 2000 (Government of Manitoba, 2002). The provincial government of Manitoba established the Healthy Child Manitoba Strategy as a government response to research identifying the importance of the first five years of life and the significance of the early years, in particular the first five years, and how the influences of a child's experience impacts their future development. Healthy Child Manitoba demonstrates a province-wide approach to implement a coordinated and integrated system of programs and supports for children, youth, and families.

In March 2000, the Manitoba government was the first provincial government to establish a Healthy Child Committee of Cabinet, devoted to the well-being of children and youth including commitments from several ministries, with responsibility for coordination by the Healthy Child Deputy Ministers' Committee and the Healthy Child

Manitoba Office and as well as being supported by new legislation, entitled *The Healthy Child Manitoba Act, 2007*.

Implementing the EDI

The research interest in the EDI continues to gain momentum by demonstrating the value of using population-level school readiness data to engage communities and mobilize state and community assets on behalf of young children. The British Columbia experience of implementing the EDI provides a good example. The British Columbia experience included establishing a baseline estimate using the EDI data to establish a baseline of early child development at school entry. This work identified that the data collection in the 2008/2009, ‘less than 10% of all neighbourhoods in British Columbia had EDI data indicating vulnerability rates below 15%’ (Cleathero, 2009, p. 37). As a result of these findings, the government of British Columbia continues to evaluate the data and its implications in determining population levels of vulnerability for children.

To address this, the government has outlined a strategic policy framework designed to reduce child vulnerability to the levels targeted by government (Kershaw, Anderson, Warburton, & Hertzman, 2009). This policy framework, called ‘15 by 15: A comprehensive policy framework for early human capital investment in BC. (Kershaw, Anderson, Warburton, & Hertzman, 2009) has identified a series of strategies and actions, including the priority for change based on the need for communities and government to form stronger partnerships, including greater alignment and integration across systems working with early childhood development mandates. The key concept underpinning this strategy is that ‘children thrive, when families thrive’ (Human Early Learning Partnership, 2010, p. 1) and outlines the role of public policy that supports investments into resources and community assets to address children’s development, health and wellbeing.

In more recent times, the provincial government of British Columbia also provides an example of how EDI data is providing the direction for strategic priorities for early childhood and reducing vulnerability. The EDI data for British Columbia have identified that, ‘while the poor are more statistically likely to be vulnerable, the majority of vulnerable children in British Columbia reside in the more populous middle-class’ (Kershaw, Anderson, Warburton, & Hertzman, 2009, p. 1). Based on these findings, the provincial government of British Columbia’s has identified as a strategic priority the need to decrease ‘the provincial rate of vulnerability to 15% by fiscal year 2015/16 and to 10% by 2020’ (Kershaw, Warburton, Anderson, Hertzman, Irwin, & Forer, 2010, p.

9). According to the Government of British Columbia (2009), ‘93% of British Columbia neighbourhoods have vulnerability rates that exceed even the intermediate target of 15%. Significant changes across the entire province are therefore required to create broad and equitable access to the conditions that help children and families thrive’ (p. 2).

By contrast, since the Pascal report *With Our Best Futures in Mind* (Pascal, 2009) outlining recommendations to support full-day kindergarten for 4 and 5 year olds, discussions on programming and supports for children’s development in Ontario have been aligned to a school readiness discourse, with the Ministry of Children and Youth allocating funding for three cycles of the EDI in 2005–06, 2008–09, and 2011–12. The Ontario government published the *Ontario Early Years Policy Framework* in January 2013, setting out priorities including an action agenda for an integrated strategy including an early years and family support system for children 0–6 years of age and their families.

This framework aligns a range of discourses to underpin the rationale for a systematic discourse articulates the need for ‘integration’, ‘alignment’, ‘coordination’, and a ‘comprehensive’ early childhood system (Government of Ontario, 2013, pp. 6–8). The document states:

The early years are a period of intense learning and development, when tremendous changes occur in the brain over a short period of time. In the first year of life, the architecture of the brain takes shape at an astounding rate – approximately 700 new neural connections are being built *per second*. Scientists now know that this process is not genetically predetermined, but is in fact dramatically influenced by children’s early experiences with people and their people and their surroundings.

In aligning two discourses – neoliberalism and neurosciences – the case for integration of an early learning and child care system, funding, policy, and implementation for the EDI could be made for a portfolio shift that would place ECD with the Ministry of Education as the preferred location to lead.

Two examples highlight the importance of how the use of both neoliberal and neurosciences discourses were used to position the importance of the early years. Both are identified as the predominant cases for the alignment within government as a key strategic approach to impact the health and wellbeing outcomes for children. In the first example as already stated, the neurosciences are used as the first layer of evidence to

support the framework. Drawing on the neurosciences in the first instance ensures that the interests of the child's own development is central to consideration. Once this case can be defended, the implications for a child's development are important in making the economic case for the wider community.

Studies show that positive early years experiences lead to improved determinants of health, resulting in better social, economic, and health outcomes throughout the life cycle. The economic benefits of investments in the early years are also well-documented. Economist and Nobel laureate James Heckman calculates a seven-to-one return on public investment in programs for young children. More recently, TD Bank Chief Economist, Craig Alexander, noted that the widespread and long-lasting benefits of early childhood education programs far outweigh the costs. (Government of Ontario, 2013, pp. 4–5)

This approach continues in 2013 when the Education Quality and Accountability Office (EQAO) (funded by the Ontario government and an independent provincial agency), in partnership with the Offord Centre for Child Studies, published *Starting Early: Teaching, Learning and Assessment. Linking early-childhood development with academic outcomes – detailed look* (Calman & Crawford, 2013) uses the neuroscience discourse to position the importance of the EDI.

In this example, the embedding of the relatively new neuroscience discourse within the importance of the early years underpins the positioning of the EDI:

The relatively new field of epigenetics has revealed that our genetic makeup is subject to modification based on experience and that brain development, or the neural wiring that takes place in the first few years of life, has life-long consequences in terms of behaviour, health and learning capacity. Science has developed to the point that we not only know that early-childhood stimulation is important, particularly during sensitive periods in brain development, but we can document precisely how this early stimulation affects neural pathways and, technically speaking, 'genome functioning,' sometimes thought of as control switches that turn genes on or off. By providing nurturing and stimulating early-childhood experiences, we can significantly enhance genome functioning, thereby optimizing children's learning capabilities. (EQAO, 2013, p. 2)

The emerging use of the neuroscience discourse will be considered in further detail, as this initial consideration demonstrates how the case is built for both the need in public policy and the investments to be made in early childhood programs and services.

However, a notable shift around the intent of the EDI does begin to emerge at this most recent stage of the implementation of the EDI in Ontario to align to monitoring of *individual* children's learning outcomes. This is evident when the EQAO reports that almost 29% of Ontario kindergarten children were identified to be 'vulnerable' or 'at risk' in the language and cognitive development domains (EQAO, 2013). The EDI results of kindergarten children are now linked to provincial reading, writing, and mathematics assessment results in Grade 3:

Group-level results of the EDI assessments, completed by teachers in senior kindergarten classes in each school once every three years, are provided to school boards and schools in addition to being used to examine student readiness within communities and at the provincial level. These group-level data serve as a rich source of information for schools and communities.

For the past two years, with a view toward providing schools with information to assist in improvement-planning efforts, EQAO has been working in partnership with researchers from the Offord Centre to gain an enhanced understanding of the relationship between early- childhood development and the consequent pathways involved in student learning and achievement. (EQAO, 2013, p. 6)

The Context for the Present Study: Early Childhood Services in Alberta¹

In 1974, the Government of Alberta launched Early Childhood Services (ECS) to support programming for children aged 0–6 years of age, with the intent that ECS would be a part of the schooling system. Prior to this, kindergarten in Alberta was typically offered through private operators and school authorities were not involved, with playschools also being organized in local communities by parents. With the introduction of ECS, two requirements were put in place: programming requirements needed to be met, and the employment of a certificated teacher who also held an ECS

¹ Due to the limited history written on the establishment of Kindergarten and ECS in Alberta, details were taken from two conversations with Dr. Sue Lynch, Project Director of ECMap and adjunct Professor in the Faculty of Extension at the University of Alberta, and Ms. Karen Sliwkanich, Senior Manager, Ministry of Education. Both conversations took place by phone in early May of 2014. I am grateful to these individuals for their assistance in understanding this aspect of the background to this study.

diploma issued by the Ministry of Education became a requirement. An ECS diploma was issued, based on a teacher having completed five full-year courses, including a practicum reflecting a specialization in early childhood education.

ECS programming was supported with the establishment of the ECS branch within the Ministry of Education, with issues spanning workforce recruitment and training, space for programming within schools, and rollout of funding and accountability. The branch undertook the role of supporting the implementation of an ECS system at a significant time in Alberta's public education system, including providing regional consultants to work with school authorities in establishing ECS programs and services, and supporting local advisory committees to promote parental engagement.

In response to the Ministry's requirement that certificated teachers deliver ECS programming, including the ECS diploma being issued by the Ministry, the Universities of Alberta and Calgary undertook to offer postgraduate courses in ECS to align to the teacher certification and ECS diploma. The University of Lethbridge offered a specialization in ECS after the first two years of an undergraduate program. The requirement for the government's ECS diploma as part of its rollout of ECS supports and programming for 0–6 year olds and these universities offering ECS courses is significant in the Alberta context given the focus of this study, which is to consider what understanding ECS kindergarten teachers apply to administering the EDI and what is evident in how they describe their practice. This thesis returns to the discourses attributable to teachers' university courses in later chapters.

With the flourishing of kindergarten programs as part of the ECS continuum of programming and supports for children under the age of six, Alberta held the distinction of being an ECS system that articulated an intention to create an integrated approach to early childhood services. However, in 1986 the decision was made to abolish the government requirement for an ECS diploma and, once the ECS diploma certification was no longer required, universities began to dismantle their ECS course specialization and issuing of the ECS diploma certification issued by the Ministry of Education.

The reasoning behind the decision to abolish the diploma was based on a number of influences, including the argument that the specialization restricted the capacity for teachers to move from other grade levels into the kindergarten program. However, the decision was considered by some as undermining the type of

programming children prior to grade 1 would receive, as universities began to end their diploma and postgraduate programs in early childhood.

Nevertheless, the expansion of kindergarten programs offered through school authorities, including private ECS operators and private schools, had flourished between 1974 and the early 1990s. By the 2000s, the foundations for kindergarten and ECS programming were firmly established, despite the dismantling of the ECS diploma certification, and even though the ramifications for how teachers would provide programming for children had not yet been fully realized.

Contemporary Discourses Influencing ECD Policy in Alberta

In very recent times, the early childhood community in Alberta has grappled with a range of social and political issues, including access, quality, and how ECD is organized to better meet the needs of families and children, including asking which outcomes of ECD are measurable. In order for government to fund ECD, governments need to be accountable for the investment being made. With an economy that is dependent on a volatile resource industry like oil, how does government justify its investment in ECD when budget constraints are imposed?

In the present day, discursive themes are evident in government policy underpinning investments in early childhood. These include:

- School readiness (Evans, 2013; Janus & Offord, 2000, 2007; Moss, 2013; Whitbread & Bingham, 2012), comprising:
 - Skills required for children to engage in learning and support their growth and learning
 - The government's role in supporting families along the service continuum to promote successful intellectual, emotional, and physical outcomes for all children
 - Community capacity, including identifying community assets and the importance of better outcomes being realized when families who have strong connections with their local community
 - Language development and acquisition; both the language spoken at home and the language of the dominant culture being of pivotal importance in the early years.
- Developmental discourses (Thompson, 2002) that represent children's development as a natural process, with development preceding learning and the provision of a continuum mapped out across measurable domains.

- Neuroscience and the influence of the ‘core story’ (Frameworks Institute, 2011; Norlien Foundation, 2013; Shonkoff & Fisher, 2013) that provide a new scientific case for why investments in the early years are critical.
- Neoliberal influences on ECD that describe children as being ‘capable’, ‘competent’, ‘independent’ and which position support for children and their families within an economic and industrialized discourse (Dahlberg, Moss & Pence, 2007; Kascak & Pupala, 2013; Simpson, Lumsden, & Clark, 2015; Mahon, 2010; UNICEF, 2006). These include:
 - ‘Parental choice’ perspectives on how and what families might access if they are seeking out programs and services. An important principle in the parental choice discourse is that decisions about which services are accessed is transferred to parents, who are able to access both funding as well as services to take to their operators, programs, and services of preference (Albon & Rosen, 2013; Breenan & Hobson, 2012; Horne & Breitzkreuz, 2015; Kershaw, 2004; Mahon, Anttonen, Bergqvist, Wall, 2013).
 - Social investment in ‘human capital’ that connects with arguments about reducing children’s vulnerability, eliminating child poverty, and the development of social policy frameworks to target risk factors of poverty. ECD is positioned as a key strategy, including the rationale of increased economic sustainability resulting from government funding into early childhood.

This neoliberal economic discourse has proved to be one of the most persistent in ECD policy. The next section of this chapter therefore pays particular attention to the history and impact of this discourse.

Economic ‘Investment’ in ECD

The economic discourse is one that has resonated throughout government policy for several years. As early as 2000, the then Premier Ralph Klein, in a contentious decision that went against his cabinet of the day, endorsed the UN Convention of the Rights of a Child by describing the need for a ‘vision of early childhood development as an investment in the future of Canada’ (Alberta Department of Children’s Services, 2003, p. 1). In formulating a rationale to support this work, progressive Albertan governments have continued to locate government investments into ECD within an economic discourse.

In its 2002 'Future Summit', the Alberta government engaged with Albertans in determining how the community envisioned government creating effective governance for Alberta in the 21st century. The summit set out a vision including 'accessible, affordable education,' a 'strong economy that makes it possible for all Albertans to share in the province's prosperity,' and 'safe, caring communities supported by well-planned and well maintained infrastructure' (Government of Alberta, 2002, p. 3) The Klein government went on to set out an agenda with four themes, one of which focused on 'Leading in learning,' aimed at 'making certain our educational opportunities are second to none and our children have the chance to get a healthy start in life. It requires our support of opportunities for lifelong learning, developing both skills and knowledge' (Government of Alberta, 2005, p. 9).

These themes of 'educational opportunities,' 'healthy start,' and 'lifelong learning' have continued to underpin an economic discourse of why investment in the early childhood years would reap the subsequent benefits of a skilled and knowledgeable workforce for Alberta. With one of the largest and fastest growing economies in Canada due to oil production, the needs for a diversified workforce, as well as the need to respond to and deal with the range of social and economic issues that arise as a result of changing demographics, continue to impact on how government invests in early childhood. However, the experience of Alberta identifies a tension that exists in traditional and conservative social culture, where parental choice is a significant value underpinning how social and human policies are formulated.

For instance, while Ralph Klein set out to support the UN Convention on the Rights of the Child, identifying the need to establish a 'vision' for early childhood, the provincial government had reduced funding for Kindergarten from 400 to 200 hours in 1994. The cuts were justified at the time by arguing that part-time kindergarten did not provide lasting benefits for children (Wagner, 1998; Harper 2003). In 1997, the Alberta government restored kindergarten funding to 400 hours per year, and today Alberta funds 475 hours a year per child, working out to about 2.5 hours of kindergarten every weekday. In order to allow all school boards to provide full-time kindergarten taught by certificated teachers, no specialization in early childhood development is required, a point which is revisited in later chapters.

The Relationship between Neoliberal Discourse and the 'New Sciences'

Within the current Alberta context, interest in ECD has been fuelled by the influence of foundations such as the Muttart Foundation, the Palix Foundation and the

United Way, as well as organizations like the Framework Institute. This convergence of various influences reflects a diversification in the ‘discourse forms’ (Foucault, 1980) that contribute to the social process of legitimating and constructing the case as to why both government and public would support investment in early childhood.

Two significant events occurred in Alberta with the release, in 2008, of the Alberta Benchmark Survey (Rikhy, Tough, Trute, Benzies, Davey, & Johnson, 2008) about what adults know about the early years, and, in 2011, the release of the Chief Medical Officer’s report *Let’s Talk About the Early Years* (Government of Alberta, 2011a)

The benchmark survey was conducted in 2007, involving over 1,400 Albertans, to determine ‘what adults know about child development’ (Rikhy, et al, 2008, p. 6) about. The survey was conducted by telephone, and adults were asked a series of questions concerning their experience with children including their understanding of early childhood development. The purpose of the study was described in terms of learning, ‘what adults and parents knew about children’s developmental milestones and strategies to support optimal child development. As well, we were interested in Albertans’ beliefs about child care and children’s issues, including the availability of programs and resources. Finally, we were interested in where parents obtained information about child development and what parenting strategies they used’ (Rikhy, Tough, Trute, Benzies, Davey, & Johnson, 2008, p. 1).

A key finding summarized in the report identified that, while 63% of Albertan adults were able answer half or more of the questions across several domains of development, only 7% answered half or more questions correctly for social development and 1.7% for emotional development.

Not unlike the EDI, the significance of the Alberta Benchmark Survey (Alberta Centre for Child, Family & Community Research, 2008) is its influence on public and community engagement about early childhood development, in combination with the underpinning discourse of why public investment in early childhood development is paramount:

The importance of optimizing child development has become increasingly apparent through the work of academics, governments, non-government organizations and business leaders. Parents’ knowledge of child development shapes their expectations of and interactions with children. Evidence suggests that effective parenting strategies are associated with better child outcomes.

Indeed, the probability of healthy social and emotional development of children is increased when children experience positive and effective parenting practices. Evidence suggesting that improved child outcomes may begin with parents' knowledge of child development created an impetus to assess parents' understanding in this area. In addition, little is known about the understanding that other adults have about child development, including those who interact with children through family, volunteer, or employment opportunities. (Rikhy, Tough, Trute, Benzies, Davey, & Johnson, 2008, p. 7)

Parents and other adults who interact with children are well positioned to influence the developmental domains of children, and by understanding what adults know about child development may shape the development of strategies to ensure adults in these important roles can optimize the development of children (Rikhy, Tough, Trute, Benzies, Davey, & Johnson, 2008).

The Chief Medical Officer's report was both a formal acknowledgement, sanctioned by government ministries, of the contributing factors, both systemic and societal, to a fractured system not reaching its potential in supporting children and their families, as well as setting out formal discourses of support for government investment in ECD:

The purpose of this report is to get people talking and engaged about early childhood development. Why? Because the prosperity of our province depends on our ability to foster the health and well-being of the next generation; because any child, no matter his or her circumstances, has the right to opportunities that will ensure their ability to grow, develop and thrive; and because, when we invest wisely in children and families we benefit from the constant renewal of people who contribute through a lifetime of productivity and responsible citizenship. (Government of Alberta, 2011a, p. iv. *Emphasis in original*)

Out of reports such as these, the concept of a 'core story' has emerged that brings together persuasive discourses underpinning ECD provision. It is this core story that drives the policy environment in which the participants in this study carry out their work.

The Core Story

In 2012, a new Premier was elected in Alberta to lead the Progressive Conservatives on a platform to expand early childhood services, including increasing funding to support the implementation of full-day kindergarten. Following the election of Premier Allison Redford (Alberta's first female premier), the six priorities for a 'focused agenda' for government were announced, with ECD identified as the first priority. Subsequent work has demonstrated the emergence of a new approach to a neo-liberal discourse, with a Ministry of Human Services initiative to establish Alberta's Social Policy Framework (Government of Alberta, 2013a). The intent of the Framework is described in terms of:

Alberta's Social Policy Framework supports the transformational change that Premier Redford has led throughout government. Communities, non-profit organizations, government and businesses will use the framework to target supports and services on achieving results Albertans want. The framework's goals will inform decision-making for priority actions including poverty reduction and early childhood development as well as challenges such as addictions and family violence. (Government of Alberta, 2013a)

Embedded in this discourse is the emerging influence of a 'core story' developed through the partnership between the Framework Institute and the Harvard Centre on the Developing Child and the Alberta Family Wellness Initiative (Palix Foundation, 2013). This core story consists of a narrative about 'how early experiences play a key role in the development both of children's brains and their behaviour' (Palix Foundation, 2013). A range of researchers, policy makers, and practitioners across the disciplines of education, health, and science, have participated in and led a range of symposia and framing activities to develop communication strategies to influence policy and practice, as well as share through public education strategies how 'behavioural development proceeds as various systems in the brain mature, including how early behaviours influence which neural circuits become well-established in children's brains' (Cameron, 2012).

In June 2013, the Alberta Government launched a public consultation exercise entitled *Together We Raise Tomorrow*. This initiative brought together four 'pillars' on a children's agenda, ranging from child poverty, ECD, and a children's charter, to a social policy framework, and was aimed at engaging the community to 'support the safety, well-being and development of children in Alberta' (Government of Alberta,

2013b, p. 3). The ECD discussion guide prepared as part of this exercise identifies that ‘the foundation for strong and healthy children is set in the early years; starting even before they are born’ (Government of Alberta, 2013b, p. 3).

This policy platform has been released into an environment where the EDI already has an established role in informing policy development. The next section of this chapter turns to the place of the EDI within current policy reforms and, therefore, the work of Albertan kindergarten teachers.

Positioning the EDI within Contemporary Policy Discourses

As the Albertan government sets out its agenda to support efficiency, effectiveness, and relevance of government investments (Government of Alberta, 2013b), it becomes increasingly important that the ‘potential’ and ‘success’ of ‘strong, healthy’ children needs to be measurable. In response to this imperative, the government’s business plan has identified ‘measures of success’ to include ‘more children realizing their developmental potential in the first years of life, and more communities working together to increase access to the right services, at the right time to meet the needs of families’ (Government of Alberta, 2013b, p. 4). At the same time, neo-liberal economic discourse can still be located within the government’s commitments, which describe ECD as follows:

Early Childhood Development: sets the course for a child’s future. It determines how well children will do in school, their physical and mental health, behaviour, relationships and general well-being.

- Improve measures of child and infant health and development by age five — e.g. infant mortality, birth weight, prevalence of Fetal [sic] Alcohol Spectrum Disorder, language skills and physical health.
(Government of Alberta, 2012, p. 1)

This continued convergence of discourses was evident when the Government of Alberta’s 2013–2016 Business Plan was released:

Every child in Alberta deserves to have the best possible start in life, with every opportunity to reach their full potential. We know that when children flourish, they are likely to become adults who thrive. This contributes to the collective well-being of the province now and into the future. The foundation for strong and healthy children starts even before they are born. All children need a healthy start, nurturing relationships and safe, supportive environments to grow, learn

and thrive. Their future health and success in school, work and relationships depends on it. We know that child poverty, homelessness, family violence and abuse cause some children to be more vulnerable than others. Supports need to be targeted to fit the unique challenges and diversity of Alberta families so all children can succeed. This means a connected early childhood system of evidence-based prevention, early intervention and protection services in communities that supports the healthy development of all children and responds to the very real risks for those who are vulnerable. The Alberta government will work with families and community partners to help parents give their children every opportunity to realize their full potential. (Government of Alberta, 2013c, p. 4)

As discussed, this convergence of discourses draws on the neurosciences in describing what “we know” what occurs “when children flourish, they are likely to become adults who thrive”. The evidence of the neoliberal discourse is then used to build the case to support the value of children’s development to the rest of society. That is, it is in the best interests that the investment be made at an earlier age as the investment to be made sooner will provide economic value to community and societal outcomes in the future – “Their future health and success in school, work and relationships depends on it”.

These policy directions and the ‘core story’ align with an emerging story from EDI data identifying that across all income levels, families, including lone and two parents, are experiencing vulnerability (Janus & Duku, 2007). And ‘since the majority of children live in two-parent and middle-income families, *numerically* the largest number of at-risk children are living in what has traditionally been described as “regular” families’ (Doherty, 2001b, para. 5). EDI data suggests that while ‘there is a higher frequency of vulnerability to developmental problems among children living in poverty and/or living with a lone parent’ (Doherty, 2001b, para. 4), there are other factors that determine vulnerability for children, including parenting styles; parental stress or parental depression; or the absence or lack of adequate language and cognitive interventions (Guhn, Gadermann, & Zumbo, 2007; Mort, 2009).

Given policy interests in early childhood and the need for accountability and measures for outcomes (Kamerman, 2000; OECD, 2001; OECD, 2009) the EDI has become an important population-level measurement tool in influencing policy development. And in particular, given the increasing demand on targeted and

specialized programs designed to target at-risk populations based on poverty and social indicators, there is growing pressure of how public policy and support systems can be designed to acknowledge that there is a greater need to be conscious of the support that *all* families require in order to help their children thrive and be successful in school and in life (Carpiano, Lloyd & Hertzman, 2009).

However, this population-based tool is dependent on the understanding teacher have of the skills an individual child should able to demonstrate in a kindergarten setting. This is the reality that underpins the rationale for this study and some of the critiques of the EDI that arise.

Critiques of the EDI

Efforts to understand the impact of the EDI, both in social and academic contexts, have resulted in only limited analyses in terms of impacts on policy and practice. Some efforts to address the concerns raised around the EDI's reliability for incorporating the effects of cultural diversity and the impact of the data's roll out on communities are beginning to emerge as part of a growing critiquing of scientific evaluation and its impact on government policy (Guhn, Gadermann, & Zumbo, 2007; Li, D'Angiulli & Kendall 2007). The use and influence of EDI as a measure of children's development is a clear example of the contentious role of science evaluation, of developers being aligned to policy, and the difficulty of distinguishing the interests of research and evaluation from the research and development of the instrument itself:

Recognizing the complexity of the many relationships involved in EDI, there is a need for a general framework in guiding explanatory research. The purpose of this paper is to develop a framework that identifies key determinants of EDI so that socially and culturally relevant outcomes can be achieved. The framework takes a closer look at the bioecological model of Bronfenbrenner (1979; 1986; 1989) in order to better understand the multi-dimensional and multi-sectoral nature of EDI in the context of Canada. The bio- ecological model is both bi-directional and the interactions between the four systems, micro-, meso-, exo-, and macro-level systems are synergistic in nature. The complexity of the interactions between the systems is daunting but encourages epidemiologists, social scientists, and psychologists to better utilize factors that impact on children's health and wellbeing. It represents a starting point for thinking about integrated service models and in general, community health. (Krishnan, 2010, p. 3)

Given this critique, it is essential that I also remain aware of my own interests and positioning in conducting this study, which I now demonstrate by shifting to a first person narrative.

Thesis Structure

This thesis consists of eight chapters. Chapter 1 has provided an overview of the policy context enabling the implementation of the EDI, including an outline of the research questions guiding this work, and an overview of the significance of the study. The aim for this chapter was to set out the scope of discourses influencing government in developing policy responses to supporting ECD.

Chapter 2 identifies what we know about the EDI, and examines the EDI both in terms of its practical application and how it relates to relevant educational theory by setting out an outline of teacher decision making, what constitutes curriculum, and pedagogy in an early childhood context. Chapter 3 builds on this with an examination of the socio-cultural epistemological framework through which teacher knowledge is understood in this thesis. Chapter 4 is in two parts: part one describes the basis and rationale for the research methodology, and part two focuses on how the data were generated and analysed. This includes how discourse analysis was conducted following Gee (2011a, 2011b), understanding discourse analysis as a research methodology that examines how both written and spoken language enacts social and cultural perspectives and identities. Chapters 5, 6 and 7 describe the findings of the thesis, drawn from the analysis of individual teacher interviews as well as a focus group. These chapters discuss the formal and informal discourses that emerged as a result of asking teachers about their understanding of children's development in the context of their practice, and specifically when administering the EDI. Chapter 8, as the final chapter, provides an overview of the findings and aims of the study, including a discussion concerning the implications arising from the study. Three areas are identified for recommendations pertaining to the development of policy, ongoing research, and development and support for teacher practice.

Chapter 2: Literature Review

A basic educational insight is that teachers' work is shaped by the knowledge that they bring to the task. Teaching is a specialized profession and the contexts in which teachers' work can vary in many ways. In a similar vein, the knowledge that teachers bring to their work is reflective of diverse contexts. In terms of the EDI, early childhood teachers require a basic level of knowledge about what the instrument is and how it should be used. In this thesis two particular aspects of the content knowledge of teachers who work with young children are examined. In the case of the EDI this content knowledge includes basic assumptions about what the instrument is, what it measures, and how it can best be used. In addition, teachers' knowledge of child development is also pertinent as this shapes not only how they use the EDI but also their whole sense of working with children. Teaching is a dynamic process where a range of expectations need to be met. These can include meeting governmental requirements in using instruments like the EDI and recognizing teachers' own sense of how the cognitive and experiential world of the child develops. For teachers to meet these demands, an understanding of what they bring to these tasks and how they move from a theoretical understanding to practice is important. This chapter is in two parts. The first will address issues surrounding the EDI, and the second will examine some of the relevant literature concerning practitioners who administer the EDI.

The Early Development Instrument

What has traditionally been considered as the body of child development knowledge (Berk, 2006; Flear, 1995) influenced by the diverse range of theorists including Piaget, Montessori, Erikson and Vygotsky is now under greater critiquing (Lightfoot-Rueda, Peach, & Leask, 2015) in regard to sociocultural approaches to early childhood education (Miller, Cable, & Devereux, 2013). Within such understandings, the EDI is a significant cultural tool within the socio-cultural context for teaching in early childhood in Alberta.

The importance of early learning and development in children is well established as an area of ongoing concern (Bukatko, 2013; Maggi, Irwin, Siddiqi, & Hertzman, 2010; Marotz & Allen, 2013). At all levels of social discourse the early life of children is considered to be of foundational importance in shaping their futures (Cynader & Frost, 1999; Shonkoff & Phillips, 2000). As well as framing educational outcomes, the early years of a child's life are considered to be of serious concern in establishing social

and moral wellbeing (Bradford, 2012; Cowie, 2012). Hertzman and Williams (2009) capture this point well when they write, ‘we now understand that health, emotional well-being, and life success have their roots in early childhood’ (p. 68). Given this overall importance, considerable attention has been directed toward how children develop as individuals and whether or not trends can be seen across populations. This distinction can be seen more clearly by contrasting attention to an individual issue, such as poor language skills of a child as opposed to poor language skills across a whole social group.

In this thesis child development is discussed in relation to large population groups and not to individuals. In particular, it examines how practitioners see such child development in this context. In order to understand child development as a communal rather than individual phenomenon, reliable measures need to be considered as these can give an indication to general trends. One such measure is the Early Development Instrument (EDI), a systematic psychometric method for measuring child development.

Work on the EDI began in 1997 at the Canadian Centre for Studies of Children at Risk located at McMaster University in Hamilton, Ontario. The EDI was designed to determine the capacity of a community’s children to learn and succeed in their first years of schooling (Brinkman, Sayers, Goldfeld, & Kline, 2009). It has been widely used across Canada and internationally in countries such as Australia (Beach, Friendly, Ferns, Prabhu, & Forer, 2009; Hart, Brinkman, & Blackmore, 2003; Janus & Duku, 2004). The EDI is a questionnaire consisting of 104 questions to be completed online by teachers or childcare educators who deal with young children, and is completed by the teacher based on their observations of each child in their kindergarten classroom in Canada, or in the first year of full-time school in Australia. (Janus, Hertzman, Guhn, Brinkman, & Goldfeld, 2009). The EDI ‘measures five core areas of early child development: social competence, physical health and well-being, emotional maturity, language and cognition, communication skills’ (Janus, & Offord, 2007, p. 6). Each of the five domains is further broken down into sub-domains, which are then linked to practical examples to help explain the instrument. The EDI domain of physical health and well-being, for instance, is broken down into a series of sub-domains, one of which is physical readiness for school. An example of this sub-domain is a child coming to school hungry. In Australia, the EDI has had some minor alterations in terminology but retains all the essential features of the original. The EDI was implemented nationwide in 2009 as the Australian Early Development Instrument (AEDI) (Brinkman et al., 2009).

The EDI is designed to help researchers and policy makers understand trends across large population groups. It is not a diagnostic tool for evaluation of individual children. Similarly, it is not designed to evaluate teachers or specific programs (, Brinkman et al., 2007). The intent of the EDI is spelled out in the manual developed for use by practitioners:

The EDI scores can provide a powerful catalyst for influencing policy and programming decisions by providing population level data about all the kindergarten age children in a neighbourhood or community and how they fare on measures related to early success in school. Increasingly, EDI data are being used to identify areas of special need, to plan and locate timely interventions such as early childhood programs and, where data are available across an entire jurisdiction, to guide broad policy development. (Brinkman et al., 2005, p. 27)

For educational and social policy planners' the EDI can allow for strategic interventions that identify areas of concern, especially related to potential difficulties when children enter school, and is considered important given the evidence that there are children who fall further behind their peers once they enter school (McCain, Mustard, & Shanker, 2007; Mustard, 2008). If differences in development can be detected early enough, intervention can make a difference (Strand, Cerna, & Saucy, 2007). The Education Department of the Government of Alberta (2013d) explains how the EDI is used in terms of collecting data on children's development from three sources:

- gauging the 'readiness to learn' of 5-year olds as measured by the Early Development Instrument (EDI)
- collecting information on the socio-economic factors that influence children's development
- taking inventory of the local services, programs and facilities for families with young children in each community across the province

The data will be 'plotted' on maps for every community in the province. This type of information can help to reveal things like where children and families live; the differences across communities in child development; and where strengths and gaps exist in programming, facilities and services. Communities can then use this information to work together to meet the needs of their young children and families. (Alberta Education, 2012b, p. 2)

This type of socially mediated intervention is in keeping with the theoretical underpinnings of the EDI. The EDI relies heavily on both social constructionist and interactionist theory (Janus & Offord, 2000). In a constructivist view the development of the child is seen within the context of the wider community. Any measurement of the child should, therefore, take place within a social context that takes into account local issues. On the basis of this assessment the best way to ensure that children are, in the case of the EDI, ready for school is to mobilize the whole community into action by addressing the root causes of any developmental delay. This is also in keeping with the community focus rather than individual focus of an instrument such as the EDI. What is important here are general and discernible demographic trends that can be identified by using relevant instruments such as the EDI to gather representative data in a particular context such as children transitioning into school. This thesis explores the understandings of early childhood development practitioners apply at the point of administering the EDI. As the participants in the study all work as teachers in the entry level of schools in Alberta, it is important to gain some sense of how school entry assessment is understood in this context.

School Entry Assessment in Canada

Over the past thirty years there has been an increasing focus on assessing preschool children (Arslan, Durmuşoğlu-Saltali, & Yilmaz, 2011; Reynolds, 2000). This is a consequence of what Pivik (2012) calls recognition that ‘early childhood is a “prime” time for positively influencing a child’s physical, social-emotional and mental health and development’ (p. 5). Many factors have influenced the discourse around school entry assessment (Guralnick, 2005). These include the effectiveness of preschool programs, government policy trends to support all children being ready to start school, and early childhood education and development research demonstrating the importance of early experiences for later development (Jutte et al., 2010; Pearson & Rao, 2012; Siddiqi, Kawachi, Berkman, Hertzman, & Subramanian, 2012; Vandivere, 2004;). Growing policy concerns for the outcomes for children in later school years have also drawn a greater focus attention on literacy and numeracy skills in early childhood programs (Turner & Sanders, 2006).

In Canada the debate around school entry requirements for children has lacked a national focus for some time (Saklofske & Janzen, 1990; Volante, 2007). This is in large part because, in Canada, educational funding, oversight, and policy are largely a provincial concern and any national perspective is therefore problematic (Cool, 2007).

There is substantial cooperation, however, between Alberta, British Columbia, Manitoba, Saskatchewan, Yukon, and Northwest Territories (Alberta Education, 2012a). These provinces and territories share common learning standards in a range of subjects. In terms of early childhood development, the province of Alberta states its goals as:

Children's first years of development set the foundation for their success in school and future well-being. Children's development during these early years affects their learning, behaviour, and physical and emotional health throughout adulthood. The Early Child Development (ECD) Mapping Initiative is a province-wide, five-year research project activity looking at the factors that may influence healthy child development. The Initiative will use the results to support communities and families in ensuring that all children have the best possible start in life. (Alberta Education, 2012b, p. 2)

Across Canada schools are publically funded from grade 1 to completion of high school. In Ontario there is also provision for a formal kindergarten program and in Alberta there is partial funding for kindergarten education. In other provinces, funding for kindergarten varies widely and is the subject of ongoing public debate (Volante, 2007). Janus and Duku (2007) have described this concern as 'a wide variation between groups of children resulting in a gap at school entry' (p. 1). In light of this school entry gap, there has been a growing consensus for the need to evaluate the whole child not on an individual basis but to look at population trends (Meisels, 1999). This approach considers a child's development in complex and interactive categories, and arises out of a sense that educational outcomes for children can vary significantly. As a result of this variation, interventions, when they are required, take on a multifactorial form (McLean, 1985; Offord & Lipman, 1996; Pianta & Stuhlman, 2004). Assessments in educational settings and, in particular, preschool assessments, are conducted to gather information, screen, diagnose, evaluate a child's progress, and in program evaluation.

The policy developments that have created the need for assessment activities in various aspects of early childhood education programming also raise issues related to premature labelling, rapid developmental change, and the need to assess with a context of the specific learning situation children are accessing (Stipek & Byler, 2001). The expansion of educational services to young children with disabilities has expanded the role of professionals in not only providing early intervention services but also to include preschool assessment activities. The approach most commonly found in Canadian

preschool programs involves early identification for young children with a diagnosed disability and/or developmental difficulty/delay with the intent to design and implement specialized and targeted interventions (Government of Canada, 2007).

The approach includes multi-disciplinary team assessments that includes multiple procedures, multiple sources of information, and is across multiple settings in order to yield a comprehensive viewpoint of a child's abilities (Janus, Hertzman et al., 2009). This approach sits well within the social interactionist approach to early childhood development. This situates the child within a social context that looks for strong functional elements as well as instances of dysfunction. Using multi-disciplinary teams is also complementary with population measures such as the EDI as it looks to the health, or otherwise, of a whole system and not just single organisms within one part of a whole. The effect of these processes, however, is the introduction of a dominant discourse of atypical development, a point I return to in the findings chapters.

Identifying Major Debates on the EDI and Locating My Study within These Debates

Debates on the EDI have clustered around four major areas. The first area centres on issues surrounding the applicability of a universal measurement tool. Offord (2000) has acknowledged that use of the EDI has little relevance for individual children or families. In addition, many of the greatest impacts can be seen on those who are in the least danger of falling behind at school. Both of these criticisms can apply to any large scale measurement instrument. Another issue has been with the validity and reliability of the EDI. The EDI instrument has undergone analysis in standard statistical tests for reliability and validity including the predictability of performance (Duku & Janus, 2004; Janus, 2001, 2002; Li et al., 2007). Issues such as the inter-rater consistency of the EDI, comparing, for instance, responses of parents and teachers, need further validation in peer reviewed studies. These concerns, however, are outside the scope of this thesis. Similarly, the longitudinal validity of the interventions resulting from EDI measures can only be assessed by future work on sampled population groups.

A second debate around the EDI has been on how well it caters for culturally and linguistically diverse populations of children (Arzubiaga, Artiles, King, & Harris-Murrin, 2008; Li et al., 2007). This holds great significance for Canada and Australia with significant indigenous populations as well as communities for whom English is not the first language (in Canada, the EDI is also available in French but has not been designed for application to First Nations, Metis or Inuit) (Martin & Carmen, 2007). The

assumptions that teachers make about these students, and especially indigenous students, can have an impact on teaching practice (Riley & Ungerleider, 2012; Mai, 2011). The EDI sets out to assess the readiness of children for school; to do this, however, it must embody assumptions about the language skills of primary students who are the subject of the test and also the knowledge base of teachers who will administer the test. Many young children from culturally diverse backgrounds do not have strong English language competency, and teachers who are asked to assess the social and communicative skills of the child, one of the key domains, may not be able to make an accurate judgment of this. Their response could be clouded by a conflation of communication skills and an inability to speak the language in a fluent fashion (D'Angiulli, Siegel, & Maggi, 2004).

In response to this, Janus, Hertzman, Guhn, Brinkman, and Goldfeld, (2009) point out that the EDI is not intended to detect first language competence. Rather, its utility is in determining, across a population cohort, competence in the language of instruction, and highlights if there is a deficiency in this regard so that some active policy can be implemented to address this issue. Without such interventions many immigrant children do not rectify language issues in primary school (Duncan & Magnusson 2005; Rutherford, 2006).

In addition to linguistic competency, the EDI records responses on the general knowledge of children and their ability to communicate this knowledge (Li, D'Angiulli, & Kendall, 2007; Li, D'Angiulli, & Kendall, 2009). As Rogoff (2003) points out, social acceptability is a social construct. Such knowledge and the facility to communicate it depend on the child understanding, even implicitly, the social norms of the dominant culture, one in which they may not be fully immersed. This could have implications for the way in which the child is perceived by the teacher responsible for administering the EDI. Kearins (1988) provides an example of this kind of culturally inappropriate behaviour when he notes that amongst many aboriginal communities in Australia, a child who is too talkative and asks too many questions is seen as being immature and not as cognitively advanced as others. Hwa-Froelich and Vigil (2004) have made a similar point about children whose dominant cultural milieu is one which values intergenerational hierarchy. Another aspect of this debate pertains specifically to indigenous communities where languages are oral and do not have a ready written form. Children brought up in this culture may be seen to have poor language skills largely due to their unfamiliarity with the written word (Atkinson, 2004; Harris & Harris, 1988).

Janus Hertzman, et al. (2009) point out that the cultural inclusivity of the EDI does need further evaluation but results in studies conducted to date do support their contention that the instrument is able to deal with separate cultural groups in a fashion that is both reliable and valid (Brinkman, Silburn, Lawrence, Goldfield, Sayers, & Oberklaid, 2007; Guhn, Gadermann, & Zumbo, 2007).

A third debate surrounding the EDI concerns its relationship to a medical model of child development. Critiques of medical models first came to prominence in psychiatry (Laing, 2001). Laing noted that doctors are rigorously trained in a methodology where observation followed by testing leads to diagnosis and treatment. The difficulty with this model in the field of mental health is that very often in psychiatric practice there are few underlying pathological indicators of dysfunction (Fein, 2012). The diagnosis, therefore, must rest on a subjective assessment of behaviour by the health professional. Key to this whole process is some agreed notion of what is normative practice (Small, 2006). In pathological diagnoses this is a relatively straightforward judgment. For example, in the case of a person with low blood glucose, once this concentration reaches below a determined and agreed upon threshold, a diagnosis of diabetes can be given. In mental health, however, empirical measures such as these are rarely available so the assumptions of a medical model can be questioned.

In a similar way, the assumptions of a medical model can be extrapolated to early childhood development and come under the same type of critique. Janus and Offord (2007) have pointed out that the EDI is not intended to be a measure of individual response or deviation. In this sense it has little overlap with a medical model of child development. What the EDI seeks to gain information on is population trends. These are measured against normative standards but this is in the nature of examining broad and indicative demographic trends and the EDI may therefore reveal an anomaly in a particular field. In the cognitive domain, for example, reading capacity may be shown to be comparatively low across certain regions where the EDI has been administered. This is not a judgment of an underlying pathology but rather a statement that, on a predetermined scale of reading ability, a certain population is outside the normative range. The EDI here maps this difference. It does not make any statement about how reading should be addressed if an intervention is planned or what the normative level should be. This is a judgment that is made by those who have chosen to use the instrument in developing educational and social policy in their jurisdictions.

Turner (2010) has critiqued the use of the medical model in education. He sees the basis of comparison amongst individuals as being dependent on socially constructed categories that often do not recognize differences between individuals. Moreover, the medical model rests on the assumption that there is an easy and obvious link between learning and the functioning of the brain. He writes:

At bottom, the application of medical models in education rest on the belief that the brain and the mind are so intimately linked that an understanding of the brain will completely account for the working of the mind. (Turner 2010, p. 2)

The EDI is certainly intended as an instrument that can be used in the framing of social policy and for strategic educational intervention (Corter, Patel, Pelletier, & Bertrand, 2008). The basis of these interventions, in the eyes of those responsible for creating the instrument, arise from a sophisticated understanding of group engagement and community action. It could be that other interventions are undertaken which follow a prescriptive medical model approach to child development. This is, however, not an issue with the EDI but rather with how the data that it generates is used and interpreted. The key question is how best to intervene on the basis of identifying population trends. This issue is beyond the scope of this thesis, except to say that issues in childhood development require sophisticated responses that acknowledge the complex nature of learning, especially in the early years.

A fourth debate concerns the EDI and conceptualizations of the child and childhood (Brinkman, Silburn, Lawrence, Goldfeld, Sayers, & Oberklaid, 2007; Brinkman, Sayers, Goldfeld, & Kline, 2009). Peers (2011) discusses the impact that instruments such as the EDI have on the conceptualization of childhood. Commenting on the AEDI he notes that a danger in using such demographically sensitive technological instruments is that it transforms the child into a type of generic human capital. In this view it is precisely the generic nature of instrument such as the EDI that is called into question: 'The Australian Early Development Index (AEDI) is a technology. It is described in government policy statements and publicity as a 'community measure of young children's development'' (Peers, 2011, p. 134). Children are not seen as unique individuals embedded in complex social relationships, most notably with their families, but as parts of an unidentified human resource pool. This fundamentally alters how the child is conceptualized. In Peers' view this is a deleterious change because, notwithstanding the social rhetoric that surround the use of the EDI, seeing the child as a product undermines any positive impact of the instrument.

Supporters of the EDI may point to its use as a benign statistical tool which promotes equity for children, and community engagement with their schools and families, but the onus for these changes lies not with the state but with the individual. Peers sees this, therefore, as an instrument of social control rather than of liberation. Lehrer and Bastien (2015) and Dahlberg, Moss and Pence (2007) have also questioned the intent of population tools like the EDI, including the impact of the range of discourses used to offer descriptions that are held to be true. 'Knowledge not only shapes our understanding of the world by offering descriptions ... It also provides techniques of normalization, such as surveillance, measurement, categorization, regulation and evaluation. The social sciences have played a particularly important role in this respect by making objectivist knowledge the classificatory criteria through which individuals are disciplined and self-regulated' (p. 30). And according to Lehrer and Bastien (2015) 'Exploring the role of schools in a larger context, we notice a surveillance and governmentality (Foucault, 1991) logic that blames the poor and target entire segments of the population ... in need of "perpetual surveillance" (Fregier, 1840, p. 1). ... The goal of surveillance and governmentality appears more sophisticated ... a framework as being beneficial to the children it targets' (p. 30). A counter view to this is that any demographic measure of a population group must be able to refer to large grouped samples, otherwise community population data could not be obtained.

Critiquing the work of Guhn, Janus, and Hertzman (2007), Peers points out that the EDI could easily become a means by which state control is minimized and the locus of control has moved away from responsible social agency. Although this may be in keeping with neo-liberal economic theory it may not reflect more general community standards. This is not, however, a necessary condition following on from the use of the EDI. The way in which information gathered by the EDI is used is part of a broader debate about how a society best utilizes data for planning and implementation of education policy. This occurs in any instance when large demographic data pools are assembled. This type of information needs to be extensive in its scope but how it is used depends on a wide range of social and political factors (Heckman and Masterov, 2007).

An important gap in existing debates is the lack of information on how teachers understand and administer the EDI. It is in this area that this thesis seeks to make a contribution. Teachers who administer the EDI bring to their task personal understandings of the EDI and child development. In both Canada and Australia, teachers are responsible for the EDI and as such are asked to make judgments on

children in the five domains. Implicit in these judgments are an understanding of the EDI, what it is, what it sets out to achieve, and also some sense, on the part of the teacher, of what is appropriate child development.

The Literature Concerning Practitioners and the EDI

The importance of teacher knowledge is evident if we consider some of the EDI's questions. Teachers are asked to assess students on a four-point scale across a range of domains: 'very good/good, average, poor/very poor, don't know' (Appendix G. EDI Questionnaire 2012-2013). In the Language and Cognitive Skills domain, to select two illustrative questions, teachers are asked to judge: 'is the student interested in mathematics?' and their 'ability to tell a story.' The teacher who makes these judgments brings to the task their knowledge of what the EDI is concerned with along with some theory, even if it is unarticulated, of child development and how they understand it to be evident in the child. We can see similar considerations in questions from the Social and Emotional Development domain. Here, teachers are asked to evaluate, amongst other things, that a child 'demonstrates self-control,' and 'accepts responsibility for actions.' The focus of this present study is on how teachers' knowledge of child development informs their use and conceptualization of the EDI. As the EDI is directed towards making judgements about child development, it is necessary to make some comments on how child development is seen in the wider literature. With the volume of literature on this topic the focus here is on aspects of this that are especially relevant to the EDI.

There are a number of important theories of development that give a scholarly contextualization to the wider discussion on the EDI and how practitioners use and understand it. As the EDI is seen as an instrument that seeks to identify and then address demographically-rooted developmental concerns, issues can arise in the broader discourse of what such concerns mean in relation to early childhood development and education. Discussion on the level of cognitive development in children, for example, is an instance where use of the EDI is related to discussion of what should be an appropriate level of development and what action should be taken if intervention is necessary.

Dahlberg and Moss (2008) point out that discourses of early childhood development can be confined by an over reliance on psychological models. Implicit in psychological models of human development are assumptions about cultural and socially defined norms. This has relevance for the EDI as it measures not just cognitive

function but also social interaction and elusive concepts such as readiness to learn. A child's interaction with peers and adults does not readily fit any one psychological model of development (P. Williams, 1994). In order to gain a sense of what is valued, educational leaders must be aware of contested meanings about what is normal development. This does not completely relativise child development but it does place it within wider public discussion about what particular cultures see as desirable.

In the Canadian context in which this study is situated, for instance, a high value is placed on students acquiring language skills at an early age, as this is seen as a firm indicator of school retention and success (Offord & Lipman, 1996). This is a valid goal when based on a certain understanding of psychological readiness for language. However, this understanding is not exhaustive and does not preclude other models of psychological development. In some communities, for example, less importance may be placed on early development of language and this is in keeping with a different cultural context and other sets of psychological assumptions (R. Price, 2010). Kerns (2008) notes the importance of attachment in developmental psychology. Drawing on the work of Bowlby and his associates, the years surrounding entry to school are seen as critical for developing competences, most importantly perhaps the acquisition of social and relational ones. Assessing these skills is also part of the scope of the EDI.

Another important factor in better understanding the psychological development of children is the family context (Pavarini, De Hollanda Souza, & Hawk 2012; Pettit & Arsiwalla, 2008). One important concept in this area is that of bio-directionality. This sees the relationships between parents and children as dynamic and multifaceted. Child behaviours can, for instance, shape parental responses and these, in turn, direct future development in the child. This notion is part of a much wider discourse that sees the social world of the child as one of complex and evolving relationships, what Hawk and Holden (2006) call 'meta-relationships.' A key aspect of these meta-relationships is the overall quality of these relationships (Laible & Thompson, 2007).

In addition to parental relationships, a wide range of literature points to the significance of sibling relationships as setting a strong social context for psychological development (Recchia & Howe, 2009). This is especially important for the development of prosocial behaviours such as reflectivity and positive engagement with others. Sibling relationships can be both complementary and reciprocal and are conditioned by factors such as the age of siblings and level of parental engagement (Rinaldi & Howe, 2012). The social domains of the EDI in determining the social development of children

is an important element to the scope of the EDI, including the influence of factors like the interaction with other siblings. This has been identified as setting an important context for developmental level (Perlman & Ross, 2005). In a similar vein, relationships with peers, especially perceived acceptance, fulfils a critical role in the psychological development of pre-school aged children (Closson, 2009).

In this study the focus is on investigating teachers' understanding and implementation of the EDI, given their understanding of child development. It is recognized that this takes place within a certain understanding of psychological development. This understanding is not necessarily considered normative but the one in which the EDI is framed. In the course of interviewing teachers who administer the EDI, certain insights about their view on psychological development may be gained. Lindon (2010) gives a comprehensive overview of various perspectives on child development. These include an examination of the various aspects of development such as in the cognitive, social, and emotional domains. MacNaughton and Williams (2004) discuss how theories of child development impact on pedagogical practices in the classroom. They note a range of teaching strategies based on the readiness of the child to learn.

The aim of the study is not, however, a detailed examination of psychological development but rather on how teachers understand this and how this influences their understanding and administration of the EDI. The focus here is on the practitioners who work with young children and who, in the context of their work, use and administer the EDI. A critical consideration is therefore to have a sense of the knowledge that *teachers* have and how this shapes their work. These considerations take place within the overarching epistemological framing for this thesis within sociocultural theory, explained in detail in Chapter 3. In the context of the present chapter, the discussion now turns to a sociocultural perspective on teacher knowledge.

Sociocultural Epistemological Perspectives on Teacher Knowledge

A sociocultural perspective on knowledge gives focus to the types of knowledge that a community and culture values (Case, 1996). However, a growing debate now centres on the contested nature of knowledge (Bereiter, 2002; Hedegaard & Chaiklin, 2005), and in particular the contested nature of knowledge concerning sociocultural approaches to early childhood programming (Anning, Cullen, & Flear, 2008). Research interest continues to grow in considering the relationship between epistemological beliefs and teaching (Brownlee, Schraw, & Berthelsen, 2012). Epistemology here is

broadly understood as the study of knowledge and how it is conceived and acquired. Epistemology has received greater scrutiny in education and teacher research, as researchers consider the relationship between epistemological beliefs and teaching (Brownlee & Berthelsen, 2004). At the same time there is consensus in research that personal epistemology is made up of an individual's thinking about knowing and knowledge (Pintrich 2002; Sheriden & Schuster, 2001). Beliefs about knowing and learning reflect "an individual's view about what knowledge is, how knowledge is gained, and the degree of certainty with which knowledge can be held" (Brownlee & Berthelsen, 2004, p. 17). This interest, within this thesis, has been driven by an understanding that teachers' theories regarding learning and teaching can provide insight into the way in which teacher practice surrounding the EDI is then constructed. For the purposes of this thesis, is important to consider how teachers working with young children acquire knowledge on child development.

There are numerous theoretical perspectives that can be offered to explain how knowledge is acquired. Brownlee and Berthelsen (2004), for instance, see the epistemological basis for belief as deriving from a constructivist understanding of how knowledge is created. Postill (2010) acknowledges Schatzki's four significant bodies of practice theory includes the foundational philosophers social and cultural theorists including Wittgenstein, Dreyfus, Bourdieu, Giddens, and Foucault. Postill (2010) goes on to argue that 'Social theorists agree that there is no such thing as a coherent practice theory, only a body of highly diverse writings by thinkers who adopt a loosely defined practice approach' (p. 6).

Rouse (2007) argues that a number of disciplines from the social sciences and history have increased their research focus on practices as a 'primary object of study', and that 'the range and scope of activities taken by various theorists to constitute "practices" can be evident by a few characteristic examples from practice theory literature' (p. 499). While there are those practices culturally specific (for example, food preparation) there are others that are short-lived activities (for example, a conference or presentation); and others that considered as 'long-standing institutionalized activities' (for example, medicine and science). The diversity in the range of practice is only matched by the practice concepts and the 'theoretical uses within social theory and philosophy of the social sciences' (Rouse, 2007 p. 499). Nicolini (2012) argues that the attention to practice in social theory emphasizes 'the importance activity, performance, and work in the creation and perpetuation of all aspects of social life' (p. 3). Postill

(2010) makes the distinction between ‘two waves or generations of practice theorists’ with the ‘foundation’ built by the ‘first generation of practice theorists’ as the ‘second generation’ tests ‘those foundations and build new extensions to the theoretical edifice’ (p. 6).

The first generation of practice theorists sought a virtuous middle path between the excesses of methodological individualism – explaining social phenomena as a result of individual actions ... they wished to liberate agency – the human ability to act upon and change the world ... These theorists regarded the human body as the nexus of people’s practical engagements with the world. ... Turning now to the second generation of practice theorists, these thinkers have continued to stress the centrality of the human body to practice while paying closer attention to question of culture and history as well as developing new concepts – such as ‘dispersed’ versus ‘integrative’ practices – and applying practice theory to new areas such as consumption studies, organisational theory, the material culture of the home or neuroscience. (Postill, 2010, pp. 6-7)

An important consideration in this thesis is how practitioners’ knowledge of child development influences their understanding and use of the EDI. This consideration arises from a view that a greater insight in to how teacher practice is constructed through an understanding of teachers’ beliefs on teaching practice (Ebbeck & Yin, 2011; Fives & Buehl, 2016). A key concern is how practitioners not only think about but how they use their knowledge of childhood development in one particular aspect of their teaching practise, namely, how their use of the EDI. Because of this, questions surrounding the nature of teacher knowledge are critical to this thesis. Brownlee, Schraw, and Berthelsen (2012) propose that the influence of epistemological beliefs can have an impact on how teachers see their role as educators and how they interact with children. They propose, for instance, that ‘there is evidence in the literature that personal epistemologies are related to [a] range of constructivist teaching practices for both in-service and preservice teachers’ (Brownlee, Schraw, & Berthelsen, 2012, p. 10). Teacher knowledge is, however, an area of substantial research endeavour and in order to contextualize the discussion of teacher knowledge and the EDI an overview of the wider literature is in order.

Connelly and Clandinin (2000) argue that greater attention should be placed on teacher knowledge in the context of professional development, and should not put emphasis on acquiring knowledge or what is referred to as the ‘teacher injection model’

(p. 101) but rather greater emphasis should be on how teacher knowledge is constructed within their own experience. This would also have the benefit of providing greater insights into the social context of teaching (Connelly & Clandinin, 2000; Fleet & Patterson, 2001; Keesing-Styles, 2003; Loughran, 2006; Moen, 2008; Sumsion, 2002; Watson, 2006). There is also the argument knowledge is best conceptualized in terms of tacit knowledge. That is, knowledge should be considered in terms of being embodied in teacher practice as a teacher may not necessarily be aware of the knowledge that they are using (Hedges & Cullen, 2005a; Hedges & Cullen, 2005a; Hemmeter, Ostrosky & Fox, 2006; Loughran 2006; Loughran, Berry, & Mulhall, 2012; Neyland, 2006). To impact teacher practice requires being able to impact beliefs, assumptions, and values (Dodeen, Abdelfattah, Shumrani, & Hilal, 2012; Harwood, Klopper, Osanyin & Vanderlee, 2013). In this thesis an important area of interest is to probe how participants *utilize* their understanding of the EDI.

While institutions are making decisions about the type of curriculum that will be used in the provision of teacher education programs, the teaching profession set standards of conduct and practices that are then used to self-regulate. In the Canadian context there are clear expectations (Alberta Education, 2009) placed on teacher knowledge. The Alberta Teachers Association, for instance, sets out teaching standards and dimensions. These expectations emerge from a considerable literature which establishes a theoretical platform for teacher knowledge. Hedges (2007) notes that while there has been research in primary and secondary education to ‘generate models of teacher knowledge’ (p. 57) the equivalent has not occurred concerning early childhood teacher knowledge. Drawing from the categories of teacher knowledge and research, Hedges (2007) proposes the importance of the ‘range of informal knowledge’ that may also be ‘intuitively’ part of a teacher’s decision making process and their actions (p. 58) as well as identifying the models that could appear to apply to early childhood teacher knowledge, including:

a deep theoretical knowledge of learning, knowledge of curriculum and pedagogy applicable to young children, knowledge about individual children, their families, and the communities and cultures of the educational context, knowledge of appropriate pedagogical strategies, understanding of early childhood philosophy as well as general knowledge and experience to draw on (Hedges, 2007, p. 58).

Funds of Knowledge

Since the 1990s, there has been an increase in research (Hedges, 2007; Hedges and Cullen, 2005a; Hedges & Cullen 2005b) that has not only led to an increase in ‘understandings of teaching and learning in the early years (Hedges, 2007, p. 58), but has also promoted the importance of early childhood teachers having specialized knowledge in the early childhood education field (Hedges 2003, 2007; Hedges & Cullen 2005b). Hedges refers to the term of ‘funds of knowledge’ in reference to how teachers, as learners, ‘bring a diverse range of formal and informal knowledge and experience to curriculum and pedagogy’ (2007, p. 59). And based on this diversity, it is important that this knowledge should be made more explicit to enable student teachers form stronger connections between formal and informal knowledge. Hedges draws on a range of studies that have considered teacher theories of practice as funds of knowledge that impact ‘the curriculum constructed with children’ (p. 59):

These theories link to learning environments provided and the curriculum and pedagogical practices teachers engage in, but may not necessarily be clearly articulated nor have a foundation of theoretical knowledge ... Theories of practice could also be referred to as working theories teachers have developed through their practical experiences, with or without reference to formal knowledge ... Moreover, if personal experiences shapes teachers so strongly, then formal theory must have clear relevance to their experiences or it may not be considered in reviews of theories of practice. (Hedges, 2007, pp. 59–60)

Other studies show a mix of concerns relating to concerns that an over emphasis on curriculum or teaching subjects may cause a shift to focus a school curriculum approach being implemented in early childhood settings (Hedges & Cullen, 2005; Krieg, 2011; Manning, 2008; Stephenson, 2009). While others identify that teachers should not overlook the influences of informal theories and pedagogies, it is also important to focus on the cultural context including the impact of the funds of knowledge in which teachers work within (McMullen et al., 2005; Moloney, 2010; Moloney & Pope, 2015; O’Connor, 2008; Osgood, 2006; Ryan & Grieshaber, 2005;). An example of this is the care-education dichotomy and its influence on early childhood teacher practice (Laletas & Reupert, 2015; Lessard, Schaefer, Huber, Murphy, & Clandinin, 2015; Sims, 2014; Velasquez, West, Graham, & Osguthorpe, 2013). Sims (2014) argues that the care discourse has been marginalized and while being

acknowledged in a range of curriculum documents, care is not recognized when it comes to early childhood standards.

A challenge for teachers concerns the need to recognize their professional independence. Sims (2014) argues that the professional independence of teachers is undermined 'from the unrecognised marginalisation of care in the standards and the assessment of standards. While I recognise the prominence of care aspects (such as relationships) in Australian and New Zealand early childhood curriculum documents, it is clear from experiences overseas ... that these components tend to become less valued in the measurement of practice and its professionalization' (p. 10).

Sims (2014) also goes on to argue that another issue to consider is what constitutes 'valid knowledge'. This includes the importance of the ethic of care – including the need for safe, consistent, stable, secure settings - that early childhood teachers report is an important component to creating and supporting early childhood environments that best promote children's social and emotional development (Buchanan, Gueldner, Tran & Merrell, 2009; Bullough, 2001; Simon, Millett, & Askew, 2004). Sims (2014) argues that early childhood practitioners have had their professional independence and decision making has been undermined, and also challenges the need to consider what constitutes 'valid knowledge; what knowledge is included within the profession and what is not' (p. 10).

The element of care of early childhood work is often likened to a competence attributed to being a mother and not necessarily an element that has an importance in the early childhood setting. This position has been considered by some as a barrier to improving or raising the profile of the quality of the early learning and care setting and the status of the practitioners and educators working in these settings (Andrew, 2015; Dalli & Urban, 2013; Cook, Davis, Williamson, Harrison & Sims, 2013; Langford, 2008; O'Connell, 2011; Osgood, 2006; Salamon, Sumsion, Press & Harrison, 2015;). By attributing this to a competence of mothering, appears to then exclude the role of caring from early childhood, and is considered an impediment to professionalization. Efforts to define early childhood in terms of education and care, while not intentional, typically profile education as taking precedent as defining early childhood development work attempts to incorporate or position care alongside the element of education (Friendly & Prabhu, 2010; Langford, 2006; Moss, 2006; Osgood, 2010; Stairs & Bernhard, 2002).

Content knowledge is considered a significant part of both teacher training as well as ongoing professional development. It could be expected that early childhood practitioners are therefore well served by structured support in using the EDI. An important part of this thesis was therefore to ask participants about their experiences of in-service on the EDI.

A further knowledge domain is that of feelings and emotions. Brownlee, Boulton-Lewis and Berthelsen (2008) and Berthelsen and Brownlee (2007) identified that child care workers did express definite beliefs about their work and that these beliefs related to the affective dimension of teaching. They saw the quality of their work in terms of how well they cared for and gave attention to children including expressing a strong preference for teacher training that provides a practical focus on knowledge and skills that supports interactions with young children.

There is an argument in the literature that there are no substantive differences between beliefs and knowledge in teaching. That is, the beliefs of the teacher or practitioner are often considered as the personal appropriation of knowledge (Allen & Wright, 2014; Giovacco-Johnson, 2011; Harwood et al., 2013; Heisner & Lederberg, 2011; MacNaughton, 2003; Moss & Dahlberg, 2008; Taguchi, 2007; Urban, 2008). A practitioner may have a range of knowledge about child development but their beliefs refer to that knowledge which they have engaged with and now recognize as part of their own perspective (Arbeau & Coplan, 2007; Abu Jaber, & Eman, 2010). There are studies that have supported this, including how the background experiences of culturally diversity might influence how teachers include diversity in their teaching (Ajayi, 2011; Akiba, 2011; Castro 2010; Locke, 2005; Reid & Collins, 2013; Rivalland, 2006; Valentin, 2006). Other studies have identified that although early childhood teachers and practitioners may align their understanding of children's development to the program's philosophy, their practices actually differ (Agbenyega, 2012; Carrington, Deppeler, & Moss, 2010; B. Chan, Lee, & Choy, 2009; Cobanoglu & Capa-Aydin, 2015; Lara-Cinisomo, Fuligni, Daugherty, Howes, & Karoly, 2009; Karoly, 2009; Ivrendi & Johnson, 2002; McMullen, 2001; Rivalland, 2006). The difference was related to how well each teacher understood and was able to articulate their knowledge of child development. Klibthong, Fridani, Ikegami, and Agbenyega (2014) identify what it means for early childhood educators when they are able to bring both their own understanding of children's development and the impact of this on their teaching.

Agbenyega ... argued that when early childhood educators understand and base their teaching on established educational theories they are able to bring innovation to their practice in the classroom. It can therefore be argued that educator's beliefs and values have a direct impact on their curriculum development and pedagogy (Klibthong, Fridani, Ikegami, & Agbenyega, 2014, p. 45)

The realities of early education learning conversations and the role of knowledge in early childhood education in the mediation of learning is an important consideration. Also important is reflective professional development because of its effects on practitioner knowledge, understanding and their practise.

Further contributing to this growing body of work is consideration how the educational process can be enhanced when teachers learn about the everyday lived contexts of the children they teach. Of critical importance is how this knowledge is conceived, how it is accumulated, and how it can be modified. One way of conceptualizing teacher knowledge is to see it in changing and dynamic terms. As such, teacher knowledge is not static but, with proper reflection and guidance, can greatly impact on how teachers approach their work. One valuable description of teacher knowledge is in terms of funds that can either accumulate or run down. Funds of knowledge, a distinctively sociocultural conceptualisation of knowledge in context, also highlights how teachers incorporate formal and informal ideas and knowledge into their day to day practice (Hedges, 2007). The term "funds of knowledge" is attributed to the work of Moll, Amanti, Neff and Gonzalez (2005), referring to 'historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and well-being' (Moll, Amanti, Neff, & Gonzalez, 2005, p. 133).

According to Kiyama (2008), in citing the work of Moll et al (2005) identifies that the 'theoretical concept of Funds of Knowledge is based on the simple foundation that people are competent, have knowledge and that their life experiences have contributed to that knowledge' (Kiyama, 2008, p. 26). Genzuek (1999) identified that central to understanding funds of knowledge is how it is 'constituted through event or activities' (p. 10). Rosa & Orey (2014), and Wei (2014) argue the importance of this when it comes to how teachers can begin to understand the impact of their own cultural beliefs and understandings potentially influence their judgements about children and their capacity for learning. They argue that 'teachers should develop a clear sense of their own ethnic and cultural identities in order to be able to understand and appreciate

those of their students.’ (Rosa & Orey, 2014, p. 50). This would improve their value of diversity of students and their families, and would enable teachers to be more explicit in how they engaged in learning and care. It would also inform how and what teachers were to learn about their students. As this process is considered the student’s funds of knowledge, there are applications of this that can be applied to how children’s funds of knowledge are, therefore, a resource for teacher knowledge and therefore for teachers’ interpretation of the EDI.

Funds of knowledge also recognize the active role of the teacher as researcher by shifting the emphasis of teachers aiming to convey educational information to that of teachers as ‘anthropological learners’ (Eisazadeh, 2014; Jovés, Siqués, & Esteban-Guitart, 2015; Hedges, 2010; Hedges, Cullen, & Jordan, 2011; McLaughlin & Barton, 2013), with the deliberate intent of seeking to understand ‘ways in which people make sense of their everyday lives’ (Gonzalez, Moll & Amanti, 2006, p.xi). Using funds of knowledge establishes a framework to consider how teachers acquire knowledge, how this knowledge can be changed or modified, and, most importantly, how knowledge informs practice (Hedges & Cullen, 2005a; Hedges & Cullen, 2005b; Hedges, 2015; Schnellert, Kozak, & Moore, 2015; Wood & Hedges, 2016).

Funds of knowledge is also regarded as a characteristic of individuals involved in activity as opposed to being a personal trait that is acquired (Genzuk, 1999). That is, knowledge is therefore obtained and not imposed, and holds great significance as knowledge is ‘clearly content – or knowledge-based and seldom insignificant. The notion of culture is a dynamic entity, not simply a collection of foods, clothes, and holidays’ (Genzuk, 1999, p. 10).

It is a way of using social, physical, spiritual, and economic resources to make one’s way in the world. Funds usually matter, that is, they are authentic. It is when the content of the interactions is significant or necessary that people are motivated to establish the social contexts for the transfer or utilization of knowledge and other resources. It is this social relationship that is so intriguing and carries with it the potential hypothesis for the importance of this dynamic cultural match between teacher and student. (Genzuk, 1999, p. 10)

Knowledge is, therefore, obtained and built up over time and also recognizes the active role of the teacher as an agent of educational change. This has been described as a ‘systematic, intentional inquiry by teachers’ in defining teacher research (Lytle & Cochran-Smith, 1990, p. 84). There is research (de Vocht, L., 2015; González, N., Moll,

L., and Amanti, C., 2005; Griner, A. C., & Stewart, M. L., 2013; Han, H. S., 2009; Han, H. S., 2014; Moll, L., Amanti, C., Neff, D. and Gonzalez, N. 1992; Plowman, L., Stephen, C., & McPake, J., 2010) demonstrating that when teachers adopt the role as learner and begin to consider the cultural and social context of their students and their families, they are then able to draw on this in developing and providing for meaningful learning opportunities for their students. This experience draws on the students' prior knowledge, and this detail then provides teachers information that help them to better understand the funds of knowledge of their students. A pertinent question for this thesis is, therefore, whether teachers are alert to children's funds of knowledge and, if so, how they influence their interpretations of the EDI.

Translating Theory into Practice

Funds of knowledge are one way of describing what teachers and children bring to the early childhood education context. It is important that this information is used in day-to-day teaching practice. An important assumption in this thesis is that, in terms of the EDI, early childhood teachers require a basic level of knowledge about what the instrument is and how it should be used in relation to the lived experience of specific children. Although very little work has been published on teacher knowledge and the EDI, a range of related literature does exist which underlines the importance of achieving a better understanding of the interface between theory and practice for teachers.

Wood and Bennett (2000) propose that one way of understanding teachers' translation of theories of children's development into practice is to use Fenstermacher's (1994) three-stage process. This is described as: reflective consideration; problematizing practice; changing theories and practice. The initial stage here encourages teachers to reflect on what they are doing in the classroom and how their own theoretical understandings impinge on their work. Once this has been achieved a questioning process can be initiated but this is premised on an awareness, on the part of early childhood teachers, of what they currently understand and apply in the classroom. Wood and Bennett (2000) in their own study observe the tension that can arise when teachers confront the disparity about what they think is good practice in early childhood teaching and development, and what they actually do in their work with children. This process must, however, be teacher-driven as changes in practice and behaviour need to arise out of teachers' sense of improving teaching on the basis of their self-awareness (Haberman, 1988; Lopez, 2010).

Implicit here is the assumption that early childhood teachers bring with them prior knowledge of how children develop and, moreover, this knowledge is vital in understanding the work of teachers and their underlying knowledge base (Katz, 1984; Silin, 1986). Spodek argued:

Teachers' actions and classroom decisions are driven by their perceptions and beliefs. They create conceptions of their professional world based upon their concept of that. These conceptions grow out of the way they interpret their perceptions in terms of the theories they hold implicitly. These interpretations then become the basis for teachers' decisions and teachers' actions in the classroom. In order to understand the nature of teaching, one must not only understand the behaviour of the teachers observed, but also the teacher's thought processes regarding teaching and the implicit theoretical systems that drive these processes. (1988, pp. 13–14)

These reflections have great relevance for how teachers administer and understand the EDI. They do not do this in a vacuum but on the basis of what they understand the instrument to do and how it will be used.

Freeman (2002) has also noted the important link between teacher knowledge and how this is then applied in practice. Argyris and Schon (1974; 2007) have pointed out that, whilst a good deal of research work is done on educational change and innovation on an abstract or theoretical level, comparatively little is done on how this knowledge is translated into practice. They noted, 'The old ideal of a working relationship between research and practice has yet to be fully realized' (Argyris & Schon, 2007, p. 43). There is a wide and growing literature that explores how teachers are able to translate strong theoretical knowledge into quality education.

Researchers have identified the importance of teacher self-reflection as a prerequisite for quality education (Amarel, 1989; Bramald, Hardman, & Lear, 1995; Cochran-Smith & Zeichner, 2005; Denton, 1982; Hammerness, Darling-Hammond, & Shulman, 2002; Mansour, 2010; Moss & Pence, 1994). Empirical studies have also underlined the need for basic teacher content knowledge for good teaching practice (Hattie, 2009; Mikkola, 2001; Darling-Hammond & Baratz-Snowden, 2005; Darling-Hammond, 2006), in an influential study on exemplary teacher education programs, drew attention to the foundational importance of content knowledge for teachers in such programs. The knowledge teachers have about programs influences the way they administer them. This is in relation to both content-directed programs but also to tests

and instrument designed to gain population data, such as the EDI. Skilled teaching requires a range of attributes and only one of these is basic content knowledge in chosen teaching disciplines (Monk, 1994).

Shulman (1987) argues that the work of a teacher is grounded in the knowledge, assumptions, and expectations that they bring to the task: '[Teaching] begins with a teacher's understanding of what is to be learned and what is to be taught' (p. 7). This process is greatly assisted by the teacher's ability to reflect on and understand the context in which she/he is working. In the case of the EDI the content knowledge of the teacher would include basic assumptions about what the instrument is, what it measures, and how it can best be used. In Shulman's view (1987), teaching is a dynamic process, facilitated by the capacity of teachers to move from the requirements of statutory authorities and into the cognitive and experiential world of the child. If teachers do not have a good understanding of the expectations that they bring to the processes that they are involved in, then there is a real risk that the goals of the program will be undermined and not achieved. Teacher expectations, therefore, are also a significant consideration in how teachers utilize children's funds of knowledge. In light of this an important consideration is recognizing that the expectations teachers bring to their work are an important window into better understanding their rationales for what they do.

Teachers' Expectations

Teacher expectations for students have small but long lasting effects on future educational success (Moller, Stearns, Blau, & Land, 2006; Moon, 2014; Riley & Ungerleider, 2012; Rubie-Davies, 2015). However, with little research in regard to the role of early childhood teachers, including their expectations as a predictor of future educational or academic achievement, there is some who argue that teacher expectations may have greater impact when they are working to a set curriculum with subjects like math and literacy (Hinnant, O'Brien, & Ghazarian, 2009). A similar point can be made about the expectations of teachers about mandated testing. If teachers are involved in the planning process and feel that they understand the broader rationale of the testing they are much more likely to be positive about the process (Skwarchuk, 2004). In relation to the EDI, important issues in this regard are the role teachers that teachers are given in using and evaluating the instrument. Teachers are more likely to have positive expectations of the EDI if they see themselves as being involved in the whole process of use and implementation.

A number of researchers have noted a tension between curricular models of early development and the practice of teachers who work with young children (Goffin, 1996; Heydon & Ping, 2006; Wong, 2003). As well as content knowledge and personal beliefs and values, one area that has particular relevance for how teachers administer and understand the EDI is personal practical knowledge (Connelly & Clandinin, 1988; Recchia, Beck, Esposito, & Tarrant, 2009). The education and care of young children is a complex and involved task and in many cases teachers are faced with a range of external pressures and expectations. The EDI is a very good example of such a constraint. What is critical in understanding the work of early childhood educators is the amalgam of skills and competencies that they bring to tasks within their responsibility (Connelly & Clandinin, 1992).

These are, in essence, a range of complex and interrelated knowledge that is built up over many years of practice. This knowledge is personal and depends on the range of experiences that the teacher has had, from prior knowledge and experience to professional in-service activities. This is shaped by a range of factors but is ultimately a practical statement of what the person understands about his/her role as a teacher and the experiences that have shaped this understanding (Russell & Munby, 2001). In terms of the EDI a relevant question for this study is how the prior knowledge and experience of teachers influences how they understand and use the EDI. A related, more conceptual, question is, what early childhood teachers think the EDI is and what it sets out to achieve. In addressing these questions a greater understanding of how the EDI achieves or does not achieve its goals can be ascertained.

Chapter Summary

The EDI is considered as being a considerable influence at the interface of public policy and theories of child development. It has a strong profile in countries such as Canada and Australia and as such is an important topic for educational researchers to engage with. The validity of the EDI relies on competent administration of the instrument itself by teachers as well as an awareness of the instrument's assumptions.

This chapter has examined the EDI both in terms of literature about the discourse surrounding its use and in terms of the practitioners who use it. The contribution that this thesis seeks to make is in gaining greater insight into how the theories of child development held by teachers inform how they understand and use the EDI. As with any educational instrument the EDI needs to be seen within a practical context and a key aspect of this is how it is situated in relation to key aspects of

public policy such as school entry requirements. In Canada there are a range of entry requirements for children depending on provincial regulations and the EDI is adapted to these needs. The EDI as a research tool has generated a lot of interest in the scholarly community. In this chapter four key debates about use of the EDI were presented and analysed. There has been considerable writing around its applicability as a universal measuring instrument. In diverse cultural contexts its suitability as a tool that can accurately record population shifts that are sensitive to children from differing cultural and linguistic background has been questioned. In addition, its use as a manifestation of the medical model in education has been the subject of much recent scholarship. The medical model is fundamentally a deficit model which looks to redress or correct imbalances. This point is elaborated on in debates about whether use of the EDI changes the way in which childhood is conceptualized (Einboden, Rudge, & Varcoe, 2013).

This thesis examines the use of the EDI not in abstract terms but *in situ*. As such, an important part of the research is its empirical component and it is toward this end that future chapters are dedicated. In order to set a framework for the empirical part of this thesis the second part of this chapter examined the literature on practitioners, particularly those who use the EDI. This is critical for consideration in understanding the EDI and represents an important nexus between theory and practice. At one level the EDI can be understood as a research tool, bringing with it an extensive raft of conceptual issues. At another level it is a pre-eminently practical tool to measure demographically any significant shifts on various measures of childhood development. The theoretical and practical meet in a powerful way when we consider the EDI in the context of the teachers who administer it. While the validity of the EDI relies on competent administration of the instrument by teachers, including an awareness of the instrument's assumptions, it is teacher understanding of the instrument, including how it should be used that is of significant importance in determining the utility of the EDI.

Use of the EDI was also discussed in this chapter within the context of discourses of child development. The study was also situated in this chapter within a broadly sociocultural theory of knowledge. Because of the importance of the human dimension in use of the EDI, questions about teacher background are central to this thesis, as well as how teachers understand children's backgrounds through concepts such as funds of knowledge.

In light of these considerations, the next chapter of this thesis turns to how best to explore both the theoretical and practical aspects of teacher knowledge and

expectation in the use of the EDI. The first of these concerns – a conceptual framework for studying teacher knowledge – is discussed in Chapter 3, which expands on the nature of sociocultural theory.

Chapter 3: Theorising Teacher Knowledge and Practice from a Sociocultural Perspective

In this study while consideration is given to the three planes of analysis, greater emphasis is placed in considering the interpersonal plane because the study focus is on the understandings held by early childhood teachers as they work with children in implementing the EDI. This interpersonal interaction is mediated by their understandings of child development. My focus for this study is on the perspectives of teachers which are critically mediated by the theories they have appropriated.

The purpose of this chapter is to set out the conceptual framework that underpins this investigation of teachers' perception and use of the EDI, and will focus on the nature of social constructionism then the sociocultural concept of tool mediation as this central to explaining the social construction of teachers' perspectives. I will expand next on the principal conceptual tools that I have anticipated would influence the construction of the teachers' understandings, including Piagetian constructivism and Vygotskian socioculturalism.

Many authors contend that, regardless of the method of instruction undertaken by the teacher, children will construct their own knowledge and interpretations as they create meanings from either direct or activity-based teaching (Cole & Wertsch, 1996; Airasian & Walsh, 1997; Donovan & Bransford, 2005; Donovan, Bransford, & Pellegrino, 1999). It is important to consider that while children will construct their knowledge and understanding within the type of instruction they receive consideration also needs to be given to the conceptual context of teacher practice. A challenge for teachers in this context is how they are able to understand the type of instruction they are providing as there is potential for confusion between the use and application of a Piagetian constructivist approach to learning when being applied with, for example, direct instruction (Hammerness, Darling-Hammond & Bransford, 2005; Alfieri, Brooks, Aldrich & Tenenbaum, 2011; Darling-Hammond, 2012).

These theories are important cognitive theories that have influenced the early childhood context, and in particular how they described by teachers in the context of their understanding of children's development that teachers refer to when asked about their practice. This becomes significant when considering the influence this may have on a teachers understanding of children's development when applied to instruments like the EDI.

Social Constructionism

Social constructionism is a theoretical perspective that derives from interpretivism and from critical perspectives on how meaning is constructed in social settings (Blaikie, 1993; Lin, 1998). Interpretivist approaches to social research include a range of epistemological perspectives, including: (i) hermeneutics, where all experienced phenomena and social reality is considered as being socially constructed, as opposed to being grounded in objective fact. Hermeneutics puts forward the case that interpretation can only be made through the action of the one who experienced them; (ii) phenomenology, which is an exploration of personal experience, and maintains that the study of social reality has to be considered from the first person's perspective, including their experience of social reality; (iii) symbolic interactionism, where the individual interprets meaning through their interactions with the objects and actions of that particular interaction or experience.

Constructionism begins from the view that meaning is not revealed but constructed. It argues that individuals, through human practice, construct knowledge and examines how ideas are formed and changed when developed and transmitted in a particular social context. Constructionism is a broad epistemology, seeking to identify 'culturally derived and historically situated interpretations of the social life-world' (Crotty, 1998, p. 67). Social constructionist research is best described as the study of the social actions in which people attach subjective meanings. Constructionist researchers understand that patterns are formed from developing systems of meaning or the social conventions that people generate as they interact socially (Neuman & Kreuger, 2003).

Argyris and Schon (1974) made the distinction between the theories that are consistent with what professionals *say* about their views and values, which they called espoused theories; and theories that are consistent with what they *do*, which they referred to as theories-in-use. Eraut (2000) asserts that there can be a discrepancy between teachers' 'espoused theories and their theories-in-use' (p 123). For instance, there can be a divergence in formal teacher education programs (espoused theories) compared to how teachers formulate their theories-in-use through their teaching experience as they experience the realities of teaching in the learning environment (Nolan & Raban, 2015). Research has established, for example, the influence formal learning theory has had on the professional bases for teachers' practices by identifying the questioning undertaken by teachers and how relevant or applicable this is to a teachers' classroom practice (Darling-Hammond, 2012; Niemi, 2011; Darling-

Hammond, 2005; Dufficy, 2005). However, further research (James & Pedder, 2006) is required to establish an improved consideration of teachers' beliefs and understanding of learning and why it often lacks theoretical coherence. This problem has considerable relevance for the administration of the EDI, as the teachers who use it are doing so in a particular education context and in a particular community of practice which shapes their views both of the instrument and how it is to be used.

Central to a social constructionist worldview is the role of discourse in constructing social reality (for example, discourses of learning theory brought to implementing the EDI). The concept of discourse and the way it has been operationalised methodologically in this study is the focus of Chapter 4. The remainder of the present chapter therefore focuses on attempts to understand the relationship between sociocultural theories of learning and teachers' practice.

Recent attempts to understand the development of teacher knowledge through a sociocultural-constructivist lens have reconsidered the learning process 'not as a process of socially shared cognition that results in the end in the internalization of knowledge by individuals, but as a process of becoming a member of a sustained community of practice' (Lave, 1991, p. 65). For Lave and Wenger (1991) the experience of learning 'in terms of participation (since it) focuses attention on ways in which it is an evolving, continuously renewed set of relations' (Lave & Wenger, 1991, p. 50). The practice of learning occurs as the community requires the individual to experience enculturation within that community of practice. Lave, drawing strongly on sociocultural theories of learning, identified that the first element in this learning process is social, and that this becomes the central foundation in an individual's thinking. Lave (1988) argues that 'cognition observed in everyday practice is distributed—stretched over, not divided among mind, activity and culturally organized settings' (p. 1). Teachers understanding of the EDI and of child development should therefore be seen as an active process that is formed by the social context in which they work.

Lave and Wenger describe how the individual learns in the same context in which their learning is being applied, underpinning the social nature of the process of co-constructing knowledge, making the most of everyday situations (using only the tools and materials immediately available) where situated learning takes place. This is also known as *bricolage* (Levi-Strauss 1966), and has been used by researchers to describe 'the ability to juxtapose, recombine, and reinterpret past materials to fashion novel responses' (Barrett, 1998, 619). Learning is not only central to social practice but

underpins the process by which the individual moves from peripheral (apprentice) involvement to central (expert) participation in a community of practice (Brown & Duguid, 1991; Brown, 1995). Central to this is the claim that learning occurs through ‘participation in real activities in real situations, involving shared experiences and insights within communities of practice’ (Wenger, 1998, p. 3). Vygotsky’s ZPD is profiled by Lave and Wagner (1991) as being distinctive from (traditional) ‘learning as internalisation’ (Smith, 2003, para. 19) as ‘learning [is understood] as increasing participation in communities of practice concerns the whole person acting in the world’ (Lave & Wenger, 1991, p. 49). With strong parallels to Rogoff’s (1990) application of the concept of appropriation, they identify a third form of interpretation of the ZPD using a collectivist perspective, affirming that the learner is considered in the context of the community of practice, thereby breaking down distinctions between external and internal planes of development:

a third type of interpretation of the zone of proximal development takes a ‘collectivist’, or ‘societal’ perspective. Engeström defines the zone of proximal development as the distance between the everyday actions of individuals and the historically new form of the societal activity that can be generated as a solution to the double bind potentially embedded in ... everyday actions. (Lave & Wenger, 1991, p. 49)

Implicit here is a sense that learning is an active process where there is interplay between what is known and how this is put into practice. This highlights again the importance of seeing the work of teachers who use the EDI as a ‘real’ activity that occurs in a particular social context. This context then shapes - and is shaped by - individual learning. A critical concept in understanding learning from a sociocultural perspective is the concept of mediation through cultural tools. In the present study, the ways in which the EDI – as a cultural tool – mediates the psychological and social activity of teachers is of focal interest.

What is Mediation?

A sociocultural approach to research aims to ‘understand the relationship between human mental functioning and cultural, historical, and institutional settings’ (Wertsh, Tulviste, and Hagstrom, 1993, p. 56) in which functioning occurs; to achieve this ‘we must be careful not to limit our focus to individual mental functioning, on the one hand, or to the sociocultural setting, on the other’ (Wertsch, 1995a, p. 3).

In this study, how teachers use and understand the EDI is seen in both a social context – that is, that the teachers bring with them an understanding of the instrument that is shaped by how it is seen in the wider educational community – and in an individual context – that is, how they understand the EDI as a consequence of their view of children’s learning and development. So, in interviews with the participating teachers, both the social and individual contexts of use and understanding of the EDI could be expected to arise. Wertsch, (1998) describes this type of approach as a way to identify how to ‘live in the middle, and thus to avoid the antinomy between the individual and society, and the perils of both individualistic and social reductionism, that have plagued the human sciences for generations’ (p. 17).

Not all scholars working within sociocultural theory have agreed with Vygotsky’s designation of language as the unit of analysis for the study of the mediated mind. Wertsch (1985, p. 197), for instance, suggests that it is difficult to perceive mediated processes such as memory or attention through language. However, for the teacher, and those interested in how teachers understand their role and interaction with young children, language is a critical concern in mediated learning. Wells (1994, p. 5) puts this importance in these terms:

Central to Vygotsky’s ‘genetic’ approach to the explanation of both sociohistorical and individual development is the recognition of the pivotal role of tools ... even more important for human development is the mediating role performed by semiotic tools, or signs, of which the most powerful and versatile is language.

Wertsch (2007, p. 170) proposes that mediation is both a ‘hallmark of human consciousness’ and a central theme that runs throughout Vygotsky’s thinking, and that fundamental to this is Vygotsky’s idea of ‘how the tool or instrument mediates overt human activity and the semiotic notion of how sign systems mediate human social processes and thinking’ (Wertsch 1981, 134). In this study, the EDI, for example, is an instrument that is not only used by practitioners and policy makers to impact policy and program design, but also to bring about change and regulate humans participating in the process of administering the EDI.

Wertsch (2005) points out that Vygotsky, in his writings, distinguished between two types of mediation. The first was developed in the later part of his life and saw mediation as a psychological process. In this process, often referred to as explicit mediation, an individual (the teacher, in educational settings) directly and intentionally

introduces a stimulus into a targeted activity (the learning of the child). A pilot, for example, wishes to know at what altitude the plane is descending. To do this he/she uses the gauge on the instrument panel of the plane. The pilot does not look out the window and try to make some type of assessment of rate of descent. This type of mediation may seem very behavioural but there is still an element of cultural integration in how the altitude dial is presented and read. A teacher working with young children could use a range of explicit mediations such as organizing a seating arrangement and providing specific classroom materials for children's use. Actions such as these need to be made in relation to a sense of how culturally appropriate they are.

A second type of mediation, and one which has great bearing for this thesis, is implicit mediation. As the term suggests, this is often not as direct and obvious as explicit mediation. Here, signs are used as a form of everyday communication and are dependent on the background, expertise and understanding of those who are charged with conveying meaning. This may, in the initial stages, be similar to the process of scaffolding but the ultimate purpose of implicit mediation is to provide the learner with the capacity to scaffold their own learning so that they are much more self-directed. Werstch (1991, 2005) and Kazak (2005) give the following example of implicit mediation in learning: A group of students are asked to organize and present data from an experiment. In the first instance, explicit mediation is used, in the form of giving students a graph on which to tabulate their results. Implicit mediation, however, is used to help assist students to interpret the data on the graph; for example, questions are used to encourage students to see patterns and trends in numbers that indicate what the graph illustrates.

This implicit mediation, if repeated and if successful, can become internalized by the students and so, the next time they are asked to record and analyse an experiment, they have the cognitive tools with which to mediate their own learning. The skill of the teacher in this example is to be able to use implicit mediation in a way which respects the cultural background of the students and which is appropriate for the learners. The teacher must be aware of the limits of the ZPD of the group and how he/she can provide signs which are not too difficult or too simplistic and thereby motivate the students he/she is dealing with.

Whereas explicit mediation has a somewhat static and constant use in the classroom, implicit mediation is more dynamic and recognizes the changing situation in the classroom. The signs that are used in implicit mediation may vary according to time

and circumstances and, indeed, this fluidity is an indication of good practice (Wertsch, 2007). For Wells (2000) this flexibility is the key to what he terms dialogic learning. This is based on a prioritization of the role of questions in the learning environment. Especially important here is the manner of discourse that is engaged in, as in a genuine dialogue all questions are open ended and all work collaboratively to achieve acceptable solutions. In some ways, the dialogic discourse is achieved as the end point of appropriate mediation and scaffolding because all parties to the task bring with them a sense of egalitarian participation and recognition of common values, culture, and concern. Implicit and explicit mediation are each relevant to the research methodology adopted in this thesis. This thesis seeks to examine how early childhood teachers in Alberta implement the EDI and the ways in which their understandings about learning and development, as well as the EDI itself, mediate this implementation. Of related interest are issues such as whether teachers who experience professional development about the EDI have experienced explicit mediation. If they have not, then implicit mediation becomes critical, as it is the only way that teachers can learn how to use the EDI.

Key Conceptual Tools used by Teachers to Construct their Practice

There are two main conceptual frameworks, Piagetian constructivism and Vygotskian socioculturalism used by teachers to construct their practice. The most influential and dominant theoretical paradigm in use in Canadian ECE, that is, a key aspect of the historical and contemporary context for Canadian ECE, has been that of Piagetian constructivism, and in particular the impact it has had in shaping the way teachers and practitioners specializing in early childhood programming understand a child's development and learning. The basis of Piaget's theory regarding cognitive development has led to the widespread understanding that has predominantly formulated the basis for a theory of children's learning and development in early childhood education that has come to be known as 'developmentally appropriate'.

Over the years, influenced by Piaget's stages of cognitive development, as teachers draw on this to understand children's development, including how they construct meaning from this to shape the type of programming they understand will support children's development and learning, and specifically that children are more likely to learn when they display capacity or readiness to learn appears in a range of research studies (Bendixen & Feucht, 2010; K. Chan & Elliott, 2004; d. Edwards & Mercer, 2013; Hofer, 2001; McLachlan-Smith & St. George, 2000; Wertsch, 1995b).

While studies identify the influence of a Piagetian orientation toward teacher and practitioner understanding of children's development, this influence on practice continues to be challenged, as studies show Piaget's theory may not necessarily grasp the potential of children and their readiness for new information and concepts (Feldman, 2004; Gredler, 2001; Hardie, 2002; Schunk, 2000). Piaget's idea of readiness is relevant in the context of this study with respect to which understandings of children's development practitioners utilize in the care and education of young children. Piaget's theory of cognitive development suggests there are potential concepts and knowledge that should not be taught until the appropriate stage of cognitive development has been reached by the child. There are studies that support that the underpinnings of practitioners' understanding of children's development, when applied to how children learn, is not evenly applied across the diversity of children's capacity for learning and development (Airasian and Walsh, 1997; Alton-Lee, 2003; Berk, 2006; Sutherland, 1992).

Further to Piaget's theory of cognitive development proposes that maturation and growth occur naturally when a child is interacting between the physical and social environments (Bartolotta & Shulman, 2010). Building on this, Piaget's (1979; 2008) theory of how children construct knowledge from their experiences through their engagement with the social and physical environments is one of four assumptions underpinning cognitive development in children; that is, as active and engaged learners, children construct their knowledge from their experiences and then proceed to arrange or organize this into a conceptual system –schema - as defined by Piaget (1952) is considered the building blocks, a 'cohesive, repeatable action sequence possessing component actions that are tightly interconnected and governed by a core meaning' (p. 240). This provides a schema (Gergen, 2009; Mandler 2014; Piaget, 1976) of how knowledge is organized, and sets an important foundation for how a child orders and draws on events, information and objects.

Piaget believed that, as a child progresses through pre-determined stages, cognitive development takes place through interactions with the social and physical environments, as the child encounters new experience and progresses through greater complexity; this, in turn, triggers disequilibrium or cognitive conflict (Gredler, 2001; Piaget & Inhelder, 1969; Schunk, 2000). During this process of cognitive dissonance, the child experiences changes in how they understand the environment and incorporate new information, moving through to a 'process of equilibration' (Piaget, 1977) that

takes place in three phases: satisfaction in their original thought that puts the child in a state of equilibrium; moving to cognitive conflict as the child becomes dissatisfied in their current thinking; and finally adopting a more advanced way of thinking that removes inconsistencies so that the child moves into a state of stable equilibrium.

With each new experience the child adapts in response to changes in their environment, and, as the child moves through this process of adaptation, new information is integrated. As learners experience this process as they undergo a change in their original thinking to align it with the new information (Rogoff, 1998). Piaget (1981) also argued that of the child's interests are fundamental to the constructive process. That is, interest is principal to the mental actions of how a child constructs knowledge, and, in its absence, a child would not be able to undertake the necessary effort to make sense out of their experience (DeVries 1997). In the absence of the function of interest, the child would not be able to modify, adapt or reason, as interest, according to Piaget, performs a regulatory function to either conserve energy or enable focus on an activity or interaction.

In summary, Piaget (1979) identified that knowledge derives from actively converting information, which is then organized into structure or units of knowledge, with each unit relating to another aspect of actions, objects and theories. This organised information is described as a 'schema'. Piaget believed that this schema is individually constructed and reconstructed by the learner through equilibration. This process involves new information being assimilated and forming a set of linked mental representations of the world which are then used to understand and apply them when needed. The process of assimilation occurs when it augments or aligns with existing schema, in cases when the two are not congruent, the learner makes the necessary modifications of existing understandings to align them with what is new (Piaget, 2007; Piaget, 2000; Blake & Pope, 2008; Piaget & Inhelder, 1969; Schunk, 2000).

Piaget's theory is often mistakenly described as giving primacy to the individual learner's cognitive processes, constructing knowledge separate from a social context. When Piaget described children's development, he also talked of both the individual internal processes and the important purpose of social interactions in learning (Palincsar, 2005; Rogoff, 1998). Just as knowledge of the world is being constructed by the child, the social process involving thought and understanding in action prompts cognitive conflict as the learner becomes aware of alternative points of view. The child's attempts to re-establish equilibrium or self-regulation enable the developing child's

interaction with their environment (Rogoff, 1998). While Piaget contended that a child's development involves their intellectual adaptation to both the physical and social environments, through these interactions the child's cognitive development cannot be taught but occurs through how they construct this understanding of both the object and psychosocial world.

While learners construct their own knowledge, the learning environment in which this occurs, including the method of instruction a child receives, influences and enables the ability of a child to participate through action and social exchange in the learning process (Gredler, 2001). Piaget's influence is acknowledged and recognized as far-reaching, and his ideas on children's development continue to influence teachers' and other practitioners' classroom practices. In particular, this influence has been identified in how teachers and practitioners define their role as facilitators to enable and provide children with the opportunities to construct knowledge, as opposed to direct teaching or instructing children, which would be considered to inhibit or create barriers to children showing their own initiative (Sfard, 2008). This influence is also evident in the practice of teachers and practitioners to provide for rich learning environments that are set up and organized to enable children to engage in spontaneous exploration, and to actively participate in and explore in imaginative (or symbolic) play (Gredler, 2001; Schunk, 2000).

This understanding of developmentally appropriate experiences for children has come to shape how practitioners understand a child's level of cognitive development and stages of knowledge, which in turn has come to influence the concept of readiness that is applied to practice with young children when determining their interest in themes or topics or their demonstrated capacity in a skill (Rogoff, Goodman-Turkanis, & Bartlett, 2001; Schunk, 2000).

As this thesis involves the study of the understanding of children's development that Kindergarten teachers may be accessing when using the EDI, it is important to examine the seminal work of Piaget and his influence on early childhood theory and practice. Piaget argued that a child's development progresses through four critical stages of cognitive development (Flavell, 2004; Piaget, 1954; 1964), and that each of these stages follow both a fixed sequence and that each sequence is connected to an age range. This range and sequence is marked by shifts in how children come to understand the world through exploration, and therefore a child's learning is reliant on them reaching set stages of cognitive development (Gredler, 2001).

The role of teachers in this context for learning becomes problematic as they are part of the learning process, facilitating opportunities for children as to what and how they construct and understand, but not assuming sole responsibility for directing and supplying information. Teachers' choice of formal theory, such as Piagetian constructivism is a considerable influence on teachers' decisions about their practice. These practices include how teachers plan and organize their instruction, as well as what guides them in choice of curriculum content and how they will teach (Nuttall & Edwards, 2007; Smith, 2011). Piagetian constructivism represents a significant influence in the field of education, and is recognized as having a leading role in modern theories of learning.

Sociocultural Theory

The nature of knowledge in relation to early childhood practice is contended by researchers (Hedegaard & Chaiklin, 2005; Hedges, Cullen, & Jordan 2011; Hedges & Cullen, 2012; Wood, 2014; Wellington, 2015), particularly with respect to practices concerning early childhood approaches, including models of curriculum and understanding the role of pedagogy (Anning, Cullen & Flear, 2004) in early childhood environments and practice. A sociocultural perspective on knowledge places a greater focus than does Piagetian theory on the '*interdependence* of both the social and individual process in the co-construction of knowledge' (Kim, 2011, p. 447), and highlights the types of knowledge identified as being important in culture and community (Case, 1996). This shift in thinking can be traced to the work of Vygotsky, particularly *Mind in Society* published in translation in 1978. The key idea in Vygotsky's work is the role of tool mediation in all developmental processes. That is, an individual uses culturally specific tools that are both physical (books, computers) and psychological tools (language) are used by individuals to orient a persons' attention and engagement to socially organized activities. 'Human mental functioning is 'inherently social because it incorporates socially evolved and socially organized human tools' (Thompson, 2013, p. 249).

the word social when applied to our subject has great significance. Above all, in the widest sense of the word, it means that everything that is cultural is social. Culture is the product of social life and human social activity. That is why just by raising the question of cultural development of behaviour we are directly introducing the social plane of development (Vygotsky, 1981, 164)

According to Vygotsky (1978; 1981) artefacts, whether symbolic or signs, are tools created by humans, used to solve problems and exert an influence on how individuals conceptualize their world as well as being an aid to problem solving in a way that wouldn't be possible in their absence. The influence of artefacts also includes how they are used by individuals to understand previously unknown activities and ways that individuals may now understand the phenomena of human activity (Karabinar, 2014; Mariotti, 2009; Turuk, 2008). Turuk (2008) argues that Vygotsky understood these artefacts in terms of being symbolic or signs, and therefore, are created under specific cultural and historical conditions, specific to the cultural context of the time, and are therefore also subject to being modified as they are passed from one generation to the next.

To put it simply, human beings interact with their worlds primarily through mediational means; and these mediational means, the use of cultural artifacts, tools and symbols, including languages, play crucial roles in the formation of human intellectual capacities. (Moll, 2000, 257)

Determining how practitioners understand and apply a particular theoretical understanding of children's development, including development occurs and the role of cultural and social contexts and relationships, is a key aspect of understanding how they might interpret and apply the EDI. Vygotsky's influences are also considered as part of this study as his influence along with Piaget, are found in the theories developed and drawn upon by teachers to understand children's development. This approach advances the idea that 'everything in the behaviour of the child is merged and rooted in social relations' (Ivić, 1994, 473 translated from Vygotsky, 1982–84). That is, based on the belief that the sociability of the child forms the basis for their social interactions with those around them, mental activity develops external to the individual, occurring through these social interactions and through shared cultural activities (Dufficy, 2005; Rogoff, 1998).

The individual then internalizes the social interaction to make meaning of the knowledge that has been acquired through inner speech. While Vygotsky provided very little detail of how this process took place (Berk, 2006), he did consider the significance of speech for the expression of developed thought, understanding speech as restructuring thought as it transitioned into speech (Gredler, 2001). Vygotsky (1978; 1981) identifies knowledge as having its origin in social foundations due to an

interdependence social process and the individual in the construction of knowledge, and in particular development and higher mental functioning.

This is important not only for understanding how learners then participate in a wide range and variety of activities, but how learners synthesize their learning internally to understand and participate more fully. Vygotsky advanced the idea that learning takes place between the learner and other individuals *with more knowledge* ‘within the learner’s zone of proximal development’ (Exley, 2015, p. 27). Vygotsky described the zone in terms of ‘the distance between the actual developmental level as determined through problem solving under adult guidance or in collaboration with more capable peers’ (Vygotsky, 1978b, p. 86).

Rogoff (1998, 2008) proposes the study of learners and their participation in collective cultural activities through the application of three analytical lenses or foci – the personal, interpersonal, and cultural-institutional planes of activity:

I refer to developmental processes corresponding with these three planes of analysis as apprenticeship, guided participation, and participatory appropriation, in turn. These are inseparable, mutually constituting planes comprising activities that can become the focus of analysis at different times, but with the others necessarily remaining in the background of the analysis. I argue that children take part in the activities of their community, engaging with other children and with adults in routine and tacit as well as explicit collaboration (both in each others’ presence and in otherwise socially structured activities) and in the process of participation become prepared for later participation in related events. (Rogoff 2008, 139)

In Rogoff’s articulation of sociocultural theory, the learner is understood in three distinctive ways. First, the personal plane can be used to locate the learner as the central focus of analysis with both the interpersonal and community remaining in the background. Second, the focus can shift to the interpersonal plane, with attention moving from an individual focus to paying attention to relationships and interactions. Third, when the cultural plane takes precedence, it frames the learner as embedded within a dynamic cultural context (Anning, Cullen, & Flear, 2008). As argued by Vygotsky, children are social and cultural individuals, living in a particular community context and constructing knowledge. Rogoff proposes that, while these planes of analysis together constitute a complete activity or event, they can also be considered distinctly in the foreground, and still retain their interdependence in a total context.

In contrast to Piaget's theory that implies that development precedes learning, Vygotsky proposed that learning leads to development. In this sense, learning drives development (Hatch, 2010). Vygotsky (1978a) put forward the theory the teacher should take on a prominent role and have oversight of what takes place within the child's ZPD to promote learning, and not wait for a child to display readiness. This process should be both supportive of the child's development at the same time being challenging, as the idea of ZPD disputes the concept of readiness in a child; the tasks set for the child are able to be initially accomplished in collaboration with the teacher and the child is then able to go on at a later stage to accomplish them on their own (Dufficy, 2005; Gredler, 2001). Appropriate support practices become essential for active teaching within the ZPD, and the demands on the teacher are more evident in organizing learning that builds on prior knowledge, in a way that presents critical ideas that hold significant meaning within the culture. To achieve this, teachers require accurate knowledge of where learners are in their current understanding (Gredler, 2001; Rogoff, 1990; Schunk, 2000). Then, to successfully apply the concept of the ZPD in practice, not only requires the teacher to know where a child is functioning but also the capacity to anticipate where the child will be, and how best to assist the child in mastering more advanced concepts and skills.

While 'scaffolding' is the metaphor frequently used to illustrate the support practices used within ZPD, and has become linked to Vygotsky's work, the term was never used in his work (Stone, 1998a). Vygotsky's focus concerned the crucial role of social interactions in cognitive development, and for learning to take place first at the social or inter-individual stage. Wood, Bruner and Ross (1976) are first attributed to using the metaphor of a carpenter's scaffolding to describe how appropriate instruction supports practices used within the ZPD. It is used to describe,

'... a kind of "scaffolding" process that enables a child or novice to solve a problem, carry out a task or achieve a goal of which would be beyond his unassisted efforts. This scaffolding consists essentially of the adult "controlling" those elements of the task that are initially beyond the learner's capacity, thus permitting him to concentrate upon and complete only 'those elements that are within his range of competence' (Wood, Bruner, & Ross, 1976, p. 90).

Later Clay and Cazden (1999), and Bruner (1983, 1986) also defined scaffolding as a framework used by adults to enable a child to learn in familiar and routine situations, and for adults to be conceptually in front of the child and priming the child's

responses. Bruner contended that ‘by providing ritualised dialogue and constraints through questioning and feedback to the child, the adult prepares the cognitive base on which language is acquired’ (McDonagh & McDonagh, 2008, 5).

Scaffolding is best considered as a responsive process for the role of the adult, who provides initial support that enables the learner to construct their understanding; as the learner develops understanding or proficiency, the support is gradually removed (Jordan, 2004). Taking on a variety of forms, scaffolding involves enlisting and motivating the child’s interest in the activity, and directing the activity to maintain the quest. The role of the teacher takes on its significance when managing and controlling for frustration and challenges experienced by the child, including taking risks in problem solving as well as enabling the child to achieve tasks that may not be possible without the support; scaffolding is a process that builds and expands the scope of tasks that a child is able to achieve (Wood, Bruner, & Ross, 1976).

The scaffolding metaphor is nevertheless controversial (Jordan, 2004), and has been criticised as promoting a mechanistic representation of learning as a passive process maintained by external forces (Stone, 1998b). There are also concerns about over simplification, causing scaffolding to be interpreted as direct instruction (Verenikina, 2003). Rogoff (1998) argues that a distinction needs to be made between working within the ZPD and scaffolding as distinctive and separate processes, and is critical of the connection made between the two, since it places too much emphasis on control by the teacher who then becomes the expert with oversight of the child’s learning.

As evidenced by the range and scope of studies that describe scaffolding, the adult is identified as fulfilling a crucial role in the learners’ process. It is also important to consider other key elements that are attributed to scaffolding including its role as an important mediating tool for teachers in their practice. Given that this study’s focus is on teachers, and their practices and understandings of children’s development, these theories of children’s development are central to the purpose of this study in terms of what the teachers use to understand and apply in their practice, since these theories have implications both for promoting children’s development and situating the role of the teacher.

A central idea in Vygotskian thought, and key to the way in which scaffolding operates is described by Kozulin (2003, p. 16–17):

Vygotskian theory stipulates that the development of the child's higher mental processes depends on the presence of mediating agents in the child's interaction with the environment. Vygotsky himself primarily emphasized symbolic tools – mediators appropriated by children in the context of particular sociocultural activities ... Some mediational concepts such as scaffolding (see Wood, 1999) or apprenticeship (Rogoff, 1990) appears as a result of direct assimilation of Vygotskian ideas. (Kozulin, Gindis, Ageyev, & Miller, 2003, p. 17)

In the learning environment, the physical tools being used by the learner, including books, paints, blocks, and technology, work to mediate the learners' perception and facilitate their opportunities to engage as they assist the learner to act upon their environment. This is also the case with what can be described as symbolic tools and how language takes on greater significance as a 'primary symbolic mediational tool in cognitive development' (Palincsar, 2005, p. 299). With regard to the teachers in this study, theories of child development function as symbolic tools to support their understandings and practices.

Language is the primary mechanism that supports mediated understanding and meaning (Wells & Claxton, 2008). Adults are able to facilitate learning experiences for children when using language when they interpret, reorganize and restructure information, including problems and ideas, to make them understandable and comprehensible. The role of teachers in the mediation process is crucial as they organize and prompt discussion to focus children's attention, encourage enquiry, and support the development of collective understandings (Dufficy, 2005; James & Pedder, 2006). Intersubjectivity is the concept (Cullen, 2001; Jordan, 2004; Rogoff, 1990) that explains how a child can be assessed by the teacher through interaction, to determine what they may already know and understand, to establish suitable scaffolding. This creates a common ground for communication as both the teacher and child can adjust to each other's perspective.

Vygotsky's theory continues to experience critique, with some experts considering that it overstates the ways in which learning originates from the social environment (Gredler, 2001). There is also research to suggest that, due to biological inclinations, children can demonstrate the capacity to attain concepts independent of their environments (Geary, 1995). As a result of this, children can develop their own understandings of their immediate surroundings and communities in advance of participating in learning opportunities through cultural experiences (Rogoff, 2003;

Seifer, 2001). Due to the complex nature of Vygotsky's theory, there is also the risk of extracting sections from his full works in ways that result in distorting its application and interpretation (Gredler & Shields, 2008; John-Steiner & Mahn, 1996; Sfard, 2008). Opinions about learning have undergone significant changes over the years and there remains disagreement among educators and researchers concerning the purpose and role of developmental psychology, including Vygotskian social psychology, and its use in practice (Blake & Pope, 2008, 59). Greater emphasis on context and the situated nature of learning has led some to recommend (e.g. Hatano, 1993; Hatano & Inagaki, 1999; James, 2006) a merger of social constructivist and individualist perspectives in order to develop a more unified theory. As James (2006) argues:

the constructivist approach in both theory and practice has taken on board the importance of the social dimension of learning: hence the increasing use of the term 'social constructivism.' Similarly, there is now evidence that sociocultural ... frameworks are involved in a 'discursive shift' to recognize the cognitive potential to explain how we learn new practices. (p. 59)

Sociocultural theory and teacher learning

Just as children's learning has been explored and re-evaluated, research into teacher learning has also undergone this discursive shift in relation to sociocultural theory. While there are particular theories of learning and development that may be privileged either by an individual or a learning institution, there is a case to be made that adherence to or reliance on one particular or singular approach is not recommended when it comes to understanding children's development and learning, as well as what is reflected in teaching practices. Sfard (1998; 2008a; 2008b) in her thesis *On Two Metaphors for Learning and the Dangers of Choosing Just One* argues that the metaphors for learning are the 'most primitive, most elusive, and yet amazingly informative objects of analysis' (Sfard, 2008, p. 30), as she aims to determine the metaphors for learning that are used by learners, teachers and researchers to describe how learning occurs in the educational setting. These metaphors can be found in most conceptual frameworks and according to Sfard, learning theories can be organized as either acquisition-oriented or participation-oriented'. The 'acquisition metaphor' (Sfard, 2008, p. 30) is used to explain how a learner acquires knowledge, including how it is constructed as a process of applying knowledge. According to Sfard (2008a; 2008b), underpinning the accumulation of knowledge are cognitive models that mean learning is a process of transmission with a focus on how ideas are developed and

meaning is constructed. On the other hand, the ‘participation metaphor’ (Sfard, 2008a, p. 30) is used to describe learning in terms of a mediated and ongoing process through a particular community that involves active involvement in a particular social and cultural context. The use of these metaphors are ‘not mutually exclusive’ (Sfard, 2008a, p. 34) but there are differences to consider in context of the complexities involved in learning, including how learning processes involve both acquiring and constructing knowledge.

The difference between the acquisitionist and the participationist versions of human development is thus not just a matter of “zoom of lens,” as it is sometimes presented. Above all, it manifests in the way we understand the origins and the nature of human uniqueness. For the acquisitionist, this uniqueness lies in the biological makeup of the individual. Although participationism does not deny the need for special biological prerequisites this approach views all the uniquely human capacities as resulting from the fundamental fact that humans are social beings, engaged in collective activities from the day they are born and throughout their lives. In other words, although human biological givens make this collective form of life possible, it is the collective life that brings about all the other uniquely human characteristics. Human society emerges from the participationist account as a huge factual-like entity, every part of which is a society in itself, indistinguishable in its inner structure from the whole (Sfard, 2008b, p. 79)

Sfard identifies an important implication for the current study concerning the challenge of how teachers bridge connections between theories that otherwise have competing outlooks, specifically in relation to their interpretation and use of the EDI.

While much of the focus of sociocultural theorising is on the development of children, related frameworks are increasingly used to understand how adults acquire and mobilise culturally valued knowledge. Sfard’s ideas on the purpose of metaphors in bridging connections between theories is helpful when considering how teacher learning has moved through changing views, including the idea that teachers are simultaneous learners with children, as evident in sociocultural theory.

Chapter Summary

In Rogoff’s conception of sociocultural theory, learners interact with their learning contexts on various planes, a critical one being the personal plane. This type of

thinking anticipates the importance of teacher background and knowledge for use of the EDI. In this view the teacher is not a passive instrument who simply opens up the EDI and uses it in the fashion of an automaton. Rather, they understand it through a particular sociocultural context. This understanding of the interplay between learner and social context is one of the central contributions of Vygotsky to sociocultural theory (Kozulin, Gindis, Ageyev, & Miller, 2003). For this reason, the methods employed in data generation in this thesis, discussed in Chapter 4, emphasise the relationship between teachers' knowledge of child development theory and their personal contextual histories, such as their training to be a teacher.

If we see the role of the teacher in understanding and using the EDI through a social constructivist lens then concepts like mediation become critical. Mediation here involves how the learner negotiates their way through a particular social context. For the early childhood teacher this can include their understanding of their role as a teacher, a sense of what schools and education are directed towards, and how children learn and develop, especially in the critical early years of schooling. Of special interest in this thesis is the question of how the teacher understands the EDI through the prism of their own background and knowledge. This is a particularly important example of implicit mediation.

Whereas explicit mediation has a clear and direct meaning and can often be observed and recorded with great clarity, implicit mediation is far more subtle. In implicit mediation the signs, the form of communications, and the narratives that teachers use, are all derived from particular contexts and from particular understandings. Teachers who, on one level, appear to share similar backgrounds and approaches to teaching may experience implicit mediation very differently. In terms of explicit mediation, however, they may have had very similar experiences. They may, for instance, have completed similar university degrees and received similar in-service training; they may teach in similar schools; and they may have, at least on the surface, similar theories of child learning and development and the use and purpose of the EDI. How they relate theory to practice, however, may be very different. A key question therefore emerges in relation to the methodology that is to be followed if we are interested in gaining a better understanding of the complexities of teachers' work with young children in the context of administering the EDI. Questions of a suitable methodology to capture teachers' understandings and practices are the focus of the next chapter. In that chapter a methodology is described and defended that highlights the

importance of teacher discourse as an approach that is able to focus on how teachers move from theory to practice in their work, including in their administration of the EDI.

Chapter 4: Methodology

This thesis seeks to describe the experience of early childhood teachers in Alberta, Canada, in implementing the EDI and the ways in which their understandings about learning and development mediate this implementation. In this chapter, the methodological basis for the study is set out. The chapter is in two parts. Part one describes in detail the basis and rationale for the selected research approach. The epistemological basis for the qualitative approach taken in this thesis is broadly described as being social constructivist, with an emphasis on social constructionism. This builds on the discussion of sociocultural theory in Chapter 3. Emerging from this discussion is a presentation of discourse analysis as the principal methodological strategy used in this thesis.

In part two of this chapter, the focus is on how data were generated. An account of how discourse analysis was used in this research is given, along with other methodological considerations. Two important areas discussed in detail are the background of participants in this study, and ethical considerations in the capturing and interpretation of early childhood teachers' discourse.

Rigour

An important consideration in determining the methodology for this study required attention to the most appropriate approach to take. Drawing on Evans (2002) and Pring (2014) the question of rigour in education research is raised due to the issue of validity and reliability associated with qualitative research.

Rigour (Burgess, L., Sieminsk, S., & Arthur, L., 2006; Evans, L. 2002; Clough, 2004; Cohen, L., Manion, L., & Morrison, K., 2014; Guba, E. G., 1981; Thomas & Pring, 2004; Pring, 2014;) is understood not only in terms of the quality of the research process being used, but also in terms of the theoretical basis of research. Evans (2002, p. 29) describes this as not only “the quality of the research process, as measured by the appropriateness, and the care and level of expertise applied to the execution, of its procedures ... Rigour relates, too, to the theoretical basis of research: the soundness of the reasoning, or the philosophical stance, underpinning the process.”

Rigour in the context of qualitative research is also understood in terms of being “associated with being open to the data, scrupulously adhering to a specific philosophical perspective, and thoroughness in collecting data. Rigour is also judged by

the logic of the emerging theory and whether the results are adding to what is known about a phenomenon.” (LibGuides: Research Methods Information: Scientific Method and Scientific Rigor. (n.d.). Retrieved June 29, 2017, from https://apus.libguides.com/research_methods_guide/scientific_method_rigor)

The necessity for rigour is described in terms of trust in the type of investigation that is underway. Attention to rigour through the process of determining the methodology of the study also provides for consistency and neutrality with the hope to mitigate risks to the credibility of the study. This approach assists to establish confidence that the findings of the study can be considered reliable and valid to both the context of the study as well as the discipline in which the study is being undertaken (Guba, E.G., 1981; Evans, L., 2002; Pring, R., 2014).

According to Pring (2014), it is important to consider what constitutes as “distinctively education research” (p. 8) as a process that will also involve an examination of rigour. However, Pring cautions that to do so may “distance that research from what is distinctively educational – it may not be about what the ‘educators’ need to know. It is a question of whether the ‘practice’ of education can be properly understood within the language and understandings of the social sciences.” (2014, p. 8)

Evans also identifies that there is a large body of research that is “disconnected from professional practice and teachers’ need” (Evans, 2002, p. 10). Evans also identifies that if rigour is not attended to, there is a risk education research won’t achieve the need to achieve the “object of the research – the need to connect to teacher and education practice. Pring (2014, p.9) also makes the distinction between research that is located within social sciences and relates to education as opposed to research that is undertaken to examine education issues and concerns.

[educationally relevant research] ... can only be relevant if it relates to the ‘practice of education’ – to the activities, engaged in on the whole by teachers, which have those characteristics which pick them out as *educational*.

Understanding the need for rigour requires a serious study of reliable and valid methodologies not only relevant to what it claims to measure, but when working with qualitative data may also involve rigour to how the validity of data is treated. Rigour is

achievable through the “honesty, depth, richness and scope of the data achieved” (Cohen, L., Manion, L., & Morrison, K., 2014, p.105), as the “honesty, depth and richness are powerful concepts to consider.” (Burgess, H., Sieminski, S., & Arthur, L., 2006 p. 62)

Methodological Basis and Rationale for the Chosen Research Approach

Qualitative research is typically made up of the collection of thoughts and perceptions, and describes the reality observed by study participants as being subjective and dimensional (Patton, 1990). As the name suggests, qualitative research is interested in the essential quality of the topic under investigation. Berg and Lune (2012, p. 3) describe quality here as ‘the what, how, when, where, and why of a thing – its essence and ambience.’ Qualitative research has no predominant theory or paradigm that is applicable in all situations. Rather, it can be seen as a range of activities, which privileges no single methodological practice (Denzin & Lincoln, 2005). Qualitative research can be seen as a process of inquiry, conducted in natural settings, that leads to an understanding of social or human problems. It is based on building a complex, interconnected understanding that is formed by words, reporting detailed views of informants, and close and critical engagement with participants (Cresswell, 1998; L. Price, 2002).

As qualitative research is not based on normative assumptions, it needs to sit alongside an epistemological view that sees knowledge as something that is constructed by a range of intersecting theories (Rossman & Rallis 1998).

Two fundamental principles apply to constructionism as an epistemological basis for this study. First, knowledge is not submissively received, but is actively construed by the learner. Second, the function of knowledge is adjusted and modified to serve the subject’s organization of the experiential world through social interaction, a process referred to as ‘discourse’. This is an important element to the research focus as the discourse of child development drawn from developmental psychology underpins the perspectives of the teachers interviewed as part of this study.

Constructionism, inspired by constructivist theories, is an epistemological standpoint that derives meaning from a subjectivist ontology and is in contrast to objectivism and positivism (Harel & Papert, 1991; Giddens, 1977; Halfpenny, 1982). The development of constructivism proceeds from a range of sources, outlined in the previous chapter, with the work of Piaget being particularly important (Lavell, 1963; Satterly, 1987). What these sources have in common is an acknowledgment of the

importance of how knowledge is internalized by the learner, which, in time, enables the learner to construct new understandings from their experience (Solso, 1995). In this view, acquiring knowledge is seen not as a process by which a closer alignment with an external reality is achieved but rather how understanding becomes more closely interconnected with a range of complex experiences. As knowledge increases, the complexity of the world that it interprets becomes more profound and is mediated through the consciousness of the subject. This methodology used in this thesis is concerned with participants' subjective interpretation of complex human phenomena and is therefore derived from a constructivist epistemology.

As discussed in Chapter 3, constructivism is concerned with how individual develops and sustains meaning. It acknowledges that, for individuals, this process is reliable and valid and can provide a suitable basis for further investigation and research. While a constructionist outlook sees meaning as something that is not discovered, it posits that we can improve our analysis and understanding by investigating how meaning is constructed. At the heart of this construction process is human interaction.

This emphasis on social interaction is especially emphasized in social constructionism and elaborated in the work of theorists such as Piaget, Bruner, and Vygotsky. In social constructivism individuals construct meaning as they encounter others and share these interpretations with other individuals and on a communal basis. The act of conducting interviews and focus groups – as in the present study – is an example of this process. This communal construction of meaning can be both structured and unstructured. In structured experiences there is some type of formal reflective and evaluative process where people come together and share social discourse. In unstructured communal construction of meaning, implicit communal understandings are built up in informal ways as an often unrecognized by-product of human interaction. The resulting new insights shape meaning for both individuals and for the community as a whole.

In evaluating the most appropriate research framework for this thesis, and as discussed in Chapter 3, consideration has been given to examining the various elements of constructionism, social constructivism, and sociocultural theory. This is because there are elements within the first two – constructionism and social constructivism – that have application to this study, but do not completely satisfy the objectives of this study.

As child development draws from a diverse of beliefs based on developmental psychology, as a discourse, it functions to bring together different ideas teachers use to inform their understanding about how children develop (Fleer, 1995; Fleer, 2010; Fleer & Hedegaard, 2010; James & Prout, 2015; Nolan & Raban, 2015). As a guide, child development then functions to bring together a diversity of ideas together representing a particular way of understanding the world (Gee, 2011a).

Constructionism can also be contrasted with positivism. Philips (1976) notes that in positivist paradigms, meaning exists independently of any shared or collective consciousness. Constructionism in contrast is derived from interpretivism (Blaikie, 1993). Interpretivist approaches value situated and contextualized interpretations of the social world. As an approach to research it can be described as a study of the social actions to which individuals attach subjective meanings. The aim of interpretivism, in general, is to explore the discourses that influence people to act in particular ways.

In light of the differing assumptions held by social actors, social research based on interpretivist paradigms such as constructionism leads to research approaches where actions are primarily interpreted through the actions of those who experience them. In constructionism meaning is not seen as something external and objective. It is not discovered but constructed. For the researcher operating within this theoretical framework knowledge is contingent upon the interactions between human beings and their surroundings, with knowledge developing and transmitted in a particular social context.

While this study is located within the epistemological paradigm of constructionism, it is important to distinguish the particulars. Although this study starts out by asserting constructivist assumptions that individuals construct meaning within their locale or situation, it then shifts to consider a constructionist perspective, where shared meanings are exchanged as new understandings and interpretations begin to emerge.

A challenge for qualitative researchers, identified by Denzin and Lincoln (2005), is that they do not abide to a universal truth:

Truth – and any agreement regarding what is valid knowledge – arises from the relationship between members of some stake-holding community... Agreements about truth may be the subject of community negotiations regarding what will be accepted as truth. (Denzin & Lincoln, 2005, p. 204)

Consequently, socio-constructivism supports a relativist ontology, meaning that reality is seen as being under constant reconstruction through the process of human interpretation (Denzin & Lincoln, 2005). However, it can be argued that socio-constructivism refers to constructing knowledge about reality, and that truth is always the result of some social agreement emanating from a specific worldview of what is real, but is by no means representative of reality. Truth is only representative of some formulated agreed-upon truths that hold meaning for members of one society or culture but are un-truths for another (Denzin & Lincoln, 2005). This is consistent with Rogoff (2003, p. 26) who argues that: ‘What is referred to as “truth” is simply our current agreement on what seems to be the useful way to understand things; it is always under revision.’

In qualitative research, the researcher sets about to investigate the reality that is constructed by the individuals involved in the research study. This means those individuals who have particular roles, and involves multiple perspectives and experiences of reality in any situation, including those individuals the focus of the study, the researcher and the audience interpreting the study. This point will be considered further into this chapter.

Discourse as a Feature of Constructionist Methodologies

There are a variety of methodological approaches that arise from an understanding of social constructionism within a situated community of practice. A key aspect of these methodologies is the use of discourse. Discourse here refers to primarily how an individual expresses' themselves through the use of words. Discourses permeated knowledge, values and experiences of the world. In everyday contexts, discourses are used to build knowledge and power, to regulate and normalize, as well as being used to create new knowledge and power relations, often with excessive influence or power being an outcome of influence (Henriques, Hollway, Urwin, Venn, & Walkerdine, 1984; Luke, 1997).

Although this thesis is not primarily informed by post-structural theories, the critical role of discourse in mediating the relationship between teacher knowledge and practice, through cultural tools such as the EDI, owes a fundamental debt to understandings of processes of discourse analysis developed by poststructuralist researchers. Poststructuralist theory sets out to question the distinction and separate between the historical construction of social and cultural discourses and the study of individual subjects, agents and social realities.

This thesis applies discourse analysis to interviews and focus groups conducted with early childhood teachers, an approach which sits well with the epistemological considerations and assumptions inherent in qualitative research.

Discourse analysis. Discourse Analysis (DA) ‘is the uncovering of implicit ideologies’ (Widdowson, 2000, p. 3) including providing a critical analysis of the relationship between language, ideology, and society (Baker & Luke, 1991; Mey, 1985; van Dijk, 1988; Langer, 1998). DA is attributed to the Frankfurt School of research located within the school of critical theory. DA is considered as a way to way to analyse ‘social inequality’ (van Dijk, 1993, p. 471), and is often considered as a research approach taking a critical view of society (Langer, 1998).

[T]hat the explanatory power of a theory and an analysis informed by it contributes to its capacity to transform aspects of social life, which brings us back to dialectical relations between discourse and other social elements with respect to the aims of critique to not merely interpret the world but contribute to changing it (Fairclough, 2013, p. 9).

Discourse theory is a study of how text and discourses are a constructive occurrence that shapes ‘the identities and practices of human subjects’ (Luke, 1997, section 4, para. 1). According to Luke (1997), Foucault’s historical studies concerning institutions focused on how new forms of human subjects are constructed through these historical representations of discourse, including how institutionalized discourses order and regulate an individual’s identity. Foucault’s (1980) argument sets out that institutionalized discourses extend their authority over the individual’s identity through public and personal spaces as well as social practices in various and diverse relations of knowledge and power. These discourses then function in the social institutions local contexts and do not refer to any particular individual or group’s role, motivations or intents.

Social institutions consist of and are comprised through discourses that are represented through various terminologies to catalogue and define their activity and function. Within these institutions generic categories (children and teachers) and more specialized categories (professionals) are constructed in ways that are used to describe human subjects. Discourses can be found in various forms of written, spoken and symbolic texts including policies and curriculum, as well as through their pervasive use through interactions and informal discussions. The activity and function of these discourses act to both construct ‘institutional technologies of power’ that are enforced

by official authority, and act as ‘technologies of the self’ (Foucault, 1980) that lead to the individual internalizing the means by which their action, practice and identity are self-regulated. Foucault believed that these ‘technologies’ have the potential for productive and negative material with physical and spatial consequences for individuals and communities (Ball, 1990).

Discourse analysis as a research method. As a focus of this study is to describe kindergarten teachers’ understandings of early childhood development when using the EDI, through the use of DA. The techniques attributed to this methodology are highly relevant when examining any language structure that ‘deals with the meaning in social, cultural and political terms’ (Gee, 2011a, p. ix). These techniques provide a methodology for engaging with teachers to reflect on their role as mediators of learning, and how this understanding influences their use and administration of the EDI.

The application of Discourse analysis (DA) as a research method for the purposes of this study has been informed by three broad theoretical approaches reflecting the use of a collective of methods to study the use of language as social and cultural practices (Fairclough, 1989, 1992a; Fairclough, 2000; ; van Dijk, 2001; Wells, 1999; Wells, 2007; Wodak, 1992). Luke (1997) identifies three theoretical approaches:

First, it draws from poststructuralism the view that discourse operates laterally across local institutional sites, and that texts have a constructive function in forming up and shaping human identities and actions. Second, it draws from Bourdieu’s sociology the assumption that actual textual practices and interactions with texts become ‘embodied’ forms of ‘cultural capital’ with exchange value in particular social fields. Third, it draws from neomarxist cultural theory the assumption that these discourses are produced and used within political economies, and that they thus produce and articulate broader ideological interests, social formations and movements within those fields (see Hall 1996). (Luke, 1997 Critical Discourse Analysis section, para 1)

According to Hall (2006) Foucault’s meaning of discourse was ‘a group of statements which provide a language for talking about – a way of representing the knowledge about – a particular topic at a particular historical moment ... Discourse is about the production of knowledge through language. But ... since all social practices entail *meaning*, and meanings shape and influence what we do – our conduct – all practices have a discursive aspect’ (Hall, 2006, p. 291). In this context, discourse is not considered a linguistic concept, but concerns language and practice, and its focus is on

breaking down distinctions that might be drawn between ‘what one *says* (language) and what one *does* (practice)’ (Wetherall, Taylor, & Yates, 2001 p. 73). Central to this study is the idea that the discourses of child development that teachers have been exposed to are cultural tools that mediate their interpretation and implementation of the EDI.

Kress (1989) describes how DA through text analysis examines how texts are a construction of social identities and cultural practices, including social relationships. Through the use of interdisciplinary techniques of text analysis, Kress (1989) has argued that particular selective perspectives and understanding of the world or particular subject views. The text is more than the written word, and text types take on conventional use and functions for social purposes, including how text used in context of social media, in written form through textbooks, letters and policy documents, as well as through spoken face to face exchanges including classroom lessons.

Therefore, my use of DA is an attempt to identify these cultural tools – not only theories of children’s development but other key concepts and artefacts that the teachers refer to during the course of their interviews. DA, in the context of this thesis, is an approach to identifying dominant or pervasive cultural understandings in the talk of the teachers. Writing from a sociocultural perspective, Daniels (2012; 2016) points to trends in current research that give greater consideration to a broader understanding to a central sociocultural construct of *artefacts* that takes into account the issues that gives ‘rise to cultural tools, and the constraints as well as the affordances associated with them’ (Daniels, 2016, p. 83). Daniels (2012) observes that, ‘the way in which the social relations of institutions are regulated has cognitive and affective consequences for those who live and work inside them’ (2012, pp. 53–55).

This is particularly significant in the context of teachers, specifically those participating in this study, when considering the role of mediation by cultural tools in establishing and maintaining identifiable discourses. Daniels (2012; 2016) however, also suggests researchers to go beyond this preliminary enquiry and ‘examine issues such as the conditions that have given rise to cultural tools, and the constraints as well as affordances associated with them’ (p. 83). Furthermore, Daniels (2016) also identifies that ‘the analysis of mediated action is concerned with how humans employ cultural tools in social and individual processes’ (p. 83).

The use of DA as a research method enables an analysis of text, and has been engaged in the analysis of different forms of spoken text in classrooms, between teaching staff, as well as parent-teacher discussions. Examples of how various forms of

talk in classrooms, staffrooms and schools between teachers, students, parents and administrators form and reform what will be considered as textual practices and their contexts, knowledge, social relations, opinions and viewpoints (Gutierrez, Larsen, & Kreuter, 1995; van Dijk, 2001). Through classroom text, including the use of textbooks, teachers and student construct meaning of text with the impact of reforming structure, character and understanding into authoritative interpretations (Corson, 1995; Lee, 1996; Luke 1997).

This study is broadly focused on how early childhood educators make sense of their work. Specifically, it examines the practice of early childhood staff who are involved in using, understanding, and implementing the EDI. An appropriate method in response to this concern that arises out of an understanding of qualitative research and a social constructivist paradigm is therefore discourse analysis (Remlinger, 2002). This is partly because it provides a framework for a systematic analysis (Graham, 2005). Within this framework there needs to be an investigation of issues out of which the text – in this case, the spoken word – arises.

This involves both an analysis of the underlying and the implicit sociocultural context and ideology of the text. In addition, the ideological properties of the text need to be considered, whilst bearing in mind that ideology cannot simply be read off from texts. Morgan and Taylor (2005) focus on discursive efforts to recognize the social elements in the written form used at various levels of interaction through social structures and institutions. Hruby (2001, p. 14) adds to this work by noting that ‘constructionism may be usefully understood as being about the way knowledge is constructed by, for and between members of a discursively mediated community.’ These communities inhabited by the teachers are, in turn, shaped by the social construction of knowledge explained in Chapter 3 (Bruner, 1986; Newman, Griffin & Cole, 1989).

Discourse analysis as a research tool. Neither discourse analysis nor sociocultural research are unified fields, either separate to each other or in relation to each other. But both are interested in how people assign meaning to their world. People jointly construct understandings of shared experience, including making sense of this experience, within the terms of particular discourses.

According to Marston (2004, p. 7) written materials (with reference to policy) don’t necessarily provide a ‘sufficient account of the social, political, and cultural processes that are inevitably in the production and legitimation of the texts in question.’

In going beyond the written text of policy material of early childhood development, discourse analysis is a useful tool to better understand dominant discourses and for explaining and exploring social meanings, including how meaning is constructed, and to draw attention to taken-for-granted meanings.

For instance, is there a difference in the discourse when the group of kindergarten teachers come together to discuss the details of their practice, when compared to that initially described through their interviews? And are there differences between how they describe their own understanding compared to what might be shared as a collective understanding of children's development? And what, if any, individual and collective constructs are used to draw attention to meaning?

In the context of this study, discourse principally refers to 'language in use' (Gee, 2011a; 2011b), that is, the use of spoken or written language in a social context, both as it constructs and is constructed by a set of social practices. For the purposes of the present study, the kindergarten teachers' understanding of early childhood development – as expressed through speech – when using the EDI becomes the *unit* of analysis in a practice context that includes administering the EDI. The *object* of analysis is therefore: What does this tell us about the development of ECD discourses in Alberta?

This study is concerned with identifying the dominant discourses that influence the participating teachers' understandings of early childhood development when using the EDI, in order to understand which discourses are shaping their practice. I contend this will tell us about the development of an ECD discourse in general in Alberta, and, in particular, whether the ECD discourses influencing policy are evident in the way the teachers explain how they understood children's development when administering the EDI.

Discourse analysis allows for an appropriate analysis of the underlying complexities of teachers' perspectives on child development. Child development functions as a discourse drawn from a range of disparate sources. Fler (1995) has noted that teachers hold diverging ideas that shape the way their understandings of children develop. The discourse emerging from early childhood teachers' talk may represent different conceptualizations of the educational vision of early childhood teachers. Within a discourse, an understanding of child development can arise from a common set of shared values, assumptions and beliefs which are expressed in common language (Gee, 2011b; Vartuli, 2005). DA is an important discourse that enables the examination

of child development due to the social practices including use of language that are associated with practitioners who work in this field (Gee, 2011a; 2011b).

Discourse analysis of interviews and focus groups. A critical question in this study was determining the best methods to use in order to identify discourses about the EDI and related professional experience amongst teachers of kindergarten-aged children. Although discourse is very much in the personal domain there is still a need for this to be generated along some sort of common lines so that a proper analysis of it can be undertaken. In this study, two primary methods were used, namely, interviews and focus groups. These methods were chosen as they are well-used techniques in generating texts for discourse analysis and provide the researcher with a fruitful account of the discourse of early childhood teachers who work with and administer the EDI (Huckin, 1997).

Discourse analysis was used to look for patterns in the speech of the participants and relate these to key concepts, as a result of kindergarten teachers' describing their understanding of early childhood development when using the EDI. Asking teachers to describe their approach to development, learning, and early childhood programming for kindergarten children established a central idea that the discourses of child development teachers were describing are cultural tools that mediate their interpretation and implementation of the EDI. Using Rogoff's (1998) three planes – individual, interpersonal, and institutional – it is possible to capture the connection between the individual and the cultural tools that mediate their interpretation and implementation of the EDI. As an analytical framework all three planes are interrelated, with each plane being in focus at various stages. As a mode of sociocultural analysis, as described in Chapter 3, these three 'planes' were used to examine the units of analysis, while DA was used as a methodology to identify specific cultural tools as previously discussed. The first opportunity to do so was through interviews with individual participants.

Interviews

The in-depth interview is one of the most-used research techniques in qualitative research (Denzin & Lincoln, 1995). It serves a wide variety of purposes, all underpinned by the understanding that those who are interviewed have something important to add to the research process by their reflective capacity. What is valued here is the depth of the response, not the number or range of responses. The principal research tool in this study was the use of a semi-structured interview approach using a series of funnel questions. The purpose of using this approach was to focus the

interviews on a number of themes identified as of interest for the purposes of this study (Minichiello, Aroni, Timewell, & Alexander, 1992). The goal here is to facilitate descriptions by the participants of their experience of working with the EDI. In the interviews conducted in this study the following questions were used as a way of stimulating discussion that would lend itself to a discourse-oriented interpretation. It is important to note, however, that not all the funnel questions were used in all interviews as some participants responded in different ways. This is in keeping with a semi-structured methodology. The semi-structured interview protocol adopted for the study was as follows (see also Appendix D):

Individual Interview Questions for Kindergarten Teachers

The purpose of this interview is to talk to you about your understanding of early childhood development and learning.

Background:

- How did you become interested in teaching?
 - What influenced you to be a teacher? To work with young children?
- Tell me about your study in education.
 - When you studied.
 - Where you studied.
 - What courses you took (Specialized? Why?)
- What is your current teaching position? How did you come to be in this position?
- What is it about early childhood teaching that you like?
- What do you think are the challenges? (Significance of the challenge/s? Why these challenges?)

Practice:

1. How would you describe your early childhood approach regarding working with children to support their development/growth/learning?
 - Where do you think you got your ideas on this?
 - When it comes to describing children's development and early childhood education, what terms are you most familiar with?
 - How do you think you apply these terms in your work?
 - How did you come to understand this approach in relation to children's development?

2. Is there a particular theory or theories that you prefer to apply in your practice/approach?

- What are the main ideas from theory/theories that you think you apply in your teaching?
- Whose/what other ideas are important in your teaching?

3. What approaches do you use to assess or screen children's development?

- Are there any specific tools or instruments you use?
 - How do these tools assist you in your work?
 - Are you the only person to administer these screens or assessments?
 - What supports/resources are in place to assist with screens/assessments?
 - Once an assessment/screen is administered what does this mean for programming for a child or group of children?

Administering the EDI: (See Appendix G: EDI Alberta 2012/13)

4. I'm particularly interested in how you use the EDI. What do you understand to be the purpose of the EDI?

- How many times have you administered the EDI?
- Has your understanding of the EDI changed during over this time? (Only asked if interviewee has extensive experience with administering the EDI).
- How well does the EDI fit with your educational philosophy?
- What understandings of children's development do you think you bring to your use of the EDI?
- What information about children's development do you gain through administering the EDI?
- How do you incorporate this information into your practice?

5. When administering the EDI, are there any particular resources or professional development opportunities that you have accessed?

- If you did participate in PD opportunities specific to the EDI or as a result of your work with collecting EDI:
 - Why did you choose these?
 - Helpful?

6. How did you apply what you learned from these opportunities in your work?

- When it comes to using a tool like the EDI, what supports would you like in place for you?

- What opportunities are there to meet with other kindergarten teachers to discuss your experience or share resources either prior to administering the EDI?
- Do you think you have any gaps in your knowledge about early childhood development and/or any particular approaches that you know about but haven't been able to access fully?

7. Is there anything else you would like to add? Or anything you would like to ask me about the research?

This interview style allowed for perspectives to emerge as participants were able to respond freely, but at the same time keep the interview within the parameters of the research design (Stewart & Cash, 1988). A more open-ended interview technique such as unstructured interviews was considered but this method can lead to a much more diffuse discourse as participants range widely over content areas of their choosing (Minichiello et al., 1992). The semi-structured interview was appropriate in this study because the focus questions were effective in assisting participants to enter into a dialogue about their experiences (Dey, 1993). All interviews were taped and transcribed and ranged in length from one to two hours. Eleven interviews were conducted.

Focus Group

In addition to interviews, another way of generating perspectives used in this study was a focus group (Liamputtong, 2011). The type of discussion generated in a focus group is different to that derived from an interview (Hennink, 2007). For this reason a focus group was used in order to generate another type of discursive frame. In a focus group, the resulting discourse is shaped more by social considerations, as the participants are responding not only to the researcher but also to each other (Puchta, 2004). As such, their responses take into account how they think others will respond as well as having their own responses mediated through social structures such as their sense of their professional standing with other teachers of young children (Carey, 2012). In discourse analysis the primary reason for using a variety of methods to generate texts is to gain further understanding of the research topic by examining the range of discourses on the selected theme (Luke, 1995; Muspratt, Luke, & Freebody, 1997).

In keeping with the qualitative assumptions followed in this study, the interviews and the focus group were seen not as ways of justifying the response of participants. Rather, they were used as methods of generating complementary yet different perspectives, ones which related both to individual personal responses as well

as the responses of a group of dedicated professionals working in early childhood education.

After a review of the data collected from the interviews, the participants were invited to participate in a 90 minute (2x45 minute sessions with a coffee break) focus group with 4–6 peers to explore in further detail the themes identified in the interviews, including several quotes collated from the individual interviews (see Appendix F: Quotes for Focus Group) reflecting the range in discourses being described by the teachers. The following protocol was adopted for use with the focus group:

Focus Group Questions:

1. These are the kinds of things teachers in this study mentioned when I asked them about their approach to early childhood development. The quotes used for question one included statements made by the kindergarten teachers in their interviews. These quotes are attached in Appendix F. What is your response to these statements? What do you consider is important for a kindergarten teacher when planning the learning and development of kindergarten children?
2. These are the kinds of things teachers in this study mentioned when I asked them about their experience of administering the EDI. The quotes used for question one included statements made by the kindergarten teachers in their interviews. These quotes are attached in Appendix F. What are your thoughts about these statements? What do you understand the purpose of the EDI to be?
 - Do you think using the EDI has changed your understanding of early childhood development? If so, how? And why? After you administered the EDI, did you hear of the results? How were the results shared with teachers?
3. What are the challenges and benefits you experienced in your work as a result of administering the EDI?
4. What do you think are the best ways to improve your understanding of early childhood development?
 - Can you share some experiences of professional development that have been helpful?

Approach to Data Analysis

A preliminary analysis involved reviewing the content of the interviews and identified common thematic discourse clusters, using NVivo 10 for Windows (QSR International, 2013) as a way of organizing the data (Ackroyd & Hughes 1992; Berg

1989). When the interviews were compiled through NVivo, keywords were used to establish codes. For instance, initially queries referencing a range of child development terminology were used to establish themes or patterns of use in the descriptions teachers were using when asked about their experiences, including their understanding of development and which terms they were familiar with – including terms like ‘typically’, ‘age appropriate’, and ‘milestones’. Once keywords and repetitions were identified through repeated motifs, dominant patterns, and themes and distinctive grammatical constructions, these were applied to grouping the texts based on Rogoff’s three planes of individual, interpersonal, and institutional analysis.

While NVivo was used initially to identify codes and themes, these patterns were then used to group across the three planes of analysis and cross-matched against the transcripts of all 11 teachers to further explore the use of the texts in the context of the questions that were being asked. Once the identified codes were checked against the transcripts, spontaneous and emergent concepts that were not directly asked as dominant discourses began to be identified for example, ‘emergent learning’, ‘appropriate practice’ and ‘learning through play’. The descriptive language and responses were grouped into themes (Gee, 2011a, p. 161), and the task was further facilitated through the use of the focus questions described earlier.

The purpose of the focus groups was to explore how the personal and interpersonal planes were interconnected with the institutional. By taking the themes of discourse beginning to emerge through individual interviews, a focus on the relationships between the planes was enabled. That is, the use of individual interviews provided a focus on the personal plane of participation considering the role of the individual and their expression of discourse in a particular activity and practice in ECD; then, the focus shifted to the interpersonal (how the teachers interacted around the shared social activity of administering the EDI) and the community/institutional process (how the teachers used the EDI as a cultural tool as they participated with others in the culturally organized activity of administering the EDI).

Using NVivo assisted in identifying themes that were based on terms that I was associating with how teachers would describe children’s development (see Chapter 2), their particular early learning approaches in the classroom, and terms they would be familiar with when describing their understanding and use of the EDI, along with any other screening or assessment tools. In addition to how these terms may or may not have been reflected in the teachers’ descriptions, some patterns did appear as a result of

asking teachers how they would describe their personal philosophy or approach when working with children, meaning some anticipated themes began to be identified, while other unanticipated key words also showed up through the coding process; these included ‘safety’, ‘happiness’, and ‘life-long success’. Based on these patterns, the next step was to take these key words and review the teacher transcripts to identify how these key words were being used by the teachers in the context of how they described their practice and children’s development, as well as their understanding and administration of the EDI.

The comparison across the interviews to determine if key words were being used consistently to form discourse patterns began to demonstrate recognizable discourses attributable to the influences of neo-liberal economics, human capital theory, and child development theories. In addition to recognizable discourses, discourses emerged drawing on teachers’ personal values and ethics as to why they were motivated to teach, what influences they attributed to their practice, and, in particular, their specialization in early learning and kindergarten.

Also evident were descriptions of their understanding of children’s development, and how were these being applied in administering the EDI as well as being applied in their practice on a daily basis. These anticipated and unanticipated discourses are the themes that are presented as findings in Chapters 5, 6, and 7. What constituted a recognizable discourse was broader than first anticipated and formed the basis of contextualizing the meanings both of formal and informal discourses. Rogoff’s (1998) three foci of analysis provided an approach to move beyond studying the teachers’ individual reference framework for children’s development and their experience of administering the EDI to consider how the relationships between the teachers and their colleagues shape what they understand. The major discourse categories identified and discussed in the findings chapters include indicative quotes.

Engaging a focus group of teachers was intentional in order to shift the unit of analysis from the individual to then consider the relationship between the teachers, their cultural tools, and the community in which they administered tools like the EDI. Rogoff (1998) proposes that interactions be analysed without prioritizing or isolating a particular plane from the others, as ‘foregrounding one plane of focus still involves the participation of the backgrounded planes of focus’ (Rogoff, 1995, p. 140). The intent was to demonstrate that these planes are mutual, showing how teachers are involved and participate in a cultural context when engaging with each other around their ideas and

understanding of children's development. This rationale provides the structure for the findings chapters, within which the discursive themes are presented.

Participants in this Study

In a qualitative research paradigm, no set assumptions are made about the participants in a study. There is certainly no assumption in this study that those who were selected are a representative sample of a wider population. Rather, the basis of selection of participants in research was governed by considerations of the research question and design. In this study, participants were invited to take part on the basis of their work with young children, their knowledge and experience with the EDI, and their willingness to talk about their experiences.

The selection criteria for participants were as follows:

- had administered the EDI at least once in the past 2 years as school boards were on a cycle of administering the EDI at least once in a 2 year period;
- currently working with kindergarten children from ages 4 to 6;
- willing to discuss their experiences of working with the EDI.

The selection profile to identify participants who were invited to a group discussion. This resulted in a sample of teachers with direct and recent experience of the EDI. The participants had all administered the EDI in the past 2 years, which considered important so that their experience was recent enough that they would be able to readily explain their understandings. The group included teachers who had administered the EDI more than once, to allow questioning about whether their experiences with the EDI had influenced their practice or changed their understanding of children's development. It could be expected that those with this background had greater experience of the EDI in comparison to a wider range of early childhood teachers.

The outcome of this study that are outlined are more likely to suggest a discourse that is better grounded than one drawn from teachers with less direct experience of the EDI. A comparative study contrasting this target group and other groups of teachers would be a continuation of this research.

Teachers invited to take part in this study were from four school districts – one Catholic school authority and three public school authorities. Two school authorities were in the capital city of the province and the others in two neighbouring regions. As discussed in the first chapter, in Alberta both Catholic and public schools receive full government funding. Aside from a higher proportion of Catholics in Catholic schools, these schools share similar demographics in all other aspects (Rymarz, 2011).

Participants were recruited through approaches made both formally through approaches to school boards as well as through informal networks of kindergarten teachers (See Appendix C: Information Letter; and Appendix E: Notice to Recruit Participants). School boards circulated the research request to their kindergarten teachers, and 2 urban school authorities provided release time for their teachers to participate in individual interviews; one of the 2 school authorities provided release time for their teachers to participate in a focus group.

As well as school authorities circulating the research request, kindergarten teachers that I had met through kindergarten teacher networks, including the Alberta Teacher Association, contacted me directly when they had heard of the research project. These informal networks were formed through professional networks that I had established as a result of my work in the Early Learning Branch of the Ministry of Education. The approaches made to several key early learning and early childhood services directors at the school board level were also shared with kindergarten teachers known to the directors, as a direct result of their interest in ECD research. In total 11 teachers were recruited from both urban and rural school boards through this process (See Appendix A: Consent Form Focus Group; and Appendix B: Consent Form Individual Interview).

The teachers who participated in the individual interviews were also invited to participate in the focus group. However, due to scheduling and classroom commitments, the focus group took place with just four teachers, all from one school district. Consistent with a qualitative methodology, this study makes no assumptions about this sample of teachers being representative. Rather, it privileges the place of an in-depth inquiry, one that can illuminate the research question by a detailed examination of the discourse of early childhood teachers.

Pen Portraits of the Participants

At the time of devising the question format for teachers, and consistent with a constructionist epistemology, I decided that asking the teachers about their education and experience in education was important, in order to highlight the different contexts in which kindergarten teachers are trained and recruited to teach kindergarten in Alberta. As outlined in Chapter One, kindergarten teachers in Alberta are no longer required to hold a relevant specialization in their educational training, nor required to be certificated with a specialization through the Ministry of Education. The pen portraits

that follow provide a contextualization of how the teachers described themselves and their identity and practice as teachers.

When the teachers were asked specific questions about why they chose to teach, what training they undertook, and how they moved into the specialization of working in kindergarten, this socially and culturally constructed educational context took the form of a recognisable discourse. The narratives teachers constructed around their decisions and practices become important when considering how teachers understand and apply this understanding of children's development in their practice and when administering the EDI.

From the biographical information provided by the participants in this study a number of key common characteristics emerge concerning the teachers' experience and influences that determined their decisions around teaching and specialization in kindergarten. These provided a narrative of what teachers have come to understand around children's development and their practice in supporting and educating young children. Participants in this study were the 11 teachers who responded to the recruitment process that was shared with all 62 school authorities in Alberta, in order to provide an opportunity for teachers in both urban and rural schools as well as public, separate (Catholic) and private to respond.

The teachers interviewed here were experienced, had a great love of teaching young children, and were well-qualified for this task. In addition, most were very happy to continue in their role as teachers. These factors have important implications for the analysis of participants' transcripts, as they are indicative of teachers who are well-oriented to their task from a professional and personal perspective. Through their talk their characters and the choices they have made to teach in the kindergarten setting provide significant meaning, including how these meanings are used and their effects on teacher understanding of children's development (Gee, 2011b, p. 90).

Brenda. Brenda had been a teacher with a permanent contract for over thirty years. In that time she had worked part-time when her children were young. She had always worked in the Edmonton area. Brenda grew up in an era where the career choices for women were prescribed. Despite this she had always wanted to be a teacher, albeit one with a particular expertise. To this end, in her teacher training she included a major in special education. When she began teaching, this special expertise became working with young children. She has a total of twenty-one years of experience working

as a kindergarten teacher, most of this being full day kindergarten (FDK). She described herself as being ‘very comfortable’ working with kindergarten-aged children.

Caroline. Caroline had been a primary school teacher for just under twenty years. She had enjoyed her time as a student in schools and, after exploring other options at university, she decided to pursue a career in education because she really enjoyed working with children. Early in her teaching career she had worked with older children but found the restrictions of working within a strict curriculum inhibiting. In contrast, she found that working with students at the entry level years allowed for a greater spontaneity and freedom. In light of this, she has spent the past seven years as a kindergarten teacher. Caroline teaches two different groups: one in the morning and a different group in the afternoon. She very much enjoys working with children of this age and feels very confident in her abilities in this area.

Cathi. Cathi grew up in a neighbouring province and completed a degree in elementary education. She also has a diploma in Early Childhood Development and a specialization in special education. Like other participants in this study her career in schools has been punctuated with some time off when her children were young. Nonetheless, she has maintained a continuous connection with schools for all of these years.

Cathi has had thirty-five years of teaching experience, with the majority of time spent in kindergarten except for five years in other grades. As she draws to the end of her teaching career, Cathi explicitly wanted to spend these years in kindergarten as she regards this experience to be the most rewarding for her as she is able to see real growth in the children she teaches. For the past three years she has taught in the school’s FDK program.

Crystal. Crystal has been teaching for nine years. Reflective of a younger generation, she had a number of career options presented to her but always wanted to be a teacher. Moreover, she always wanted to work with young children, or, as she put it, ‘the younger the better.’ This is because she firmly believes that getting a good start is important in the lives of children and she wants to play a part in this.

Crystal has always worked as a kindergarten teacher, mainly in FDK with some half day programs experience. She has a degree in elementary education along with a specialization in language learning and acquisition. She describes herself as being very satisfied with her career choice and has no plans to move away from kindergarten teaching.

Danielle. Danielle, like many of those interviewed in this study, has a tangible love of teaching which comes across very clearly. For her, this can be traced back to spending summers with her teacher aunt helping her out in her classroom. After a first degree and some work experience in another field, Danielle realized that her first love was teaching and she returned to university and pursued an education degree. She had a specialization in special education, which initially took her to a high school, but over time she realized her dream to work with young children. Mentors have been important to Danielle in her professional life and inspiring teachers have helped her focus on reading and literacy as a key professional concern. She has completed a master's degree in literacy education.

Danielle has been a teacher for sixteen years, the last twelve of these as a kindergarten teacher. She works half time giving her time to spend with her young children. She is very happy with this arrangement and sees herself working as a kindergarten teacher for many years to come.

Denise. Denise has been a teacher for just under thirty years. Like other participants, she displays strong reflective capacities. This was evident when she discussed why she got into teaching. She had initially studied in another area but realized her interests were explicitly in working with children. She was able to articulate that, in her life, what she had done a lot of and what she found satisfying were things like babysitting and teaching children music. From this conclusion, becoming a teacher was an obvious choice.

Denise also found that her great passion was with working with young children and she has done this for close to twenty-five years. The main reason for this was a point made by other participants, namely, that in the early years of elementary school the teacher had a freedom to creatively design a learning context for students that reflected her personality. This was often unavailable with older children. Denise works full time, teaching two separate classes – one in the morning and another in the afternoon.

Grace. Grace, like some of the other participants, did not start out as a kindergarten teacher, but after being exposed to it, 'fell in love with it.' For her, this came about through an experience of working in another part of the school and being involved in a reading buddy program with kindergarten children. This gave her an experience of what she and others have called, 'making a difference' – something that was lacking in her other teaching experiences.

She has been a teacher for twenty-four years and for half of this time she has been a kindergarten teacher. Denise teaches FDK with the same class in the morning and afternoon. She applied for her current position as it was much closer to home and she could spend more time with her children. This pragmatic streak was very evident in many of the participants in this study. A firm image of them that emerges is of very experienced educators who have a love of their work and of children. At the same time, they remain very grounded and aware of their lives outside the classroom.

Kate. Kate's biography is an important one as it has clear portents for the future. Unlike many of the other participants, she is a relatively inexperienced teacher. She has worked in schools for less than five years. Her entry into the profession was different from the older teachers in the study. She is typical of the current generation of teachers who enter the profession after spending some time on 'substitute' lists and only subsequently gaining a permanent position.

Kate is another example of a participant who can reflect on her reasons for being a teacher. A point that has been made in relation to other participants is that she is aware of the amount of time that she spent 'teaching' when she was growing up. This may have been with her brother who did not speak until he was six ('I found I was always teaching him things') or teaching children to swim.

Kate trained as a high school teacher but her experience as a substitute teacher gave her exposure to working with young children in an elementary school and she found that she really loved it. This is a phase that was repeated often by the participants in this study and indicates a preferential desire to work with kindergarten-aged children. She has worked in FDK for two years and says that she thinks she has found her educational niche.

Kim. Kim has been a teacher for fifteen years. Her initial plans were in another profession but she decided to move into education because she was a 'people person.' This preferential choice to be a teacher is a common biographical theme. She entered her education degree on the secondary stream but found that she enjoyed working with younger children more, so changed to the primary stream. Her first job was in a pre-school Head Start program for young children and she decided that working with children of this age was where her passion lay.

She has taught FDK for the past eight years. Kim, in a common refrain, finds what she enjoys about kindergarten teaching is seeing children's growth through the whole year. To describe this, Kim used an expression similar to that used by other

participants: ‘When it happens it’s like seeing a light turned on.’ Because of this, and the excitement that comes with it, Kim says that she is more than happy to remain a kindergarten teacher for the foreseeable future.

Michelle. Michelle has been a teacher for thirty years. Like other participants of this generation in this study, she was aware that when she was deciding on career options the fields available for women were prescribed. This did not trouble her as she always wanted to be a teacher. ‘There’s nothing else I wanted to do, you know. But there was never any question. It was teaching.’

Michelle took an education degree with a major in special education as this seemed to be the best way to get a job in an elementary school. In her teaching career she has taught at all levels in the primary school. She has two different kindergarten classes, one in the morning and the other in the afternoon. She has worked as a kindergarten teacher for the past five years and plans to continue in this area until she retires. What she loves about working in this area is what she describes as, ‘the quickness of the day.’

Stephanie. Like many of the participants in this study, Stephanie traces her interest in teaching back to her earliest memories. ‘Even by the time I went to kindergarten I was asking my teachers, ‘Where do I go and buy these things when I become a teacher?’’ In Stephanie’s education degree she had a specialization in early childhood education and translated this to kindergarten teaching once she had a position in schools. She has been teaching for fifteen years and in all of that time has been a kindergarten teacher.

She has successfully negotiated a teaching position that takes into account her own family and the need for work-life balance. She teaches three days a week and has done so for the past five years. Stephanie shares her position with another teacher who takes up the other two days of the load. She finds this a great solution that she sees continuing well into the future. Stephanie, like the other participants, is very secure and confident in her role as an early childhood educator.

Ethical Considerations

Before turning to a description of the insights shared by these teachers, it is essential to reflect on the ethical complexities of research of this type, particularly given my positioning as a government official within the field under research. The most basic consideration in social science research is to avoid harm (Babbie, 2007). Moving beyond this fundamental assumption involves considering the particular type of

research project that is being undertaken (Berg & Lune, 2012). These concerns are most urgent in research where the vulnerability of those taking part is a major issue (Kershaw, Warburton, Anderson, Hertzman, Irwin, & Forer, 2010; Punch, 2005).

When working with vulnerable groups such as children care must be taken to ensure that no coercion of participants occurs (Bachman & Schutt, 2007). This is especially important when potential participants in a study do not have a strong power relationship when compared to the researcher (Bower & de Gasparis, 1978). In this study, all the participants are adults and empowered by their training and certification as early childhood educators. What is valued in the study is their perspective as an important informant in the practice of early childhood education, especially as it relates to the theory and practise of the EDI. The major ethical considerations in this study arise from the manner in which participants were recruited to the study and how the study was conducted.

In this thesis, the primary interface between the researcher and participants was in the research interviews and focus group. Both of these are well established research tools without major ethical implications, especially when conducted with informed adults (Holstein & Gubrium, 1995; Krueger, 1994; Rubin & Rubin, 2004). In addition, the role of the researcher in this thesis was overt, in an attempt to reduce concerns about how the data were gathered (Marks & Yardley, 2004). In order to proceed with the project, ethics review of the research design was conducted by both the sponsoring university as well as the school board from whom participants were invited to take part. Wynn (2011) has noted that institutional review boards of various types do, overall, give fair and appropriate oversight of research projects and, as such, provide support for ethical research.

In framing the ethical case for this project a number of issues were addressed. It was important to recognize that participants in this study were invited to take part and effort was made to ensure that their voluntary participation was indicative of active rather than passive consent (M. Punch 1994). For active consent to be given a number of important conditions must be met. These include providing all potential participants with sufficient information on which they can make a judgement about the aims, scope, and implications of the study. In this thesis, such information was provided in the form of a letter that accompanied the invitation to participate, along with an offer to explain the research further and provide greater detail if requested.

A second consideration of informed consent is consideration of any implied pressure on participants to take part. This is a consideration when those taking part in the study are doing so because of their expertise, which is often associated with employment in a particular area (Christians, 2008). Those working in medical and allied fields, for example, may feel implicit pressure to take part in studies which examine treatment regimes in their workplace. Failure to take part may be seen as placing patients at risk or undermining workplace efficiency. Participants in this study were invited to take part through local school boards, which are the employing agency. It was made clear to all those invited that this project was one that was extrinsic to the work of the school board. It was to be undertaken by an independent researcher and although the sponsoring school board approved of the study, there was no sense in which participants' involvement or non-involvement would have any consequences for their positions within in the board.

In this study, confidentiality – defined as the active attempt to remove from research records any element that might indicate the subjects' identities – was ensured as far as possible (Berg & Lune, 2004 p. 57). In the presentation of the data, no participant is identified by their real name, nor are the agencies that approved the study. As standard procedure, participants were informed of the right to remove themselves and their data from the study at any time. If participants had any concerns about the conduct of the research they were provided with contact details of the principal investigator, Associate Professor Joce Nuttall (Faculty of Education and Arts, Australian Catholic University), who would assist them with their concerns. Ethics review was completed in 2012 (HREC number 2012-269V). These measures provided further confirmation of the voluntary nature of participation in this research.

Chapter Summary

Wittgenstein (2009) referenced discourses as 'forms of life,' (p. 15), and as pervasive ways of understanding and experiencing the world that can be used to assert power and knowledge as well as for purposes of resistance and critique. Discourse is shaped by social and cultural factors, and cannot be understood without taking into account human activity, with the nature of this activity including how knowledge is co-constructed and shared (Gee, 2011a; Wittgenstein, 2009). Bringing discourse analysis and sociocultural theory together to frame a method and analysis was considered the most appropriate approach to the research question for this study. That is, asking teachers to describe their approach to development, learning, and early childhood

programming for kindergarten children in to the context of administering the EDI is a valid approach to explore how teachers co-construct and create ways of thinking, including their understandings, social practices, and the tools they engage with to mediate these meanings.

Luke (1997) proposes that DA provides an approach that reflects an interdisciplinary approach including a ‘flexible metalanguage’ that is used in sociological analysis of texts, and has at least three interconnected implications in the study of education. According to Luke (1997) using discourse analysis as a research approach based on recognizing language and discourse as a dense way of studying the world, which challenges how researchers approach their research including their own use of discourse in the design of their inquiry. Setting out to re-theorise educational practice, DA provides ‘a new set of methodological techniques, and marks out the grounds for rethinking pedagogical practices and outcomes as discourse’ (Luke, 1997, section 5, para. 3). Metaphors have become increasingly popular ways to describe a conceptual framework (O’Neil & Kendall-Taylor, 2014) used in educational theory and practice to describe the potential of the child, industrialization, the rationalist individual and, in more recent times, the digital age (Luke, 1997). In a similar way the spoken word, the discourses and the narratives of the early learning teachers in this study provide a source from which discourse analysis can occur.

As discussed in earlier chapters, child development has been built on diverse theories and these have formed a complex theoretical foundation from which practitioners working with the EDI draw their conceptual understandings. Much of this foundational understanding is contested (Anning, Cullin & Flear 2004; Bereiter, 2002; Berk, 2006; Flear 1995; Hedegaard & Chaiklin, 2005; Littlefield-Cook, Cook, Berk, & Bee 2005).

In light of the complexity of the topic under investigation in this thesis discourse analysis, based on the spoken word of the participants, is an appropriate approach because discourse analysis allows the researcher to situate how the practitioners’ understanding of child development shapes their interpretation and use of the EDI. Having presented the rationale for discourse analysis and the methods described in this chapter, the thesis now turns to a series of chapters which set out the empirical component of this thesis. By drawing on interviews and focus groups, the discourses of participants – the teachers who work with young children and who use and administer the EDI – the findings of this study will be described.

Chapter 5: How Teachers Access Dominant Discourses of Child Development

This chapter discusses how teachers described children's development, including the difficulty they encountered in describing which particular pedagogical approach they applied in their classroom practice. The aim of this chapter is to trace the theoretical underpinnings relating to the participants' understandings of children's development when administering the EDI. The extent of this analysis incorporates three prominent discourses: ECD in relation to the EDI, teacher practice in relation to understanding ECD, and children and society.

This chapter presents three main claims: The first relates to how socio-cultural theoretical understandings underpin teacher knowledge; secondly, how human activities are connected to the social context in which they occur; and, thirdly, how and where they specifically occur through the practice of early childhood practitioners. Discourse analysis is therefore used in the next three chapters to examine the socio-cultural influences on how kindergarten teachers understand children's development when using the EDI, in particular how kindergarten teachers account for their current understandings and practices when administering the EDI. Discourse Analysis (Gee, 2011b) provides a framework to analysis how language is engaged to 'enacts activities, perspectives and identities' (p. 4).

In setting the context for the next three chapters it is important to describe the context for how the participants viewed the educational setting and the potential challenges in their work. This is in part to determine a social backdrop against which teachers' current roles and responsibilities might be understood, including providing a broader context for the meanings teachers provided when asked about their understanding of children's development.

As explained in Chapter 4, to achieve this I interviewed 11 kindergarten teachers who worked across either public or Catholic school boards, and with either urban or rural experiences. The kindergarten teachers were either working in 475 hour per year programs (half day kindergarten), job sharing with another kindergarten teacher to offer full day kindergarten, or they were themselves teaching full-day kindergarten.

A key consideration in Chapter 5 is the discourse of development for the kindergarten teachers participating in this study and the way this revealed a discourse of development and children with disabilities. I argue that the reference frame for teachers is the requirement to use standardized screening and assessment and that this shapes

teachers' understanding of children's development within a developmental discourse. That is, what is 'typical' and 'normal' is evident as a dominant discourse.

The EDI is considered as 'the first uniform systematic method for measuring whether a community's children are prepared to learn and succeed in their first years of schooling' (Janus, Brinkman, et al., 2007, p. vi). Based on this 'systematic method' the reliability of the data collected is dependent on practitioners being familiar with the range of appropriate child behaviour and skills within an early learning setting. Their understanding 'provides reliable and meaningful information' (Janus & Offord, 2007, p. vi).

This premise is important when considering that the teachers interviewed in this study struggled to describe their understanding of children's development in the context of administering a tool that 'provides reliable and meaningful information.' This finding calls into question assumptions being made that kindergarten teachers and early childhood practitioners have a familiarity of the range of 'appropriate' children's behaviour that can be clearly described.

In the first half of this chapter experienced difficulty in the interview situation. I will argue that the following four themes emerged, each of which is discussed in this chapter, as a result of asking teachers to describe their understanding of children's development:

- When the teachers were asked about their understanding of children's development, teachers struggled to explain children's development, including a lack of terminology to describe early childhood concepts and children's development
- The teachers resorted to positioning themselves flexibly within the available dominant discourses through the use of pronouns, including 'I' and 'we'
- The teachers principally constructed a discourse of normal development by drawing on their experience of screening children for atypical development
- This narrow discursive range was confirmed when asking the teachers about the theoretical underpinnings of their understandings of child development

I found that I had to spontaneously vary the semi-structured interviews to assist teachers to identify any terms that they might be familiar with, for instance, when teachers were asked the question, 'When it comes to describing children's development and early childhood education ... what terms are you most familiar with?' At this stage I was seeking to identify similarities and differences between particular terms and

references attributed to development, yet it appeared difficult for the teachers to describe or provide even a loose definition. An important finding as a result of undertaking the interviews is that the teachers did not readily access a discourse of ‘child development’ and that I needed to provide them with prompts and examples to facilitate a discussion.

As language is not external to society but a part of it (Gee & Green, 1998), I also paid attention to when practitioners began to reference their actions through the use of the pronouns ‘I’ and ‘we’. I found that the teachers started to move to personal pronouns as the interviews progressed. I also began to notice that the use of ‘I’ and ‘we’ was a way of teachers locating themselves in the discourse and, at times, the use of pronouns also became a way of teachers locating themselves in the situation of being interviewed, as the self-reflector (Bowers & Schatzman, 2009). For instance, teachers’ confidence in describing an understanding of development was stronger when using the pronoun ‘we’ with reference to either their teaching colleagues or respective authority – i.e., either the school district or collective of teachers – as opposed to their own view, or ‘I’, when describing understandings of development.

In the second half of the chapter I turn to the question of what these findings might mean for the teachers’ implementation of the EDI. I describe their responses to questions about the EDI and show how these responses confirm to role of the local school authority in constructing the range and nature of the discourses made available to the teachers. I turn now to the evidence for the claims I have outlined in this opening section.

The Struggle to Locate Discourses of Child Development in the Teachers’ Talk

The first theme as mentioned has been described in terms of an absence of concepts and descriptions to explain children’s development. This is understood in terms of the struggle for terminology teachers experienced when asked questions to describe theories or theorists of children’s development. When asked about her specific approach to early childhood teaching, Caroline shifted between the use of ‘I’ and ‘we’ in describing her approach, saying,

[in a] few ways, *I think* it’s trying to use developmentally appropriate practice, so working at the level that the children are at and moving them forward. *We use*, in our district *we have* a Reggio inspired approach, so there’s a lot of belief that the child is a capable learner and has a lot of information already when they come to school, and *it’s our task* to find out where they’re at and *how can we*

further provoke their imagination in their learning. (Caroline, interview lines 71–78; emphasis added)

For those with less confidence in describing their understanding, a series of prompting questions were required, including; ‘If you have to describe children’s development, what are the terms you are most familiar with?’ ‘How do you go about describing children’s development? I’ll ask another question and we can come back to that’. Teacher responses ranged across descriptors to qualify what they were attempting to describe. For instance, while Caroline, distinguished between her understanding and that of an approach being implemented through her school authority, other teachers interviewed added qualifying descriptors to their understanding. Descriptions included ‘I think’ (Caroline), ‘I think’ (Kim) and ‘I’m struggling’ (Grace), and ‘I try’ (Stephanie), and were offered as qualifiers when teachers were being prompted to describe their approach and their understanding of children’s development.

It was also evident through the teachers’ descriptions, when they were asked initially about how they would describe their approach to early childhood teaching, of how many potential meanings around children’s development is constructed were taken for granted (Marston 2004). One of the more telling encounters in relation to this claim was my interview with Grace. Grace identified the challenges she encountered in the classroom:

the children I usually get have never been to play school; have never been in any programs. They know nothing, academically they have never usually held a pencil in their hand or scissors in their hand; they can’t recognize their name or numbers or letters or anything. School wise they don’t even know what a line-up is, they don’t know how to go in line-up is. (Grace, interview lines 48–52)

Once Grace established what she expects of children’s social and academic ability, her description of her approach demonstrates how her constructed meanings of children’s development were based on the challenges she encounters in the classroom. As a member of a professional network with the purpose of considering early learning practices when working with the ‘same kind of social economic group of families throughout the whole school’ (interview lines 131–132), Grace sets out to reconcile the meanings taken for granted when considering the social and economic situation of children and their families, and what this might mean in terms of developmental expectations and outcomes, with particular focus on her approach to children’s learning.

We're talking about the Play book by Stuart Brown and we started that this year, but yet our professional learning is about understanding backwards design. So I'm looking at those two things and going 'They don't really complement each other', that's what I'm struggling with personally right now, it's let them play and let them explore but yet have your unit plan and have this task at the end. So I've been asking other people, I know how I teach but I don't where it is in that continuum and a lot of people have told me I do a bit of both. (Grace, interview lines 134–140)

My interviews were structured to provide the participating teachers with an opportunity to talk about their background, including how they became interested in teaching, particularly in ECD. When moving onto the questions around child development, the approach I took was to ask how they thought their practice reflected the decision they had made to teach in kindergarten and the challenges they encountered in kindergarten.

The initial responses ranged across: 'I need to think about that a little bit. Just to describe development?' (Kat, interview line 108); 'Ok, I don't know what you mean by that' (Michelle, interview line 123); and 'Child-centred, is that the type of thing you're looking for?' (Denise, interview line 175). I interpreted these initial responses as meaning they were not only seeking clarification around the question, but seeking reassurance or deferring to my role as interviewer. I felt it was important to offer reassurance without being suggestive of how they might shape their responses to my questions. I aimed to allow for time for them to think about the question, as well as indicating at times that we could come back to the question and move on to other interview questions. When Denise was asked the question about terminology and children's development, her answer was typical of the clarification that the teachers sought through the interview process. I felt it was important to provide clarification, so I often provided this through further probing questions:

Jennifer: Yes, so describing children's development and education, what are the terms you are most familiar with?

A: I'm not sure what you're asking.

Jennifer: So for instance when you look at a child's development and early childhood education, what are some of the terms that come to mind that you would use to describe that – you associate with development and education?

A: So you're talking about like learning through play?

A: <laughs> Yeah, Education, so you learn through play, then it would be child education, developmentally appropriate planning.

Jennifer: What do you mean by developmentally appropriate?

A: That I'm not having a 4 year old doing complex worksheets, sitting for very long, not being able to interact and talk with others, that sort of thing. (Denise interview, lines 176–188)

I was particularly interested in these initial responses to the situation we found ourselves in, as interviewer and interviewee, as it became apparent to me that the participants were deferring to me to expand or *define for them* a collective understanding of children's development. I was also mindful of my own role in determining or influencing how they might respond to this. Often my own clarifying questions were an attempt to divert the question and the thinking back to the interviewee including, for instance, the prompt to 'think about it, I'll ask you another question', or 'when talking about children's development, what terms are familiar that people would use to describe their development?' Kat was the least confident in her responses, and relied on aligning her understanding of children's development to an external authority to construct meaning of how children learn to provide context:

A: I need to think about that a little bit. Just to describe their development?

A: Okay, we'll come back to that, I've got think about that one.

Jennifer: How do you think you apply then these terms and that sponge term that you just used, how do you think you apply this in your work?

A: Well, there is a curriculum that we follow so there is things we need to teach the kids, but we do a lot of number work, a lot of literacy, a lot of alphabet work, and the kids just love to read and you get them excited about their reading, we're climbing the mountain, at the end they get to pick any book from the book order and I'd buy this book for them as their prize and they're just so excited to get up that extra step to get that different book, to get that other level, and I think just having a wide variety of centres and activities just to stimulate the kids and get them motivated to want to come to school and want to learn. (Kat interview, lines 108–123)

The interview setting became more important as the interviews progressed, as the teachers would often refer to or defer to an external authority or context to assist them in explaining their understandings. Brenda's interview demonstrates this search for reassurance as she questions me about what it is that I'm seeking in her response:

So are you looking for a theory? ... I am a wide reader and I am a wide believer in things like 'hands on' learning, so I believe that much of what I have to do should be 'hands on' and should be stuff that the children can do manipulating things involving as many senses as they possibly can. (Brenda, interview lines 140–144)

I interpreted these types of answers to reveal a lack of confidence in articulating an understanding, in their responses to the question on development, because their responses were typically formulated as another question, such as, 'Meaning what? You mean in terms of fine motor, gross motor, those kind of things?' (Cathi, interview line 257); 'Terms to describe them? Like where they're at?' (Crystal, interview line 121); and 'Development. Gosh. Well, there is the intellectual and the physical realm, the emotional, social, so those four basic areas we try and cover and reach every day.' (Stephanie, interview lines 103–104).

This apparent lack of confidence was also demonstrated through the types of responses eventually given to the question. For instance, Michelle responded, when asked for a clarification on which terms she was familiar with reference to children's development:

In terms of report cards, I guess I could think of that. I know we have three marks on our report cards and on our educational outcomes that come from the government. We look at are the kids doing that outcome independently ... Are they needing some prompting to get going or to understand the concept – that's SM, that means minimal prompting. SD means do I basically have to do it for them or with them for the whole concept ... So I think I keep that in the back of my mind I guess. You know, are they very independent in their outcomes or are they requiring lots of support from me or the other EAs, so I think that's what I look at. (Michelle, interview lines 125–133)

Likewise, Kim and Danielle responded with less confidence and seemed to be seeking approval for the type of response I was looking for in regard to their understanding of development and approaches they might either be aware of or be using:

I'm not sure Like in terms of like their emergent learning? Emergent learning and development with appropriate practice so what they're capable of doing and where they will need to be going in terms of that developmentally appropriate, a

bit more of development and choosing activities that are selected to meet their development at that stage. (Kim, interview lines 101–106)

Well I think that when children meet their milestones it has to do with their development as well. So if they're getting all of the basic needs like if they're getting, you know, if their physical and emotional and all of those needs are met then they're more capable of being successful in their education. (Kim, interview lines 140–143)

well learning, first where is the child at? Where do they need to go and what they already know. We always do this little interview at the beginning of the year of what they are all their favourites, what have you ever done, where have you ever been, what have you experiences and then build from there. (Danielle, interview lines 169–172)

The Discursive Shift from 'I' to 'We'

However, for those teachers who requested clarification and then went on to explain their understanding of development, I noted that a shift tended to occur in their explanation of development. Caroline, for example, when I posed the question to clarify that she understood what was being asked, expressed her understanding with reference to the ways in which children's development is constructed through her school authority's definitions of children's developmental milestones:

So describing development? Well in our district we use typically developing, for children who are within say the normal range of development. Then we use terms like moderate or mild delay, we speak specifically about speech and language, expressive and receptive, articulation of phonological. We refer to socially appropriate behaviour, social skills, development, we look at their motor development, so we look at gross and fine motor, cognitive development. (Caroline, interview lines 119–124).

I argue that, by being situated in the broader teaching context of her school district's authority and leadership in ECE, the practice of screening and assessment undertaken by Caroline reinforces an established discourse of development and therefore heavily influences her practices in the classroom setting.

Caroline's interview captures this in the way she reverts to the collective pronoun of 'we'. This locates her understanding of children's development in the

experience and approach implemented by her school authority through a discourse of 'typically developing'. Once the teachers expanded on their understandings in response to probing questions, their constructed meanings for children's development began to take form through how they made sense of their experience. For example, Caroline's experience becomes significant as she describes children's development through a typically developing discourse focusing on children's characteristics and the developmental skills expected to be demonstrated, including the developmental milestones to be reached, by children.

When Kat was asked about development her response initially indicated the 'need to think about' (line 108) how she would describe children's development; and her initial response was, 'They're almost like sponges in a way, they take all this information in and they're process and they give it to you, so it's a lot of growth ... I've got think about that one' (Kat interview, line 110–114). After her initial response, Kat sought to describe her understanding of development with reference to both the school authority as well as her observations of interactions between classroom teachers' aides and children. Her description of her understanding was influenced by this, but also highlighted a tension in how she would then describe her approach to children's learning:

Because a lot of Reggio is not basically paper/pencil, it's not saying here's a sheet of W's practise your W's, now I do that, which we're not supposed to, but what I do with it as well is I teach the kids how to draw, well, let's make a worm, this is how we draw a worm, but your worm can have big eyes, your worm can have little eyes, it can be close together far apart, so that makes the differences and uniqueness, so it's not really you have to make it this way, you have to make it perfect, it has to be like mine, everybody has to be the same. So it does give a little bit of a chance for kids to be creative and to explore as well. The Reggio philosophy, basically its working with what the child's interested in and having them bring out that creativity' (lines 137–145).

Kat's understanding of children's development reflects a dominant discourse of 'typically developing' that is influenced by the observations she describes of the interactions between more experienced teachers' aides in her classroom and with what she describes as her understanding and practice:

So, like creativity, there's just so much that they have, and just some things that they say, like their discussion and the words that they use just shock you, you

just go wow, I didn't know you knew that but you know that. So they're very creative and they can be independent and you work on that at the beginning as well and I do the oh, poor Miss K, 20 jackets to zip up and it's amazing how 15 kids all of a sudden, look, I can zip up my jacket by myself. So, they're very, how do you say that, think of the word, ingenuity I guess they have, kids are very smart. (Kat interview, lines 162–168)

The same analysis was identified when teachers were asked about the main ideas from theory or theories that they understood themselves as applying in their teaching, including any ideas or theories that they considered important. For example, Stephanie was a teacher who shifted between her use of the personal pronoun of 'I' and the collective pronoun 'we' when describing how she understood children's development. Similarly, when describing theories or ideas they considered important, the shift between 'I' and 'we' was evident:

Jennifer: And how do you think you apply these terms in your work?

A: *We* talk about feelings. *We* talk about feelings on the inside, how are you feeling on the outside. Giving them self-confidence and building up their self-esteem for the social and emotional part. *I'm* kind of stumped there. *I think I* do it.

Jennifer: How do you – how did you come to understand this approach, you talked about those four domains, how did you come to understand this in relation to children's development?

A: *I mean*, university taught *me* a lot of that stuff but even just as a child growing up, *you* remember who made *you feel* what, who built up your esteem and maybe who broke it down, and that's part of schooling. But probably going to university *I* learned a lot about why *we need* to touch on each of these four fields, and of course there's nothing like getting into the real world and *teaching your* first class and making sure that *you touch* on all of those four aspects.

Jennifer: Why do you think – in terms of that point about the why?

A: To develop the whole child. To develop every single part of them as best *we* can as educators. (Stephanie interview, lines 109–120, emphasis added)

The distinction was soon evident between theories they understood themselves to be applying and those ideas or theories they considered important but not necessarily applying to their practice, or attempting to determine how this was to be applied to their

practice. I now expand on this claim, beginning with the teachers' access to discourses of 'typical' development.

The Influence of Available Discourses of 'Atypical' Development and 'Screening'

In the ECE cultural context for Alberta there is a strong emphasis placed on determining what is typical and expected of children's development, and how best to structure practice to support this.

The purpose and importance of screening and assessment cannot be underestimated in relation to the role of the school authority in the North American context, where local school authorities have oversight for the education within a local community, and policy requirements for screening and assessing children are closely connected with the purposes of securing government funding for children to access ECS programming.

This was evident as a significant distinction for the teachers interviewed as part of this research, given that all these teachers, when asked about their use of assessments and screening tools, were able to articulate a clear intent and purpose for these, both based in practice and often beyond meeting the policy requirements (e.g., to secure funding for children with disabilities or delays). To better understand this, and as outlined in Chapter 3, the context of formal and informal theories is important in understanding what professionals *say* about their views and values - espoused theories; and theories that are consistent with what they *do* – theories-in-use (Argyris, C., & Schon, D. A., 1974; Eraut, M., 2000; Nolan, A., & Raban, B., 2015).

The use of both formal and informal understandings of children's developments that teachers apply when using standardized screens and assessment tools (including the EDI and its competitors, the Ages & Stages Questionnaires®: Social-Emotional (ASQ:SE) (Squires, Bricker, & Twombly, 2002) and the Early Years Evaluation (EYE) (Willms & Beswick, 2002) takes on considerable significance in relation to what is being measured when teachers undertake to administer such tools.

This was evident when Kat was asked about the process of assessment and screening, including what this would mean for her programming either for a child or group of children, drew on a dominant discourse of children's developmentally appropriate practice:

It just kind of says what kind of activities we need to do if there's a lot of kids struggling in their fine motor and their cutting skills, then we might focus a lot more on cutting activities, I might have a lot more cutting activities available in

the centres. If it shows that there's some kids with speech articulation difficulties we might pull them out one-on-one just to work on that speech or pull them out with a group and play a game and work on those speech activities or we might just put, in the sand, we might put those S letter sounds in that sand box so that we can play with the kids at the sand, oh, look I've found a shell, oh, look, there's a shovel, there's a skate, and then the kids can model that back to us. We do use a lot of peer modelling, look how so-and so's sitting, look how they're playing nicely with their friends. It shows where we kind of have to go, do we have to have more of this or less of this, where do we need to focus our instruction and teaching on, and that focuses a lot on the centres too, how do I set up the centres. (Kat, interview lines 245–257)

That suggested to me that, while the teachers are administering the EDI as a measure of how children are developing, they are also administering screens and assessments to identify children on a continuum of disability/delay (either diagnosed or assessed) from mild/moderate to severe within the same time period. The distinction between the two processes is, however, important. The focus of the EDI is on measuring a particular population of children, *excluding those already coded through assessments and screens*, and the purpose of these tools is to identify eligible children for funding to support additional programming.

However, I argue that a conflation of these two purposes was occurring, mobilized through a discourse of 'typical development'. The familiarity the teachers are required to have with screening and assessment establishes a discourse of typical development that then forms the basis for programming and, could be argued, sets the course for how teachers will in turn administer a population-level tool in interpreting children's development.

There was a notable absence in the teachers' transcripts of a vocabulary for child development beyond coding and formally assessing children. This extended to a silence around children who have been assessed and identified as being on a continuum of disability/delay, as well as English Language Learners. This is not to say that the teachers did not make any reference to these groups; the important point, however, is that when the teachers did refer to these children, they accessed alternative discourses to that of child development. These included less formal or more generalised descriptions of provision for these children, including: the work of multi-disciplinary teams; the role of aides; the role of parents in supporting programming. Brenda, in her interview,

summarized the way in which she had been enculturated into a discourse of ‘typical’ development through in-service activities:

I loved someone being able to come and say to me ‘you know, so here are the realities about fine motor for kids this age. Here is what you need to know about speech or language or gross motor’ and things like that, so all of these resources were available to me and I was able to use those people resources and ideas and adapt them to something that worked for me. I still am able to do that, at the beginning they used to offer lots of in-services after school; I went to every single one. I went to everything that they offered to talk about, how to make sure that you had great experiences for your children to encourage the development of all of these different little areas. (Brenda, interview lines 209–217)

In summary, I argue that the dominance of a discourse of typical development in relation to administering the EDI is evidence of a *parallel dominant discourse* of ‘atypical’ development, promoted through the application and use of assessments and screening tools, which have become widely used by educators and practitioners to determine or chart children’s progress. One of the advantages of standardized assessments and screens is that the results can be used to compare children to developmental norms or to other children in similar settings or age ranges. However, as identified in Chapter 3, the EDI has been established as a significant and powerful data collection tool to determine how well children *as a population* are developing. In an educational context where screening and assessment have become determinants for how funding is administered and for access to ECD programming for children, it appears that critical attention needs to be paid to *which* understandings of children’s development might be applied when a teacher administers screens and tools, and how these instruments, as powerfully mediating cultural tools, themselves shape these understandings. This concern leads back to the key question underpinning this study: that of the discourses and understandings teachers then access when administering the EDI.

Discourses of Development in the Context of Child Development Theory

In questioning the teachers about their understandings of child development, I was particularly interested in which bodies of theory they were drawing upon. Theories of child development drawn from developmental psychology typically aim to describe the process of a child’s growth and change. Such theories are often defined in relation to

moving through a continuum of age-appropriate ‘ages and stages’ or ‘milestones’ and these principles were indeed mentioned by the teachers: ‘the fact that much of what, you know, all of those synapses and things like that have already formed by the time they are certain ages and things like that, why it is important we have this information about early learning and how it will impact future learning’ (Brenda, interview lines 877 – 891); ‘I’m thinking things like awareness of milestones. When kids are typically reaching some of the things’ (Crystal, interview lines 355–356). Dahlberg, Moss, and Pence (1999) contend that the impact of developmental theories in the early childhood field can’t be underestimated: ‘Developmental psychology can be seen as a discourse which not only contributes to the construction of our images of children and our understanding of children’s needs, but also to the construction and constitution of the whole childhood landscape’ (Pence, 1999, p. 36).

I have argued so far that these psychologically-based discourses dominated the participating teachers’ responses to questions about what informed their use of the EDI, in large part because they were drawing on dominant discourses of ‘typical’ development reinforced through their use of screening assessments. However, other influential theories, including newer understandings about children’s learning through active participation in social activities, were also reflected at different stages of the teachers’ interviews, even though the teachers’ vocabulary for describing such theories was not always explicit in their interviews.

For example, when Brenda reflected on the ideas or theories that may have influenced her approach, she said,

I do not remember names of people very well, so if you are looking for me to remember Piaget and all of those guys I am sorry, I have no idea. But I can tell you that enquiry is the way to go. I believe those rich questions, the rich ability to look at something and not just accept it, the idea that children are in charge of their own learning, I think it valuable. (Brenda, interview lines 418–422)

In her next description, of how she understood theories in relation to her practice, her response was more grounded in her experiences within the classroom setting:

I have to make sure I address all of those different intelligences; I have to make sure that I provide tools that support all of the children and include all of the children. To make sure I choose ideas that will be inclusive for all of the children, to make sure that everything is accessible to all of the children and that

they are all able to participate or enjoy or manipulate or whatever. So I think those are probably the biggest, I think theories that I believe in. I do a lot of kind of that old school behaviour management stuff so lots and lots of, if I see you sitting the wrong way, I won't say anything to you but I will say 'oh my gosh, look at you Jonathan sitting with your legs crossed and your hands in your lap, not poking anyone. You are just ready for Grade 1.' I believe in those kinds of things, but I couldn't tell you what the theory is, and I am not good at that. I am very confident in what I believe though and I am very skilled in using things that work for me and work for the kids. Is that enough theory for you? (Brenda, interview lines 431- 443)

Brenda's reference to 'I' again, locates her within practices relying more on knowledge acquired through experience and demonstrates how personal epistemological beliefs can have an impact on how teachers see their role as educators as well as how they interact with children (Brownlee & Berthelsen, 2004; Brownlee, Boulton-Lewis, & Berthelsen, 2008; Kowalski, 2001).

We are given an insight into how Brenda has engaged in a process that shapes theory through her 'I think theories that I believe in' in contrast to her 'I couldn't tell you what theory is.' Her theory centres on what she believes is her role, which is to 'make all of my children successful so how do I have to do that?' (Brenda, interview lines 441–443).

Because Brenda had referenced Piaget earlier in her description, I probed again on this, at which point her comments shifted to a variety of curriculum tools to facilitate her theory of development and locating how they are important for children:

A: Oh you know, I am not, I am just not good at those things and I just, I don't but, you know, you want me to tell you some specific tools that I use in my classroom, so I do use things like 'Writing Without Tears.' I think that that whole idea of manipulating letters and having the physical movement is really valuable. We put that into using Sticky Wickies in making our letters and making our people and stuff like that. Do you use things like H is alphabet to help us guide our letter formations and things like that. (Brenda, interview lines 445–450)

I understood Brenda's description of 'valuable' learning to be invoking a discourse of school readiness, so I asked:

Jennifer: You use the word valuable, why is it valuable?

A: I think it is valuable because it hits the children where they are right now, so to give you an example, when I first started doing kindergarten we never taught the children how to print properly that was a Grade 1 activity. Unfortunately, now the kids are coming to school with so many experiences holding pencils and holding felt pens and drawing and colouring and printing that they are already coming with bad habits, so you know, we need to kind of work on some of those. Holding the pencil properly or orienting your paper properly and things like that, so that those kids can start them early enough. (Interview lines 451–459)

While Brenda did not explicitly link Piaget and development, even when prompted, some teachers were able to recall certain theorists by name. These were not necessarily in the context of discussing development, and they did not necessarily invoke Piaget. In Danielle's case, the influence shaping her understanding was identified as being professional development opportunities, in particular a 'leadership course' where her former ideas of development aligned to classroom tasks were challenged. For example, she talked about how the collective profession, 'we', would have at one time argued that the idea that children 'are capable, that they need to have lines on the page' (Danielle, interview lines 252–256), was being reconsidered in how she would now 'argue' for their need to have 'a blank page and then just show us where they can go and start. I think I'm not into a lot of theory but the majority of, I'm trying to think, we were just giggling about this the other day, someone that's all Piaget and I'm like no, not me' (Danielle, interview lines 252–259). Her uncertainty around her preferred theory for children's development with specific reference to Piaget ('yeah, I am but I'm not,' line 261) was perhaps therefore due to the impact of recent professional development. Such opportunities typically include influences on practice determined in advance by school districts, with the aim of providing the basis for how teachers engage with theories and explore their beliefs and values in relation to children's development.

Recalling Kim's response to being asked about her development, her response indicated that she identified her understanding within an economic and industrialized discourse using descriptors associated with neoliberalism influences and human capital theory (Dahlberg, Moss & Pence, 2007; Kascak & Pupala, 2013; Simpson, Lumsden, & Clark, 2015; Mahon, 2010; UNICEF, 2006). Kim identifies the educational needs of children with descriptors associated with a neoliberalism and human capital discourse as

she describes the context for learning in ‘making sure that they [children] are prepared ... to be employed in the 21st century, and that they have those skills’ as well as the need to ‘keep them interested in being a lifelong learner’ (Kim, interview lines 125–129). This is a newer but readily identifiable discourse, of the ‘21st century learner’, and links strongly to human capital theory. Kim attributes a child’s development to ‘milestones’, and to ensuring that children are ‘getting all of the basic needs, like if they’re getting, you know, if their physical and emotional and all of those needs are met then they’re more capable of being successful in their education.’ (Kim, interview lines 140–143).

In summary, I have argued so far that when asked to identify the concepts or theories underpinning their practice, the teachers participating in this study drew powerfully on discourses of ‘typical’ development. However, there were other, less dominant, discourses also evident in their responses, including links to issues such as school readiness and the work of specific theorists. In the second part of this chapter I turn to the teachers’ responses when asked specifically about their administration of the EDI. This was a deliberate move in the interviews, in an attempt to make sense of the relationship between the teachers’ understandings of child development and their administration of the Instrument.

Administering the EDI

This next section considers the implications of administering the EDI within discourses determined, as I have argued in the first half of this chapter, by tools designed to screen for atypical development. I argue such discursive practices may have far reaching consequences when conflated within a population data set that will be used by government policy makers to determine ECD strategies that target improving the outcomes for *all* children prior to entry to school.

Amongst the teachers that were interviewed, two teachers (Kat and Stephanie) had only one experience of administering the EDI, but were experienced in administering the EYE along with other screening tools. One teacher (Grace) had extensive experience with administering the EDI (four times) as she had been involved in pilots and early implementation of the EDI. Grace had also extensive experience in administering screening tools including the EYE.

The remaining eight teachers had each administered the EDI on two occasions, over the span of the previous 2 years, with all eight also being experienced with screening tools, including five who had experience in administering the EYE.

Each of the participating teachers was working in a professional context where access to multi-disciplinary teams was available, including teacher aides, to assist in providing early interventions for children identified with mild to severe disabilities or developmental delays. Furthermore, the population of children being identified through the use of screens and formal assessments are not included in the EDI data, nor are they included in the data profiles created for community coalitions (Government of Alberta, 2010; Government of Alberta, 2011a).

This raises two contradictions. First, as already argued, there is a tension inherent in teachers interpreting the EDI in relation to atypical development. Second, the absence of the significant number of children with disabilities or developmental delays from a population data tool used for government planning and policy development, as well as being used as a community mobilization tool to promote the importance of the early years, poses some critical questions when asking teachers about how they bring an understanding of child development to their administration of the EDI. I turn now to the teachers' responses when asked about this relationship.

It was immediately evident that identifying development with 'milestones', 'benchmarks', 'domains', a 'range of areas', and 'normal busy' contributed to the teachers' understandings about their practice of administering the EDI. But this was strongly supplemented by a focus on children's development in relation to education and how children perform:

Well we know developmentally, most 5-year-olds typically do not read complex words, yet. So, I would know that. Identify ten letters, yeah that's much more of a, you know. So, you have to kind of know what the typical development is, and then of course there's continual after that. (Denise, interview lines 470–476).

Well, you know what's normal and what is not. So for example, where it [the EDI] says 'is independent in washroom habits most of the time'. Well, in kindergarten we would expect that. So, it really – you just use what you think as a teacher, parent, educator, what's normal and what's not normal, I guess.

(Stephanie, interview lines 268–271).

For Stephanie and Denise their responses are phrased in terms of qualifying their practice in administering the EDI by deferring to a collective understanding of children's development – almost a 'given' – of what is expected. This is captured by 'we know' (Denise, interview line 472) and 'you know' (Stephanie, interview line 534), as they explained what they applied in their practice. Teacher perspectives on children's

development, in this context of practice and the EDI, identifies a discourse where the emphasis is on the stages of children's development, including developmental milestones, and how the process of administering the EDI provokes teachers to reflect on the ways in which their practice is constructed (Brownlee & Berthelsen, 2004).

For Brenda, her 'need' was to 'look at their average, so I need to understand the development of children and where they should be at this time' (Brenda, interview lines 782–783). Kim, identified with knowing about 'benchmarks or milestones' to then inform her judgements: 'you're thinking about that and each particular child, and I do like that it's set up in that form that you go through each child and think about all the domains that they need to have assessed. That it gives you that opportunity to think about their development and in relation to education how that fits in' (Kim, interview lines 214–218).

The reference to 'you' and 'we' reveals what Fairclough (2003) identifies as how the individuals *position* themselves within the dominant discourse, and the language used by teachers shows the shifts between the certainty of what 'we know developmentally' alongside what 'most 5 year olds typically do' (Denise, interview lines 472–476), versus uncertainty or the need to qualify their judgements – 'it gives you a chance to see' (Grace, interview lines 503–505) – in the context of administering the EDI.

Although Stephanie and Crystal had earlier demonstrated a level of uncertainty in identifying a developmental continuum, they did invoke engage a developmental discourse when describing administering the EDI. At issue in their descriptions around expectations of children's development is the situated meaning (Gee, 2011a) that they attribute to descriptive words like 'expect', 'average', and 'normal', which can also be attributed to how teachers describe how they understand children's development. However, as discussed earlier in this chapter, the teachers were not able to articulate a formalized discourse or ECD vocabulary to describe children's development, commensurate with their roles as kindergarten teachers. There is a risk, therefore, that the EDI therefore *becomes* the cultural tool through which meaning of children's development is defined.

This possibility, however, does not explain how and where the teachers were able to access alternative discourses of child development and how these discourses might relate to their practice. The answer to this puzzle was evident when they were

asked about where they found ideas to apply in practice. At this point, the role of the local school authority was once again evident.

Discourses and the Role of the School Authority

The discourses being accessed by the teachers were also clearly influenced by ideas being available to them in their school districts. I described earlier how Caroline considered that, while her ideas and role as a teacher in ECE were important in terms of how she went about building relationships, her context for understanding children's development and ECE was expressed within a collective framework, demonstrated by her deferring to 'our district' (Line 120). The school authority was also important for Caroline in how she used "typically developing" for children who are within, say, the normal range of development. Then we use terms like "moderate" or "mild delay". ... We refer to socially appropriate behaviour, social skills development, we look at their motor development ... I could go on' (Caroline, interview lines 123–125).

I identified this relationship between discourse and school authority again when Caroline talked about the relationship between her child development knowledge and administering the EDI: 'I think because our district has such a strong focus on early intervention and working with children in a wide range of areas, I think that when I'm answering the questions, I have a good understanding of developmental levels, where the children should be at' (Caroline, interview lines 263–268).

Likewise, for Kim, when asked to expand on her initial response to the question about her early childhood approach, her response of 'Seeing what kind of a learner they are and also teaching them to become 21st century learners' (Kim, interview lines 78–82), revealed discourses are influenced through the opportunities and direction of the school district:

I think that through teaching professional development and just through being in the field of education gives you that background to see where you need to be going and different initiatives that come up in the district and communities as well. (Kim, interview lines 84–86)

When asked to expand specifically on her understanding of the approach she was describing in terms of 21st century learning, she replied:

That's something that's relatively new and that it does include the technology but also it kind of fits into the Reggio philosophy where you're meeting children's interests and trying to move them along in that way and using project

approaches and taking what they know and finding different learning styles and ways that they can show their learning which is very different from how we were educated, so that kind of way. (Kim, interview lines 88–92)

Brenda's experience is also described in terms of how she identifies the approach being implemented by her school district, and in particular her role in implementing the approach, including supports for teachers in their classroom practices:

So now, what we have were all working as a school and as a district on this UDL, Universal Design for Learning. What I have to do is I have to make sure that I am meeting with all of my division team to incorporate something like that in my classroom but make sure I am accessing the support for kindergarten teachers as well and kind of mesh it all together. There is also some kindergarten – it is called The Play Group that has been started here in Edmonton and we have two different play groups that are basically just again chances for kindergarten teachers to meet and just talk about their ideas and exchange ideas and talk about things they have heard and just share thoughts about the whole process. (Brenda, interview lines 217–225)

And in this instance Brenda's description accounts for her experience in the activity led by her school authority and connected to the social context being shaped by how the school authority undertook to describe a particular approach to influence teacher practice, including their understanding of children's development and learning. This experience is indicative of how the teachers featured in this study were able to describe their approach in the context of a broader understanding implemented through their respective schools and/or school authorities. Kim, Stephanie, and Brenda were all able to describe how their practice reflects how human activities are connected to the social context in which they occur.

Stephanie also speaks about the influence of the school authority that situates a context for her understanding and practice as she identified with the school district's implementation of a Reggio influenced approach when asked to describe what she liked about early childhood teaching:

I like the freedom to teach what you would like and how would you like, and I like the philosophy especially with the district. [Name of district] Catholic is taking the district in terms of the Reggio Emilia [preschool approach] and just focusing on what their interests are rather than pulling all of your themes out of

a box and doing it that way. I love just the freedom and just I want to give the kids a love for learning just right as the beginning of their start of schooling so.

(Stephanie, interview lines 51–56)

How teachers position themselves within such discourses is clearly personalized through the ‘I’ and provides a cohesive link (Gee, 2011b) as to how teachers are connecting their both their practice in administering the EDI and their practice when it comes to applying an understanding of children’s development. For instance, Brenda, in describing the importance of her role, argued that ‘I have to have a good understanding of where an average child should be and I have to understand that not so much in relation to my neighbourhood, because I think my children are up here compared to my last school where the children were down here’ (Brenda, interview lines 777–786).

Chapter Summary

The final section of this chapter has highlighted the tensions that became evident when asking teachers how they applied their understanding of child development when administering the EDI. In summary, if teachers have already determined, based on tools used for screening and assessment, what they believe to be typical children’s development, the process of administering the EDI may confirm what teachers already understand about development. This demonstrates the circularity of a discourse that is *both constructed and maintained* by the nature of the EDI, and other screening and assessment tools, as powerfully mediating cultural tools. When the teachers described their understandings in reference to the EDI, they conformed to a discourse of development that constructs a child who meets universally accepted developmental stages.

Any understanding of child development functions within discourses attributable to a common set of shared values, assumptions and beliefs (Gee, 2011a). The normative, developmental psychologically-oriented discourse of child development and is typically understood as a powerful set of understandings about (i) how children develop as individuals, and (ii) children’s development being categorized according to social and emotional, physical, language and cognitive domains (Woodhead, 2006). Although when the teachers in this study were asked to describe children’s development they rarely referenced ‘cognitive development’ or ‘social development’, but described the events or situations that located *where* children’s development was occurring, this

was in reference to the kindergarten as a specific ‘age-stage’ context. The formal discourse of development, when articulated in the context of administering the EDI, appeared to create a representation of development that conforms to a global perspective described in terms of ‘typical’ and ‘normal’ ‘developmental milestones’.

However, none of the claims made in this chapter are evidence that the teachers’ understandings of what is being measured through the EDI *are incorporated into their practice*. This is the focus of Chapter 6. A straightforward causal assumption in response to the findings described in this chapter would be an expectation that, as the EDI is measuring a particular population of children in the context of ‘typically developing’, this understanding would appear in how teachers enable children’s development through their practice. However, in Chapter 6 I will argue that there was evidence from the interviews and focus group that, as school authorities begin to offer new discourses of ECD approaches, support networking with teachers to facilitate sharing of ideas, and professional development opportunities expand to include new ideas including new curriculum tools, the teachers’ descriptions of child development begin to shift. I will argue that, in reconciling a new ethic within established discourses required the teachers to *negotiate between* discourses. What they have formally acquired in their understandings of children’s development do not necessarily become incorporated into their practice (Brownlee & Berthelsen, 2004), as teachers also draw on personal experiences, beliefs and values about the importance of children’s development to shape their practice.

Overall, the teachers’ descriptions of the understandings of children’s development they applied to administering the EDI reinforced a discourse of development that identifies a child constructed as an active individual who follows certain developmental stages that occur universally, without consideration or acknowledgement of a child’s cultural or social context. One critical factor in their understanding is how these ideas are shaped, influenced and determined by a myriad of formal and informal theories.

I have argued in this chapter that the discourses accessed by the teachers participating in this study when asked about the EDI are the consequence of a range of influences shaping teacher understanding, including the intent of the instrument itself. However, the main evidence for understandings of children’s development that the teachers brought to administering the EDI seems to reflect not a range of theories of child development, but specific notions of atypical development taken up as a result of

their experiences in a cultural context whereby screening and assessment for disability or developmental delay is a key part of teachers' practice. Second, the data provided by the participating teachers suggests that school district endorsements over the types of ECE approaches to be implemented or explored by teachers provide reminders and reinforcements for these discourses around typical/atypical development. Nevertheless, the teachers are still subject to a tension between the understanding of children's development as a global process, predetermined by a linear sequence that all children are measured against and are understood to meet to fulfil their potential, and an understanding of development that positions children's development in terms of a particular set of circumstances of place and culture (Dahlberg, Moss, & Pence 2007; Dahlberg & Moss, 2005). When the teachers were asked about their practice, and the influences and ideas they felt are important for how they work with children, they described a myriad of considerations that they need to navigate. It is to these considerations that I turn in Chapter 6.

Chapter 6: Teachers' Alternatives to a Discourse of Child Development

Chapter 6 is the second of three chapters that examines what the teachers participating in this study said about how they understand development in relation to administering the EDI. In the contested field of what constitutes child development knowledge, teachers' understandings are significant when considering what concepts, including their judgments, are being applied to the task of administering the EDI.

As described in Chapter 5, some of the participants initially struggled or deferred to me as the interviewer when explaining their understandings of development when this question was posed to them. Some alternative discourses were identifiable, including a school readiness discourse, and child-centred and individualistic discourses that situate learning, meaning, and motivation within individual children (Blandford & Knowles, 2013).

By posing questions to them around their judgements and understandings to consider these theories what was strongly evident was the way in which teacher practice is constructed (Wood and Bennett 2000), including how their understanding of children's development informs their practice in a way that is consistent with the DAP discourse (Copple & Bredekamp, 2009). The understanding teachers draw on to inform their practice conveys how knowledge is obtained and built up over time, and recognizes the active role of the teacher as an agent of educational change (Argyris & Schon 2007; Freeman 2002; Moll & Greenberg, 1990).

Nevertheless, there is often a misalliance between teachers' espoused understandings and teachers' actual practice (Eraut, 2000). In the absence of access to specialized ECE knowledge in their teacher education programmes, these teachers have had to form their own theories as they learn to work within the day to day classroom experience. These theories-in-use are the focus of this chapter.

The discourses accessed by the practitioners examined in this chapter can be categorized in several ways. One important descriptive category used here is 'the practical approach'. Here teacher practitioners described their workplace experiences through a discourse heavily marked by reference to the practical application of their knowledge. This category also reveals one of the strengths of discourse analysis as a methodology in allowing researchers to examine the contextualization of discourse by probing more deeply into the discourses that have been made available to teachers and that they have chosen to describe their practice and understanding of children's development.

A second obvious discourse that was evident in the teachers' talk, and which has also underpinned the EDI, is that of 'school readiness'. As discussed in Chapters 1 and 3, the development of the EDI has necessarily been grounded in the discourse of school readiness and has emerged into broader ECD discourse as a factor influencing school readiness policy. For educators and health professionals who rely on the findings of the EDI, this discourse continues to influence policy to establish baselines to determine whether programs, services and policies have been effective in shifting the percentage of children identified as experiencing difficulty in one or more domain of the EDI on school entry.

On the basis of the data and claims presented in this chapter, I contend questions can be raised about how teachers, professionals, parents, and communities understand not only the EDI tool, but its purposes. However, such an understanding needs to *make explicit* the discourses around 'school readiness' and 'developmental appropriateness' that underpin the tool. For instance, the distinction in the EDI between 'very ready' (school readiness) compared to 'developing appropriately' (developmentalism) suggests some divergence in conveying key ideas to early childhood teachers in Alberta.

Evidence for this divergence is further provided by Janus (2006, 10):

The EDI was designed with a goal in mind: to put into a questionnaire form, and a reliable and valid format, the teachers' informed view on the development, skills and abilities of the kindergarten children in their classroom. The questions are intended to ask about noticeable markers of children's development, appropriate to this age range, most of which could also be conceivably interpreted as markers of children's brain development.

Janus's reference to 'markers of children's brain development' alerts us to a third discourse relevant to the EDI: that of brain development. The importance of understanding how teachers interpret and administer the EDI is critical, if their 'informed view[s]' is to be the source for interpretation of 'markers of children's brain development.'

Some context for this significant claim is necessary. Alberta, along with other government jurisdictions and research communities in Canada, has made a commitment to devising what is being referred to as a 'core story' (Davey 2010; Kendall-Taylor, 2010; O'Neil, 2010a; O'Neil, 2010b; Simon, 2010) in ECD, previously described in this thesis. This work has expanded from an initial partnership between the Frameworks Institute and the National Scientific Centre on the Developing Child, and has expanded

to include partnerships with the Alberta Family Wellness Initiative, funded by the Palix Foundation, and in collaboration with the Government of Alberta, primarily engaging partnerships with staff in the Ministries of Human Services, Education, and Health (including Alberta Health Services) to attend symposiums, workshops, and collaborate on core story projects aimed at improving the 'understanding of the lay public, and to establish a translation story of the science that will improve public understanding of key developmental principles (e.g., *what* develops, *how* development is facilitated, and in *what contexts* development is derailed, with what consequences)' (Davey, 2010, p. 3).

The scientific discourse, specifically that of neuroscience, has in recent times been challenged in terms of being a 'developmental enterprise' (Einboden, Rudge, & Varcoe, 2013) that merges discourses from health and economics to position the child as a subject of significant interest and social value. This perspective argues that health professionals have been recruited to the development enterprise, raising the question of the type of discourse likely to emerge when teachers bring their experience of administering the EDI into an encounter with neuroscientific claims about child development.

A fourth discourse evident in the interviews with the teachers, as an alternative to traditional discourses of child development, was that of the pedagogical function of play in early childhood classrooms. I argue that the discourse of play was a complex space for these participants, which they found themselves having to negotiate in parallel with the discourse of school readiness, in particular.

These four discursive themes – school readiness, a 'practical' approach, the core story of brain development in relation to the EDI, and the place of play – are the focus of the analysis and discussion of the teachers' talk presented in this chapter. In the final part of the chapter, the analysis of the discussions will focus on when some of the teachers were brought together and show how these discourses were tested in the social situation of the focus group.

Discourses of School Readiness

As discussed in Chapter 1, the distinctions and convergences between the discourses underpinning the work of the Offord Centre for Child Studies and the EDI, compared to that for the ECMap Research Project are important to note for two reasons. First, the shifts in which discourses dominate the EDI raises questions about which understandings of children's development are being measured.

Second, given the profile of the EDI and its potential to inform policy and planning, EDI implementation has the potential to significantly influence teachers' understanding of child development through the forms of discourse underpinning the EDI – school readiness and neuroscience – and the meanings attributed to these discourses that likely shape teachers' practice in early childhood settings.

The discourse of school readiness was a strong thread that came through for most of the teachers interviewed. The question posed to teachers was, 'How would you describe your early childhood approach regarding working with children when it comes to supporting their development, their growth and their learning?'

Crystal's description drew on the discourse of 'readiness', reinforcing the kindergarten setting as a preparatory phase, readying children for specific tasks, and emphasizing how understandings of 'developmental progression identify which children are considered 'ready' to undertake specific learning, once they have acquired particular developmental capacities' (Evans, 2013, p. 174):

For readiness? It's the social science of school. Being able to separate from parents. Being able to get along in a group. Being able to follow directions. Being able to read, social cues. You know when we've all come to the carpet and you're still playing and you don't notice that. And those kinds of things. Being part of the school community. Coming in when the bell rings recess. Being able to take out your snack and stuff. To me those things are the - it's the stuff. It's hard to measure. (Crystal, interview lines 169–174)

Crystal identifies her role in fostering a form of readiness to guiding the 'development of children's capabilities' (Evans, 2013, p. 175): 'That to me is my structured teaching. Teaching those routines. Teaching following of the routines. There are a lot of pictures where they are able to build independence that way. Teaching kids those readiness skills. We actually use how does your engine run' (Crystal, interview lines 176–179). Readiness, according to Crystal, is the process 'that provides children with the skills, knowledge and experiences' they need to be ready to transition (Evans, 2013, p. 174) to grade 1 and more formalized approaches to teaching.

Grace, when asked how she came to understand her approach, said:

I still send homework home because I still want the parents to realize and I tell the children, especially this time of the year if they're bright, I can say well, you can do it at home yourself, read your book draw your picture, it's okay if Mum and Dad doesn't sign it but you're doing your part or I have an assistant in the

classroom and she will do the homework with them in the mornings if that's not going to happen. If books don't come back we don't give them books we just do it in the morning. (Grace, interview lines 242–245)

Grace identified a 'practical theory' (interview line 267) involving 'whatever works for kids. If anybody wants to give me ideas I have to see that it's going to work' (Grace, interview line 276), and 'I will try it out for a while to give them the benefit of the doubt and give it an honest try and if it doesn't work I'll say well, thank you very much, but in my situation for my group of students it doesn't work. I can't back it up with things' (Grace, interview line 272). When questioned further about what was meant by 'work' (Grace, interview line 279):

A: That helps them gain social skills, academic skills, emotional skills, that whole SPICE thing I guess, social.

Jennifer: SPICE?

A: That social, physical, intellectual, creative and emotional. I think you can't get to the intellectual until everything else is taken care of. You can't get a child to succeed very well unless all those other parts are in place, and you can't do anything about the family but we can make our school our safe haven family and if they feel that relationships are most important. If you have a relationship with that child, find out about that child, you can find out what makes them tick, you can find out how to help them in a way that helps them grow. They don't have to be doctors or lawyers, I want them to be successful and be happy individuals in whatever vocation they choose, wherever their abilities lie. (Grace, interview lines 282–290)

Caroline, when questioned about her understanding of development and her practice approach, responded in terms of negotiating between practice theories on a personal level and at a school authority level. The shifts that occur in her descriptions between 'trying to use developmentally appropriate practice, so working at the level that the children are at and moving them forward' (Caroline, interview lines 71–72), and 'We use, in our district, we have a Reggio inspired approach, so there's a lot of belief that the child is a capable learner and has a lot of information already when they come to school' (Caroline, interview lines 73–75). While there is an established understanding in research that learning theory is a strong influence on teaching practice including the professional knowledge base of teachers, responses such as Caroline's call in to

question the significance of formalized learning theory and its influence on the daily practice of teachers (Hammerness, Darling-Hammond, Bransford, Berliner, Cochran-Smith, McDonald & Zeichner, 2005; Darling-Hammond, 2005; Darling-Hammond, 2006; Darling-Hammond, 2012; Dufficy, 2005; Bransford, Brown, & Cocking, 2005). This was evident in how Caroline expanded on the question put to her about her 'practical theory' in describing 'to do learning' as an activity to be structured according to 'individual learner needs'. Her response showed that she saw this as still needing to be aligned to a school readiness discourse but contextualized in a more personable way to individualize how children might access the curriculum:

so instead of teaching everybody the alphabet, when some already know the alphabet and are already reading when they come to school, and some don't recognise a letter in their name. I try to tailor as much as I can to those individual needs, so we do a lot of like balanced literacy, guided maths, those sorts of things to work within the frameworks of what they're already coming to school with. (Caroline, interview lines 77–82)

Discourses of Practice: 'Practical' and 'Inspired' Approaches

In questioning the teachers about their actual practice, it soon became evident that the influence of school authorities, in introducing teachers to different or emerging approaches, was beginning to shape new discourses in facilitating an understanding of children's development. As first identified and discussed in Chapter 5, the influence of school authorities was most evident when teachers began to speak about the influences of the Reggio Emilia approach (Edwards, Gandini, & Forman, 2011; Malaguzzi, 1993; Rinaldi 2006; Smidt 2012) or, as the teachers referenced this, a 'Reggio-inspired approach,' when asked about particular approaches and influences in their practice.

In pursuing the distinction between the district's approach and how this was reconciled to her practice, or her own I-centered approach, I asked Caroline, 'Does this fit [the district's approach] with your understanding or your approach to working with children?' Caroline responded that, during her six years of teaching kindergarten, 'we' have been 'introduced to the concepts' (Caroline, interview line 90), and it is something that she has 'grown into' (Caroline, interview line 87): 'I'm learning about kindergarten at the same time as I'm learning about Reggio, so it fits nicely for me, it wasn't like reframing my thinking, I'm learning at the same time' (Caroline, interview lines 91–92). Yet Caroline acknowledged the challenges and dilemma in reconciling what she aspires to as learning not only for herself, but for kindergarten children:

I really do like a lot of aspects of the Reggio-inspired approach, the one thing that I sometimes am challenged with is how to make sure that the - sometimes I think rote learning has a place, where you have to practice, practice, practice, just like a child has to hear a word, you know, two hundred or four hundred times before they're able to speak it as an infant. I think it's the same thing with learning letters and learning numbers, there has to be some rote in there. So you know blending the two in a nice smooth transition is what my challenge is I think. (Caroline, interview lines 87–99)

Caroline appears to be re-positioning her understanding of children's development by including the school district's approach to accommodate this in her practice. At the same time as Caroline undertakes to accommodate, she also described how she goes about incorporating new approaches to her practice, including how she reconciles these with her own understanding of children's development and how best to support their learning.

For example, when Caroline asked what she meant by this, she described 'blending' (Caroline, interview line 98) her experiences. It was important to pursue what it was that Caroline meant by 'growing' and 'blending' that enables or 'let's children learning happen, while still making sure that all the children are learning their letters and their numeracy and so on at the same time' (Caroline, interview lines 65–67). While Caroline described her practice in terms of psychological theories of individual development, she identified an emerging 'task' in her practice (Caroline, interview line 76) as being to 'further provoke [children's] imagination in their learning' (Caroline, interview line 75). Brenda, likewise, understood this dilemma but where Caroline had spoken of 'blending', Brenda talked about 'balance':

So the challenge for me is balancing, okay where do I put in the practice, we need repetition and practice to learn those concepts. Where a Reggio inspired approach is child led, child chooses, you may have provocations, you may have items within a centre that maybe provoke literacy or numeracy, but unless a child chooses to do so or an adult sits with the child to work on it, they may not choose to learn in that way. So where do I balance the two, how do I make sure that they're getting that rote, and still having freedom. (Brenda, interview lines 102–108)

The Place of Professional Development in Shaping 'Practical' Approaches

As I argued in Chapter 5, when the teachers were asked about any preferred or particular theories that they applied in their practice or approach, their responses were not grounded in a theory, but described more in terms of recent exposure to curriculum, professional development, networking with other teachers, and school district-led ECE approaches. The likely influence of such activities is supported by research (Branscombe, Burcham, Castle, & Surbeck, 2013; Gordon & Brown, 2013; McLachlan, Fleer, & Edwards, 2013) that focuses how teachers construct knowledge out of their own experience (Hammerness, Darling-Hammond, Bransford, Berliner, Cochran-Smith, McDonald, & Zeichner, 2005; McDonald & Zeichner, 2005).

As outlined in Chapter 5, in the Alberta context the role and influence of the school authority is significant in terms of the oversight of educational programming. In particular is its influence on teachers in shaping how they acquire knowledge, even as it is acknowledged that rather than being embodied in thought that such knowledge is embodied in a teacher's action (Connelly & Clandinin, 2000; Neyland, 2006; Yinger & Hendricks-Lee, 1993). There is also research to suggest that even though teachers may acquire knowledge it is not necessarily applied in practice, and to have impact on practice requires influencing and responding deeply held assumptions and beliefs held by teachers (Borger & Tillema, 1993; Fish & Coles, 1998; Lara-Cinisomo, Fuligni, Daugherty, Howes, & Karoly, 2009).

In the cases where teachers referenced an approach such as the Reggio Emilia approach (Edwards, Gandini, & Forman, 2011; Malaguzzi, 1993; Rinaldi 2006; Smidt 2012), these approaches were not typically described in terms of any theories of child development but appeared to be described around how the approach facilitated or aligned with both their own informed understanding of development, and a loosely subscribed to and articulated discourse around 'developmentally appropriateness.'

Ironically, at the same time as the teachers were accessing this discourse there was competing pressure to comply with a discourse of school readiness. For example, when Kat was asked about coming to understand the Reggio Emilia approach (Edwards, Gandini, & Forman; Malaguzzi, 1993; Rinaldi 2006; Smidt 2012) in relation to children's development, her description of the 'Reggio philosophy' was contextualized through a description of skills and ability. While describing the Reggio Emilia approach (Edwards, Gandini, & Forman, 2011; Malaguzzi, 1993; Rinaldi 2006; Smidt 2012) as a philosophy ('basically it's working with what the child's interested in and having them

bring out that creativity'), Kate gave a description of highly structured activities and tasks that still reflected a discourse of development aligned to school readiness:

Because a lot of Reggio is not basically paper/pencil, it's not saying here's a sheet of W's practice your W's, now I do that, which we're not supposed to, but what I do with at as well is I teach the kids how to draw, well, let's make a worm, this is how we draw a worm, but your worm can have big eyes, your worm can have little eyes, it can be close together far apart, so that makes the differences and uniqueness, so it's not really you have to make it this way, you have to make it perfect, it has to be like mine, everybody has to be the same. So it does give a little bit of a chance for kids to be creative and to explore as well. (Kat, interview lines 137–144)

There is considerable evidence that teachers' 'actions and decisions in the classroom are driven by perceptions and beliefs' (Spodek, 1988, p. 13), and that they are continuously engaged in a questioning process, identified by Wood and Bennett (2000), that identifies the tensions that can arise when teachers confront the disparity about what they think is good practice and what they actually do in their work. For Kat, her experience of Reggio was in tension with expanding her ideas on how to structure her activities and her own beliefs and values concerning children's development that dictated that she should 'teach those kindergarteners those skills' (Kat, interview line 147).

Access to the Reggio philosophy, while providing Kat with a framework to expand on her practice of 'letting the kids create', is confined to a limited understanding of the learning theory underpinning the Reggio approach:

working with the documentation of Reggio because it's taking that snapshot of them doing their creativity work and writing down what they're actually thinking about and talking. Because sometimes you go to their art and you're going what did you do and tell me about your picture, because you have no clue what's going on, and they tell you this elaborate story and you're going, oh my gosh, wait, I'll grab my camera you tell me that again, I'll video this. So that's kind of working in that Reggio philosophy, just letting the kids create. (Kat, interview lines 152–155)

It was not surprising that the teachers participating from one of the school districts referred to the influence of the Reggio Emilia approach (Edwards, Gandini, &

Forman, 2011; Malaguzzi, 1993; Rinaldi 2006; Smidt 2012) as the school district had embarked on an implementation of what was often referenced as 'Reggio inspired', 'provocation-based', and 'whole child' approaches. Without prompting, the teachers were confident in expressing their understanding of children's development once they located this within the school district's early childhood approach. Brenda described her approach, and specifically her approach to fostering development, in terms of 'provocations': 'it is just giving permission to all of us kindergarten teachers who have been very good at [changing your program; offering things that kind of get them all involved] and providing interesting things, I think' (Brenda, interviews lines 174–176).

Brenda described her practice in terms of having 'always taught theme-based' (Brenda, interview line 410). Her experience was located in the collective 'we' if a formalized approach and understanding about following children's interests, 'because we understood that that was really important to hook the children and keep their interest' (Brenda, interview line 411). Her access to the ideas of other approaches including the Reggio Emilia approach (Edwards, Gandini, & Forman, 2011; Malaguzzi, 1993; Rinaldi 2006; Smidt 2012), had also provided her with access to a new discourse of 'provocation' and 'enquiry' (Brenda, interview line 420) to describe her practice and how it aligned not only to shaping children's development, but to aligning her understanding of children's development to her practice. Brenda's access to the ideas and learning theories underpinning the Reggio Emilia approach did not necessarily shift or alter her understanding of children's development. If anything, the influences were on how she would structure her activities to better facilitate the developmentally appropriate practices that Brenda had developed as a result of her understanding of children's development. Brenda's hybrid approach to understanding children's development and supporting this in practice is underpinned not only by content knowledge and personal beliefs and values, but the personal practical knowledge (Connelly & Clandinin, 1988; Connelly & Clandinin, 1992) acquired through her access to influences such as the Reggio Emilia approach. This is a practical statement of what she understands about her role as a teacher and the experiences that have shaped this understanding (Russell & Murphy, 2001).

Provocation is a development, provocation is just my part of how I teach, so when I am looking at children's development and looking at things like maturity ... and I want to know socially how they interact with the other children, how they interact with me, how prepared they are to be left at the door and come with

a teacher, how well they listen to myself and other people in authority. I look at fine motor skills because I want to know whether they are able to handle the fine motor bits of life. So can they use zippers, can they open up their own snacks, can they handle scissors, do they have their two hands do they cross the midline. (Brenda, interview lines 267–275)

A Discourse of Learning Through Play

Play was identified across all the teachers interviewed and the teachers typically spoke of 'play' and 'learn' together. By describing these together, teachers produce play as important – both for children in terms of their overall development, and for kindergarten teachers as a focus on how to facilitate and understand children's development.

The status of play is elevated in an educational context by being attributed to learning. The term 'play' was often described in terms of being highly structured, keeping children 'busy' with 'activity', but was considered more than task-oriented and involving more than 'paper and pencil'. This description of play was also grounded in a social context, represented as integral to providing children with a range of experiences across social, physical, emotional and cognitive domains. An emerging theme of the importance of an aesthetic domain was also identified in the interviews with teachers who were being exposed to the Reggio Emilia approach, who also described the importance of dance, art and movement as way of understanding children's development and the importance of play.

Play was significant in the educational setting through the teachers' identification of a discourse of 'learning through play' (Anning, Cullen, & Fler, 2008), reinforcing that play may primarily be about learning and development, but is also concerned about the interests of children, including their happiness and success in relationships with their peers.

When Michelle was asked about what it was that she loved about teaching, her representation of play reflected an interchange between play as a 'natural' process by which children learn and the need for structured time to facilitate their social development.

A: I love the kids. I think they're great kids. They're all good. I love the quickness of the day. I love lots of activity. I love lots of movement and I like the fact that there's lots of different things involved. There's not just paper and pencil, but

play and manipulatives and singing. I like the singing a lot and the role play and all that too. They're willing to try lots of different things. They're good that way.

Jennifer: Can you talk a little bit more about the play? What is it – role play?

A: Yeah, and they imagine things in the house and there are social situations, building social skills with them – role play is every effective. As soon as you act something out to learn a social skill, they get it right away, as soon as you act it out. And they're willing to pretend and play and role play when we have the house set up for different things. Like we just had the veterinary centre in there and they loved it. So it's interesting to see them play.

Jennifer: So you talked about in terms of the play piece – because that's a focus for you then in kindergarten – do you see that as being different then in terms of the kindergarten piece with play compared to your experience with, say, the one to six or other elementary classes?

A: Well there's more opportunity in here for role play and imaginative play. We don't really get that in the older grades unless you're doing like stories or plays and you don't do that all year long. But in here there's, you know, with the house centre and the stories and the action poems and the songs we do, there's a little bit of role play in all that every day. (Michelle, interview lines 36–62)

The teachers in their interviews defined play as centrally important as an approach in their classroom practice to influence children's development across the range of developmental domains. Their descriptions of the importance of play as an approach also identified the importance of play being structured and led by teachers. Denise describes this in terms of 'children have an opportunity to move, think, talk, interact and explore freely, but with my intervention' (Denise, interview lines 190–192). While teachers identified what learning through play meant for children's participation, it was also expressed in terms of the importance of play being teacher-led (Brown & Freeman, 2001; Wood & Attfield, 2005).

Other influences were also notable on how teachers referenced play and children's development, reflecting the range and types of professional development they had experienced. Caroline, in the following excerpt, negotiates and locates herself within the idea of unstructured play and the impact this might children's development.

In locating herself in this experience, Caroline describes that there is a strong sense of questioning what it might look like in practice, still contained within developmental domains, but profiling the dimensions of social and academic learning:

The most recent one [book] I purchased was on - I do not remember the title - but it is about the importance of active play, particularly rough and tumble play, and how that effects social development, academic development, not just motor skills. And I find that fascinating, so I tend to find a topic that is of interest to me, read about it and then see what I can apply in my practice. And so right now the real test is at recess time, you know allowing the children some rough and tumble play and then what is the teaching that I have to front load, so they can rough and tumble play without hurting each other, and while maintaining friendships, and actually building friendships. So yeah that's the sort of thing that it find really interesting, so I read I read I read, I try it out and then I go on to something else. (Caroline, interview lines 348–357)

Michelle, describing children's play in terms of 'lots of social play; role play at the house centre; lots of interaction, lots of problem solving,' said 'we try and make sure there's lots of fine motor ... I like the kids to be busy and, for the most part they're really good, they know their jobs and they know what to do when they get there. I find they're pretty good that way' (Michelle, interview lines 87–89).

Crystal described her understanding of play in terms of wanting to 'do the best for kids,' yet question whether she is able to support children to be 'typically developing' when working in a 'play-based' setting:

You want to move them to where you need to, but when you have that many, I wondered if I was supporting typically developing like I should be. I felt like my program had to be geared lower for kids. And it sounds funny to say that in play based, but when you're working and supporting so many language needs and breaking language down to this lower level, I really did struggle with what am I doing for those kids who need more. (Crystal, interview lines 82 – 87)

However when asked about her 'play based' approach Crystal was clearly able to articulate an approach to play that advocated on behalf of the interests of children and a child-led approach to play.

Well for sure it's learn through play, obviously, but I don't like that expression because it's so broad. I'm a big believer in letting them direct it. I don't like classes that you know clap and they all rotate. So I want them to have the freedom to make their choices and have enough time to engage in them at the

same time getting out the things that I know they need targeted areas in. But yeah, child directed for sure. (Crystal, interview lines 105–109)

An interesting dimension in Crystal's response was how she understood the value of play in terms of a teacher's understanding, identifying with the 'whole child' (Crystal, interview line 166) and the need to 'get them ready for learning and [being] inquisitive' (Crystal, interview line 167). Her uncertainty, when probed on how she would apply this to her teaching, revealed her efforts to negotiate between 'freedom' in children's play (Crystal, interview line 107) she desired as an outcome, and how best to manage the expectations that go with trying to capture or document what this approach would achieve with respect to educational outcomes for children:

Well it's sort of funny because we don't have to talk about it anymore. That's where my head is right now. I don't have to say these things to people anymore and when I'm trying to say to parents what I think is the importance of play is and why it needs to be child directed and child driven and based on interests and stuff. Actually I was just talking to someone about this like I'd like to see a really good kindergarten report card. And I use that term very loosely that could define those things better because I don't think that really good early ed programming lends itself to an evaluation with those words explore, and experience, and create. I have a hard time evaluating that. (Crystal, interview lines 184–191).

The purpose of play as a socio-cultural activity (Rogoff, 2003) identifies how children are both shaped and being shaped by social and physical environments. Michelle conveyed this understanding of how play is structured and engages children in shaping their development in terms of production and self-autonomy, when she equated children's learning with 'work' (Michelle, interview line 97), and stated, 'If we do all our work, then we get to play' (Michelle, interview line 474):

Well there is play in jobs. Sometimes they don't realise that, but you know what, if they're ... talk about three dimensional – they were out in the hallway building a castle out of large blocks. So there's play and jobs there at the sand table – filling up containers for volume. You know, like they're building puzzles or right now on the carpet they were sorting three dimensional objects into groups. Like, there's play, there's co-operation. So I think a job sometimes has

got to be a lot of academics, but it can also have lots of play in it too. (Michelle, interview lines 479 –485)

When asked about what she understood she was achieving with play when describing it as being embedded into a 'job', her response aligned development and learning in the context of children actively contributing to and shaping their own development through productive and meaningful activity: 'To me the more kids move and the more active they are when they're learning, the more they'll remember. I think. And the more engaged they are. I think' (Michelle, interview line 489).

A dominant aspect of the teachers' discourse described in this chapter is the predominance of play and play based learning as a descriptor. The teachers seemed very ready to access a discourse of play both as an indicator of what they saw as effective teaching practice, allowing them to meet the practical demands of their work, as well as the more aspirational parts, such as preparation for the future. Crystal's discourse of play is a good illustration of how this was done. For her, play, amongst other things, readies the child for future learning. It also engages the whole child in learning and, as such, was a strong pedagogical practice and one that strongly reflects her understanding of child development.

Play was also seen as an integral part of more academic learning, described as an activity that 'worked' on many levels. It was highly structured, activity-centred, and kept children busy. This positions play discursively as a good preparation for more task-oriented activities, ones that involve more conventional teaching strategies. In this way, the discourse of play could be converged with a discourse of school readiness.

Participants' Collaborative Discourses

As outlined in Chapter 4 and Chapter 5, engaging a focus group of teachers was intentional in order to shift the unit of analysis from the individual to then consider the relationship between the teachers, their cultural tools, and the community in which they administered tools like the EDI.

The purpose of the focus group was in keeping with the approach of this study regarding how discourse is shaped by social and cultural factors, and cannot be understood without taking into account human activity, with the nature of this activity including how knowledge is co-constructed and shared (Gee, 2011a; Wittgenstein, 2009). Chapter 5 highlighted by bringing together some of the teachers to discuss the

themes that had been identified through their individual interviews was an opportunity to show how these discourses would be tested in the social situation of the focus group.

In a focus group, the dominance of particular discourses is shaped by social considerations, as the participants are responding not only to the researcher but also to each other. The teachers who participated in the focus group were from the same school district and shared a loose affiliation through their professional development in early learning and the Reggio Emilia approach, as part of the teacher network hosted through the school district.

The focus group was presented with a selection of de-identified statements purposively drawn from the individual interviews in which they had participated. There were two groups of quotes shared with the teachers: 1) quotes about their approach to early childhood; and 2) quotes about teachers' experiences of administering the EDI, including their understanding of the Instrument.

As outlined in Chapter 4, the interviews and focus group were seen not as ways of justifying the responses of participants, but used as a method of generating complementary and potentially different discourses, related as individual responses as well agreed responses from a group of professionals working in early childhood education. The teachers were provided with time at the commencement of the focus group to review the quotes (Appendix F) about approaches to early childhood. They were then asked about their responses to these statements, and what they considered important for a kindergarten teacher to bear in mind when planning the learning and development of kindergarten children.

The focus group members identified, at the outset, distinctions between what was familiar or what was different in the 'ways we think in terms of how we approach the children, and yet there is lots of parallels between our practices as well' (Focus Group, interview lines 11–12). When asked to clarify this statement it was evident that, while there was agreement around the shared understanding that 'we want kids to explore that freedom' (Focus Group, interview line 15), there was also agreement about a need for 'structure' (Focus Group, interview line 15), which the teachers expressed as a 'privilege' (Focus Group, interview line 355), based on their role in 'provid[ing] the opportunity to build imagination' (Focus Group, interview lines 355–356).

The group were also able to confirm that the Reggio Emilia approach had had the greatest influence on their practice of focusing on 'freedom', lots of playing' and 'lots of exploring'. And yet this freedom and exploring was also contextualized as a

new way of understanding 'structure', captured 'under the Reggio-inspired approach' (interview lines 15–16).

With an emphasis on 'child centred learning or leadership as well from the children' (interview line 23), the teachers also discussed how their colleagues enjoyed a 'freedom as individuals' (interview lines 25–26) to provide 'their own way of delivering their curriculum to the kids' (interview line 29), and the importance of classroom providing a space for children, regardless of the circumstances children may be coming from. The freedom to take a different direction from what may have been planned was valued, and 'not the whole group but maybe just that one little group at that time and then move on to whatever.' (Focus Group, interview lines 34–37).

A discourse of developmentalism drawn from psychologically-based theories of typical individual development, identified in Chapter 5 as a dominant discourse, was also evident in the focus group in how teachers positioned their practice when creating the context to engage with children: 'I think that's kind of what we've been talking about, thinking about where they're coming from and where we need to get them to move to in terms of their learning and development' (Focus Group, interview lines 401–402).

The discourse of school readiness was also at the forefront of the teachers' collective description of the importance of the kindergarten experience for children. Teachers described the use of play and 'centres' as tools for children to gain 'social skills' (Focus Group, interview line 220). Their descriptions also identified the importance of play, and the challenges they identified in justifying its purpose and role in kindergarten. This was important in being able to speak to what an approach in an early learning setting should look like, and what distinguishes it from a more traditional and formal approach found in the higher grade levels: 'We have to teach them this, they need to know this, and then you have the other – the other teachers [in] Grade 1, "Well, how come this child doesn't know how to write their first name?"' (Focus Group, interview lines 256–258).

The teachers also reinforced the statements about challenges and opportunities they had described in their individual interviews as they navigated through formal and structured approaches whilst also wanting to 'meet the children' (Focus Group, interview line 95). At the same time, they showed they are seeking to conform to requirements such as, 'You have to assess their levels of what they already know before

you can really get into that deep planning ... their interests and these projects we might start with' (Focus Group, interview lines 96–98).

Because the focus of this thesis is on the thinking the teachers bring to administering the EDI, the final section of the focus group discussion focussed on the relationship between what the teachers had said about their practice and how they understood the EDI. This is discussed in the final section of this chapter.

The EDI as a Mediating Tool Within a Collective Discourse

The teachers understood that administering the EDI 'correlates' (Focus Group, interview line 480) with a formal discourse of development that identifies children's growth and learning in terms of a continuum of stages in physical, social, and cognitive domains. The focus group confirmed child development as a discourse, due to its particular social practices and language features (Gee, 2011a; 2011b). The developmental discourse continued to be identified as the teachers described their understanding in the context of administering the EDI, including whether their understanding had changed as a result of working with this Instrument.

A notable feature of the discussion was the alignment of a developmental discourse with the EDI, *and the corresponding alignment* of this developmental discourse with the teachers' descriptions of the ideas informing their practices. The teachers told me the EDI 'correlates' with 'what we've already been learning' (Focus Group, interview line 596–597) and 'reaffirms ... that you're not just worried about one particular domain, it's the whole child that you're thinking about' (Focus Group, interview lines 598–599).

The EDI influences teachers practice when administering the tool as they conform to a collective way to understand children's development. And yet the teachers, in describing the understanding they bring to administering the EDI, also referenced what they understand as a result of their experience, including the influence of an approach like Reggio Emilia. The teachers in the focus group drew on this to describe what they considered to be important in supporting children's development and learning. Yet when asked to describe their understanding of children's development when using the EDI, their understanding of children's development was then be aligned to a shared discourse of developmentalism drawn from psychologically-based theories of typical individual development. This was not only evident in what the teachers shared in their individual interviews, but was confirmed when discussing, during the focus group, their shared understanding of development when administering the EDI.

What remains unclear and worthy of further consideration is how the influences and ideas that teachers continue to engage in through their practice influence the *outcomes* of administering the EDI, since the teachers' understandings and commitments seem to relate less to ideas of 'freedom' and 'imagination' they invoked when discussing influences on their practice, than to a developmental discourse that teachers conform to when required to administer the EDI.

The influence of the EDI came through in the teacher interviews particularly for those relatively new to administering the tool, as in Stephanie and Kat's experience. When Stephanie was asked what she thought was the purpose of the EDI, she responded in terms of 'just to see what children's backgrounds are and where you see them at in regards to where they are coming from in their experience in life' (Stephanie, interview lines 253–255). Likewise for Kat, the EDI was a 'collection of survey questions and answers in regard to where the kids are at and how they're functioning, where they stand with other kids,' and 'I think it's to be used in regards to community support, if there's enough community support in that area for that community' (Kat, interview lines 261–266).

When the teachers were asked about how well the EDI 'fits' with their educational philosophy, their responses were consistent with a formal discourse of development that aligned to the importance of developmental milestones and measuring against what would be 'typically' expected, consistent with Piagetian claims that children need to reach the required stage of cognitive development in order for learning to occur (Gredler, 2001; Schunk, 2000). Based on an understanding of a child's cognitive development and accumulated prior knowledge, the kindergarten teachers have constructed their practice around creating developmentally appropriate experiences for children.

Several teachers expressed confidence when asked how well the EDI fitted with their educational philosophy. This ranged from where they positioned themselves in understanding the intent of the EDI as measuring children's development, to consider the EDI as important in informing the role of the community in supporting children's development, to a conformity around children's development. Further evidence of this can be seen in the way Danielle responded as seeing 'two parts to the question' (Danielle, interview line 487), when asked about the EDI and its fit with her philosophy. She located herself in a practice that reflects the 'need to go where the children need to go and what they are thinking, but then I always need to, I also need to do my

curriculum and this [the EDI] matches with the curriculum for me and this gives me that little bit of basis.' (Danielle, interview lines 488–489). Kat had a similar response, aligning her views with the importance of measuring children and 'how they are functioning, where they stand with other kids' (Kat, interview lines 262–263), as well as determining public investments into ensuring the appropriate community supports are in place for children.

For Grace, her responses implied the EDI acted as a precursor for child-centred practices, in terms of determining the alignment between the EDI and her philosophy. Grace's response was that 'it can't just be about the academics, that it has to be where the child is coming from' (Grace, interview lines 464–465). Cathi also located the fit between her philosophy and the EDI as 'it's still looking at a child as a child and not seeing them as just a little human being that needs to be at an adult level ... like it's to let them to be a child' (Cathi, interview lines 439–440). For Denise, in identifying with the collective purpose of what the EDI might mean beyond the child and school, located herself collectively in the 'we' and 'you' as she responded: 'looking at the global development, you're looking at not just one aspect ... you're looking at all aspects that make healthy children and healthy communities, and we're not looking specifically at school as the tool, we're looking at many things' (Denise, interview lines 436–438).

What began to emerge through the teachers' descriptions were two inter-related discourses: a working discourse of teacher practice in relation to children's development, and a discourse of child and society. While these two elements will be explored in further detail in Chapter 7, their importance began to take shape when the teachers described the relationship between the EDI and their philosophy. The interchange between the use of 'I' and using the pronoun 'you' in the collective sense, reveals how the teachers positioned themselves. This was represented at times as they described themselves in terms of being a teacher as a member of a community of practitioners, flexibly sometimes as an individual teacher, and more broadly, to families and communities, as well as within the community constructed through the authority of their school district. Using the pronoun 'you' also allowed these teachers to confer greater authority on the issue being described (Fairclough, 2003). Michelle's level of confidence within a formal discourse, for example, was represented when she identified 'you' as confirming her opinion that the 'theory behind it [the EDI] is good. That's it's supposed to be able to provide services to children at a very young age within their communities. So, of course, if you do that, you're going to have happy, healthy,

productive kids' (Michelle, interview line 312). Through both her description and her positioning of herself within a collective discourse, Michelle validates teachers' use of the EDI and its fit with a collective educational philosophy, grounded in a collective understanding of children's development amongst their peers. This struggle to make sense of individual and collective philosophy in relation to the EDI is further explored in Chapter 7.

Chapter Summary

An important theme identified in this chapter is the place of teachers' theories of child development and how these theories translate into practice when in the classroom interacting with children. Any dissonance between these has critical implications for how early childhood education is understood, especially for those who are about to enter the profession but also for experienced teachers such as those who were included in this study. As discussed in earlier chapters a recurring theme for those involved in teacher education is how to best to influence teacher practice, not just in an abstract sense but in a direct way, one that focuses on the working world of the teacher. To this end, references to the EDI, and its origins and purpose could be a positive inclusion in early learning and childcare education courses and in the ongoing professional development of teachers.

The teachers in this study expressed a tension between what they described as the official approach of their school or district and what they saw as a more inspired but yet to be fully realized perspective. Many of those who took part in this study described this as, say, the tension between a new paradigm such as the Reggio Emilia approach to early childhood development and the approach that was actually followed in their school.

Recognition of this tension, however, uncovered some indicators of the ways in which these practitioners negotiate early childhood discourses on an everyday basis. One the one hand, they have practical issues to address around how they interact with children and use instruments like the EDI. On the other hand, they are also aware of a larger, more conceptual, discourse in which they are also located. This is the world of new and inspiring theories about childhood curriculum, pedagogy, learning, and development. Living with and negotiating this tension is very much a part of the lived reality of these early childhood teachers. Their discourse, as revealed in this chapter, suggests the methodology used in this study has been able to probe the experience of teachers who administer the EDI.

Chapter 7 builds on the claims laid out in this chapter to consider the 'new ethic' that these teachers revealed when describing their understanding of children's development and what this might mean in administering the EDI. This discourse emerged as a result of teachers being asked to describe their values concerning children. In this way, Chapter 7 not only summarizes the themes already evident in Chapters 5 and 6, but the interrelationships between themes, and the implications of these interrelationships in the context of understanding children's development and administering the EDI.

Chapter 7: Discourses of Professional Values, Advocacy, and Ethics

Chapter 7 reports how the participating teachers described a professional ethic and set of values, revealed in their understanding of children's development, and what this might mean in administering the EDI. The background of each of the teachers and their reasons for teaching, as well as their reasons for choosing to teach at the kindergarten level, were canvassed through interview questions that went beyond collecting demographic information. The purpose of gathering this information about the teachers was to reflect their diversity of experience and training, and thereby perhaps to better understand why particular discourses were evident in how the teachers described their understanding of children's development and their approach to ECD, including administering the EDI. As a result of these questions, an unexpected discourse emerged related to their motivation for wanting to teach, particularly their choice to focus on early childhood. This discourse drew on a professional ethic of valuing childhood, and included wanting to set children up for 'success' by advocating for childhood experiences that would promote self-esteem, confidence, and creativity.

With regard to the use of the phrase 'professional ethic' that I am applying to this section is based on what emerged as a result of the interviews. This is due to the consistent theme emerging of how the teachers described their reason for teaching and the influence of this on how they choose to describe their understanding of children's development. On closer consideration of finding a way to describe this, I choose to describe this as a professional ethic because it was closely aligned to the Alberta Teachers' Association Code of Professional Conduct, and in particular to how teachers engage with their students:

The teacher teaches in a manner that respects the dignity and rights of all persons without prejudice as to race, religious beliefs, colour, gender, sexual orientation, gender identity, physical characteristics, disability, marital status, family status, age, ancestry, place of origin, place of residence, socioeconomic background or linguistic background. [and] (4) The teacher treats pupils with dignity and respect and is considerate of their circumstances. (Alberta Teachers' Association, 2004)

I develop this claim in this chapter in the following sequence. First, I begin by examining the subject positions taken up in the language the teachers used when talking

about their values and ethics. Next, I move from the *subject* of the discourse to the *object* of the teachers' discourses by reflecting on the dominant outcomes they described for the children they teach, including creativity and 'excitement'. For example, evidence of how deeply-held were individual teachers' philosophical beliefs is demonstrated through Brenda's ethic she defines for children. Brenda's specialization in special education shapes her work in early childhood education as she 'liked the flexibility and the openness of the types of activities' when working with children with 'developmental delays':

I also believe that the children who feel they are successful and have some confidence in their abilities will have more success as they grow throughout their years, so part of what I have to do is give them a little taste of everything with as much support as they need so that they can go 'oh, I can do this, oh I can do it.' So they can feel that it is within their grasp. (Brenda, interview lines 131–132)

Third, I then return to aspects of the teachers' talk, described in the two previous chapters, that drew on issues of school readiness and typical development. In this chapter, however, I show that these discourses were not taken up unproblematically. Rather, in the second half of this chapter I show how the teachers were engaged in continuous discursive negotiation between received, dominant discourses (such as 'typical development' and 'school readiness') and their personal professional discourses that drew from their personal and professional values and ethics. I conclude the chapter by reflecting on what this continuous negotiation might mean for the administration of the EDI.

Speaking from the 'I'

A feature of the way the participating teachers responded to questions about their practice was their prevailing use of the first-person pronoun: 'I'. I understood this to be a mechanism for locating themselves within a discourse of teacher professionalism, which in turn related to views expressed about professional ethics and the value of childhood, as a way of formulating a classroom approach. Brenda, for example, drew powerfully on the 'I' when she told me that creating an environment where children want to be at school is central to her understandings about her teaching:

First of all, I believe that kindergarten, my job as a kindergarten teacher is to offer a transition, so I am helping the children transition and the family's

transition from home into a school setting. From a place where mum is looking after you primarily to a school setting where there is one teacher and 23 or 24 children in one class. My job is to make sure that children want to come to this great big school and I write that on my wall, you will see that written out there, so I have it written on. I believe my job is to make sure that the children want to be at school ... (Brenda, interview lines 117–122)

For Brenda, this understanding extends to her team as well as her relationship with parents and children:

I want them [the children] to love school; I want them to love learning, letters, numbers, homework so I am giving them a taste of all of that stuff so that when they get this idea ‘oh school is fun, oh school is interesting.’ ‘Oh I really like all of this stuff’ giving them a taste of everything so that they want to be here because I believe that that is half the battle. I also believe that my job is to make sure that parents understand the role they have as advocates and as support for the school program, so it is not like they are sending kids to school and leaving us to teach and then they do their stuff at home. We have to be a team so part of my job is to make sure I set that, I get that set up in the kindergarten here. I also believe that the children who feel they are successful and have some confidence in their abilities will have more success as they grow throughout their years, so part of what I have to do is give them a little taste of everything with as much support as they need so that they can go ‘oh, I can do this, oh I can do it.’ So they can feel that it is within their grasp. (Brenda, interview lines 123–135)

I understand Brenda’s references to what she hopes to achieve for children and her approach to this, clearly expressed through references to ‘love’, ‘success’, ‘confidence’, and ‘ability’, as representing the values underpinning her interpretation of theories and approaches in ECD. This was confirmed when I put a further question to her concerning her job:

Jennifer: To do the job in terms of getting to that love of learning and the success that you have described, what is the approach then that you take in terms of working with them then to support that as a way of development, growth and learning? What is the approach you take? (Brenda, interview lines 136–139)

Her response was to challenge me:

Brenda: So are you looking for a theory? Cause you know, I am a wide reader and I am a wide believer in things like ‘hands on’ learning so I believe that much of what I have to do should be ‘hands on’ and should be stuff that the children can do manipulating things involving as many senses as they possibly can. I believe that in order to teach them the things that are in the curriculum, that then I have to give them experiences in all those things, not just stand up at the front and teaching kindergarten, I am going to be letting them learn. I think giving them opportunities to learn rather than having me do the teaching. (Brenda, interview lines 140–148)

Throughout this discussion, Brenda is firm in her subjectivity: she speaks from the ‘I’ and confidently expresses her professional ethic and value commitments in the form of particular outcomes for children.

When asked about her goals for children, Brenda described her personal value of being able to ‘excite’ them.

Excite them, get them excited, get them involved. Provide a provocation that doesn’t just offer them to choose their interest, but offers a guided provocation, so the Reggio [approach] would be more [to] just offer all of those provocations that are maybe unrelated and then maybe go wherever the children want to go. (Brenda, interview lines 172–175)

Brenda then repeated her earlier view, ‘I have to offer things that excite the children and [I] want them to learn what I need to teach them’ (Brenda, interview lines 175–176).

Danielle shared a different example of her professional ethic and values in action through her description of administering assessments. This had particular significance when she is engaged in establishing relationships with parents whilst determining the type of supports and services their child might require, children whose assessments showed a score marked as a ‘red box’:

It just means when they get a red box and my son got every red box there could be, Walter’s like okay, we have twins. We are both teachers, we work hard at our job for everyone else’s child; we need to work hard at home with our children. I said, ‘You bet, that’s why we’re here but everything we do, we’ve done the same with my daughter and my son’. Of course my son, they’re different, his success and her success are different and that’s good. As a parent it

makes me a better teacher because I do now see the eyes of a parent when I come to them and say, 'Okay I've done some assessment, I need to talk to you about some areas that your child, we need to just work on', I feel that sensitive awful feeling, that tugging at your hear when I'm telling a parent that we need to look into some further things but not with their child because I've been there now. He said as a parent it's just totally made me a better teacher because I know, I am a parent and I can understand. (Danielle, interview lines 804–818)

Here Danielle is not only drawing on her expertise as a professional, but accessing the discourse of parenting that is available to her through her own experience, her 'I', as a parent. I understand this to be allowing Danielle to take up a compassionate position with respect to the family. Danielle shows she is aware that assessment decisions she makes directly affect the young children in her care. This was evident in references across the teachers to: families and values around parenting; program and government funding policies; the influences of curriculum approaches on their practices; and the interests and benefits to children of various approaches.

Stephanie located her priority in terms of the interests of children:

Number 1, I think school needs to be fun and engaging for the kids otherwise you're going to lose them early on. They need to be leaders in the class and learn how to take leadership roles and make it an enjoyable happy place to be where they feel safe and loved and secure here. So I try and make every day a happy one for them, even though some of these kids, as I had mentioned, come from a tough background. This is a safe haven for them and we make it fun and loving. (Stephanie, interview lines 88–93)

The teachers interviewed often evidence more than an understanding of children's development along a continuum referenced by 'normal' and 'capable'. Through the process of the interviews, they also began to identify that children needed to be 'successful', 'happy', and 'safe': 'How happy they are in here – that's a big thing for me. I want them to be happy in here' (Michelle, interview lines 111–112).

The formal and working discourses that emerged around development, the practitioners' ECD approaches, and their practice, as outlined in Chapters 5 and 6 are distinctive in how the teachers incorporate a personal ethic and valuing of children into their practice and understanding of children's development. What emerged from the interviews were layered discourses to describe their practice and approach to working

with children. That is, while on one level teacher descriptions for understanding children's development ranged predominantly across 'DAP' (Copple & Bredekamp, 2009) and 'school readiness', an emerging discourse began to offer an insight into how the teachers also viewed children through an ethical and values lens.

Brenda's context for how she determined what is appropriate for children, for example, was informed by professional and personal values around success, informing an approach that locates itself within a school readiness discourse that references curriculum and skills associated with particular activities. Yet a tension exists for Brenda when endeavouring to facilitate the opportunities that might enable children to experience success and confidence in their abilities:

You know, I can't stand the commotion, which is unusual because you can see I am not terribly crazy organised, at the beginning of the year when you come in, my class will look like a playschool. I will have the water table, the sand table, the house corner and it will all be set up and as I go throughout the year things kind of get pushed to the side and the tables come out. So now, we have tables with pencils and crayons and scissors and every day we have, you know, something fine motor, we have something that is more like a Grade 1 kind of an activity. But in addition, I still have all of those other things that insight the learning, so we have just got our caterpillars we are doing, of course, a little bit of circles of life, so we have our tadpoles, we have our caterpillars, we have just hatched ducks. Our chicks have already gone out to the farm, we have a whole bunch of mealworms and things like that and that is where we are right now looking at those kinds of things. The kids can touch them, hold them, play with them, take them home for sleepovers and things like that. You know, I would have the manipulatives out, I would have - yesterday we made, you know, a life cycle kind of drawing pictures and showing the life cycles and things like that and sent it home to talk about it at home. So it has to be 'hands on', it has to be stuff that they can do but with the goal in mind, so where the whole Reggio thing about letting the children kind of drive their own learning, is not my style. I believe within half a day of kindergarten what I have to do is insight the children to be interested in what I need them to learn. (Brenda, interview lines 150–168)

When Crystal was asked how she applied her some of her understanding around readiness in her practice, the 'whole child' emerged through a discussion navigating

between discourses around DAP (Copple & Bredekamp, 2009) and school readiness. Her response appears to be influenced by a collective determination in practice, where, once again, the ‘I’ and the individual ethic are not necessarily aligned or reconciled:

It’s such a school-based thing, right? We’re moving these kids forward. You’re always looking for independence, you’re always looking for growth. You’re looking for those socialisation skills. Those strong - And that whole readiness factor and kind of defining what readiness means is sort of my whole thing. I don’t know. I get frustrated when I heard about kindergartens looking like a mini grade 1 and too much focus on reading and writing and stuff. Whereas I really want to develop that whole child piece and get them ready for learning and inquisitive. I don’t know I’m not really answering that am I? (Crystal, interview lines 160–167)

When pressed on her reference to ‘readiness’, what this might mean for children and how she applies this in her teaching, Crystal’s response located her ethic around children and her efforts to navigate expectations of readiness with her beliefs and attitudes about children. This reflects that while teachers will generally align their teaching philosophy with their school or board approach, their teaching practice may differ and is related to how individual teachers identify and describe different philosophical beliefs (Rivalland, 2006; Manning, 2008; Mackenzie, Hemmings, & Kay, 2011; Smith, 2000):

For readiness? It’s the social science of school. Being able to separate from parents. Being able to get along in a group. Being able to follow directions. Being able to read social cues. You know when we’ve all come to the carpet and you’re still playing and you don’t notice that. And those kinds of things. Being part of the school community. Coming in when the bell rings recess. Being able to take out your snack and stuff. To me those things are the - it’s the stuff. It’s hard to measure. (Crystal, interview lines 169–174)

This is particularly reinforced in the distance Crystal establishes between ‘readiness’ in referencing this as the ‘social science of school’, and not locating herself alone in this discourse, once again attributing it to a collective understanding through the use of ‘you’ and ‘we’.

For Kim, when talking with her colleagues or parents, while children’s capability was described in terms of ‘emergent learning’ (Kim, interview line 101) and

‘development with appropriate practices’ (Kim, interview line 102), ‘if they’re getting all of the basic needs like if they’re getting, you know, if their physical and emotional and all of those needs are met then they’re more capable of being successful in their education’ (Kim, interview lines 141–143).

The theme of being safe and yet productive featured for Danielle, who referenced her ethic for children in the context of ‘these children that need extra help’ (Danielle, interview line 477). Danielle made constant reference to their needs, describing ‘these children’ nine times in her interview. On each occasion, ‘these’ referenced children whom she identified as having not ‘seen paper and pens’ (Danielle, interview lines 91–92); ‘these children are having trouble solving problem’ (Danielle, interview line 559); and ‘these children have a tic, these children need to work on conversation, these children need to have some skills here on basics’ (Danielle, interview line 844). Danielle’s use of ‘our’ locates her as identifying with the social situation of children: ‘A lot of our kids came from refugee camps, refugee children’ (Danielle, interview lines 92–93); ‘Our children have background, because we work with them’ (Danielle, interview line 477); and ‘these children’s families need help’ (Danielle, interview line 477). While articulating her beliefs about the social situation of the children, her context was expressed in terms of a collective ‘we’ in determining not only the role of herself and other staff, but also the role of the district.

Crucially, in the context of this study, Danielle’s advocacy for children comes through in how she has come to understand the purpose of the EDI and her role in administering it. Having been one of the first teachers in her district to administer the EDI, she has now incorporated its intent and purpose with how she understands the importance of understanding children development and learning:

They [the developers of the EDI] have done good service to our parents so everyone who works with children has good access to information now and I think the questions are information that we need to know, right? (Danielle, interview lines 483–485)

Danielle, while articulating her beliefs for the needs of children (that ‘Our children have background because we work with them. These children’s families need help’), her context was expressed in terms of the collective. This was evident in comments about the children’s families in identifying the role of the district and beyond through the use of ‘they’: ‘Even if all they get this year is the fact that school is a safe

place to be and there's people here to help me, not Child Services are going to take my children away' (Danielle, interview lines 481–482).

Negotiating Competing Discourses

The idea that there is a misalignment between espoused theories and theories-in-use by teachers (Argyris & Schon, 1974) as discussed in Chapter 2, is based on the claim that, regardless of what might be taught formally in teacher education programs (and remembering that those teachers interviewed in this study did not necessarily receive formal education in ECE or ECD) teachers' theories-in-use (Eraut, 2000), while lacking theoretical coherence (James & Pedder, 2006), nevertheless draw on a personal ethic for children that shapes their practice. One limitation of such an approach is that teachers must themselves negotiate these points, adapting their understanding of children's development to the context their practice.

As I read and re-read the talk of the teachers, it became increasingly evident that they were continually negotiating between 'formal' discourses of development, and discourses of capacity and strength. This second set of discourses has been identified in the research (Malaguzzi, 1998; Rinaldi, 2006) as recognition that children have great capacity and potential, rather than always focusing on understandings based on deficits and what children are not able to do or are yet to achieve. This negotiation – tension, even – is seen in the following statement from Michelle:

Yeah, so if I see in their numbers that they, let's say for example at the math table, that they're not even recognising numbers one to five yet, the rest of the class is on six to ten, then I'll revise that activity down for them. If they have fine motor issues, let's say, and get very frustrated at the guided drawing, then either I will draw, they will draw, I will draw, they will draw – I'll revise it down, okay. Or if the cutting is an issue with some of them, where they get frustrated, then I will do some of the cutting and just say 'Okay, you have to cut this part'. But everything's revised, I think, according to what they can and cannot do because we want them to be successful. Right. We want them to participate and be happy and have a good day. (Michelle, interview lines 218–226)

I understand the participating teachers to be struggling between these positions. When Michelle was asked to expand on her ideas about the importance of play, she spoke in terms of children being 'happy' and experiencing 'success':

Well, I think then the theory behind [the EDI] it is good. That it's supposed to be able to provide services to children at a very young age within their communities. So, of course, if you do that, you're going to have happy, healthy, productive kids. (Michelle, interview lines 310–313)

Similarly, Danielle accessed a range of discourses when she set out to identify her approach, including her goals for children: 'learning first where the child is at. Where do they need to go and what they already know?'; then her theories: 'that's all Piaget and I'm, like, no, not me ... definitely Vygotsky' (Danielle, interview line 259); and the main ideas Danielle applies to her teaching: 'I think the fact that children are so very capable and so – maybe it's just seeing through their eyes the fact that they're not just little children' (Danielle, interview lines 303–305).

At the next point in her interview, Danielle explained how her perspectives were drawn from her teacher training. First, she was able to identify a theorist or early childhood approach that influenced her ideas. Secondly, and more specifically, Danielle described how she had learned about gender, class, and images of children conveyed through analysis of Anne Geddes's pictures (a photographer famous internationally for her 'cute' images of babies sleeping, sitting in flowerpots, and the like), and challenging what these images 'actually do' (Danielle, interview line 306):

To portray that they're helpless and I can't look at those photos anymore without analysing them to death, and I think when I look at the kids in my class I think I don't walk in and say, 'Oh, aren't they cute, let's get started'. I think, 'Okay, you've come from Africa, what have you seen, and what animals do you know?' All their knowledge is so key and what their families have come from and what their families have taught them. (Danielle, interview lines 306–311)

As I questioned Danielle, she continued to reveal not only distinct discourses but hybrid discourses, across what she considered appropriate for children within the context of the district's expectations and framework; for example, a hybrid discourse between children's development, the influences of the Reggio Emilia preschool approach, and the need for screening and assessing children for developmental delays:

these kinds of tools and all the research that's out there; there's so much to be learned but then you think about it, it always goes back to the basics and knowing, yeah this is really what it is that the children need to learn, we can do it this way and it's so simple but boy they'll get so much more out of it, and the

reason? Why do I do my teaching? Why, why, why? (Danielle, interview lines 652–657)

Towards the end of the interview, I asked Danielle again about the terms she was familiar with, since she had been hesitant when this question was first posed to her. At this point, her response was framed in the context of administering instruments like the EDI:

I think when we do these kinds of instruments you're talking about the whole child and all the dimensions of the whole child. I think so does the curriculum, so I think you could be a good teacher in an area, but if you're not focusing on the whole child there's a lack for that child. (Danielle, interview lines 693–695)

Danielle's negotiating between these understandings played out in an extensive response she provided to articulate her view culminating in 'we want them to be successful' (Danielle, interview lines 733–734):

Successful in whatever they want to be in, like I don't care if they all don't leave kindergarten, I don't care so much that I've achieved, I can tell the principal this and always tell her, I said I don't care if they can't all read an A and B level book. (Danielle, interview lines 736–738)

When teachers used the term 'success' or 'successful' in terms of setting children up for the future, I put a question to them about what they meant by success or successful. The teachers' typical response to this was to move outside the 'normal' and 'capable' discourse around development, to a focus on the individual child, or attempting to negotiate a space for the individual children within a context focused on standardization in learning environments heavily influenced by the need for screening and assessing children. For example: 'I'm really looking at what is it that each child needs to have. Not, I guess the word achieve, we want them to be successful' (Danielle, interview lines 733–734).

Michelle also positioned success for children in terms of the purpose and structure of the kindergarten experience, suggesting the influence of a school readiness discourse. Her desire for the children was to be 'proud of themselves, proud of what they're doing' (Michelle, interview line 497) and 'when we have somebody that does something that they've never done before or whatever or their drawing is amazing today' (Michelle, interview line 499). Nevertheless, her responses were still located

within a discourse of DAP (Copple & Bredekamp, 2009) as an approach to teacher practice:

I think it's just seeing if they want to come to kindergarten every day, which I would say the majority of them do, unless they're very, very tired and then it's hard for them. When you get a great big 'Good morning', when they come up, and they've been saying it lots lately, 'I like kindergarten' – that's all I want to hear. I like our jobs this week. You know, when I just say 'Okay, Green, you're at number one today'. Bang, they're gone. Like they run to number one. You know, that's good for me. Then I just want them to have a good day. (Michelle, interview lines 464–470)

These images were significant in the frequency they appeared through the teachers' descriptions and also in how they applied these images in situating their discourse through their practice. When Michelle was asked to clarify her understandings of ECD in the context of EDI, she identified children's success alongside an uncertainty about how to determine what is meant by success in terms of what is it that the EDI is measuring, and for what purpose.

If I'm looking for kids to be successful, then I need to be aware of what they're doing and where they are. So I guess if that's what the EDI shows me is what my kids are like and where they are and how they're doing, then does that equate to success? I guess it does. But you know, like I said, I assume that that was for the government and they want to look at that and find out how demographics of kids are doing and so we're still waiting for that piece I think. (Michelle, interview lines 507–512)

In summary, the views of children held by the teachers were not necessarily informed by formal theories, since they were drawing on the discourses available to them, both formally and informally through training and practice. This was not surprising, as the career paths and the teaching courses taken by teachers did not necessarily incorporate or feature child development. Furthermore, as the teachers talked about their views on children – not only their growth and development, but what the teachers considered as important for them – the construction of an informal discourse around the ethic and values of childhood as frequently evident.

Just as Grace articulated her ethic focusing on the relationship with child as being 'find out about that child' (Grace, interview line 286) and 'what makes them tick,

you can find out how to help them in a way that helps them to grow' (Grace, interview line 287), Caroline, when asked to describe her early childhood approach stated:

I think relationship is very important. I think that nothing can be done if you have not developed a relationship with the children first. So relationship building and relationship maintaining is central to my teaching, right from the beginning of the year, between myself and the children, and between the children and each other, and I work on that throughout the whole year. We do social skills and life skill development, we use a program called Fun Friends to develop resiliency and reduce anxiety. Yeah, I think that that's central. (Caroline, interview lines 165–171)

In instances where teachers drew on their personal experiences, their accounts drew on multiple and hybrid discourses, including advocating for the needs of children, relationships with parents to encourage them to be engaged for children to succeed, and the need to consider a child's individual needs. Kamberlis (2001) argues that a hybrid discourse approach is one in which teachers and students construct a way or ways to understand their context through a fusion of influences from authoritative external sources and personal discourses. While the authority sources may not be well incorporated into the individuals understanding, they remain influential.

By and large, they construct these identities and knowledges by fusing authoritative and internally persuasive discourses. In other words, they make new and unfamiliar discourses their own by reaccenting them and integrating them with discourses from more familiar domains such as everyday life and public media. In doing so, they find ways both to connect with and to disrupt school discourses and knowledges. (Kamberlis, 2001, p. 87)

As explored in detail in Chapter 6, through a working discourse constructed whilst administering the EDI and related instruments, the practice of assessing and screening has established the discourse parameters by which kindergarten teachers set about describing not only children's development as *being determined by the need to measure*. Nevertheless, they are also able to articulate what they advocate for children's success, and what this might look like.

Children as Capable

Consistent with claims made earlier in this chapter about the multi-layered nature of the teachers' discourses, although the teachers articulated an ethic of what was important in their teaching, their ethic could also be located within a prescribed approach, reflected either through how they described their practice in terms of curriculum and assessing children for supports and services, or an emerging ECD approach being implemented by the school authority. The distinction being drawn in this section of this chapter, between the need to assess the 'whole child' and a commitment to the idea that all children are capable was evident in the different discursive positions the teachers took up when describing what was important in their practice. The capable child was often referenced within the discourse of the 'whole child' (Cathi, interview lines 302, 278, 474; Crystal, interview line 166; Danielle, interview lines 693–695; Grace, interview line 479; Kim, interview lines 222–224; Stephanie, interview line 119; Focus Group, interview line 598) but was also distinguished through reference to particular contexts when teachers were describing their ECE approach.

For these teachers, the Reggio Emilia approach had recently been introduced as a new focus for their school jurisdiction to enhance teacher practice and the early learning experience of children. Although sometimes referred to by the teachers as a 'Reggio inspired approach' (Caroline interview, lines 65, 73, 83, 87; Danielle interview, lines 82, 265, 426, 850; Crystal interview, line 153; Focus Group interview, lines 16, 120, 123, 255) or 'Reggio philosophy' (Kat, interview lines 85, 89, 144, 153; Kim interview, line 89), the introduction of this approach had become *a vehicle through which the teachers could locate their ethical discourse* of how they viewed children and their development. Most particularly, when teachers were asked to describe a particular early childhood approach, the idea of a 'capable learner' began to emerge in their shared understanding.

For many of the teachers, DAP and school readiness discourses had underpinned their descriptions of understanding children's development and what was expected of children in a learning environment. Yet when the teachers were asked more probing questions about how they explained children's development *in the context of their practice*, relatively new influences on their ECE practices began to be evident. For seven of the teachers interviewed, their school jurisdiction's ECE approach provided

access to a discourse of children's competence and capacity determined by the Reggio Emilia approach to ECE.

Caroline's response, for example, provided in-depth evidence of negotiation between long held beliefs about teaching children, expressed as 'trying to use developmentally appropriate practice' (Caroline, interview line 71), and shifting to a collective position of the district's implementation of a 'Reggio inspired approach' (Caroline, interview lines 65, 73, 83, 87, 94, 103, 111, 368). Caroline described the resolution of this discursive negotiation as 'something that I've kind of grown into' (Caroline, interview line 87), situating children and their development in terms of a 'belief' (Caroline, interview line 73) in the 'child is a capable learner' (Caroline, interview line 74), and the role of the teacher as being 'to find out where they're at and how can we further provoke their imagination in their learning' (Caroline, interview line 75). It is important to note that the collective discourse of a Reggio inspired approach is not necessarily incorporated or internalized by Caroline into her own understanding of children, as the belief she expresses about the capability of the child *is externalized to her practice and aligned to the district* as the means by which a new belief in the child and development is being formed. Reinforcing this point, Caroline locates her belief in a context of developmentally appropriate practice, even as she states she has to 'kind of grown into' the Reggio approach. Her attempt to reconcile this separation is evident in the following statement by Caroline:

And I also like to do learning that meets as much as possible the individual learners needs, so instead of teaching everybody the alphabet, when some already know the alphabet and are already reading when they come to school, and some don't recognise a letter in their name. I try to tailor as much as I can to those individual needs, so we do a lot of like balanced literacy, guided maths, those sorts of things to work within the frameworks of what they're already coming to school with. (Caroline, interview lines 76–82)

While there is 'a lot of belief' (Caroline, interview line 73) in the child's capacity for learning, Caroline is still grappling with her discursive history of holding an individualized approach, especially in relation to a school readiness discourse: 'I try to tailor as much as I can to those individual needs, so we do a lot of like balanced literacy, guided math, those sorts of things to work within the frameworks of what they're already coming to school with' (Caroline, interview line 79–82). One of the

ways in which she attempts to reconcile this tension is to qualify the idea of a child's capacity through expressing the need for 'freedom' as a form of autonomy for the child:

Where a Reggio inspired approach is child led, [the] child chooses, you may have provocations, you may have items within a centre that maybe provoke literacy or numeracy, but unless a child chooses to do so or an adult sits with the child to work on it, they may not choose to learn in that way. So where do I balance the two, how do I make sure that they're getting that rote, and still having freedom? (Caroline, interview lines 104–108)

For the purposes of this research, this has particular significance when considering the EDI as the artifact under scrutiny, as teachers' understandings of child development have a direct an influence and impact on ECD public policy. As teachers begin to experience significant shifts, not only in relation to ECE approaches that frame the learning environment for young children, but the influence this may have on their own understanding of children's development, it seems logical that this would begin to show in how they incorporate this into their administration of the EDI. This is also consistent with the disparity between what teachers understand to be good practice in early childhood teaching and development, and what they actually do in their practice (Wood & Bennett 2000). As teachers begin to grapple with a new ECD approach like Reggio, the positioning of children within this context comes through in the way teachers describe their abilities. It is these abilities that are the focus of the EDI. As Danielle said, 'I think the fact that children are so very capable and so – maybe it's just seeing through their eyes the fact that they're not just little children' (Danielle, interview line 303).

A Personal Ethic and View of Childhood

It is important to point out that not all the teachers located their ethic for children within a Reggio inspired approach. Recalling Brenda's descriptions of children in terms of success and confidence in their abilities, and her description of a continuum of learning milestones as necessary to ensure the children achieved, she also described her approach as 'hands on' (Brenda, interview lines 141, 142, 165) with 'the goal in mind' (Brenda, interview line 166). Brenda saw this as being directly *in contrast to*:

The whole Reggio thing about letting the children kind of drive their own learning, [it's] not my style. I believe within half a day of kindergarten what I

have to do is get the children to be interested in what I need them to learn.

(Brenda, interview lines 166–168)

When asked what she meant by her repeated reference to ‘insight’ (Brenda, interview lines 157, 168, 172, 374), Brenda’s personal ethic came through in terms of what ‘excites them, [makes] them excited, get them involved’ (Brenda, interview line 172). Paradoxically, Brenda’s commitment to the experience of children was contextualized through key principles and practices of the Reggio Emilia approach. When asked what she meant by ‘excites,’ Brenda responded in terms of ‘provocation’ – a key concept within the Reggio Emilia approach – thereby reflecting the competing and multiple discourses informing teaching practices (Ryan & Grieshaber, 2005; Sachs, 2001):

Excites them, so get them excited, get them involved. Provide a provocation that doesn’t just offer them to choose their interest, but offers a guided provocation, so the Reggio would be more just offer all of those provocations that are maybe unrelated and they maybe go wherever the children want to go. I have to offer things that excite the children and want them to learn what I need to teach them.

(Brenda, interview lines 172–176)

For Grace, a capable child is the consequence of applying ‘practical theory’ (Grace, interview line 267) of ‘whatever works for kids. If anybody wants to give me ideas I have to see that it’s going to work’ (Grace, interview line 276). When asked to clarify what she meant by what is going to ‘work’, Grace’s expressed uncertainty about what she could articulate for her practice. That is, while not being ‘too big on that [sic] theories’ (Grace, interview line 261), her context for children was drawn from a personal ethic based on identifying the challenges she encountered working with children in communities who have ‘never been to play school, have never been in any programs, they know nothing, academically they have never usually held a pencil in their hand or scissors’ (Grace, interview lines 48–50). For Grace, her professional ethic was most concerned with ‘families with poverty and that’s made a huge impact in my teaching and relating to kids’ (Grace, interview lines 199–200).

Grace constructed both her understanding of children and the ideas she incorporates into her practice, that is, what ‘helps’ (Grace, interview lines 279, 288, 520) children ‘gain social skills, academic skills, emotional skills, [as] that whole spice thing I guess’ (Grace, interview line 279):

Jennifer: SPICE?

A: That social, physical, intellectual, creative and emotional. I think you can't get to the intellectual until everything else is taken care of. You can't get a child to succeed very well unless all those other parts are in place, and you can't do anything about the family but we can make our school our safe haven family and if they feel that relationships are most important. (Grace, interview lines 282–285)

Although Grace articulates a personal ethic in her practice outside the formal structures of a particular approach, she nevertheless draws on an implicit understanding of children's development that will at least influence the understandings she would draw on when administering the EDI. Grace expressed this in terms of 'knowing' the child:

If you have a relationship with that child, find out about that child, you can find out what makes them tick, you can find out how to help them in a way that helps them grow. They don't have to be doctors or lawyers, I want them to be successful and be happy individuals in whatever vocation they choose, wherever their abilities lie. (Grace, interview lines 286–290)

In a section of interview transcript across four pages, Cathi's response to being asked about any particular influences in terms of wanting to be a teacher, then steering in the direction of ECE, are revealing in this regard. Her attempts to describe a child centred approach are captured through her 'love' (Cathi, interview lines 24; 59; 268; 788) of working with children; then, their acceptance and 'insights' (line 26) that 'help us to grow because of how they experience the world.' Cathi then identifies an important consideration in how she is able to negotiate between the 'free environment' (Cathi, interview line 25) to pursue her own 'love' of elements she can teach.

In other words, Cathi's personal ethic, in identifying the value of being a teacher as being due to this 'love' (Cathi, interview lines 24, 59, 268, 788) of working with children, was incorporated into her practice, even as she enacted requirements to meet certain learning outcomes. Her hesitancy in answering what it was she liked about early childhood teaching was attributed to a jurisdictional decision to provide full-day kindergarten.

This was evident in her uncertainty in reconciling what she described as the 'aha moments and there are so many of them in kindergarten where children at this age are

very excited about learning about anything' (Cathi, interview line 102) and 'they're willing to try anything' (Cathi, interview line 106), with the challenges to 'manage' (Cathi, interview line 107) and 'find a balance' (Cathi, interview line 118). Cathi believed that 'if you give them enough time to settle in – especially to things like free choice – if you give them enough time to really settle into it then all of a sudden you see great things happening' (Cathi, interview lines 110–112).

As Grace was one of the few teachers in the group who had extensive experience of administering the EDI, noting the most recent cycle was either her third or fourth time, it is of particular interest to note how her understanding of children have been shaped. For instance, her personal ethic around relationships with children was originally expressed as concerns about administering the EDI but there was a noticeable shift for her over the course of administering the instrument. Initially '[I] was very concerned about, I'm not sure if this child is at 'most likely' or 'very likely' or something like that,' compared to a 'more global look at it, just to say, 'you know what, it doesn't really matter if it's a three or a four for this particular question because it's one student among many [so] that whoever's going to look at the results aren't going to say, 'Hmm, they're going to get it or they're not going to get this program'' (Grace, interview lines 452–456). This changing view of the EDI, based on an understanding of the purpose of the instrument, suggests that, over time, Grace has resolved the requirement to make judgments about individual children's development on the EDI with her 'practical theory' of learning and development.

Overall the interviews with teachers like Grace, Caroline and Cathi demonstrated to me how the teachers navigated or negotiated different discourses when talking about their work. The significance of this for the purposes of this study is that it reinforces the notion that teaching involves more than technical processes and formal knowledge (Fish & Coles, 1998). The perspectives of the teachers shared through the course of this study support the growing body of work showing how educational process are greatly enriched when teachers understand and learn the everyday lived contexts of themselves and the children they teach (Argyris & Schon, 1974; 2007; Freeman, 2002; Moll & Greenberg, 1990). This understanding was particularly evident in the teachers' discourse of children's capabilities.

The Importance of Family and Community

A further discourse accessed by some of the teachers was that of family and community. This discourse was distinguishable through the language used to describe a child in the context of the child's experience within the early learning program. This was often expressed in hopeful terms, and in terms of how the teacher understood children's development, what they hoped to achieve in teaching in a kindergarten program, and, in more recent times, (and most significantly in the context of the present study) what they hoped would be achieved with collecting data through administering the EDI.

Discourses of family and community were typically positioned in relation to the discourse of school readiness and the role of parents in determining children's ability and developmental potential. Relationships with parents, including understanding their parenting style, was seen as important for supporting and understanding their children. This was particularly important for Danielle, who was concerned with enhancing the lives of children who experience social disadvantage, and identifying opportunities within the kindergarten setting and her practice to minimise disadvantages that might otherwise affect children's opportunities for full participation:

We built this little apple tree courtyard where they have an outdoor area, have a place to play. A lot of them live in a box in the sky and they don't go outside all day and its dark and that's how their families are, close their curtains, heat it up high. Coming here is a whole new world and even the fact that we can dig and find worms in the garden is such valuable learning for them that we just start with that and see where we can go. (Danielle, interview lines 197–204)

The importance of parenting was also clearly set out by Cathi in terms of her values about parenting and the impact of these on children's development:

I guess there are parents who are your salt of the earth and very down to earth and it doesn't matter how much money that they have but the kids are toeing the line and they're doing what they need to be to interact with others throughout their life kind of thing. Those basic skills are there. Time is another thing where I think probably more so now where parents are away from their children more. (Cathi, interview lines 715–719)

Cathi was also aware of the role of family structure and its impact on children's wellbeing:

We still have some where the mum is staying home or the dad is staying home or they've got their shift work going where somebody is always able to be there or they've got it covered if they're not and they spend lots of time with their kids. Some kids I know – there's a little girl that comes here at seven o'clock in the morning and she doesn't leave here until probably just about six. (Cathi, interview lines 719–722)

Cathi's description of her values also reflected how she draws on her own family and community experience in her commitment to advocating for what is important to support children's development:

So I mean that's a lot of time to be institutionalised and then how much time do you actually have that is fulfilling time where everybody's got lots of energy to just deal with life or to spend time together to interact. So as I said, I definitely see more of that part of it. Where I started teaching was a farming community and even with the small town there was usually one parent at home or being able to spend lots of time with their kids – and were those kids any different? Maybe – they were probably a bit more down to earth and didn't have all the things but I mean some of those things weren't invented back then. But I do find that there's lots of things but there may not be as much time spent with that child and that's a personal perspective. (Cathi, interview lines 724–732)

Cathi's societal perspective on the importance of family and community aligns to her assessment of parenting s determining how children are engaged in her classroom setting. This is particularly in relation to how parents behave and how this might otherwise explain their children's achievement. Cathi recalled an encounter with parents in a classroom setting where parent participation was considered an important component to the structure of her classroom routines.

When I said 'come be part of our circle and the celebration' [a father] said 'ok ok yeah' and then within a few minutes he was part of it for one little song and then he went and sat down and he's busy again and I'm thinking, 'Why did you come? It was frustrating for your child not to be here for them'. So that's surprising to see that as well. Or if I get two and they just love to chat amongst themselves and the heck with the kids kind of thing. And you're thinking, 'Just a minute, common sense and manners should be that you wouldn't be talking to each other when I'm reading a story or whatever and we're kind of having a

hard time hearing the story because you're having this gay old time having a chit chat', so you're thinking, 'Whoa what's going on?' But again just sort of ok. And if that's what you do when your children are doing something or trying to tell you something then you're not really totally engaged with what they're doing and that's pretty sad. (Cathi, interview lines 747–757)

The importance of family, while identified in practical ways, also reflected how the teachers judged parental capacity, including parenting styles. In Grace's ethic of what 'helps' children, she also included the importance of family – the 'family dynamic' (Grace, interview lines 467, 469):

It's the family dynamics and who families are in their value system will affect how well a child does, I truly believe. There's some children that go way beyond and I'm hoping that there are some children that I can see are very bright and you hope that they will overcome all their obstacles that they have, that they will become the doctors or lawyers that their brain has them capable of, but you have to see where they're coming from too. (Grace, interview lines 469–474)

The notion of being there to 'help' children was evident in Grace's discourse of practice. For instance, the work of Ruby Payne² in the field of education success and poverty was referenced by Grace: 'That play based or essential learnings, understanding backward design, Ruby Payne has done a lot of work on poverty, families with poverty and that's made a huge impact in my teaching and relating to kids' (Grace, interview lines 198–200).

While Grace's discourse of practice was influenced by a variety of learning approaches and curricula, her beliefs were strongly oriented around the lasting impact of

² Dr. Ruby Payne, an America educator, is known for her work in the field of the culture of poverty in relation to education. She is the author of *A Framework for Understanding Poverty* (2013), which deals with what Payne describes as the 'hidden rules' (Payne, 2013. p 10) of economic class (upper, middle, and lower). Belonging to one of three main social classes (upper, middle, and lower) will govern how people think and interact in society (Payne, 2013). Payne's research (Payne, DeVol, & Smith, 2001; Payne, 2013) focus is then on the significance of the 'hidden rules' (p. 10) in the educational setting. Critics of Payne identify key tenets of her work as problematic in a deficit view of poor students and their families (Bomer, Dworin, May, & Semingson, 2008; Gorski, 2006; Meier & Wood, 2004). Criticisms of Payne include her advocacy for *No Child Left Behind Act 2001* as a policy that holds all students to the same achievement standard (as dictated by their state) regardless of their ability level, socioeconomic status, and native language (Meier & Wood, 2004). Other criticisms of research includes how she frames poverty as 'a deficit among students and parents that is argued as drawing on racist and classist stereotypes' (Gorski, 2006, p. 16), and 'the idea that economically disadvantaged people must adopt the values and behaviors of the middle class in order to achieve academically' (Gorski, 2006, p.18).

families on children's development. Paramount for Grace was the relationship between herself and parents:

What I keep telling parents we're partners, we're working for the betterment of your child, I don't want to see your child getting frustrated that they don't want to come to school anymore, school should be a place that you're loving to be at, you're curious about things, that you're not crying when you come to school or the teacher's not having to send you in the hall or sit at the table, what can we do, what do you do at home to stop this behaviour, maybe I can do that at school, we're in this together. So they don't feel so alone, a lot of parents seem alone, they feel alone, I say 'no, this has happened to many other kids, this is the change I've seen in some kids if this little thing has changed'. (Grace, interview lines 655–663)

For Brenda, her relationship with parents not only reflected her beliefs in the importance of children's success in school, it was also an important influence in establishing her leadership and expertise, demonstrating the range of ideas teachers draw on to create and understand 'their perceptions in terms of the theories they hold implicitly' (Spodek, 1988, 13–14):

I invite parents in here to play with the kids, encourage them to come in at lunchtimes with their younger children and just kind of come in and play in my classroom to get a feel for it. Talk about the whole transition part. I believe that I also want parents to see me as capable. I think that part of their satisfaction with how their children are doing in school and the progress they make will be reflected in how confident they are when we meet. (Brenda, interview lines 504–511)

The Relationship Between Discourses of Family and Community, and Administering the EDI

The range of ways the teachers situated the importance of family in children's development varied from a practical perspective on identifying the role of parents in the wellbeing of children, through to a broader perspective around social inclusion and the importance of the community's role in supporting families. This was particularly captured when the teachers were asked specifically about what they considered to be the purpose of the EDI, which the teachers identified as significant for addressing a range of practical issues for parents in the care and wellbeing of their children, to set them up for

academic success. The teachers clearly understood the importance of the EDI as being beyond an assessment or data collecting tool, to identifying the role of government and communities in supporting families and their children.

While teachers didn't necessarily associate the outcomes of the EDI as impacting on their own work, their experience of administering the EDI, including broader experience with the work of community coalitions, was still captured within a discourse about advocating for the needs of children:

So I have adapted a couple of things, so one of the things that I do is I have all of my parents give me a sheet of paper that I used to call the IPP [Individualized Program Plan] input sheet but now it is called just something like 'Get To Know Your Child.' It asks questions that I know the EDI is going to ask me, 'has your child gone to pre-school before?' Those sorts of things that I would go 'oh my god, I don't know those things' so questions that are on here, do you have any siblings, you know, things that I want to know I ask on that sheet. How do I do this? I wait until I know the children so they feel fairly good about making sure that it comes at a time after I know the children and then I start and I go through the questions and I go student by student rather than question by question.

(Brenda, interview lines 708–717)

This was also reflected in determining how the EDI was aligned to teachers' educational philosophy. For example:

I like the parts about families that they include in the EDI, is the child coming to school late, is the child coming to school hungry. Those types of questions, because it can't just be about academics, that it has to be where the child is coming from, does your child or does the family speak English. I guess through whether they're fed, well clothed, well we'll give you an idea of the family dynamics as well. (Grace, interview lines 463–467)

The importance of family in children's development, and how this is supported through the EDI, was a consistent theme across the experience of teachers. Indeed, the teachers were able to shift between discourses, depending what they were endeavouring to reconcile about the purpose of the EDI. Brenda, for example, stated:

Oh, I think that it really is important too if we are so committed to early learning and proving so much financial support to early learning, then we need to also be able to show proof that there is some, that there is a connection between support

when the children are young and how ready they are for school and how well they do in school. So I think that's what this does. What this does is look at what services parents have available in our community, what services they take advantage of, what they have as far as income, all of those kinds of things and how many parents in the family, all of those kinds of things and then compare it to how well the children are ready to come to school and make changes based on the comparison between the two. (Brenda, interview lines 728–736)

The structure of Brenda's response, qualifying her understanding of the importance of the EDI through an 'if we' positioning (Brenda, interview lines 281, 335, 339, 728), shows her negotiating between the role of advocate ('if we are committed') to better understanding family situations 'as far as income' (Brenda, interview line 733), and 'how many parents [are] in the family' (Brenda, interview line 734), with what services are available to families in the community. At the same time Brenda identifies the importance 'connection' (Brenda, interview lines 373, 407, 730, 1052) between supports and services children need when they are young and 'how ready they are for school' (Brenda, interview lines 731, 740).

This advocacy for children in a community context – expressed as 'community mobilization' (Crystal, interview line 430) – was evident in how Crystal positioned herself in the role of administering the EDI as 'to know that you have a voice' (Crystal, interview line 431). However, in acknowledging the importance of the EDI and the 'information that it gives the community and families' (Crystal, interview line 381) when it comes to identifying community assets, Crystal was less convinced about its impact on her practice: 'I can't say that as a kindergarten teacher I use it a lot' (Crystal, interview line 385). This was reinforced through her deference to the third person 'you' at this point in her interview, serving to position its influence as external to her own practice, even as it is acknowledged as a tool through which her ethic for children and families can be mobilized:

the information really does just go to the stakeholders in the community and the kindergarten teachers are a very powerful voice in that group. You can quickly identify holes. You can quickly identify parent concerns. You can bring a voice that just builds a better understanding to possibly what is going on in the community and with your families. (Crystal, interview lines 431–435)

Advocacy and the EDI

This ability of teachers to reflect on and understand the context in which they are working reveals processes grounded in the knowledge and assumptions they bring to the task of teaching (Shulman, 1987). When the teachers began to share their understanding of the importance of the EDI and why this would matter in their practice, they were able to base their understandings beyond that of administering an instrument to measure children's vulnerability, to aligning the importance of the tool to a belief in what was needed to support and promote children's development.

That's kind of what I think the purpose is, so you compare what services are available to families compared to what the children can do when they get into school, how ready they are for school. Then you make changes in the environment and in the services and in the community and in whatever has to be changed so that we can work on some of these things that the families are having difficulty providing for the children themselves. (Brenda, interview lines 738–743)

The advocacy aspect of administering the EDI was shaped by what the teachers already understood about their role as a teacher and the experiences they have drawn on that have shaped this understanding (Russell & Murphy, 2001). As Crystal identified with 'community mobilization' and knowing 'you have a voice,' her efforts to present the needs of refugee children capture an example of her advocacy for parents and children through a series of educational processes to determine and measure children's development. A commitment to social justice and how this can be leveraged through assessment instruments, including those for the purposes of screening, came through when the teachers spoke of addressing social barriers that may prevent families and communities from being able to support children's development. For example, Crystal explained:

I have kids that are refugees. They just left a camp so when they get here, when you're meeting with parents, and even reviewing the EYE. Do they have the same concerns that I do? No, because their circumstances are so different. So yeah, bringing that voice to the EDI. But I think for anyone filling out to understand the bigger picture. That's it's not just - Especially since we do that EYE [Early Years Evaluation] which I'm getting off topic for you because the EYE has nothing [to do with this] - But when you're using a diagnostic screen versus a community survey, I think that it confuses a lot of people. Here's what

we did with the EYE what are we doing with the EDI? But they didn't do well on this. And what comes of it? Nothing. And it takes years to see results, so sometimes it's hard to show teachers the same value. (Crystal, interview lines 435–444)

The challenge of removing the barriers teachers begin to identify through their advocacy for the interests of children, and the importance of community support, was evident also when Kat drew on a development discourse of 'where the kids are at and how they are functioning, where they stand with other kids' (Kat, interview line 262):

And I think it's to be used in regards to community support, if there's enough community support in that area for that community. Now, the one thing I did put on the EDI survey as one of the questions, I said it would be nice to kind of know what the final product is of this. I haven't really heard of where these questions went or what they're doing with them, so it'd be nice to know is there something I could do to maybe support my kids better from this EDI. (Kat, interview lines 263–268)

Likewise, Denise and Danielle both accessed a discourse of advocacy for children, identifying strongly with community coalition building as a form of advocacy for ECD via the EDI. Their collective understanding of children's development does not contradict or come in to conflict with the EDI, but it does at least overcome any scepticism or initial concerns with the instrument. Danielle expressed her worry that on more than one occasion when assessment tools and the EDI have been implemented, 'I was worried when they did the EDI experience that this would all be pushed to change the curriculum and take out the play part and all the dimensions of the child and I said it's good, it's just another – we always have to look at these things as just another piece of the puzzle' (Danielle, interview lines 820–823), and, 'When this came out I was almost worried that it was like when we had to do the Brigance³, and all that. I thought

³ First published in 1982 by Albert Brigance, the BRIGANCE K & 1 Screen was developed with the purpose to identify children in kindergarten and grade 1 who may need further assessment to determine if they required additional services as part of their Individualized Education Plans (IEPs). In 1983, the Brigance Diagnostic Comprehensive Inventory of Basic Skills (published by Curriculum Associates) was then designed to assess students in kindergarten through to grade nine. By 1987, the Brigance is now recognised as one of the most widely used screens being used by teachers and school authorities. Due to the demand for screening and the reputation attributed to the Brigance and the growing use of screens for preschool children, led to the development and publication of the BRIGANCE

okay they're going to mandate our curriculum and take away the whole idea that it's so play-based in kindergarten' (Danielle, interview lines 792–793).

Danielle's advocacy for what the EDI might indicate to support the case for investing in children and communities provides insight into the impact and experience of teachers in administering the EDI. Her consideration of how well the EDI fits with her educational philosophy is captured in two references to 'just another piece of the puzzle' (Danielle, interview line 823), where she responds definitively about the 'need to go where the children need to go and what they are thinking' (Danielle, interview lines 487–488). She is able to reconcile this when reflecting on her fear that the 'EDI experience' for her would '[push] to change the curriculum and take out the play part and all the dimensions of the child' (Danielle, interview lines 821–823). For Danielle, while locating her educational philosophy and the use of the EDI within a curriculum context that is more aligned to a developmental discourse, she defines her curriculum approach as facilitating 'where the children need to go' (Danielle, interview line 488), by scaffolding to extend the scope of tasks and activities that a child is able to perform (Jordan, 2004; Long, 2000):

I definitely need to go where the children need to go and what they are thinking but then I always need to, I also need to do my curriculum and this matches with the curriculum for me and this give me that little bit of basis, let's just go into this little group and do this little activity, if she can achieve it great, if not let's do another one so it just gives me the data and I'm a bit of a data person when it comes to data and unfortunately, it's a little bit later in the year but it's okay because I can always have a discussion with Grade 1 and say by the way, even though we've worked on this ... it's awesome, it's great information, it's very organised and helpful as a teacher because it shows what we're going to do. (Danielle, interview lines 487–494)

Recalling Danielle's earlier account of her experience in assessing and screening and how this, along with her personal experience of assessments for her children, begins to align with her 'need to go where the children need to go,' her advocacy in a professional network, and her endeavours to reconcile the multi-layered discourses that

appear in her discussion concerning her practice, provides insight into the potential impact of measures and instruments in determining programming for children:

I'm never ever going to be the one that says you need – I see my own children, they don't have a sandbox, they don't have a water table, they don't have centres throughout their tables, almost half their morning, okay their five years old, they could learn so much through play and dramatic play and so we've had quite a few conversations this year but I was worried when they started administering this one especially the EYE [Early Years Evaluation], I thought they're going to change our curriculum and be very much, it was a fear of a lot of teachers in Alberta and I stood up in the meeting and said 'we're doing this EYE [Early Years Evaluation] just to gather data, it's not to put it against anyone's professional teaching it's to teach for these children. This is how this child learns and succeeds, this is how this child learns and succeeds, this is where we need to go with this child. I said the fact that your child has green boxes doesn't mean they don't have areas inside those green boxes that we have to strike. It's just my experience. (Danielle, interview lines 793–803)

Danielle identifies the collective impact of the EDI as to how to mobilize community assets, through connecting this to children and play:

[When asked to implement the EDI] I went back to my principal and asked why do I have to do this? He said, 'Because you work with those children and you know them the best'. I said, 'Okay, I get that part but how does the funding part help?' and he said, 'Okay, well think about it this way, we don't have a playground in this whole area. There hasn't been a new one since I moved into this community. There is a brand new water park, we got funding from the lottery to do our own playground. He goes [Danielle recalls her discussion with her principal], 'There was nowhere for our children to play. So what if they live in the inner-city they still need a place to be kids'. This gave you that; this gave the government the push ... (Danielle, interview lines 415–420)

Denise also connects the importance of play, 'building foundations' (Denise, interview line 493), and the need 'to fix it here' (Denise, interview line 493) as a 'precursor, in the earlier developmental stages' (Denise, interview line 491):

So well how about us look at children, could we do a certain aspect in the playgroup, that would incorporate more of this, you know, to aid in their

development; could we possibly put this in the library program, to aid in the ... they need to play more, they need to be with each other, parents are to be together, sure, could this assist in this aspect of where our scores were a little bit ... need to be improved. So I think a few of them, the precursor, in the earlier developmental stages, or it can have it happen earlier. For you to understand that it's about building foundations, you would want to fix it here. But unless you have the foundations here, it's not going to be fixed. (Denise, interview lines 486–494)

Once again, in the discursive negotiation evident in the talk of Danielle and Denise, we see the ways in which these teachers bring together their theories in use with the requirement to administer the EDI.

Chapter Summary

Chapter 7 is the final of three chapters examining the anticipated and unanticipated discourses evident in how the teachers participating in this study described their practice in supporting the development of children. It has particularly examined themes and interrelationships occurring in the kindergarten teachers' understandings of children's development in the context of their practice, including administering the EDI. An unanticipated finding, reported in this chapter, is the way the teachers view the administration of the EDI as an act of advocacy on behalf of children.

Chapter 7 builds on the discussion in Chapters 5 and 6 that identified the reluctance of the teachers to enter into an explicit discourse on development, and instead described their practice in terms of practical application of their knowledge. Just as the teachers were more willing to describe their practice and how theories of child development were applied to their work, their descriptions of children were grounded in their values, beliefs, and experiences. They drew on these experiences with children – whether incidental or planned – to find ways to provide for the educational opportunities of children. That is, teachers identified that a key component in their practice is how they are able to enhance the lives of children from diverse backgrounds, including children that they judged as not having had early learning experiences and children experiencing social disadvantage, as well as how parents and communities determined what was needed to promote and advocate for children's optimal development. A key objective teachers identified was the importance of the

kindergarten setting in facilitating children's development and bridging disadvantages that might otherwise impact on a child's full participation.

An unexpected discourse emerged around their motivation for wanting to teach: their focus on early childhood revealed an ethic and value concerning children in the context of their growth, development, and learning. This was expressed through descriptions indicating their decisions around setting children up for 'success', 'happiness', and 'freedom', and advocating for childhood experiences that would promote 'self-esteem', 'confidence', and 'creativity'.

It was no surprise, therefore, that when teachers were asked about their practice in administering the EDI, this aligned with their educational philosophy: a strong ethic situated in the importance of community, in a broader context of advocating for supports that would target families and optimize children's development. This was particularly the case as the teachers described their understandings of the intent of the EDI, which began to shift from collecting data to administering the EDI to secure information that could be used to inform policy and programming. Ultimately, the teachers saw this as better informing which community programming and resources would impact best on the care and wellbeing of children in setting them up for academic success.

As only two of the eleven teachers had an early childhood specialization in their teaching degree, their responses in describing children's development reflected how they negotiated through various discourses to develop their understanding and practices in ECD, beyond that of any formal academic study or training in the field of early learning and children's development. Also identified was the range of discourses that the teachers were either accessing formally through local school authorities implementing particular approaches, including the professional development opportunities some teachers indicated as being of influence and support for them in their work with young children. Of significance was how the teachers negotiated through various discourses to develop an understanding of children's development, including an unexpected discourse around valuing the experience of childhood that came about through what had motivated them to undertake to teach, and was expressed as being a focus of their practice in working with kindergarten children.

In the final chapter of the thesis I turn to discussing four main findings in relation to how the EDI mediates the relationship between research, policy, and practice when considering the understandings of children's development teachers apply in their

practice, and in particular when administering the EDI. Chapter 8 discusses these findings and the implications of these for research, policy and practice, identifying the influence of the EDI in shaping and constructing policy, research and practice, as well as giving careful consideration to the EDI in terms of what is being measured.

Chapter 8: Conclusion

This study has been an attempt to describe and theorise discourses of early childhood development and the influence of these on kindergarten teachers' work in kindergarten and preschool programs in Alberta, Canada, with specific reference to the *Early Development Instrument* (EDI). The significance of this is that data collected through the EDI is used by governments to engage with communities to better understand the types and levels of programs and services necessary to promote better developmental outcomes for children.

The research that is influential in government policies in Canada at present is that of the *Early Child Development* (ECD) *Mapping* research, undertaken through the Offord Centre for Child Studies. Kindergarten teachers are increasingly using tools like the *Early Development Instrument* (EDI) as part of *ECD Mapping* to gather information about the developmental outcomes of children (which is then reported at the population level) at the time of their entry into kindergarten.

This final chapter revisits the aims of the study, discusses the findings, provides key insights, and offers implications and recommendations arising from the study.

Aims of the Study

The central aim of this study was to address the research question: What understandings of early childhood development do Alberta Kindergarten teachers bring to their work when administering the Early Development Instrument (EDI)? To explore this question in further detail, three sub-questions guided the study:

- What discourses of early child development are predominant amongst kindergarten teachers in Alberta?
- How is kindergarten teacher discourse formed? What influences the development of kindergarten teachers understanding of these discourses?
- What are some of the implications of early child development discourses for teachers' practice and public policy?

This study set out to seek out the perspectives of kindergarten teachers about how their practice is informed by early childhood research, especially in relation to how they understand and administer the EDI. This research has been undertaken during a period of the increasing influence of neuroscience on policy development in the early years. Within this discourses, and as described by the teachers interviewed, the concept of 'development' is presented as the accumulation of knowledge and skills important

within a second discourse, that of school readiness, as well as a child's overall developmental outcomes.

Drawing on what Gee (2011a) describes as the 'situated meaning' that occurs as a result of particular language forms taking on specific meanings in particular contexts of use, this study considers the features accompanying the language in use of the participating individuals: their present language (about what they know and believe); the language that comes before and after a given utterance; the social relationships of the people involved in the discourse; as well as cultural, historical and institutional factors (Gee, 2011a). Using this methodological orientation as a guide, it was evident that a discourse of child development, as described by the kindergarten teachers, allowed the teachers to hold together multiple different ideas that represent the practice of kindergarten teachers in a particular way when administering the EDI.

Chapters 5, 6, and 7 present the results of analysis of the data contributed by the teachers. Chapter 5 identifies the reluctance of the teachers to enter into explicit discourses of development, drawn from established child development theories. Instead, as set out in Chapter 6, the teachers described their practice in terms of the practical application of their knowledge about children. Chapter 7 argues that, just as teachers were more willing to describe their practice than how theories of child development were applied to their work, their descriptions of children were also grounded in characteristic discourses of values, beliefs and experiences, which they draw on to find ways to provide educational opportunities of children. That is, the teachers identified that a key component to their practice is knowing how to enhance the lives of children from diverse backgrounds, including children they judge as not having had early learning experiences, and children experiencing social disadvantage. It was also evident that they are aware of how they, alongside parents and communities, can determine what is needed to promote and advocate for children's optimal development. A key objective the teachers identified was the importance of the kindergarten setting in facilitating children's development and bridging disadvantages that might otherwise limit a child's full participation.

Summary of Key Findings of the Study

The study has four main findings:

- **First**, that a discourse of developmentally appropriate practice underpins the practice of kindergarten teachers, noting that:

- Teachers did not articulate a vocabulary for describing development, including a vocabulary to describe concepts or theories concerning children's development.
- Based on the vocabulary that was used to explain children's development, a default discourse of developmentally appropriate practice emerged consistently across the descriptions shared by the teachers.
- Teachers explained their understanding of development in the context of planning for and assessing the needs of children, including administering screens and assessment tools, as well as administering the EDI
- The use of assessments and screening tools appears to mediate meaning, with these tools of practice shaping teachers' understanding of children's development
- These tools act as a vehicle for aligning teachers' understanding of development in relation to a discourse around 'appropriate', 'typical', and 'normal ranges' when describing children's growth and learning.
- Teachers distinguished in their practice between a formal discourse of development and that of personal understanding of children and society. These distinctions were evident as teachers described their practices around planning and assessing children's need as opposed to how they described their practices and approaches in structuring play-based activities for children. When teachers locate children's development in a context or in relation to practice, including administering the EDI, a formal discourse of DAP emerges.
- **Second**, the teachers were able to incorporate the use of the EDI into their educational philosophy: The teachers drew on their personal values and judgments about children's development when describing their understanding of EDI, because they saw it as helping to determine what is going on for children in the community.
- No clearly articulated 'theory' or approach was evident in their educational philosophy, suggesting the importance of how school boards shape and influence this; the example of the discourse of 'Reggio-inspired' practice was evident in the teachers' talk

- The process of exploring a new approach had the function of opening up the range of discourses available within which the teachers could describe children's development.
- There was some evidence of a potential paradigm shift, from a dominant discourse of school readiness to wanting to consider a more in-depth collective understanding of working with children, including a desire to support this through connecting with other professionals
- The teachers also expressed a strong sense of responsibility for, and influence over, children
- However, those with greater background in working with older grades described the importance of structure and literacy as important experiences
- **Third**, the thesis implies the need to structure teacher training and professional development to allow teachers to establish their practice on a solid foundation of knowledge and understanding of children's development, whilst also incorporating personal values around children and childhood:
 - The teachers in this study, like many peers across Alberta, were not exposed to ECD in their training. For this reason they may be more likely to align their understanding of children's development to school readiness and general principles of DAP
 - In this situation, professional development and teacher networks become important for teachers with less background in ECD to consider alternative ECD approaches, including what these approaches mean for children's learning and development.
 - Teacher training and ongoing professional development need to also recognize the beliefs about diversity and personal values that teachers draw on to establish their ECD approach in the classroom.
 - While most of the teachers interviewed had not had formal or specialized training in ECD, they expressed a discourse of values and ethics about children and children's rights, their motivation for working with children, the role of socialization in children's lives, and the importance of kindergarten in setting children up for success

- Training and professional development are important in terms of not only how to administer an assessment or screening test, but to develop professional networks to better understand or develop practice; there was evidence that the teachers wanted to explore ECD and practice in-depth and with colleagues.
- **Fourth**, there was evidence of the important role of school authorities in leading and shaping ECD approaches adopted in schools.
 - School authorities endeavouring to establish an ECD approach need to provide appropriate professional development for teachers.
 - There is a risk that standardization may undermine the personal ethic that teachers bring to their work, in terms of the values they espouse around childhood, and that have drawn them to the profession of teaching and the specialization of ECD. This may occur when particular assessment or practice approaches become prescriptive.
 - The two school districts represented in this study are taking very different approaches to staff development and support for teachers, but with similar outcomes around collective understanding of practice. Within this, the teachers still maintain a strong individual identity of what is being achieved when working with children.

I now turn to discussing each of these four main findings in more depth.

1. Developmentally appropriate practice discourse underpins the practice of kindergarten teachers. While kindergarten teachers demonstrated a reluctance to describe an explicit discourse on development, including a particular theory or theories, when asked specifically to describe what concepts, terms or phrases they associated with children's development. While there appeared to be a poverty of concepts and descriptions to explain children's development, when teachers were asked the general question about how they would describe their early childhood approach regarding children in context to supporting their growth and learning, their reference point for development was described in terms of developmentally appropriate practice and school readiness. Developmentally appropriate practice (DAP) discourse came through as a dominant discourse in the context of what kindergarten teachers know and believe to be important in the growth and learning of young children (Gee 2011a). When teachers came together to discuss the descriptions they had contributed to, along with those of their colleagues, a shared meaning of children's development was established and

expanded upon when discussing children's development in relation to a collective approach to both the EDI as well as a school authority-led approach to ECD. These findings address two the research questions concerning which discourses of early child development are predominant and how kindergarten teacher discourse is formed. The situated meaning of children's development was determined by kindergarten teachers locating themselves in a context of what they understood and believe to be important in influencing children's growth and learning. The kindergarten teachers' social context of the early learning environment and their practices were influenced by DAP, including teachers views of children's developmental needs and structuring play-based activities to meet the interests of children. As child development represents a diverse set of beliefs drawn from developmental psychology, it functions as a discourse as it holds together different ideas that are used by teachers to guide them in their understanding about how children develop (Fleer, 1995).

The significance of this finding highlights the way DAP influences teacher practices as a dominant discourse in early childhood settings, and how it holds together different ideas that represent an understanding of child development, arising from a common set of shared values, assumptions and beliefs (Woodhead, 2000; Woodhead, 2006; Wylie & Thompson, 2003) that are expressed through a common language (Gee, 2011b). Child development then can be identified through Discourse Analysis as an important discourse, due to its particular social practices and language features that are associated with practitioners who work in this field (Gee, 2011a, b).

2. Incorporating the EDI into their educational philosophy. This second finding expands on the first: if teachers are reluctant to enter into explicit discourse on children's development, how is that kindergarten teacher discourse is formed in relation to the EDI? And what influences the development of their understanding of these discourses?

The teachers frequently used terms such as 'school readiness' and 'typically developing', and notions of social and physical domains to describe their understanding of children's growth and learning. This thesis has argued that the role of screens and assessments, including administering the EDI, cannot be underestimated as an influence on teachers' practice in mediating meanings about children's development in the absence of formal theories of ECD.

It was evident, however, that the teachers were able to incorporate this mediational process into their everyday philosophy and practice: the kindergarten

teachers interviewed in this study articulated a strong awareness of the demands placed on them as practitioners with the responsibility of administering screens and assessments that would determine the level of supports and services children received in the kindergarten classroom. Based on a culture of assessment and screening of children, their level of awareness in administering the EDI was heightened when it came to applying an understanding of children's development to the tool (and vice versa). The tool itself, and the understanding teachers applied to administering the EDI, did not necessarily impact directly their day-to-day practice; however, the understandings they applied to administering the EDI conformed to a set of beliefs and values that had been reinforced through regularly administering screens and assessments as part of their day-to-day practice.

How teachers then constructed their practice and approaches to meet the needs of children was reinforced by discourses of development and the assumptions built in to this discourse, underpinning the purpose and intent of screening and assessment tools. What became evident through the use of probing questions to explore teachers' practice was a range of contested theories the teachers were negotiating about how children learn and what constitutes authentic development. The significance of this for teacher practice in the early years, especially in the kindergarten year prior to grade 1, revealed an important distinction being made between what is being taught and how a child is learning.

These kindergarten teachers demonstrated the capacity to also put theoretical considerations to one side in their day-to-day working life, by drawing instead of their core values and ethics in relation to children's present and future opportunities.

3. What does this mean for teacher training and professional development?

Teachers experience, including their training and professional development, featured significantly in an alternative discourse of compassion and advocacy for children that was accessed by these teachers. As discussed in detail in Chapter 7, the teachers described their professional career choices in early learning, due to the opportunity to be creative and have the freedom to create the type of learning environments and opportunities that would set children up for success.

This takes on significance when considering the disconnect between teachers' espoused theories and their theories-in-use, as discussed in Chapter 2. That is, based on the claim that, regardless of what might be formally taught in teacher education programs, teachers' own theories-in-use (Eraut, 2000), while lacking theoretical

coherence (James & Pedder, 2006), allow them to draw on a personal ethic for children that shapes their practice. The background demographics of the children then become very important as part of the factors that influence teacher discourse. Four of the 11 teachers interviewed undertook specializations in ECD as part of their teaching degrees, while four, including two with ECD specializations, also held specializations in Special Education. The call for specialization, consistency, and standardization in teacher training for early learning to improve the quality of teaching and the outcomes for children accessing early learning programming prior to grade 1 is, therefore, timely. In 2013, the Association of Canadian Deans of Education (ACDE) published the *ACDE's Accord on Early Learning and Early Childhood Education*, citing that there had been a major shift over the past 50 years in the discourse relating to the care and education of young children. From a focus on childcare as a 'women's issue' relative to workforce engagement, there is now a focus on early children education with its own pedagogical discourse on child development and learning (Franklin, McNinch, & Sherman, 2013, p. 1). However, this new focus on early children education is not without its own controversies, as the purposes of early years education and care are framed in multiple and even contradictory ways (Franklin, McNinch, & Sherman, 2013, p. 1). The range of discourses influencing the structure and demands for an ECD specialization in elementary teaching spans neo-liberalism and the need to invest in human capital, neuroscience, and the importance of the early years for brain development and school readiness to create a productive workforce, couched in terms of citizenship and participation.

In this political and social context, the kindergarten teachers interviewed as part of this study were distinguished by their motivation and commitment in choosing to be kindergarten teachers. Their experience in the classroom spanned the range from recent graduate to 35 years of teaching. And yet, across this diversity of backgrounds as specialists in music, physical education, language, language arts, and special education, a common set of values and aspirations emerged as a the desire to be in environments where they could choose to be creative, have the flexibility to create opportunities that would lead to children's independence and abilities to grow including their ability to manage their world, and to problem solve and create an environment where children would love to learn.

What became evident from the teachers, in response to questions about influences on their understanding of formal and informal discourses, wasn't dependent

on a formal or standardized approach in their teacher training, but the wide ranging scope of professional development – both formal and informal – that had become critical in shaping and supporting their understanding of children’s development. From the group of teachers who had formed a network to discuss and share ideas on working with at-risk children and their families in vulnerable communities, to the teachers who were a part of a Reggio-inspired approach being implemented more formally by a school authority, these formal and informal approaches identified a key motivating factor for teachers in locating their understanding of children’s development within a personalized social and cultural context that was both familiar and readily accessible to both teacher and child. The teachers drew on their experience, and that of other teachers, to formulate a working discourse responsive to what they perceived and understood would optimize children’s growth and learning. Their incidental references to DAP and school readiness take on greater significance when asked to describe their understandings when applying screens and assessments, and more notably, when administering the EDI. It was in this context, that the issue of standardization emerged as to what teachers understood to be children’s development for the purposes of collecting data, and determining what constituted a continuum or pattern of growth and development for children that could be measured.

While teacher training and professional development remain important considerations, the *outcomes* of forming teacher knowledge are critical, since these determine, in large part, the approaches they subscribe to and incorporate into their practice. If teachers are to retain the characteristic practices attributed to a specialization of kindergarten teaching, then there must be distinctiveness in what is being ‘taught’ in the kindergarten classroom and for what purposes. When it comes to the implementation of a population data tool like the EDI, further consideration needs to be given as to how teachers are acculturated to actively participate in measuring children’s development and growth, based on a set of assumptions reflecting an objective common stage and culture that all children should attain including certain elements of knowledge that are essential learning, being prerequisites for later success in school and life (Agbenyega, 2009, p. 4).

4. The role of school authorities in leading and shaping ecd approaches adopted in schools. What then are some of the implications of early childhood development discourses for teachers’ practice and public policy? In addressing the first area identified in this question – that is, the issue of teacher practice – what became

evident from the teacher interviews were the tensions the teachers identified as a result of school authorities prescribing an official approach. Such approaches prescribe certain expectations and assumptions around reconceptualizing old (or establishing new) discourses on children's development, including setting out approaches about how best to support children's growth and learning in an educational context. As discussed in Chapter 6, an important theme was the incongruence between teachers' theories of childhood development and how these theories translated into practice when they were in the classroom, interacting with children. This dissonance has critical implications for how early childhood education is conducted, both for those who are about to enter the profession but also with experienced teachers, such as those who were included in this study. A recurring implication for those involved in teacher education is how to best to influence teacher practice, not in an abstract sense but in a more direct way, that centres on the working world of the teacher.

This raises the issue of the role of the school authority as well as teaching institutions in supporting understandings about the role of the EDI, its origins, and its purpose. This would be a very positive inclusion in early childhood education courses and in the ongoing professional development of teachers.

The potential leadership of school authorities in shaping and supporting the practice of kindergarten teachers cannot be underestimated. This study was fortunate to benefit from being able to interview teachers from diverse backgrounds, as well as spanning five school authorities covering urban and rural communities. It was soon evident that these authorities play a critical role in how early learning and early childhood are represented and supported across their respective school jurisdictions, and across the general practice of teachers in kindergarten, including the both the formal and informal professional development that occurs to support teachers in their practice.

While the teachers in this study expressed a tension between what they described as the official approach of their school or district, and what they saw as a more inspired but yet to be fully realized perspective, they identified the importance of their respective professional networks in facilitating greater understanding and opportunities for exploring practical issues revolving around teacher practice, relationships, and interactions with children. These understandings include exploring the influence of the EDI as a community mobilization tool. Through these professional development networks, the teachers are provided with the opportunity to locate themselves and their experience as a part of a larger, more conceptual, world also in

which they take part. This is the world of new and inspiring theories about childhood learning and development, bringing with it a range of alternative discourses of child development and teaching practice. Living with this tension was very much a part of the reality for these early childhood teachers. Chapter 6 shows this tension, whilst also suggesting that the methodology used here has been successful in probing the experience of teachers who administer the EDI.

Many of those who took part in this study described this as the tension between a new paradigm, such as the Reggio approach to early childhood development, and the approach that was officially followed in their school. There was not a clear distinction between the new, inspired approach and the existing one, as school authorities were often the ones responsible for exposing teachers to these new ideas.

By contrast, very little attention was attributed to the significance of administering the EDI from a jurisdictional perspective, with only one teacher indicating an interest within her jurisdiction concerning the results and reporting on the EDI. This included how the school authority was represented at a local community level when the teacher undertook a leadership role to connect the efforts in school to support children's development with various community initiatives in response to EDI results.

The caution, like that for teacher training and professional development opportunities across early childhood, is that there remains a risk that if school authorities undertake to implement a 'one authority' ECD approach, that standardization may undermine the personal ethic that teachers bring to their work, in terms of the values they espouse around childhood and what drew them to the profession of teaching and the specialization of ECD. There are risks around standardizing understandings and practices in early childhood when an approach becomes prescriptive, which would potentially silence teachers' range of discourses in practice. Ironically, these discourses might otherwise be the influencing factor in shaping what an authentic ECD approach might look like for a school authority wanting to distinguish its leadership in the educational field, and in particular, the specialization of early learning. As a result of this study, it could be argued that, regardless of how and what school authorities choose to implement, teachers still demonstrate a strong individual identity in what they want to achieve when working with children. The question remains as to how this may be captured and utilized as an authentic and culturally diverse approach, responsive within the respective localized social and cultural contexts of children and their families.

Implications

Three key implications have been identified from this study. These are discussed in the following order:

1. The implications of the study's findings for policy and implementing the EDI
2. The need to focus on the insights of kindergarten teachers, policy makers, and school district leadership.
3. Implications in relation to the methodological value of the study.

1. The implications of the study's findings for policy and implementing the EDI. The finding that the teachers conform to a collective understanding of children's development when administering the EDI has implications for training, policy, and the implementation of the EDI as a tool for generating population-level data that might otherwise be used by both communities and government for planning and program delivery. The absence of teachers in how the EDI is implemented, including how the data and community results are reported back to community for planning, is also a contentious issue if the policy and planning objectives of provincial governments like Alberta are to be achieved. EDI results are intended to enable Albertans to better understand and support the development of young children (ECMap 2010, p. 1). The professional and personal values and judgments of teachers, which shape the early learning environments children access, appear to be absent in shaping the further development and implementation of the EDI.

It could be argued that the cycle of administering the EDI has little impact on the day-to-day practice of teachers, and the instrument itself might otherwise be considered as having little or no significance on the outcomes of children's health and wellbeing. Yet the significance of the EDI, and its prominence as a research and policy tool, has identified the need to understand the influence of tools like the EDI on teachers and their understanding of children's development, as they align their understanding to a collective perspective on children's growth and learning.

2. The need to focus on the insights of kindergarten teachers, policy makers, and school district leadership. The teachers in the study, in describing the understandings they bring to administering the EDI, drew on what they understand as a result of their experience and practice, including the influence of an approach like the Reggio Emilia approach. The teachers drew on this to reflect on what they consider to be important in supporting children's development and learning. This is the dimension that the teachers, both through their individual interviews and confirmed when

discussing influences in the focus group, brought to their descriptions when aligning their understanding of development to administering the EDI. It is this set of understandings that is absent in the development discourse. That is, the ethic of wanting to know more about ‘relationships’, creating opportunities to encourage ‘imagination’, and to ‘explore’ and have ‘freedom’, described as being a privilege within the kindergarten setting, was what the teachers believed to be important *and that they bring to administering the EDI*. What remains unclear, and worthy of further consideration, is how such ideas influence the *outcomes* of administering the EDI.

Equally as important as capturing the experience and expertise of teachers in what is being measured and represented as a result of implementing the EDI, is the question of how school authorities engage with and empower teachers in co-creating authentic ECD approaches that reflect local social and cultural contexts of children, families, and practitioners. While there appeared to be conformity in how the teachers described children’s development when required to complete an instrument like the EDI, the challenge remains as to how best to facilitate ongoing learning and professional development to better prepare teachers in administering the EDI, as well as enabling them to engage in authentic practice, that is responsive to the needs of children within their communities. In order for school authorities to enhance and build on current approaches, there remains the need to structure teacher learning so that teachers are able to establish their practice on a solid foundation of knowledge and understanding of children’s development, at the same time as providing appropriate time and space for teachers to explore and incorporate personal values and ethics concerning children, childhood, and development.

A critical insight from this study is that there remain a large number of teachers specializing in kindergarten with little or no exposure to ECD in their formal training. This is significant for both government and school authorities, who have to determine how best to support teacher training in the field. For those teachers with less training, it appears that their views on children’s development are more likely to conform to conventional discourse on development, including DAP and school readiness. How then can teacher training and professional development avoid the risk of standardizing or prescribing approaches to understanding children’s development that lead primarily to further ‘schoolification’ of kindergarten approaches. The role of school authorities in facilitating professional development for teachers is paramount in determining opportunities where teachers are able to establish their practice on a solid foundation of

understanding of children's development, at the same time as recognizing the diversity and personal values they draw on to establish their ECD approach in the classroom.

3. Implications in relation to the methodological value of the study. The benefits of Discourse Analysis for this study were its capacity to bring awareness to discourses that are dominant through highlighting the use of language as social and cultural practices (Fairclough, 1989; Gee, 2011a), and exploring the situated meaning that occurs as a result of particular language forms that take on specific or situated meaning in specific contexts of use (Bakhtin, 1981; Bourdieu, 1992; Gee, 2011a;). It is essential to remember that the formal and informal discourses teachers identified with through their practice, including administering the EDI, are produced and used within wider social and political contexts, and they create and articulate broader ideological interests, social formations, and movements within the field of early childhood development (Gee, 2011a; Hall, 1996). The descriptions that captured the terminology and language use of the teachers took on specific and situated meanings in the specific contexts of use, including: describing their practice in general terms; their application of screening and assessment tools; and when asked about their understanding of children's development in the context of administering the EDI. A particular insight was the dominance of a discourse that identified the social relationships of the teachers in relation to the children in the classroom setting via tools used to shape and inform their interventions for children. A further important discourse was that of contact with colleagues through networking and professional development, where they were able to build on their individual and shared understanding of ECD approaches as well as their collective understanding of children's development, in the context of better understanding how best to enhance and support children's growth and learning.

Recommendations

Based on the findings, three recommendations are made to address the issues arising across research, policy, and practice impacting on the development and delivery of early childhood programming, as a result of the findings identified through this study into the understandings of children's development teachers use when administering the EDI.

Research recommendations. Further research about the implementation of the EDI is needed, including how EDI population data is actually influencing policy and practice. Foci could include, for example:

- The role of the research community and its accountability in an objective analysis and critiquing of what is being measured, and for what purpose;
- The need for further research to critique the methodological approaches underpinning the EDI;
- Evaluating the efficacy of the EDI as a measure for early detection of vulnerability and optimal children's developmental outcomes, and as a community and knowledge mobilization tool to determine a community's 'health' in supporting and optimizing early learning and developmental outcomes for children;
- The implications of the absence of children with disabilities from discussions about ECD and the EDI.

The first recommendation concerns further EDI research, and the need for research to be conducted from multiple perspectives, including a critical approach in determining what is being measured and the discourse assumptions underpinning the EDI as a population-level instrument. An emerging body of research is beginning to challenge these discursive assumptions, including the implications of commonly held theories on child development (Agbenyega, 2009; Einboden, Rudge & Varcoe, 2013; Keating, 2007; Peers, 2011) in relation to the use of the EDI. An important challenge to the EDI's research assumptions is its claim that any risks to children's development are best identified early to optimize children's outcomes (Einboden et al., 2013; Keating, 2007). Research critiques of the EDI are difficult to identify, as the most significant body of research pertaining to the instrument focuses on the reliability and validation of its efficacy as a measure of children's readiness to learn and the potential for success in the first year of schooling. However, as the critique of EDI research has identified, two critical reframes that have occurred that call in to question the legitimacy of the EDI: first, the claim that a shift in discourse from school readiness to healthy development detracts from the social and economic factors affecting vulnerability and outcomes for children; second, the framing of EDI as a 'global consensus that early development is a social determinant of health' (Einboden et al. 2013) reframe the primary focus of the EDI from the broader social and economic context of development to locating the family and community as the primary site (Irwin, Siddiq, & Hertzman, 2010; Lapointe, Ford, & Zumbo, 2007). Central to this second reframing is revisiting the idea that the location of children's development is best measured in terms of individual behaviour (Einboden et al., 2013), rather than positioned in terms of the greater complexity of

social and political contexts. These tensions were evident in the divergence in discourses provided by teachers, as they negotiated their role in facilitating the learning context as the means by which children's growth and learning can flourish. As notable shifts occur in privileging certain discourses, kindergarten teachers must also negotiate what particular contexts mean for their role as teachers, including the intent and scope of the early learning environment directed at children's development and learning; and the particular approach they have personally committed to, or subscribed to, as a part of their role in a larger educational institution, through the authority of the school board. Taking into account the myriad of factors that come in to play, the impact and influence of the EDI extends beyond the scope of a measurement tool from its classroom application to that of its potency for community mobilization and policy:

New understandings of nature (biological development) have been produced through a melding of techniques of measurement, state interest, and the elision of diffuse theories of ECD ... The EDI can be considered a technique of developmental science, a technoscience that exemplifies how through technology, biology is opened to be interpreted through the lens of social observation. (Einboden et al., 2013, p. 7)

Critiques of EDI research indicate a need for greater accountability and critique from within and between academic communities as to the ethics, values, and intent of a significant measurement tool, and its potency as a vehicle for transmitting cultural and social values pertaining to the growth, development, and wellbeing of children.

Policy recommendations. The implications of this study imply a priority for systemic change in the Government of Alberta's policy framework for ECD, including its regulatory framework and workforce planning and training strategy. The pressing needs are:

- Clearly articulate ECD policy, including its intent and objectives as to why and how government invests in ECD initiatives, programs and services;
- Establish an implementation strategy for the use of EDI population data collection, including community engagement to support local and diversified training options, professional development networks, and scope for community-initiated ECD approaches to engage government and community in alternative theories to inform practice, including a critical approach to predominant discourses, including DAP

- Recognize and give priority to how ECD policy addresses the needs of all children, including children not profiled through the EDI discourse of development – including children with disabilities.

A number of governments across Canada as well as internationally, including Australia and Scotland, have identified a policy imperative around the learning and developmental outcomes of young children, including the need for social investment into the early years. A range of policy positions have underpinned the case for investments, and typically the most sustainable case in support of these investments is referenced by an economic argument based on early development of children as a social determinant of health. As outlined in Chapter 1, the provincial government of Alberta launched a five-year research initiative in 2009, with \$25M (Canadian) funding provided to an external research consortium under the auspices of the University of Alberta, and contracted through the Ministry of Education. The research initiative, led by the Ministry of Education, ‘was to study children’s developmental progress by the end of the formative first five years and to learn more about the environmental factors that may be influencing their development’ (ECMap 2014, p. 2). (As a result of this initiative, over 100 community coalitions were formed outside existing health and social services boundaries as predetermined through the Ministries of Health, Education and Human Services. To date they have received government funding to establish local action plans in response to local EDI data collated into ‘Community Information Packages’ [CIPS]) (ECMap 2011, p. 1).

Policy research indicates how policies in early childhood are shaped by constructions of children and childhood (Anning, Cullen, & Flee, 2008; Mitchell, 2010; Alderson & Morrow, 2011). This contributes to a process that offers an insight into how discourses are shaped and privileged in a policy context as way of validating or garnering political consensus for government sanctioned supports and investments into areas of early childhood development. This takes on significance in political contexts that might be challenged from more conservative representatives, both within and external to government, that question the role of government in what might otherwise be argued as a private family concern.

The second recommendation from this thesis challenges the policy implications of implementing and utilizing the EDI, including the need to examine the existing practices of early childhood policy and acknowledge the role of teachers and practitioners working in early learning and child care settings. As previously outlined, a

key finding in this study concerned the competing landscape of theories and discourses that influence teacher practice, which has significant implications for when teachers are required to administer population-level measurement tools like the EDI. Within the policy realm there appears a convergence in the interests of research and teacher practice, as governments engage in the practice of evidence-based policy making. Underpinning the concept of evidence-based policy making is the principle that legitimate and informed public policy development is based on ‘evidence’ (Young, 2013). This is seen in recent efforts to establish policy processes engaging with evidentiary decision making criteria (Howlett, 2009), with the overall objective of better aligning policy objectives, and minimizing discrepancies that arise between government and community expectations in the delivery of programs and services.

Current standards for teaching certification have no requirements that kindergarten teachers meet additional specialization criterion to teach kindergarten, including children’s development, ECD approaches, or current ECD research and practice trends. As identified in the findings of this study, this diversity of teaching backgrounds has provided both opportunities and challenges for teachers, who have drawn on a myriad of experiences and approaches to inform their practice, with a tendency to default to a discourse of development that is prescriptive of what to expect around children’s developmental outcomes. The analysis of this process that is offered here includes the use of tools including curriculum, and screening and assessment tools, that draw teachers into conformity around what constitutes children’s development. The influence of the EDI, as a measure of children’s developmental outcomes, aligns with this experience, and highlights the risk of standardization in the delivery of programs and services. This leads to cautions about how then to train, educate, and support the ongoing learning of professionals who might otherwise be motivated to seek out a variety of sources and ideas to inform their practice.

In a policy climate where ECD is the particular focus of government’s agenda – as outlined in Chapter 1– it seems apparent that there is an opportunity to establish a policy framework that would cultivate a diversity of approaches for training and ongoing learning for professionals.

Practice recommendations. A final set of recommendations arising from this thesis focus on school authorities’ roles in facilitating ECD approaches, including engaging staff and communities to:

- Move beyond ‘inspired approaches’ and develop authentic local ECD approaches;
- Create discursive and theoretical spaces where teachers have opportunities to directly shape and engage in early childhood approaches, to enable teachers and practitioners to engage in multiple and critical perspectives
- Revisit traditional delivery modes of professional development and training to reconsider how best to engage professionals in creating new and innovative theories and practices, including engaging teachers in the research methodology in the development and implementation of assessment, screening, and measurement tools like the EDI
- Enter into partnerships with government and universities to develop models of teaching that place an emphasis on the sociocultural nature of learning and teaching, and address the issues and concerns relating to risks of standardization in teaching and learning approaches for both professionals and children.
- Improve community engagement through the community mobilization process established as a result of the implementation of the EDI across community coalitions, with a greater emphasis on the sociocultural nature of learning. This would contribute to positioning teachers as agents of community engagement and change, and to be a part of learning communities that explore in depth an approach and philosophy to early childhood education that recognizes the role of culture and language in children’s development.

This recommendation is in recognition of the findings of this study that indicate entrenched discourses relating to children’s development, growth, and learning and how they continue to shape how programming and teacher practice is enacted.

The theoretical underpinnings of this thesis, identified in Chapter 3, have focused on learning as an activity mediated by physical or psychological tools situated in a specific social practice (Lave, 1988). According to Ellis, Edwards, and Smagorinsky (2010), ‘people learn by engaging in social practices which are stretched over specific settings for practice, settings that are in a dialectical relationship with the cultural arena within which certain forms of identity are motivating’ (p. 2). As learning is considered a ‘dynamic social activity, situated in physical and social contexts, and is distributed across persons, tools, and activities’ (Martin-Beltran and Peercy, 2014, p. 2)

there is the implication that learning is not static and that social interaction plays a fundamental role in the learning process. Vygotsky's concept of mediation is key to understand sociocultural theory, and proposes that the human mind is mediated by the use of psychological or physical tools. Such artefacts enable us to both understand the world as well as change it. Through the course of this study, involving interviewing kindergarten teachers about their understandings of children's development, with particular reference to administering the EDI, the focus has remained on the activities of teacher practice in the classroom. Questions about administering the EDI, as a cultural tool, have provided significant insights into why and how teachers offer children specific experiences. This has also allowed insight into how teachers develop their understanding of children's development at the same time as changes occur in the context in which this learning is occurring. That is, at the same time as noticeable influences are identified in the experiences of teachers as they go about their daily activity, they are also negotiating external influences and requirements including screening and assessments, and engaging with and testing new ideas and approaches in relation to enhancing programming for children. This is consistent with what Rogoff (2003) describes as a reconceptualization of human development as a process of 'people's changing participation in the sociocultural activities of their communities' (p. 52).

Conclusion

Through discourse analysis, this study has identified that even though the teachers demonstrated a reluctance to describe an explicit discourse of child development, they were able to describe their practice in terms of practical application of their knowledge and experience of children. Just as the teachers were more willing to describe their practice, their descriptions of children were grounded in their values, beliefs, and experiences that they drew on – whether incidental or planned – to find ways to provide for the educational opportunities of children.

It was no surprise therefore that, when the teachers were asked about their practice in administering the EDI, this aligned with their educational philosophy of situating it within the importance of broader advocacy for supports that target families to optimize children's development. This was particularly the case as the teachers described their shifting understandings of the intent of the EDI from collecting data, to administering the EDI to secure information that could be used to inform what

community programming and resources could improve the care and wellbeing of children in setting them up for academic success.

The influence of the EDI in shaping and constructing policy, research, and practice, along with the extent to which the developmentally appropriate practice discourse influences teachers understanding of children's development when administering the EDI, requires careful consideration in terms of: what is being measured, the role of professionals including their understanding of children's development, and how best to capture and reflect these. Ultimately, the key message of this thesis is the need to capture appropriate and authentic representations both of children's development and the expertise of teachers, so that each may be carefully considered in the development of ECD policy.

Appendix A. Consent Form for Focus Group

CONSENT FORM - FOCUS GROUP

TITLE OF PROJECT: Kindergarten Teachers experience of administering the Early Development Instrument (EDI).

SUPERVISOR: A/Prof Joce Nuttall

STUDENT RESEARCHER Jennifer Weber

I have read and understood the information provided in the Information Letter. Any questions I have asked have been answered to my satisfaction. I agree to participate in a 90 minute focus group with other participants that will be recorded, realising that I can withdraw my consent at any time without adverse consequences. I understand that research data collected for the study may be published.

NAME OF PARTICIPANT

SIGNATURE.....

DATE

SIGNATURE OF SUPERVISOR.....

DATE.....

SIGNATURE OF STUDENT

RESEARCHER.....

DATE.....

Appendix B. Consent Form for Interview**CONSENT FORM - INTERVIEW**

TITLE OF PROJECT: Kindergarten Teachers experience of administering the Early Development Instrument (EDI).

SUPERVISOR: A/Prof Joce Nuttall

STUDENT RESEARCHER Jennifer Weber

I have read and understood the information provided in the enclosed Information Letter. Any questions I have asked have been answered to my satisfaction. I agree to participate in a 45 minute interview that will be audio-recorded and transcribed, realising that I can withdraw my consent at any time without adverse consequences. I understand that research data collected for the study may be published.

NAME OF PARTICIPANT.....

SIGNATURE

DATE.....

SIGNATURE OF SUPERVISOR.....

DATE:.....

SIGNATURE OF STUDENT RESEARCHER.....

DATE.....

Appendix C. Information Letter, Sept 2012

Research Project: Kindergarten Teachers experience of administering the Early Development Instrument (EDI).

INFORMATION LETTER

Principal Investigator: A/Prof Joce Nuttall

Dear Participant

Associate Professor Joce Nuttall and Ms Jennifer Weber, who is a PhD candidate under Dr Nuttall's supervision in the Faculty of Education at Australian Catholic University, are seeking to investigate the experiences of kindergarten teachers in Alberta who have administered the Early Development Instrument (EDI). The project specifically aims to describe kindergarten teachers' understandings of early childhood development when using the EDI, by asking teachers to describe their approach to development, learning and early childhood programming for kindergarten children in response to the EDI. The project has been approved by the Human Research Ethics Committee governing research at Australian Catholic University. This Information Letter has been sent to you in your capacity as an Alberta kindergarten teacher who has administered the EDI and who has expressed interest in participating in the research. You are invited to participate in this project.

If you decide to participate in this project, you will participate in a 45 minute interview with Jennifer Weber it is anticipated that participation in this project will provide an opportunity for you to reflect on your work in administering the Early Development Instrument (EDI) and that this might also provide new insights into the work of kindergarten teachers. We anticipate this research will also be of interest to policy-makers and administrators in supporting professional development and teacher training opportunities in the field of early childhood.

With your consent, each interview will be audio taped and transcribed for research purposes. We do not anticipate any risks to you as a result of your participation beyond the normal experience of working life, but please note that your participation is voluntary and you have the right to withdraw your data from the study at any time. You will not be identified by name in the findings of the project and, although the interview process means you will be identifiable by the researchers, every attempt will be made to maintain confidentiality (for example, by changing the names of participants in reports of the findings of the project and removing any other information that could be used to identify you). Also, you will not be required to answer any questions that you consider personal, intrusive, or potentially distressing, and you will retain the right to withdraw some or all of your data from the study at any time. Your decision to participate (or not) in this study will have no bearing on any aspect of your employment.

At the end of the interview, you will be asked whether you would also like to participate in a focus group with 4 or 5 other participants, at which time you will be offered an additional consent form, specifically for the focus group. Participation in the focus group is entirely optional. If you choose to take part your identity, as a participant, will be known to others who participate in the focus group, but the researchers will not report your participation in any part of the research.

Results of the project will be disseminated at conferences, and in practitioner and academic journals. No findings of a personal nature, or data which could have the potential cast as a negative light on you, will be included in these reports. Data from the project will be retained for up to seven years then destroyed.

If at any time you have any questions, concerns, or complaints about the project, you can contact the Principal Investigator, Associate Professor Joce Nuttall, telephone (+613) 9953 3632, or email joce.nuttall@acu.edu.au. You can also contact the ACU Human Ethics Committee in the following ways:

By mail:

Chair, HREC

C/- Research Services

Australian Catholic University

Melbourne Campus

Locked Bag 4115

Fitzroy VIC 3065

AUSTRALIA

By telephone: +61 3 9953 3158 By fax: +61 3 9953 3315

If you are prepared to participate in the study, please read and sign both of the attached Consent Forms, keep one for yourself and return the other to Dr Nuttall in the stamped, addressed envelope provided. Please also keep this Information Letter for your own reference.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'J. Nuttall', with a horizontal line extending from the end of the signature.

A/Prof Joce Nuttall
Principal Research Fellow
Faculty of Education

Faculty of Education Australian Catholic University
Level 8, 250 Victoria Parade ABN 15 050 192 660
East Melbourne, VIC 3065
CRICOS registered provider:
Locked Bag 4115 | Fitzroy MDC | Fitzroy Victoria 3065
00004G, 00112C, 00885B
T: +61(0)3 9953 3532 F: +61(0)3 9953 3625 E: joce.nuttall@acu.edu.au

Appendix D. Discourse Interview Questions

Individual interview questions for kindergarten teachers:

The purpose of this interview is to talk to you about your understanding of early childhood development and learning.

Background:

- How did you become interested in teaching?
 - What influenced you to be a teacher? To work with young children?
- Tell me about your study in education
 - When you studied.
 - Where you studied.
 - What courses you took (specialized? Why?)
- What is your current teaching position? How did you come to be in this position?
- What is it about early childhood teaching that you like?
- What do you think are the challenges? (significance of the challenge/s; why these challenges?)

Practice:

1. How would you describe your early childhood approach regarding working with children to support their development/growth/learning?

- Where do you think you got your ideas on this?
- When it comes to describing children's development and early childhood education, what terms are you most familiar with?
- How do you think you apply these terms in your work?
- How did you come to understand this approach in relation to children's development?

2. Is there a particular theory or theories that you prefer to apply in your practice/approach?

- What are the main ideas from theory/theories that you think you apply in your teaching?
- Whose/what other ideas are important in your teaching?

3. What approaches do you use to assess or screen children's development?

- Are there any specific tools or instruments you use?
 - How do these tools assist you in your work?
 - Are you the only person to administer these screens or assessments?
 - What supports/resources are in place to assist with screens/assessments?
 - Once an assessment/screen is administered what does this mean for programming for a child or group of children?

Administering the EDI:

4. I'm particularly interested in how you use the EDI. What do you understand to be the purpose of the EDI?

- How many times have you administered the EDI?
- Has your understanding of the EDI changed during over this time? (only asked if interviewee has extensive experience with administering the EDI).
- How well does the EDI fit with your educational philosophy?
- What understandings of children's development do you think you bring to your use of the EDI?
- What information about children's development do you gain through administering the EDI?
- How do you incorporate this information into your practice?

5. When administering the EDI, are there any particular resources or professional development opportunities that you have accessed.

- If you did participate in PD opportunities specific to the EDI or as a result of your work with collecting EDI:
- Why did you choose these?
- Helpful?

6. How did you apply what you learned from these opportunities in your work?

- When it comes to using a tool like the EDI, what supports would you like in place for you?
- What opportunities are there to meet with other kindergarten teachers to discuss your experience or share resources either prior to administering the EDI ?
- Do you think you have any gaps in your knowledge about early childhood development and/or any particular approaches that you know about but haven't been able to access fully?

7. Is there anything else you would like to add? Or anything you would like to ask me about the research?

Focus Group Questions for kindergarten teachers

The purpose of this focus group is to explore in further detail the themes identified in our interviews:

Focus Group Questions:

1. These are the kinds of things teachers in this study mentioned when I asked them about their approach to early childhood development [refer to handout or powerpoint slide 1]. What is your response to these statements? What do you consider is important for a kindergarten teacher when planning the learning and development of kindergarten children?
2. These are the kinds of things teachers in this study mentioned when I asked them about their experience of administering the EDI [refer to handout or powerpoint slide 2]. What are your thoughts about these statements? What do you understand the purpose of the EDI to be?
3. What preparation (either individually or with colleagues) have you undertaken to administer the EDI?
 - Do you think using the EDI has changed your understanding of early childhood development? If so, how? And why?
 - Are there particular changes you have made based on the results of the EDI?
 - After you administered the EDI, did you hear of the results? How were the results shared with teachers?
4. What are the challenges and benefits you experienced in your work as a result of administering the EDI?
5. What do you think are the best ways to improve your understanding of early childhood development?
 - Can you share some experiences of professional development that have been helpful

- Have you undertaken any specific professional development as a result of administering the EDI?

Appendix E. EDI Script Sept 18 2012

Research Project: Kindergarten Teachers experience of administering the Early Development Instrument (EDI).

Notice for newsletters:

Faculty of Education, Australian Catholic University

PARTICIPANTS NEEDED FOR RESEARCH PROJECT:

Kindergarten Teachers experience of administering the Early Development Instrument (EDI).

We are looking for volunteers to take part in a study of the experiences of kindergarten teachers in Alberta who have administered the Early Development Instrument (EDI). The project specifically aims to describe kindergarten teachers' understandings of early childhood development when using the EDI, by asking teachers to describe their approach to development, learning and early childhood programming for kindergarten children in response to the EDI.

As a participant in this study, you would be asked to participate in an interview and focus group. Your participation would involve 2 sessions, approximately *45 minutes for the interview and one hour for the focus group*.

For more information about this study, or to volunteer for this study, please contact Jennifer Weber at 780-758-4638 (after 5pm weekdays or anytime weekends) or email jennifer.weber@shaw.ca

This study has been reviewed by, and received ethics clearance through, the Human Ethics Committee, Australian Catholic University.

Email script:

Dear [name],

My name is Jennifer Weber and I am a PhD student working under the supervision of Dr Joce Nuttall in the Faculty of Education at Australian Catholic University. I am contacting you because you recently provided your name and contact details through the [newsletter details], and indicated you would be interested in sharing your experiences as a kindergarten teacher when administering the Early Development Instrument.

Attached to this email is a detailed Information Letter about the study and a Consent Form for participants. If you would like to participate in the study, please complete the Consent Form and return it to me at this email address. The Information Letter is for you to keep. I will then contact you to confirm arrangements for the interview.

Sincerely,

Jennifer Weber

Appendix F. Quotes for Focus Group

(Handout for Teachers)

Question 1. These are the kinds of things teachers in this study mentioned when I asked them about their approach to early childhood. What is your response to these statements? What do you consider is important for a kindergarten teacher when planning the learning and development of kindergarten children?

Quote 1:

- Sparking their interest with a particular object or a story, and then them taking it further. Just using their natural curiosity with the approach to learning.

Quote 2:

- I think a lot of kids today due to technology and this fast paced world, and most parents working full-time, both the mum and dad working full-time jobs. The kids need fast, fun learning, and if they're not engaged in the letter F of the day, then you just have to roll with it and spark their interest into what they want to learn ... Doing work on the carpet for example, not necessarily at the table. And you don't have to make them sit cross-legged. If they want to sit on a chair then by all means sit on a chair.

Quote 3:

- Well, you know that all kids come to school with different experiences. Some have gone to pre-school, some have gone to head start, the early intervention program, some have not gone at all. So I think that it just changes your beliefs as a teacher to roll with what you have and build on what they already know because you know that they're all coming in to us with different life stories, and different experience, and just making their journey as successful as you can for them.

Quote 4:

- I am a wide believer in things like 'hands on' learning so I believe that much of what I have to do should be 'hands on' and should be stuff that the children can do manipulating things involving as many senses as they possibly can. I believe that in order to teach them the things that are in the curriculum, that then I have to give them experiences in all those things, not just stand up at the front and teaching kindergarten, I am going to be letting them learn. I think, giving them

opportunities to learn rather than having me do the teaching. I am not really great at doing centre activities, so I am not a big centre person.

Quote 5:

- I would describe it in a few ways, I think it's trying to use developmentally appropriate practice, so working at the level that the children are at and moving them forward. We use, in our district we have a Reggio inspired approach, so there's a lot of belief that the child is a capable learner and has a lot of information already when they come to school, and it's our task to find out where they're at and how can we further provoke their imagination in their learning.

Quote 6:

- And I also like to do learning that meets as much as possible the individual learners needs, so instead of teaching everybody the alphabet, when some already know the alphabet and are already reading when they come to school, and some don't recognise a letter in their name. I try to tailor as much as I can to those individual needs, so we do a lot of like balanced literacy, guided maths, those sorts of things to work within the frameworks of what they're already coming to school with.

Quote 7:

- Well for sure its learn through play, obviously but I don't like that expression because it's so broad. I'm a big believer in letting them direct it. I don't like classes that you know clap and they all rotate. So I want them to have the freedom to make their choices and have enough time to engage in them at the same time getting out the things that I know they need targeted areas in. But yeah, child directed for sure.

Quote 8:

- So I'm looking at these two things and going they don't really complement each other, that's what I'm struggling with personally right now, it's let them play and let them explore but yet have your unit plan and have this task at the end.

Quote 9:

- I think school needs to be fun and engaging for the kids otherwise you're going to lose them early on. They need to be leaders in the class and learn how to take leadership roles and make it an enjoyable happy place to be where they feel safe and loved and secure here. So I try and make every day a happy one for them

even though some of these kids, as I had mentioned, come from a tough background. This is a safe haven for them and we make it fun and loving.

Quote 10:

- Where a Reggio inspired approach is child led, child chooses, you may have provocations, you may have items within a centre that maybe provoke literacy or numeracy, but unless a child chooses to do so or an adult sits with the child to work on it, they may not choose to learn in that way. So where do I balance the two, how do I make sure that they're getting that rote, and still having freedom.

Quote 11:

- When I set up a centre there's usually a specific way that I'm seeing that centre being done but I also try to keep it open ended so that that child can take it to the level that they are at.

Question 2: These are the kinds of things teachers in this study mentioned when I asked them about their experience of administering the EDI. What are your thoughts about these statements? What do you understand the purpose of the EDI to be?

Quote 1:

- My understanding of the EDI is that it is an instrument to help agencies, government agencies determine where needs are to provide extra support community based, for example Parent Link Centres.

Quote 2:

- There's one concern I do have with the EDI, is the consent, I realise that we need to have consent. However I did not get consent for a number of children who would have very important valuable information, children who you know who have parents who have issues, whether you know mental health issues, or children who are coming to school underclothes or underfed. I didn't get consent and I tried three times and made personal phone calls, spoke to the parents, did not get consent, and so even though I teach that range, I'm not performing the EDI on the entire range, and that is a concern.

Quote 3:

- Instead of just looking at academic development, social, emotional development, those sorts of things. You're looking at how prepared is the child when they're coming to school every day, have they had a good sleep, are they well fed, you

know those sorts of things. So stepping back and saying okay, maybe I need to think about that in my approach to the child, because sometimes when they walk in the door you're thinking they've all had the same experience, and then you remember like oh wait a minute, they haven't, they've come to school with experiences before the day even begins.

Quote 4:

- I think it's to see where the children are in all areas of Alberta and to see whether they've got the richness of the environment to be able to learn it if that's a situation where the schools are not able to supply the things that we have. It's also the economics of the situation and whether that effects education.

Quote 5:

- (Fit with philosophy) those areas that they were looking at were not necessarily academic areas that we say 'we've got to get on that and get this done' I mean it's still looking at a child as a child and not seeing them as just a little human being that needs to be at an adult level by the time they get to be eighteen, like it's to let them to be a child. When I looked at those questions, they were pretty basic questions for children of this age and right through time, yeah the way that they learn those concepts may have changed with technology and stuff but I mean they're still learning the same concepts and they're still learning and growing.

Quote 6:

- I like the parts about families that they include in the EDI, is the child coming to school late, is the child coming to school hungry, those types of questions, because it can't just be about academics, that it has to be where the child is coming from, does your child or does the family speak English, I guess through whether they're fed, well clothed, well we'll give you an idea of the family dynamics as well. Who families are in their value system will affect how well a child does, I truly believe.

Quote 7:

- The EDI is just a collection of survey questions and answers in regards to where the kids are at and how they're functioning, where they stand with other kids. And I think it's to be used in regards to community support, if there's enough community support in that area for that community. Now, the one thing I did put

on the EDI survey as one of the questions, I said it would be nice to kind of know what the final product is of this. I haven't really heard of where these questions went or what they're doing with them, so it'd be nice to know is there something I could do to maybe support my kids better from this EDI.

Quote 8:

- So it forces you to really think about each child's development.

Quote 9:

- It's the government feels that it's important to catch kids when they're having difficulties early and to provide supports within the community to target the needs of those kids very early in life. So that is why we're doing this. We're seeing how kids are developing in certain large areas and so if there are needs being exposed in those areas, then the government is supposed to set up programs for those kids.

Quote 10:

- (Children's development do you gain) Well I think too that you think about the whole child and what their strengths and what their areas of development need to be and it kind of again reinforces that idea of the global learner and how that they're the whole child and how they could be strong in one particular area but still need support in other areas ... Sometimes you can kind of see that too about how parents or particular communities value some things over other things and yeah so I find that quite interesting as well.

Quote 11:

- (Children's development) Well, you know what's 'normal' and what is not. So for example, where it says is independent in washroom habits most of the time. Well, in kindergarten we would expect that. So it really – you just use what you think as a teacher, parent, educator, what's normal and what's not normal ... see kids that are growing normally and independently versus those that might be struggling.

Quote 12:

- (Incorporate this into practice) when you're planning, thinking about including all different areas of development into the activities that are happening in the classroom and for sure going outside, incorporating outdoors as a learning venue as well to stimulate their excitement about learning outside and seeing that education is more than just being inside the classroom.

Quote 13:

- (Incorporate into practice) Well, for example, today we went on a field trip and instead of taking the escalator we took the stairs, because some of them don't have stairs in their houses. They live in apartments with elevators, so those kids are doing the step by step by step with one foot. So it was really interesting to me as we were walking down the steps to see who is able to climb stairs properly and then go down the stairs properly. And I purposely put them on the stairs because they need that practice.

Quote 14:

- It's being considered with regards to understanding children's development in the context of their community. So it's to help understand what is it within the community that can be – what are the community assets that can go to helping community support children's development. So the role of kindergarten teachers in terms of collating that data, then it going and – going to the Offord Centre, and the Offord Centre then prepares that data along with other information then around social economic status and community assets. So then it comes back to community and community uses this for planning.

Appendix G. Alberta EDI Questionnaire 2012_2013

EARLY DEVELOPMENT INSTRUMENT
A Population-Based Measure for Communities
Alberta 2012/2013



Please fill in the circles like
 this ● or ✕ NOT ✕
 Please use a blue or black
 ballpoint pen.

If any of the information on the label is incorrect
 or missing, please make changes clearly below.

1. Class Assignment

● Kindergarten

2. Child's Date of Birth:

dd / mm / yy

0 ○ ○ ○ ○
 1 ○ ○ ○ ○
 2 ○ ○ ○ ○
 3 ○ ○ ○ ○
 4 ○ ○ ○ ○
 5 ○ ○ ○ ○
 6 ○ ○ ○ ○
 7 ○ ○ ○ ○
 8 ○ ○ ○ ○
 9 ○ ○ ○ ○

3. Sex: ○ F ○ M

4. Postal Code:

5. Class Type:

○ Kindergarten
 ○ Preschool/Kindergarten
 ○ Kindergarten/1
 ○ Other

6. Date of Completion:

dd / mm / yy

0 ○ ○ ○ ○
 1 ○ ○ ○ ○ ●
 2 ○ ○ ○ ○
 3 ○ ○ ○ ○ ●
 4 ○ ○ ○ ○
 5 ○ ○ ○ ○
 6 ○ ○ ○ ○
 7 ○ ○ ○ ○
 8 ○ ○ ○ ○
 9 ○ ○ ○ ○

**7. Identified Special Needs
(Code 41-46):**

○ Yes ○ No

**8a. Severe Delay Involving
Language (Code 47):**

○ Yes ○ No

**8b. Mild/Moderate Disability/Delay
(Code 30):**

○ Yes ○ No

9. Child considered ESL:

○ Yes ○ No

10. French Immersion:

○ Yes ○ No

11. Other Immersion:

○ Yes ○ No

12. Aboriginal:

○ Yes ○ No ○ Don't Know

(North American Indian, First Nations, Métis, Inuit)

13. Child's First Language(s):

○ English only

○ French only

○ Other only

○ English & French

○ English & Other

○ French & Other

○ &

Other Other

(Refer to Guide for language codes in
 "other" categories. If you do not know
 the "other" language code, use "000".)

**14. Communicates adequately
in his/her first language:**

○ Yes ○ No ○ Don't know

15. Student Status: ○ in class more than 1 month

(See Guide) ○ in class less than 1 month

(Do not complete) {
 ○ moved out of class
 ○ moved out of school
 ○ no consent
 ○ other

16. Child is repeating kindergarten:

○ Yes ○ No



Section A - Physical Well-being

1. About how many regular days (see Guide) has this child been absent since the beginning of school in the fall?

Number of days
absent:

--	--	--	--

Since the start of school in the fall, has this child sometimes (more than once) arrived:

	yes Λ	no Λ	don't know Λ
2. over- or underdressed for school-related activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. too tired/sick to do school work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. late	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. hungry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Would you say that this child:

	yes Λ	no Λ	don't know Λ
6. is independent in washroom habits most of the time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. shows an established hand preference (right vs. left or vice versa)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. is well coordinated (i.e., moves without running into or tripping over things)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How would you rate this child's:

	very good/ good Λ	average Λ	poor/ very poor Λ	don't know Λ
9. proficiency at holding a pen, crayons, or a brush	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. ability to manipulate objects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. ability to climb stairs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. level of energy throughout the school day	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. overall physical development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section B - Language and Cognitive Skills

How would you rate this child's:

	very good/ good Λ	average Λ	poor/ very poor Λ	don't know Λ
1. ability to use language effectively in English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. ability to listen in English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. ability to tell a story	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. ability to take part in imaginative play	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. ability to communicate own needs in a way understandable to adults and peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. ability to understand on first try what is being said to him/her	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. ability to articulate clearly, without sound substitutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Would you say that this child:

	yes Λ	no Λ	don't know Λ
8. knows how to handle a book (e.g., turn a page)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. is generally interested in books (pictures and print)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. is interested in reading (inquisitive/curious about the meaning of printed material)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. is able to identify at least 10 letters of the alphabet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. is able to attach sounds to letters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. is showing awareness of rhyming words	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. is able to participate in group reading activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. is able to read simple words	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. is able to read complex words	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. is able to read simple sentences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. is experimenting with writing tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. is aware of writing directions in English (left to right, top to bottom)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. is interested in writing voluntarily (and not only under the teacher's direction)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. is able to write his/her own name in English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. is able to write simple words	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Section B - Language and Cognitive Skills

Would you say that this child:

	yes Λ	no Λ	don't know Λ
23. is able to write simple sentences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. is able to remember things easily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. is interested in mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. is interested in games involving numbers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. is able to sort and classify objects by a common characteristic (e.g., shape, colour, size)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. is able to use one-to-one correspondence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. is able to count to 20	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. is able to recognize numbers 1 - 10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. is able to say which number is bigger of the two	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. is able to recognize geometric shapes (e.g., triangle, circle, square)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. understands simple time concepts (e.g., today, summer, bedtime)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. demonstrates special numeracy skills or talents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. demonstrates special literacy skills or talents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. demonstrates special skills or talents in arts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. demonstrates special skills or talents in music	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. demonstrates special skills or talents in athletics/dance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. demonstrates special skills or talents in problem solving in a creative way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. demonstrates special skills or talents in other areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>If yes, please specify:</i> _____			



Section C - Social and Emotional Development

How would you rate this child's:

	very good/ good Λ	average Λ	poor/ very poor Λ	don't know Λ
1. overall social/emotional development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. ability to get along with peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Below is a list of statements that describe some of the feelings and behaviours of children. For each statement, please fill in the circle that best describes this child now or within the past six months.

Would you say that this child:

	often or very true Λ	sometimes or somewhat true Λ	never or not true Λ	don't know Λ
3. plays and works cooperatively with other children at the level appropriate for his/her age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. is able to play with various children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. follows rules and instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. respects the property of others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. demonstrates self-control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. shows self-confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. demonstrates respect for adults	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. demonstrates respect for other children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. accepts responsibility for actions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. listens attentively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. follows directions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. completes work on time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. works independently	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. takes care of school materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. works neatly and carefully	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. is curious about the world	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. is eager to play with a new toy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. is eager to play a new game	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. is eager to play with/read a new book	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section C - Social and Emotional Development

Would you say that this child:

	often or very true	sometimes or somewhat true	never or not true	don't know
22. is able to solve day-to-day problems by him/herself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. is able to follow one-step instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. is able to follow class routines without reminders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. is able to adjust to changes in routines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. answers questions showing knowledge about the world (e.g., leaves fall in the autumn, apple is a fruit, dogs bark)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. shows tolerance to someone who made a mistake (e.g., when a child gives a wrong answer to a question posed by the teacher)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. will try to help someone who has been hurt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. volunteers to help clear up a mess someone else has made	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. if there is a quarrel or dispute will try to stop it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. offers to help other children who have difficulty with a task	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. comforts a child who is crying or upset	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. spontaneously helps to pick up objects which another child has dropped (e.g., pencils, books)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. will invite bystanders to join in a game	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. helps other children who are feeling sick	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. is upset when left by parent/guardian	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. gets into physical fights	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. bullies or is mean to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. kicks, bites, hits other children or adults	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. takes things that do not belong to him/her	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41. laughs at other children's discomfort	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42. can't sit still, is restless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43. is distractible, has trouble sticking to any activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. fidgets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45. is disobedient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Draft



Section C - Social and Emotional Development

Would you say that this child:

	often or very true	sometimes or somewhat true	never or not true	don't know
46. has temper tantrums	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47. is impulsive, acts without thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48. has difficulty awaiting turn in games or groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49. cannot settle to anything for more than a few moments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50. is inattentive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51. seems to be unhappy, sad, or depressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. appears fearful or anxious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. appears worried	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. cries a lot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
55. is nervous, high-strung, or tense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. is incapable of making decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57. is shy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58. sucks a thumb/finger	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section D - Special Concerns

1. Does the student have a problem that influences his/her ability to do school work in a regular classroom?
(based on parent information, medical diagnosis, and/or teacher observation)

☐ yes ☐ no ☐ don't know (If answered no/don't know go to question 5)

If YES above, please mark all that apply.

Please base your answers on teacher observation or medical diagnosis and/or parent/guardian information.

	YES Observed	YES Parent Info/Medical Diagnosis		YES Observed	YES Parent Info/Medical Diagnosis	
2a. physical disability	<input type="radio"/>	<input type="radio"/>	code 44	f. emotional problem	<input type="radio"/>	<input type="radio"/>
b. visual impairment	<input type="radio"/>	<input type="radio"/>	code 46	g. behavioural problem	<input type="radio"/>	code 42
c. hearing impairment	<input type="radio"/>	<input type="radio"/>	code 45	h. home environment/problems at home	<input type="radio"/>	<input type="radio"/>
d. speech impairment	<input type="radio"/>	<input type="radio"/>		i. chronic medical/health problems	<input type="radio"/>	<input type="radio"/>
e. learning disability	<input type="radio"/>	<input type="radio"/>		j. unaddressed dental needs	<input type="radio"/>	<input type="radio"/>
				k. other (if known, print below)	<input type="radio"/>	<input type="radio"/>

3. If the child has received a diagnosis or identification by a doctor or psychological professional please indicate. You can indicate up to three diagnoses. If there are more than three, please write in the "other" box. Please do not use children's names. (see the Guide for codes)

If Other, please specify:



Section D - Special Concerns con't

- | | yes
Λ | no
Λ | don't
know
Λ |
|---|-----------------------|-----------------------|-----------------------|
| 4. Is the child receiving any school based support(s)
(e.g. educational assistant, equipment)? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. a. Is the child currently receiving further assessment? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Is the child currently on a wait list to receive further assessment? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. Do you feel that this child needs further assessment? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
- If yes, please specify: _____

Section E - Additional Questions

To the best of your knowledge, please mark all that apply to this child:

- | | yes
Λ | no
Λ | don't
know
Λ |
|--|------------------------------------|------------------------------------|---|
| 1. attended an early intervention program
Specify if known, please print: _____ | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. has been in non-parental care on a regular basis prior to kindergarten entry | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If yes, please specify type of care arrangement (please refer to Guide for examples): | | | |
| 2a. Centre-based, licensed, non-profit <input type="radio"/> | | | |
| 2b. Centre-based, licensed, for profit <input type="radio"/> | | | |
| 2c. Other home-based, licensed <input type="radio"/> | | | |
| 2d. Other home-based, unlicensed, non-relative <input type="radio"/> | | | |
| 2e. Other home-based, unlicensed, relative <input type="radio"/> | | | |
| 2f. Child's home, non-relative <input type="radio"/> | | | |
| 2g. Child's home, relative <input type="radio"/> | | | |
| 2h. Other/don't know <input type="radio"/> | | | |
| 2i. To the best of your knowledge, prior to the child's entry to kindergarten, was this arrangement | full-time
<input type="radio"/> | part-time
<input type="radio"/> | don't know
<input type="radio"/> |
| 3. attended other language or religion classes
Specify if known, please print: _____ | yes
Λ
<input type="radio"/> | no
Λ
<input type="radio"/> | don't
know
Λ
<input type="radio"/> |
| 4. attended an organized pre-school/nursery school (only if <i>part-time</i> , and if it was <i>not</i> the main child-care arrangement) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

If you have any comments about this child and her/his readiness for school, list them below, please print.

Appendix H: Ethics Approval

From: Kylie Pashley on behalf of Res Ethics
Sent: Monday, 19 November 2012 2:59 PM
To: Joce Nuttall; jiwebe001@myacu.edu.au
Subject: 2012 269V Ethics application approved!

Dear Applicants,

Principal Investigator: A/Prof Jocelyn Grace Nuttall
Student Researcher: Ms Jennifer Weber
Ethics Register Number: 2012 269V
Project Title: The understanding of early childhood development that Alberta Kindergarten teachers bring to their work when administering the Early Development Instrument (ED).
Risk Level: Low Risk 2
Date Approved: 19/11/2012
Ethics Clearance End Date: 30/04/2013

This email is to advise that your application has been reviewed by the Australian Catholic University's Human Research Ethics Committee and confirmed as meeting the requirements of the National Statement on Ethical Conduct in Human Research.

This project has been awarded ethical clearance until 30/04/2013. In order to comply with the National Statement on Ethical Conduct in Human Research, progress reports are to be submitted on an annual basis. If an extension of time is required researchers must submit a progress report.

Whilst the data collection of your project has received ethical clearance, the decision and authority to commence may be dependent on factors beyond the remit of the ethics review process. For example, your research may need ethics clearance or permissions from other organisations to access staff. Therefore the proposed data collection should not commence until you have satisfied these requirements.

If you require a formal approval certificate, please respond via reply email and one will be issued.

Decisions related to low risk ethical review are subject to ratification at the next available Committee meeting. You will only be contacted again in relation to this matter if the Committee raises any additional questions or concerns.

Researchers who fail to submit an appropriate progress report may have their ethical clearance revoked and/or the ethical clearances of other projects suspended. When your project has been completed please complete and submit a progress/final report form and advise us by email at your earliest convenience. The information researchers provide on the security of records, compliance with approval consent procedures and documentation and responses to special conditions is reported to the NHMRC on an annual basis. In accordance with NHMRC the ACU HREC may undertake annual audits of any projects considered to be of more than low risk.

It is the Principal Investigators / Supervisors responsibility to ensure that:

1. All serious and unexpected adverse events should be reported to the HREC with 72 hours.
2. Any changes to the protocol must be approved by the HREC by submitting a Modification Form prior to the research commencing or continuing.
3. All research participants are to be provided with a Participant Information Letter and consent form, unless otherwise agreed by the Committee.

For progress and/or final reports, please complete and submit a Progress / Final Report form:

http://www.acu.edu.au/about_acu/research/staff/research_ethics/

For modifications to your project, please complete and submit a Modification form:

http://www.acu.edu.au/about_acu/research/staff/research_ethics/

Researchers must immediately report to HREC any matter that might affect the ethical acceptability of the protocol eg: changes to protocols or unforeseen circumstances or adverse effects on participants.

Please do not hesitate to contact the office if you have any queries.

Kind regards,
Kylie Pashley

Ethics Officer | Research Services
Office of the Deputy Vice Chancellor (Research)
Australian Catholic University
THIS IS AN AUTOMATICALLY GENERATED RESEARCHMASTER
EMAIL

References

- Abu Jaber, M., & Eman, A. (2010). Kindergarten teachers' beliefs toward developmentally appropriate practice in Jordan. *Early Childhood Education Journal*, 38(1), 65–74.
- Ackroyd, S., & Hughes, J. (1992). *Data collection in context*. London: Longman.
- Advancing the educational preparation and professional development of Alberta's early learning and care workforce (2014). Edmonton, AB: The Muttart Foundation.
- Agbenyega, J. (2009). The Australian Early Development Index: Who does it measure: Piaget or Vygotsky's child? *Australasian Journal of Early Childhood*, 34(2), 31–38.
- Agbenyega, J. (2012). How we view our theoretical competency: Early childhood pre-service teachers' self-evaluation of a professional placement experience. *Australasian Journal of Early Childhood*, 37(2), 141.
- Airasian, P., & Walsh, M. (1997). Constructivist cautions. *Phi Delta Kappan*, 78(6), 444–449.
- Ajayi, L. (2011). Exploring how ESL teachers relate their ethnic and social backgrounds to practice. *Race Ethnicity and Education*, 14(2), 253–275.
- Akiba, M. (2011). Identifying program characteristics for preparing pre-service teachers for diversity. *Teachers College Record*, 113(3), 658–697.
- Alberta Centre for Child, Family & Community Research. (2008). Alberta benchmark survey: What adults know about child development. Retrieved from <http://www.research4children.com/public/data/documents/BenchmarkFINALfinalreportOct108pdf.pdf>
- Alberta Department of Children's Services. (2003). Alberta's early childhood development baseline expenditure and investments report. Retrieved from <http://www.assembly.ab.ca/lao/library/egovdocs/2003/alchs/142506.pdf>
- Alberta Education. (2009). Principal quality practice guideline: Promoting successful school leadership in Alberta. Retrieved from <http://education.alberta.ca/admin/resources.aspx>
- Alberta Education. (2012a). A solid foundation. Retrieved from <http://www.education.alberta.ca/parents/educationsys/ourstudents/vi.aspx>
- Alberta Education. (2012b). Early child development (ECD) mapping initiative. Retrieved from <http://education.alberta.ca/admin/ecs/ecd.aspx>

- Alberta Teachers Association (2004) *Code of Professional Conduct*. Retrieved from <https://www.teachers.ab.ca/About%20the%20ATA/UpholdingProfessionalStandards/ProfessionalConduct/Pages/CodeofProfessionalConduct.aspx>
- Albon, D., & Rosen, R. (2013). *Negotiating adult–child relationships in early childhood research*. New York, NY: Routledge.
- Alderson, P., & Morrow, V. (2011). *The ethics of research with children and young people: A practical handbook*. London: Sage.
- Alfieri, L., Brooks, P. J., Aldrich, N. J., & Tenenbaum, H. R., (2011). Does discovery-based instruction enhance learning? *Journal of Educational Psychology*, 103(1), 1-81.
- Allen, J. M., & Wright, S. E. (2014). Integrating theory and practice in the pre-service teacher education practicum. *Teachers and Teaching*, 20(2), 136–151.
- Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis iteration (BES)*. Wellington, NZ: Education Counts Publications.
- Alvermann, D., Commeyras, M., Young, J. P., Randall, S., & Hinson, D. (1977). Interrupted gendered discursive practices in classroom talk about texts. *Journal of Literacy Research*, 29(1), 73–104.
- Amarel, M. (1989). Some observations on a model of professional training: The developmental teacher education program. *Genetic Epistemologist*, 17(4), 31–34.
- Amoroso, J. (2010). From women to children: Reframing childcare in Canada. *Queens Policy Review*, 1(1), 29–46.
- Andrew, Y. (2015). What we feel and what we do: emotional capital in early childhood work. *Early Years*, 35(4), 351-365.
- Anning, A., Cullen, J., & Fler, M. (2008). *Early childhood education: Society and culture*. London: Sage.
- Arbeau, K., & Coplan, R. (2007). Kindergarten teachers' beliefs and responses to hypothetical prosocial, asocial, and antisocial children. *Merrill-Palmer Quarterly*, 53(2), 291–318.
- Argyris, C., & Schon, D. A. (1974). *Theory in practice: Increasing professional effectiveness*. San Francisco, CA: Jossey-Bass.
- Argyris, C., & Schon, D. (2007). *Theory in practice: Increasing professional effectiveness*. San Francisco, CA: Jossey-Bass.

- Arslan, E., Durmuşoğlu-Saltali, N., & Yilmaz, H. (2011). Social skills and emotional and behavioral traits of preschool children. *Social Behavior and Personality*, 39(9), 1281–1288.
- Arzubiaga, A., Artiles, A., King, K., & Harris-Murrin, N. (2008). Beyond research on cultural minorities: Challenges and implications of research as situated cultural practice. *Exceptional Children*, 74(3), 309–327.
- Atkinson, J. (2004). Voices from the past: Trans-generational effects of trauma. Paper presented at the *Short Course on Social Determinants of Indigenous Health*, Menzies School of Health Research, Darwin. Retrieved from <http://www.menzies.edu.au>
- Babbie, E. (2007). *The practice of social research*. Belmont, CA: Wadsworth.
- Bachman, E., & Schutt, R. (2007). *The practice of research in criminology and criminal justice*. Thousand Oaks, CA: Sage.
- Baker, C. D., & Luke, A. (Eds.). (1991). *Towards a critical sociology of reading pedagogy*. Amsterdam: John Benjamins.
- Baker, M., Gruber, J., & Milligan, K. (2005). Universal childcare, maternal labor supply, and family well-being (No. w11832). National Bureau of Economic Research.
- Bakhtin, M. M. (1981). *The dialogic imagination*. Austin, TX: University of Texas Press.
- Ball, S. (Ed.). (1990). *Foucault and education*. New York: Routledge.
- Barnett, W. S., & Ackerman, D. J. (2006). Costs, benefits, and long-term effects of early care and education programs: Recommendations and cautions for community developers. *Community Development*, 37(2), 86–100.
- Barnett, W. S., & Fuller, B. (2006, May). *Universal or targeted preschool?* Education Sector Debates. Retrieved from http://educationpolicy.air.org/sites/default/files/publications/Preschool%20Debate_0.pdf
- Barrett, F. J. (1998). Coda: Creativity and improvisation in jazz and organizations: Implications for organizational learning. *Organization Science*, 9(5), 605–622.
- Bartolotta, T. E., & Shulman, B. B. (2010). Child development. In N. C. Singleton & B. B. Shulman (Eds.), *Language development: Foundations, processes, and clinical applications* (pp. 35–58). Burlington, MA: Jones & Bartlett.

- Beach, J., Friendly, M., Ferns, C., Prabhu, N., & Forer, B. (2009). Early childhood education and care in Canada 2008. Retrieved from <http://www.childcarecanada.org/publications/ecec-canada/09/11/early-childhood-education-and-care-canada-2008>
- Belfield, C. R. (2005). The fiscal impacts of universal pre-K: Case study analysis for three states (Working Paper No. 6). Invest in Kids Working Group, Committee for Economic Development. Retrieved from <http://www.researchconnections.org/childcare/resources/6907/pdf>
- Bendixen, L. D., & Feucht, F. C. (2010). *Personal epistemology in the classroom: Theory, research, and implications for practice*. New York, NY: Cambridge University Press.
- Bereiter, C. (2002). *Education and mind in the knowledge age*. Mahwah, NJ: Lawrence Erlbaum.
- Berg, B. (1989). *Qualitative research methods for the social sciences*. Boston, MA: Allyn and Bacon.
- Berg, B. L., & Lune, H. (2004). *Qualitative research methods for the social sciences* (vol. 5). Boston, MA: Pearson.
- Berg, B., & Lune, H. (2012). *Qualitative research for the social sciences*. New York, NY: Pearson.
- Bergquist, M., & Szcepanska, A. (2002). Creating a common ground: Developing discursive practices as means for aligning systems development projects in open source communities. In K. Bødker, M. Pedersen, J. Nørbjerg, J. Simonsen, & M. Vandelø (Eds.), *Proceedings of the IRIS 25: 25th Information Systems Research Seminar in Scandinavia*, Bautahøj, Denmark.
- Berk, L. (2006). *Child development*. Boston, MA: Allyn and Bacon.
- Berthelsen, D., & Brownlee, J. (2007). Working with toddlers in child care: Practitioners' beliefs about their role. *Early Childhood Research Quarterly*, 22(3), 347–362.
- Bingham, S., & Whitebread, D. (2012). School readiness: A critical review of perspectives and evidence. Occasional Paper (2), TACTYC.
- Blaikie, N. (1993). *Approaches to social enquiry*. Cambridge, UK: Polity Press.
- Blake, B., & Pope, T. (2008). Developmental psychology: Incorporating Piaget's and Vygotsky's theories in classrooms. *Journal of Cross Disciplinary Perspectives in Education*, 1(1), 59–67.

- Blandford, S., & Knowles, C. (2013). *Developing professional practice 0–7*. London: Routledge.
- Bomer, R., Dworin, J., May, L., & Semingson, P. (2008). Miseducating teachers about the poor: A critical analysis of Ruby Payne's claims about poverty. *The Teachers College Record*, 110(12), 2497–2531.
- Bonk, C. J., & King, K. S. (Eds.). (2012). *Electronic collaborators: Learner-centered technologies for literacy, apprenticeship, and discourse*. New York, NY: Routledge.
- Borger, H., & Tillema, H. (1993). Transferring knowledge to classroom teaching: Putting knowledge into action. In J. Calderhead, C. Day, & P. Denicolo (Eds.), *Research on teacher thinking: Understanding professional development* (pp. 185–197) London: Falmer Press.
- Bourdieu, P. (1992). *Language and symbolic power*. Cambridge, UK: Polity Press.
- Bower, R., & de Gasparis, P. (1978). *Ethics in social research: Protecting the interests of human subjects*. New York: Praeger.
- Bowers, B., & Schatzman, L. (2009). Dimensional analysis. In J. Morse, P. Stern, J. Corbin, B. Bowers, K. Charmaz, & A. Clarke (Eds.), *Developing grounded theory: The second generation*. Walnut Creek, CA: Left Coast Press.
- Bradford, H. (2012). *The well being of children under three*. London: Routledge.
- Bramald, R., Hardman, F., & Lear, D. (1995). Initial teacher trainees and their views on teaching and learning. *Teaching and Teacher Education*, 11(1), 23–31.
- Branscombe, N.A., Burcham, J.G., Castle, K., & Surbeck, E. (2013). *Early childhood curriculum: A constructivist perspective*. New York, NY: Routledge.
- Bransford, J., Brown, A., & Cocking, R. (Eds.). (2005). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Academy Press.
- Bransford, J., Derry, S., Berliner, D., & Hammerness, K. (2005). Theories of learning and their role in teaching. In J. Bransford & L. Darling-Hammond (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 40–87). Hoboken, NJ: Jossey-Bass.
- Brinkman, S., Sayers, M., Goldfeld, S., & Kline, J. (2009). Population monitoring of language and cognitive development in Australia: The Australian Early Development Index. *International Journal of Speech–Language Pathology*, 11(5), 419–430.

- Brinkman, S. A., Silburn, S., Lawrence, D., Goldfeld, S., Sayers, M., & Oberklaid, F. (2007). Investigating the validity of the Australian early development index. *Early Education and Development*, 18(3), 427–451.
- Brown, J. S., & Duguid, P. (1991). Organizational learning and communities of practice: toward a unified view of working, learning and innovation. In E.L. Lesser, M.A. Fontaine & J.A. Slusher (Eds.), *Knowledge and communities*. Oxford, UK: Butterworth Heinemann.
- Brown, M. (1993). *Philosophical studies of home economics in the United States: Basic ideas by which home economists understand themselves*. East Lansing, MI: Michigan State University Press.
- Brown, M. (1995). The concept of community. *Kappa Omicron Nu Forum*, 8(2), 7–20.
- Brown, M. H. and Freeman, N. K. (2001). ‘We don’t play that way at preschool’: the moral and ethical dimensions of controlling children’s play. in S. Reifel and M. H. Brown (Eds.), *Early education and care and reconceptualising play: Advances in early education and day care* (vol. II, pp. 259–274). Oxford: Elsevier.
- Brownlee, J., & Berthelsen, D. (2006). Personal epistemology and relational pedagogy in early childhood teacher education programs. *Early Years*, 26(1), 17–29.
- Brownlee, J., Berthelsen, D., & Boulton-Lewis, G. (2004). Working with toddlers in child care: Personal epistemologies and practice. *European Early Childhood Education Research Journal*, 12(1), 55–70.
- Brownlee, J., Boulton-Lewis, G. and Berthelsen, D. (2008), Epistemological beliefs in child care: Implications for vocational education. *British Journal of Educational Psychology*, 78, 457–471.
- Brownlee, J., Schraw, G., & Berthelsen, D. (Eds.). (2012). *Personal epistemology and teacher education*. London: Routledge.
- Bruner, J. (1983). *Children’s talk: Learning to use language*. New York: NY: Norton.
- Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge, MA: Harvard University Press.
- Buchanan, R., Gueldner, B., Tran, O., & Merrell, K. (2009). Social and emotional learning in classrooms: Survey of teachers’ knowledge, perceptions and practices. *Journal of Applied School Psychology*, 25(2), 187–203.
- Bukatko, D. (2013). *Child development: Thematic approaches*. Belmont, CA: Wadsworth.

- Bullough, R. (2001). *Uncertain lives: Children of promise, teachers of hope*. New York, NY: Teachers College Press.
- Burgess, H., Sieminski, S., & Arthur, L. (2006). *Achieving your doctorate in education*. Sage.
- Byrnes, J. (1996). *Cognitive development and learning in instructional contexts*. Boston, MA: Allyn and Bacon.
- Calman, R. C., & Crawford, P. J. (Eds.). (2013). *Starting early: Teaching, learning and assessment: linking early-childhood development with academic outcomes, a detailed look*. Education Quality and Accountability Office. Retrieved from http://www.eqao.com/en/research_data/Research_Reports/DMA-docs/starting-early.pdf
- Calman, R., & Crawford, P.J. (2013). Starting early: Teaching, learning and assessment. Linking early-childhood development with academic outcomes: Detailed look. Retrieved from <http://www.childcarecanada.org/documents/research-policy-practice/13/06/starting-early-teaching-learning-and-assessment-linking-ear>
- Cameron, J., (2012) The core story of brain development. Retrieved from <http://www.albertafamilywellness.org/resources/publication/core-story-brain-development>
- Carey, M. (2012). *Focus group research*. Los Angeles, CA: Left Coast Press.
- Carpiano, R. M., Lloyd, J. E., & Hertzman, C. (2009). Concentrated affluence, concentrated disadvantage, and children's readiness for school: A population-based, multi-level investigation. *Social Science & Medicine*, 69(3), 420–432.
- Carrington, S., Deppeler, J., & Moss, J. (2010). Cultivating teachers' knowledge and skills for leading change in schools. *Australian Journal of Teacher Education*, 35(1), 1–13.
- Case, R. (1996). Changing views of knowledge and their impact on educational research and practice. In D. Olson & N. Torrance (Eds.), *The handbook of education and human development* (pp. 75–99). Cambridge, MA: Blackwell.
- Castro, A. J. (2010). Themes in the research on preservice teachers' views of cultural diversity implications for researching millennial preservice teachers. *Educational Researcher*, 39(3), 198–210.

- Chan, B., Lee, M., & Choy, G. (2009). Competing forces: Government policy, teacher education, and school administration in Hong Kong early childhood education. *International Journal of Child Care and Education Policy*, 3(1), 75–86.
- Chan, K. W., & Elliott, R. G. (2004). Relational analysis of personal epistemology and conceptions about teaching and learning. *Teaching and Teacher Education*, 20(8), 817–831.
- Christians, C. (2008). Ethics and politics in qualitative research. In N. Denzin & Y. Lincoln (Eds.), *The landscape of qualitative research* (pp. 185–220). Thousand Oaks, CA: Sage.
- Clay, M. M., & Cazden, C. B. (1999). A Vygotskian interpretation of reading recovery. *Lev Vygotsky: Critical Assessments*, 3, 354–70.
- Cleathero, J., (2007) *A profile of young children aged 0-5*. Retrieved from Township of Langley and City of Langley Website:
http://www.langley.ca/LinkClick.aspx?fileticket=fSLUoe8b_qg%3D&tabid=104&mid=463
- Cleveland, G., Corter, C., Pelletier, J., Colley, S., Bertrand, J., & Jamieson, J. (2006). *A review of the state of the field of early childhood learning and development in child care, kindergarten and family support programs*. Canadian Council on Learning.
- Cleveland, G., & Krashinsky, M. (2001). *Our children's future: Child care policy in Canada*. Toronto, ON: University of Toronto Press.
- Closson, L. (2009). Status and gender differences in early adolescents' descriptions of popularity. *Social Development*, 18(2), 412–426.
- Clough, P. (2004). Theft and ethics in life portrayal: Lolly—the final story. *International Journal of Qualitative Studies in Education*, 17(3), 371–382.
- Cobanoglu, R., & Capa-Aydin, Y. (2015). When early childhood teachers close the door: Self-reported fidelity to a mandated curriculum and teacher beliefs. *Early Childhood Research Quarterly*, 33, 77–86.
- Cochran-Smith, M. & Zeichner, K. (2005). *Studying teacher education: The report of the AERA panel on research and teacher education*. Mahwah, NJ: Lawrence Erlbaum.
- Cohen, L., Manion, L., & Morrison, K. (2014). *Research methods in education*. London: Routledge.

- Cohen, L. E., & Friedman, D. E. (2015). The Early Development Instrument: A Bioecological View of School Readiness. In J. M. Iorio & W. Parnell (Eds.), *Rethinking Readiness in Early Childhood Education* (pp. 49-64). New York, NY: Palgrave Macmillan.
- Cole, M., & Wertsch, J. (1996). Beyond the individual-social antinomy in discussions of Piaget and Vygotsky. *Human Development*, 39, 250–256.
- Connelly, F. M., & Clandinin, D. J. (1988). *Teachers as curriculum planners: Narratives of experience*. New York, NY: Teachers College Press.
- Connelly, F. M., & Clandinin, D. J. (1992). Curriculum theory. In M.C. Alkin (Ed.), *Encyclopedia of Educational Research* (6th ed.) (pp. 287–292). American Educational Research Association: Macmillan.
- Connelly, F. M., & Clandinin, D. J. (2000). Narrative understandings of teacher knowledge. *Journal of Curriculum and Supervision*, 15(4), 315–331.
- Cook, K., Davis, E., Williamson, L., Harrison, L. J., & Sims, M. (2013). Discourses of professionalism in family day care. *Contemporary Issues in Early Childhood*, 14(2), 112–126.
- Cool, J. (2007). *Child care in Canada: The federal role*. Parliamentary Information and Research Service, Parliament of Canada.
- Copple, C., & Bredekamp, S. (2009). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8*. Washington, DC: National Association for the Education of Young Children.
- Corson, D. (Ed.). (1995). *Discourse and power in educational organizations*. Cresskill, NJ: Hampton Press.
- Corter, C., Patel, S., Pelletier, J., & Bertrand, J. (2008.) The early development instrument as an evaluation and improvement tool for school-based, integrated services for young children and parents: The Toronto First Duty Project. *Early Education and Development*, 19(5), 773–794.
- Council of Ministers of Education Canada (CMEC). (2012). Early Learning and Development Framework. Retrieved from <http://www.cmec.ca/Publications/Lists/Publications/Attachments/327/2014-07-Early-Learning-Framework-EN.pdf>
- Cowie, H. (2012). *From birth to sixteen: Children's health, social, emotional and linguistic development*. London: Routledge.

- Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five designs*. Thousand Oaks, CA: Sage.
- Crotty, M. (1996). *Phenomenology and nursing research*. South Australia: Churchill Livingstone.
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. London: Sage.
- Cullen, J. (2001). An introduction to understanding learning. In V. Carpenter (Ed.), *Theory in practice for educators*. Wellington, NZ: Dunmore Press.
- Cynader, M. S., & Frost, B. J. (1999). Mechanisms of brain development: Neuronal sculpting by the physical and social environment. In D. Keating & C. Hertzman (Eds.), *Developmental health and the wealth of nations*. New York, NY: Guilford Press.
- D'Anguilli, A., Siegel, L., & Maggi, S. (2004). Literacy instruction, SES and word reading achievement in English language learners with English as a first language: A longitudinal study. *Learning Disabilities Research and Practice*, 19(4), 202–213.
- Dahlberg, G., & Moss, P. (2005). *Ethics and politics in early childhood education*. London: Routledge Falmer.
- Dahlberg, G., Moss, P., & Pence, A. (1999). *Beyond quality in early childhood education and care: Postmodern perspectives* (1st ed.). London: Falmer Press.
- Dahlberg, G., Moss, P., & Pence, A. (2007). *Beyond quality in early childhood education and care: Languages of evaluation* (2nd ed.). London: Falmer Press.
- Dalli, C., & Urban, M. (2013). Professionalism in early childhood education and care: International perspectives. London: Routledge.
- Daniels, H. (2012). Institutional culture, social interaction and learning. *Learning, Culture and Social Interaction*, 1 (1), 2–11. Retrieved from <http://dx.doi.org/10.1016/j.lcsi.2012.02.001>
- Daniels, H. (2016). *Vygotsky and pedagogy*. London: Routledge.
- Darling-Hammond, L. (2005). Teaching as a profession: Lessons in teacher preparation and professional development. *Phi Delta Kappan*, 87(3), 237.
- Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of Teacher Education*, 57(3), 300–314.
- Darling-Hammond, L. (2012). *Powerful teacher education: Lessons from exemplary programs*. San Francisco, CA: John Wiley.

- Darling-Hammond, L. & Baratz-Snowden, J. (2005). *A good teacher in every classroom: Preparing the highly qualified teachers our children deserve*. San Francisco, CA: John Wiley.
- Davey, L. (2010). *Talking child mental health and the core story of child development in Alberta*. Washington, DC: FrameWorks Institute.
- Denton, J. (1982). Early field experience influence on performance in subsequent coursework. *Journal of Teacher Education*, 33(2), 19–23.
- Denzin, N. K., & Lincoln, Y. S. (2005). Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (3rd ed., pp. 1–32). Thousand Oaks, CA: Sage.
- Deumert, A. (2004). *Language standardization and language change: The dynamics of Cape Dutch* (Vol. 19). Amsterdam: John Benjamins Publishing.
- DeVries, R. (1997). Piaget's social theory. *Educational Researcher*, 26(2), 4–18.
- Dey I. (1993) *Qualitative data analysis: A user-friendly guide for social scientists*. London: Routledge.
- Dodeen, H., Abdelfattah, F., Shumrani, S., & Hilal, M. A. (2012). The effects of teachers' qualifications, practices, and perceptions on student achievement in TIMSS mathematics: A comparison of two countries. *International Journal of Testing*, 12(1), 61–77.
- Doherty, G. (2001a). Targeting early childhood care and education: Myths and realities. Retrieved from <http://childcarecanada.org/publications/occasional-paper-series/01/08/targeting-early-childhood-care-and-education-myths-and-re>
- Doherty, G. (2001b). Targeting early childhood care and education: Myths and realities. Executive Summary. *Childcare Briefing Notes. Childcare Resource and Research Unit*. Retrieved from <http://www.childcarecanada.org/sites/default/files/targeting.pdf>
- Donovan, M. S., & Bransford, J. D. (2005). *How students learn: History, mathematics, and science in the classroom*. Washington, DC: National Academies Press.
- Donovan, M. S., Bransford, J. D., & Pellegrino, J. W. (1999). *How people learn: Bridging research and practice*. Washington, DC: National Academies Press.
- Dufficy, P. (2005). 'Becoming' in classroom talk. *Prospect*, 20(1), 59–79.
- Duku, E., & Janus, M. (2004). Stability and reliability of the early development instrument: A population-based measure for communities (EDI). *Children*, 72(155), 112.

- Duncan, G., & Magnuson, K. (2005). Can family socioeconomic resources account for racial and ethnic test score gaps? *The Future of Children*, 15, 35–54.
- Early Development Index Guide (EDIG). (2015). Retrieved from http://www.offordcentre.com/readiness/pubs/Implementarion_Resources/EDI-Guide-MB-2015-Eng.pdf
- Early Learning Advisory Group. (2008). *British Columbia early learning framework*. British Columbia: The Ministry of Health and the Ministry of Children and Family Development.
- Ebbeck, M., & Yin, Y. (2011). Instituting change in early childhood education: Recent developments in Singapore. *Early Childhood Education Journal*, 38(6), 457–463.
- ECMap. (2014). *How are our young children doing? Final Report of the Early Childhood Mapping Project*. (1st ed.). Retrieved from http://www.ecmap.ca/images/results/ECMap_Final_Report_20141118.pdf
- Edwards, C., Gandini, L., & Forman, G. (Eds.). (2011). *The hundred languages of children: The Reggio Emilia experience in transformation*. Santa Barbara, CA: ABC-CLIO.
- Edwards, D., & Mercer, N. (2013). *Common knowledge: The development of understanding in the classroom*. New York, NY: Routledge.
- Einboden, R., Rudge, T., & Varcoe, C. (2013). Producing children in the 21st century: A critical discourse analysis of the science and techniques of monitoring early child development. *Health*, 17(6): 549–66.
- Eisazadeh, N. (2014). *Exploring preschool educators' funds of knowledge about print literacy pedagogy through a narrative lens* (unpublished doctoral dissertation, The University of Western Ontario).
- Ellis, V., Edwards, A., & Smagorinsky, P. (Eds.). (2010). *Cultural-historical perspectives on teacher education and development: Learning teaching*. New York, NY: Routledge.
- Eraut, M. (2000). Non-formal learning and tacit knowledge in professional work. *British Journal of Educational Psychology*, 70(1), 113–136.
- Evans, K. (2013). School readiness: The struggle for complexity. *Learning Landscapes*, 7(1), 171–186.

- Evans, L. (2002). *Reflective practice in educational research*. NY: Continuum.
- Exley, B. (2015). Researching the teaching of subject English: Socio-cultural theories and methods. *English in Australia*, 50(3), 27-30. Retrieved from <http://eprints.qut.edu.au/96025/>
- Fairclough, N. (1989). *Language and power*. New York, NY: Longman.
- Fairclough, N. (Ed.). (1992a). *Critical language awareness*. London: Longman.
- Fairclough, N. (1992b). *Media discourse*. London: Edward Arnold.
- Fairclough, N. (1993). Critical discourse analysis and the marketization of public discourse: The universities. *Discourse and Society*, 4(2), 133–168.
- Fairclough, N. (1995). *Discourse and social change*. Cambridge, UK: Polity Press.
- Fairclough, N. (2000). *Language and power* (2nd ed.). New York, NY: Longman.
- Fairclough, N. (2002). The dialectics of discourse. *Textus*, 14(2), 3–10. Retrieved from <http://www.ling.lancs.ac.uk/staff/norman/2001a.doc>
- Fairclough, N. (2013). *Critical discourse analysis: The critical study of language*. New York, NY: Routledge.
- Fein, M. (2012). *On loss and losing: Beyond the medical model of personal distress*. New Brunswick: Transaction Publishers.
- Feldman, D. H. (2004). Piaget's stages: The unfinished symphony of cognitive development. *New Ideas in Psychology*, 22(3), 175–231.
- Fenstermacher, G. (1994). The knower and the known: The nature of knowledge and research on teaching. In L. Darling-Hammond (Ed.), *Review of Research in Education* (pp. 3–56). American Educational Research Association.
- Fish, D., & Coles, C. (1998). *Developing professional judgement in health care: Learning through the critical appreciation of practice*. Elsevier Health Sciences.
- Fiske, J. (1994). *Media matters: Everyday culture and political change*. Minneapolis, MI: University of Minnesota Press.
- Fives, H., & Buehl, M. M. (2016). Teachers' Beliefs, in the Context of Policy Reform. *Policy Insights from the Behavioral and Brain Sciences*, 2016, Vol. 3(1) 114–121.F
- Flavell, J. H. (2004). Theory-of-mind development: Retrospect and prospect. *Merrill-Palmer Quarterly*, 50(3), 274–290.
- Fleer, M. (1995). *DAPcentrism: Challenging Developmentally Appropriate Practice*. Watson, ACT: Australian Early Childhood Association.

- Fleer, M. (2010). *Early learning and development: Cultural-historical concepts in play*. New York, NY: Cambridge University Press.
- Fleer, M., & Hedegaard, M. (2010). Children's development as participation in everyday practices across different institutions. *Mind, Culture, and Activity*, 17(2), 149-168.
- Fleet, A., & Patterson, C. (2001). Professional growth reconceptualized: early childhood staff searching for meaning. *Early Childhood Research & Practice*, 3(2). Retrieved from <http://ecrp.uiuc.edu/v3n2/fleet.html>.
- Forget-Dubois, N., Lemelin, J.-P., Boivin, M., Dionne, G., Séguin, J. R., Vitaro, F., & Tremblay, R. E. (2007). Predicting early school achievement with the EDI: A longitudinal population-based study. *Early Education and Development*, 18(3), 405-426.
- Foucault, M. (1980). *Power/knowledge*. New York, NY: Pantheon.
- Foucault, M. (2000). *The essential works of Foucault (Volume 3, Power)*. (Ed. J. D. Faubion) (Trans. R. Hurley). New York, NY: The New Press.
- Frameworks Institute (2011). The core story of child development. Retrieved from http://www.frameworksinstitute.org/toolkits/canp/resources/pdf/Child_Abuse_Toolkit_Core_Story.pdf
- Franklin, K., McNinch J., & Sherman, A. (2013). Early learning and early childhood education. Association of Canadian Deans of Education.
- Freeman, D. (2002). The hidden side of the work: Teacher knowledge and learning to teach. A perspective from North American educational research on teacher education in English language teaching. *Language Teaching*, 35(1), 1-13.
- Friendly, M., & Prabhu, N. (2010). Can early childhood education and care help keep Canada's promise of respect for diversity? *Occasional Paper*, 23. Retrieved from https://www.researchgate.net/profile/Martha_Friendly2/publication/242593202_Can_early_childhood_education_and_care_help_keep_Canada's_promise_of_respect_for_diversity/links/544305190cf2e6f0c0f939a5.pdf
- Friendly, M., Halfon, S., Beach, J., & Forer, B. (2013). Early Childhood Care and Education in Canada 2012. Childcare Resource and Research Unit. Retrieved from <http://www.childcarecanada.org/publications/ecec-canada/13/08/early-childhood-education-and-care-canada-2012>
- Fuller, B., Bridges, M., & Pai, S. (2007). *Standardized childhood: The political and cultural struggle over early education*. Stanford, CA: Stanford University Press.

- Geary, D. C. (1995). Reflections of evolution and culture in children's cognition: Implications for mathematical development and instruction. *American Psychologist*, 50(1), 24.
- Gee, J. P. (1990). *Social linguistics and literacies: Ideologies in discourse*. London: Falmer.
- Gee, J. P. (2011a). *An Introduction to discourse analysis: Theory and method*. New York, NY: Routledge.
- Gee, J. P. (2011b). *How to do discourse analysis: A toolkit*. New York, NY: Routledge.
- Gee, J. P., & Green, J. L. (1998). Discourse analysis, learning, and social practice: A methodological study. *Review of Research in Education*, 23, 119–169.
- Gentzler, Y. (1999). What is critical theory and critical science? In J. Johnson & C. Fedje (Eds.), *Family and consumer sciences curriculum: Toward a critical science approach: Yearbook 19*. Peoria, IL: Glencoe/McGraw-Hill.
- Genzuk, M. (1999). Tapping into community funds of knowledge. In *Effective Strategies for English Language Acquisition: Curriculum Guide for Professional Development of Teachers*. (pp. 9–21). Los Angeles, CA: Los Angeles Annenberg Metropolitan Project/ ARCO Foundation.
- Gergen, K. J. (2009). *Realities and relationships: Soundings in social construction*. Cambridge, MA: Harvard University Press.
- Giddens, A. (1977). Positivism and its critics. *Studies in Social and Political Theory*, 4(2), 29–95.
- Giovacco-Johnson, T. (2011). Applied ethics as a foundation in early childhood teacher education: Exploring the connections and possibilities. *Early Childhood Education Journal*, 38(6), 449–456.
- Glascoe, F. P. (2002). The Brigance infant and toddler screen: Standardization and validation. *Journal of Developmental & Behavioral Pediatrics*, 23(3), 145–150.
- Glascoe, F. P., & Leew, S. (2010). Parenting behaviors, perceptions, and psychosocial risk: Impacts on young children's development. *Pediatrics*, 125(2), 313–319.
- Goelman, H., Doherty, G., Lero, D. S., Lagrange, A., & Tougas, J. (2000). You Bet I Care! Caring and Learning Environments: Quality in Child Care Centres across Canada. Retrieved from http://www.worklifecanada.ca/cms/resources/files/5/ybic_report_3.pdf

- Goffin, S. (1996). Child development knowledge and early childhood teacher preparation: Assessing the relationship—a special collection. *Early Childhood Research Quarterly*, 11(2), 117–133.
- Gordon, A., & Browne, K. (2013). *Beginnings & beyond: Foundations in early childhood education*. Belmont, CA: Cengage Learning.
- Gormley, W., Gayer, T., Phillips, D., & Dawson, B. (2004). The effects of universal pre-k on cognitive development (Working Paper No. 4). Retrieved from <http://www.crocus.georgetown.edu/publications.html>
- Gorski, P. (2006). Savage unrealities. *Rethinking Schools*, 21(2), 16–19.
- Government of Alberta. (2002). Imagine our tomorrow: Alberta Future Summit 2002. Retrieved from http://www.finance.alberta.ca/publications/other/2002_0530_future_summit_report_highlights.pdf
- Government of Alberta. (2005). Government of Alberta Strategic Business Plan 2005. Retrieved from <http://www.finance.alberta.ca/publications/Budget/budget2005/govbp.pdf>
- Government of Alberta. (2010). Early child development mapping project Alberta (ECMap): How communities can support healthy early childhood development. Fact Sheet. Retrieved from <http://education.alberta.ca/media/6429557/ecd-community-nov22-10.pdf>
- Government of Alberta. (2011a). Let's talk about the early years. Retrieved from <http://www.health.alberta.ca/documents/CMOH-Lets-Talk-Early-Years-2011.pdf>
- Government of Alberta. (2012). Cabinet mandate. Retrieved from <http://alberta.ca/mandate.cfm>
- Government of Alberta. (2013a). Alberta's social policy framework. Retrieved from <http://www.socialpolicy.alberta.ca/>
- Government of Alberta. (2013b). Together we raise tomorrow. An Alberta approach to early childhood development 2013. Retrieved from http://earlychildhood.alberta.ca/Document/Together_We_Raise_Tomorrow_Alberta_Approach_Early_Childhood_Development_2013
- Government of Alberta. (2013c). 2013–16 Government of Alberta strategic plan. Retrieved from

- (<http://www.finance.alberta.ca/publications/budget/budget2013/goa-business-plan.pdf>)
- Government of Alberta. (2013d). Early child development mapping project Alberta (ECMap). Retrieved from <https://www.ecmap.ca/About-ECMap/FAQs/Pages/default.aspx>. and <https://www.ecmap.ca/Findings-Maps/Alberta-Results/Pages/default.aspx>
- Government of Canada. (2007). The well-being of Canada's young children: Government of Canada report 2006. Human Resources and Social Development Canada. The Public Health Agency of Canada and Indian and Northern Affairs Canada. Retrieved from http://www.socialunion.gc.ca/well_being/2007/en/well_being.pdf
- Government of Manitoba. (2002). Healthy child Manitoba annual report 2001–2002. Retrieved from http://www.gov.mb.ca/healthychild/about/annual_report_2001_02.pdf
- Government of Ontario, Ministry of Education. (2013). Ontario early years policy framework. Retrieved from <http://www.edu.gov.on.ca/childcare/OntarioEarlyYear.pdf>
- Graham, L. J. (2005) Discourse analysis and the critical use of Foucault. Retrieved from <http://eprints.qut.edu.au/2689/1/2689.pdf>
- Gredler, M. (2001). *Learning and instruction: Theory into practice*. Upper Saddle River, NJ: Merrill Prentice Hall.
- Gredler, M. E. & Shields, C. (2008). *Vygotsky's legacy: A foundation for research and practice*. New York, NY: Guilford.
- Guba, E.G.(1981). Criteria for assessing the trustworthiness of naturalistic inquiries. Educational Resources Information Center Annual Review Paper, 29, 75-91
- Guhn, M., Gadermann, A., & Zumbo, B. D. (2007). Does the EDI measure school readiness in the same way across different groups of children?. *Early Education and Development*, 18(3), 453–472.
- Guhn, M., Gadermann, A., & Zumbo, D. (2007). Does the EDI measure school readiness in the same way across different groups of children? *Early Education and Development*, 18, 453–72.

- Guhn, M., Janus, M. & Hertzman, C. (2007) The early development instrument: Translating school readiness assessment into community actions and policy planning. *Early Education and Development*, 18(3), 369–374.
- Guralnick, M. (2005). An overview of the developmental systems model for early intervention. In M. Guralnick (Ed.), *The developmental systems approach to early intervention: National and international perspectives* (pp. 3–28). Baltimore, MD: Brookes.
- Gutierrez, C., Larson, J., & Kreuter, B. (1995). Cultural tensions in the scripted classroom: The value of the subjugated perspective. *Urban Education*, 29, 410–442.
- Haberman, M. (1988). What knowledge is of most worth to teachers of young children? *Early Child Development and Care*, 38(1), 33–41.
- Habermas, J. (1973). *Theory and practice*. Boston, MA: Beacon.
- Halfpenny, P. (1982). *Positivism and sociology*. London: Allen and Unwin.
- Hall, S. (1996). The meaning of New Times. In D. Morley & K. Chen (Eds.), *Stuart Hall: Critical dialogues in cultural studies*. London: Routledge.
- Hall, S. (2006). The west and the rest: Discourse and power. In Maaka, R., & Andersen, C. (Eds.), *The indigenous experience: Global perspectives* (pp. 165–173). Toronto: Canadian Scholars' Press.
- Hammerness, K., Darling-Hammond, L., & Shulman, L. (2002). Toward expert thinking: How curriculum case writing prompts the development of theoretically based professional knowledge in student teachers. *Teaching Education*, 13(2), 221–245.
- Hammerness, K., Darling-Hammond, L., Bransford, J., Berliner, D., Cochran-Smith, M., McDonald, M., & Zeichner, K. (2005). How teachers learn and develop. In L. Darling-Hammond & J. Bransford, (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 358–389). San Francisco, CA: Wiley.
- Harder, L. (2003). *State of struggle: Feminism and politics in Alberta*. Edmonton, AB: The University of Alberta Press.
- Hardie, B. J. (2002). Challenging developmental theory in early childhood education. *NZ Research in ECE*, 5, 123–131.
- Harel, I., & Papert, S. (Eds.). (1991). *Constructionism*. London: Ablex Publishing.

- Harper, L. J. (2015). Supporting young children's transitions to school: Recommendations for families. *Early Childhood Education Journal*, 1–7.
- Harris, S. & Harris, J. W. (1988) Aboriginal communication styles, assessment and social change. In G. Davidson (Ed.), *Ethnicity and cognitive assessment: Australian perspectives*. Darwin, NT: Darwin Institute of Technology.
- Hart, B., Brinkman, S., & Blackmore, S. (2003). *How well are we raising our children in the north metropolitan area? Early development index*. Perth, WA: North Metropolitan Health Service, Western Australia.
- Harvey, D. (1989). *The condition of postmodernity*. Oxford: Basil Blackwell.
- Harwood, D., Kloppe, A., Osanyin, A., & Vanderlee, M. L. (2013). 'It's more than care': Early childhood educators' concepts of professionalism. *Early Years*, 33(1), 4–17.
- Hatano, G. (1993). Time to merge Vygotskian and constructivist conceptions of knowledge acquisition. In E. A. Forman, N. Minick, & C. A. Stone (Eds.), *Contexts for learning: Sociocultural dynamics in children's development* (pp. 153–166). New York, NY: Oxford University Press.
- Hatano, G., & Inagaki, K. (1999). A developmental perspective on informal biology. In D. L. Medin & S. Atran (Eds.), *Folkbiology* (pp. 321–354). Cambridge, MA: MIT Press.
- Hatch, A. (2010). Rethinking the relationship between learning and development: Teaching for learning in early childhood classrooms. *The Educational Forum*, 74(3), 258–268.
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge.
- Hawk, C., & Holden, G. (2006). Meta-parenting: An initial investigation into a new parental social cognition construct. *Parenting: Science and Practice*, 6(4), 321–342.
- Heckman, J. J., & Masterov, D. V. (2007). The productivity argument for investing in young children. *Applied Economic Perspectives and Policy*, 29(3), 446–493.
- Hedegaard, M., & Chaiklin, S. (2005). *Radical-local teaching and learning*. Aarhus, Denmark: Aarhus University Press.
- Hedges, H. (2007). *Funds of knowledge in early childhood communities of inquiry*. (Unpublished doctoral dissertation). Palmerston North, New Zealand: Massey

University.

<http://mro.massey.ac.nz/bitstream/handle/10179/580/02whole.pdf?sequence=1>

- Hedges, H. (2010). Blurring the boundaries: Connecting research, practice and professional learning. *Cambridge Journal of Education*, 40(3), 299–314.
- Hedges, H. (2015). Sophia's funds of knowledge: theoretical and pedagogical insights, possibilities and dilemmas. *International Journal of Early Years Education*, 23(1), 83–96.
- Hedges, H., & Cullen, J. (2005a). Meaningful teaching and learning: Children's and teachers' content knowledge. (ACE papers, Issue 16: Approaches to Domain Knowledge in Early Childhood Pedagogy, Paper 1). Auckland, New Zealand: Auckland College of Education.
- Hedges, H., & Cullen, J. (2005b). Subject knowledge in early childhood curriculum and pedagogy: Beliefs and practices. *Contemporary Issues in Early Childhood*, 6(1), 66–79.
- Hedges, H., Cullen, J., & Jordan, B. (2011). Early years curriculum: Funds of knowledge as a conceptual framework for children's interests. *Journal of Curriculum Studies*, 43(2), 185–205.
- Hedges, H., & Cullen, J. (2012). Participatory learning theories: A framework for early childhood pedagogy. *Early Child Development and Care*, 182(7), 921–940.
- Heisner, M. J., & Lederberg, A. R. (2011). The impact of child development associate training on the beliefs and practices of preschool teachers. *Early Childhood Research Quarterly*, 26(2), 227–236.
- Hemmeter, M. L., Ostrosky, M., & Fox, L. (2006). Social and emotional foundations for early learning: A conceptual model for intervention. *School Psychology Review*, 35(4), 583.
- Hennink, M. (2007). *International focus group research*. Cambridge, UK: Cambridge University Press.
- Henriques, J., Hollway, W., Urwin, C., Venn, C., & Walkerdine, V. (1984). *Changing the subject: Psychology, social regulation and subjectivity*. London: Methuen.
- Henry, F., & Tator, C. (2002). *Discourses of domination*. Toronto, ON: University of Toronto Press.
- Hertzman, C., McLean, S. A., Kohen, D., Dunn, J., Evans, T., & Smit-Alex, J. (2004). Early child development in Vancouver. *Horizons*, 6(4), 44–47. Retrieved from <http://www.cdrcp.com/pdf/Child%20Development-Early%20Years.pdf>

- Hertzman, C., & Bertrand, J. (2007). Children in poverty and the use of early development instrument mapping to improve their worlds. *Paediatric Child Health, 12*(8), 687–692.
- Hertzman, C., & Williams, R. (2009). Making childhood count. *Canadian Medical Association Journal, 180* (1), 68–71.
- Heydon, J., & Ping, W. (2006). Curricular ethics in early childhood education programming: A challenge to the Ontario kindergarten. *McGill Journal of Education, 41*(1), 29–46.
- Hinnant, J. B., O'Brien, M., & Ghazarian, S. R. (2009). The longitudinal relations of teacher expectations to achievement in the early school years. *Journal of Educational Psychology, 101*(3), 662.
- Hofer, B. K. (2001). Personal epistemology research: Implications for learning and teaching. *Educational Psychology Review, 13*(4), 353–383.
- Holstein, J., & Gubrium, J. (1995). *The active interview*. Thousand Oaks, CA: Sage.
- Horne, R. M., & Breitzkreuz, R. S. (2015). The motherhood sacrifice: Maternal experiences of child care in the Canadian context. *Journal of Family Studies, 1*–20.
- Howlett, M. (2009). Policy analytical capacity and evidence-based policy-making: Lessons from Canada. *Canadian Public Administration, 52*(2), 153–175.
- Hruby, G. (2001). Sociological, postmodern, and new realism perspectives in social constructionism: Implications for literacy research. *Reading Research Quarterly, 36*, 48–62.
- Huckin, T. N. (1997). Critical discourse analysis. In T. Miller (Ed.), *Functional approaches to written text* (pp. 78–92). Washington, DC: US Department of State. Retrieved from http://eca.state.gov/education/engteaching/pubs/BR/functionalsec3_6.html
- Human Early Learning Partnership (HELP), BC Smart Family Policy (2010). Report card: Assessing British Columbians' support for families with young children. Retrieved from [http://earlylearning.ubc.ca/media/publications/bc_smart_family_policy_report_card_2010_final-_10-09-16_\(3\).pdf](http://earlylearning.ubc.ca/media/publications/bc_smart_family_policy_report_card_2010_final-_10-09-16_(3).pdf)
- Hwa-Froelich, D. A., & Vigil, D. C. (2004). Three aspects of cultural influences on communication: A literature review. *Communication Disorder Quarterly, 25*(3), 107–118.

- Iorio, J. M., & Parnell, W. (Eds.). (2015). *Rethinking Readiness in Early Childhood Education: Implications for Policy and Practice*. New York, NY: Palgrave Macmillan.
- Irwin, L. G., Siddiqi, A., & Hertzman, C. (2007). *Early child development: A powerful equalizer. Final report to the WHO Commission on social determinants of health, Geneva*.
- Ivić, I. (1994). Lev S. Vygotsky. *Prospects*, 24(3–4), 761–785.
- Ivrendi, A., & Johnson, J. E. (2002). Kindergarten teachers' certification status and participation in staff development activities in relation to their knowledge and perceived use of developmentally appropriate practices (DAP). *Journal of Early Childhood Teacher Education*, 23(2), 115–124.
- James, A., & Prout, A. (Eds.). (2015). *Constructing and reconstructing childhood: Contemporary issues in the sociological study of childhood*. London: Routledge.
- James, M. Assessment, teaching and theories of learning. In J. Gardner (Ed.), *Assessment and Learning* (pp. 47–60). London: Sage.
- James, M., & Pedder, D. (2006). Beyond method: Assessment and learning practices and values. *The Curriculum Journal*, 17(2), 109–138.
- Janus, M. (2001). Validation of a teacher measure of school readiness with parent and child-care provider reports. (Poster presented at the Department of Psychiatry Research Day). Ontario: McMaster University. Retrieved from https://edi.offordcentre.com/wp/wp-content/uploads/2015/06/PUB.6.2001_Janus.pdf
- Janus, M. (2002) Validation of the Early Development Instrument in a sample of First Nations children. Ontario: McMaster University.
- Janus, M. (2006, April). Early Development Instrument: An indicator of developmental health at school entry. In *Proceedings of the International Conference on Measuring Early Child Development, Vaudreuil, Quebec*. Retrieved from https://edi.offordcentre.com/wp/wp-content/uploads/2015/06/PUB.10.2006_Janus.pdf
- Janus, M., Brinkman, S., Duku, E., Hertzman, C., Santos, R., Sayers, M., Schroeder, J., & Walsh, C. (2007). *The Early Development Instrument: A population-based measure for communities. A handbook on development, properties, and use*. Hamilton, ON: Offord Centre for Child Studies. Retrieved from

- https://edi.offordcentre.com/wp/wp-content/uploads/2015/07/2007_12_FINAL.EDI_.HANDBOOK.pdf
- Janus, M., Cameron, R., Lefort, J., & Kopechanski, L. (2007). Starting kindergarten: What do we know about issues affecting the transition to school for children with special needs? *Canadian Journal of Education*, 30(3), 628–648.
- Janus, M., & Duku, E. (2004). Early Development Instrument: Normative data based on 5 years of implementation (2000–2004).
- Janus, M., & Duku, E. (2007). The school entry gap: Socioeconomic, family, and health factors associated with children's school readiness to learn. *Early Education and Development*, 18(3), 375–403.
- Janus, M., Hertzman, C., Guhn, M., Brinkman, S., & Goldfeld, S. (2009). Response to 'Reply to Li, D'Angiulli, and Kendall: The Early Development Index and children from culturally and linguistically diverse backgrounds'. *Early Years: An International Journal of Research and Development*, 29(1), 83–87.
- Janus, M., & Offord, D. (2000). Readiness to learn at school. *Canadian Journal of Policy Research*, 1(2), 71–75.
- Janus, M., & Offord, D. R. (2007). Development and psychometric properties of the Early Development Instrument (EDI): A measure of children's school readiness. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 39(1), 1–22.
- Janus, M., Offord, D., & Walsh, C. (2001). Population-level assessment of readiness to learn at school for 5-year-olds in Canada: Relation to child and parent measures. Presented at the SRCD Meeting, Minneapolis, April 2001. Retrieved from https://www.researchgate.net/profile/Magdalena_Janus2/publication/228890488_Population_level_assessment_of_readiness_to_learn_at_school_for_5_year_olds_in_Canada_Relation_to_child_and_parent_measures/links/0912f51184a7e98d80000000.pdf
- Jenson, J. (2009). Writing gender out: The continuing effects of the social investment perspective. In A. Dobrowolsky (Ed.), *Women and public policy in Canada: Neo-liberalism and after?* (pp. 25–47). Don Mills, ON: Oxford University Press.
- John-Steiner, V., & Mahn, H. (1996). Sociocultural approaches to learning and development: A Vygotskian framework. *Educational Psychologist*, 31(3–4), 191–206.

- Jones, E.L. (2013). Decision making within a child's timescale: Who decides?
Retrieved from <http://fourteen.co.uk/news-knowledge/publications/>
- Jordan, B. (2004). Scaffolding learning and co-constructing understandings. In A. Anning, J. Cullen & M. Fler (Eds.), *Early childhood education: Society and culture* (pp. 31–42) London: Sage.
- Jørgensen, M. W., & Phillips, L. J. (2002). *Discourse analysis as theory and method*. London: Sage.
- Jovés, P., Siqués, C., & Esteban-Guitart, M. (2015). The incorporation of funds of knowledge and funds of identity of students and their families into educational practice. A case study from Catalonia, Spain. *Teaching and Teacher Education*, 49, 68–77.
- Jutte, D., Brownell, M., Roos, M., Schnapps, C., Boyce, T., & Syme, S. (2010). Rethinking what is important: Biologic versus social predictors of childhood health and educational outcomes. *Epidemiology*, 3, 314–323.
- Kamberelis, G. (2001). Producing of heteroglossic classroom (micro) cultures through hybrid discourse practice. *Linguistics and Education*, 12(1), 85–125.
- Kamerman, S. B. (2000). Early childhood education and care: An overview of developments in the OECD countries. *International Journal of Educational Research*, 33, 7–29.
- Karabınar, S. (2014). Writing approaches of student teachers of English. *Journal of Language and Linguistic Studies*, 10(2), 1–16.
- Karoly, L. A. (2009). *Preschool adequacy and efficiency in California: Issues, policy options, and recommendations*. Santa Monica, CA: RAND.
- Kašćák, O., & Pupala, B. (2013). Buttoning up the gold collar: The child in neoliberal visions of early education and care. *Human Affairs*, 23(2), 319–337.
- Katz, L. (1984). The professional preschool teacher. In L. Katz (Ed.), *More talks with teachers*. Urbana, IL: ERIC Clearinghouse on Elementary and Early Childhood Education.
- Kearins, J. (1988). Cultural elements in testing: The test, the tester and the tested. In G. Davidson (Ed.), *Ethnicity and cognitive assessment: Australian perspectives*. Darwin, NT: Darwin Institute of Technology.
- Keating, D. P. (2007). Formative evaluation of the Early Development Instrument: Progress and prospects. *Early Education and Development*, 18(3), 561–570.

- Keesing-Styles, L. (2003). Re-thinking the notion of qualified teachers in early childhood education. *New Zealand Journal of Educational Studies*, 235–244.
- Kendall-Taylor, N. (2010). *Kids must have mental health...but they can't, can they?: How Albertans think about child mental health*. Washington, DC: FrameWorks Institute.
- Kerns, K.A. (2008). Attachment in middle childhood. In J. Cassidy & P. Shaver (Eds), *Handbook of Attachment* (2nd ed.) (pp. 366–382). New York, NY: Guilford.
- Kershaw, P. (2004). 'Choice' discourse in BC child care: Distancing policy from research. *Canadian Journal of Political Science*, 37(04), 927–950.
- Kershaw, P., Anderson, L., Warburton, B., & Hertzman, C. (2009). *15 by 15: A comprehensive policy framework for early human capital investment in BC*. Human Early Learning Partnership, University of British Columbia. Retrieved from <http://earlylearning.ubc.ca/media/publications/15by15-full-report.pdf>
- Kershaw, P., Irwin, L., Trafford, K., & Hertzman, C. (2005). *The British Columbia atlas of child development* (vol. 40). Vancouver, BC: Human Early Learning Partnership.
- Kershaw, P., Warburton, B., Anderson, L., Hertzman, C., Irwin, L. G., & Forer, B. (2010). The economic costs of early vulnerability in Canada. *Canadian Journal of Public Health/Revue Canadienne de Sante'e Publique*, S8–S12.
- Kiyama, J. M. (2008). *Funds of knowledge and college ideologies: Lived experiences among Mexican-American families*. (Published doctoral dissertation). Tucson, Arizona: University of Arizona. Retrieved June 27 2016, from Dissertation & Theses: Full Text database. (Publication No. AAT 3303779).
- Kim, M. S. (2011). Toward activity-centered literacy: teaching and learning Korean literacy in a multilingual montreal context. *Asia Pacific Education Review*, 12(3), 447-461.
- Klibthong, S., Fridani, L., Ikegami, K., & Agbenyega, J. S. (2014). The relationship between quality early childhood programs and transition services in inclusive education of young children. *Asian Journal of Inclusive Education [P]*, 2(1), 35–55.
- Kowalski, K. (2001). Preschool teachers' beliefs concerning the importance of various developmental skills and abilities. *Journal of Research in Childhood Education*, 16(1), 123–134.

- Kozulin, A., Gindis, B., Ageyev, V. S., & Miller, S. M., eds. (2003). *Vygotsky's educational theory in cultural context*. Cambridge, UK: Cambridge University Press.
- Kress, G. (1989). *Linguistic processes in sociocultural practice*. Oxford: Oxford University Press.
- Krieg, S. (2011). The Australian early years learning framework: Learning what? *Contemporary Issues in Early Childhood*, 12(1), 46–55.
- Krishnan, V. (2010). Early /: A conceptual model early child development mapping project (ECMap), Community-University Partnership (CUP), Faculty of Extension, University of Alberta. Retrieved from http://www.cup.ualberta.ca/wp-content/uploads/2013/04/ConceptualModelCUPwebsite_10April13.pdf
- Krueger, R. (1994). *Focus groups: A practical guide for applied research*. Thousand Oaks, CA: Sage.
- Lightfoot-Rueda, T., Peach, R. L., & Leask, N. (Eds.). (2015). *Global Perspectives on Human Capital in Early Childhood Education: Reconceptualizing Theory, Policy, and Practice*. Springer.
- Laible, D., & Thompson, R. (2007). Early socialization: A relationship perspective. In J. Grusec & P. Hastings (Eds.), *Handbook of socialization: Theory and research* (pp. 181–207). New York, NY: Guilford Press.
- Laing, R. D. (2001). *The politics of the family, and other essays*. New York, NY: Routledge.
- Laletas, S., & Reupert, A. (2015). Exploring pre-service secondary teachers' understanding of care. *Teachers and Teaching*, 1–19.
- Lamont, M. (1987). How to become a dominant French philosopher: The case of Jacques Derrida. *American Journal of Sociology*, 584–622.
- Langer, R. (1998) The concept of discourse in the analysis of complex communication events. Retrieved from <http://hdl.handle.net/10398/7028>
- Langford, R. (2006). Discourses of the Good Early Childhood Educator in Professional Training: Reproducing Marginality or Working toward Social Change. *International Journal of Educational Policy, Research, and Practice: Reconceptualizing Childhood Studies*, 7(1), 115-125.
- Langford, R. (2008). Making a difference in the lives of young children: A critical analysis of a pedagogical discourse for motivating young women to become early

- childhood educators. *Canadian Journal of Education/Revue canadienne de l'éducation*, 78-101.
- Lapointe, V., Ford, L., & Zumbo, B. D. (2007). Examining the relationship between neighbourhood environment and school readiness for kindergarten children. *Early Education and Development*, 18(3), 473–495.
- Lara-Cinisomo, S., Fuligni, A. S., Daugherty, L., Howes, C., & Karoly, L. A. (2009). A qualitative study of early childhood educators' beliefs about key preschool classroom experiences. *Early childhood Research and Practice*, 11, 1. Retrieved from <http://files.eric.ed.gov/fulltext/EJ848842.pdf>
- Lave, J. (1988). *Cognition in practice: Mind, mathematics and culture in everyday life*. Cambridge, UK: Cambridge University Press.
- Lave, J. (1991). Situating learning in communities of practice. *Perspectives on Socially Shared Cognition*, 2, 63–82.
- Lave, J., & Wenger, E. (1998). Communities of practice. Retrieved from <http://valenciacollege.edu/faculty/development/tla/documents/CommunityofPractice.pdf>.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.
- Lavell, J. (1963). *The Developmental Psychology of Jean Piaget*. New York, NY: Van Nostrand.
- Lee, A. (1996). *Literacy, gender and curriculum*. London: Taylor and Francis.
- Lemke, J. L. (1998). Analyzing verbal data: Principles, methods and problems. In K. Tobin & B. Fraser (Eds.), *International handbook of science education*. NY: Kluwer Publishing. Retrieved from <http://academic.brooklyn.cuny.edu/education/jlemke/papers/handbook.html>
- Lehrer, J., & Bastien, R. (2015). Ready for School? Lessons from a sociohistorical investigation into mechanisms of preparation and classification of children for primary school from 1911 to 1979. In J. M. Iorio & W. Parnell (Eds.), *Rethinking readiness in early childhood education*. (pp. 19-32). New York, NY: Palgrave MacMillan.
- Lessard, S., Schaefer, L., Huber, J., Murphy, M. S., & Clandinin, D. J. (2015). Composing a life as a teacher educator. *International Teacher Education: Promising Pedagogies (Part C)* (22), 235–252.

- Li, J., D'Angiulli, A., & Kendall, G.E. (2007). The early development index and children from culturally and linguistically diverse backgrounds. *Early Years: An International Journal of Research and Development*, 27(3), 221–235.
- Li, J., D'Angiulli, A., & Kendall, G. (2009). Response to 'Reply to Li, D'Angiulli, and Kendall: The Early Development Index and children from culturally and linguistically diverse backgrounds' by Janus, Hertzman, Guhn, Brinkman, and Goldfeld. *Early Years: An International Journal of Research and Development*, 29(1), 89–92.
- Liamputtong, P. (2011). *Focus group methodology: Principles and practice*. Thousand Oaks, CA: Sage.
- Lin, A. (1998). Bridging positivist and interpretivist approaches to qualitative methods. *Policy Studies Journal*, 26(1), 162–80.
- Lindon, J. (2010). *Understanding child development*. Oxford: Hodder Education.
- Littlefield-Cook, J., Cook, G., Berk, L. E., & Bee, H. (2005). *Child development: Principles and perspectives* (Vol. 55, pp. 23–38). Boston, MA: Allyn and Bacon.
- Locke, S. (2005). Institutional social and cultural influences on the multicultural perspectives of preservice teachers. *Multicultural Perspectives*, 7(2), 20–28.
- Lopez, J. K. (2010). Funds of knowledge. *Learn NC*. Retrieved from <http://www.learnnc.org/lp/pages/939>.
- Loughran, J. J. (2006). *Developing a pedagogy of teacher education: Understanding teaching and learning about teaching*. New York, NY: Routledge.
- Loughran, J., Berry, A., & Mulhall, P. (2012). *Understanding and developing science teachers' pedagogical content knowledge* (Vol. 12). Springer Science & Business Media.
- Luke, A. (1995). Text and discourse analysis in education: An introduction to critical discourse analysis. *Review of Research in Education*, 21, 1–48.
- Luke, A. (1997). Theory and practice in critical science discourse. In L. Saha (Ed.), *International encyclopedia of the sociology of education* (pp. 50–56). NY: Pergamon. Retrieved from <http://pages.gseis.ucla.edu/faculty/kellner/ed270/Luke/SAHA6.html>
- Levi-Strauss, C. (1966). *The savage mind*. Chicago, IL: University of Chicago Press.
- Lyotard, J. F. (1984). *The postmodern condition: A report on knowledge*. Minneapolis, MI: University of Minnesota Press.

- Lytle, S., & Cochran-Smith, M. (1990). Learning from teacher research: A working typology. *The Teachers College Record*, 92(1), 83–103.
- Mackenzie, N. M., Hemmings, B., & Kay, R. (2011). How does teaching experience affect attitudes towards literacy learning in the early years? *Issues in Educational Research*, 21(3), 281–294.
- MacNaughton, G. (2003). *Shaping early childhood: Learners, curriculum and contexts*. UK: McGraw-Hill Education.
- MacNaughton, G., & Williams, G. (2004). *Teaching young children: Choices in theory and practice*. Maidenhead: Open University Press.
- Maggi, S., Irwin, L., Siddiqi, A., & Hertzman, C. (2010). The social determinants of early child development: An overview. *Journal of Paediatrics and Child Health*, 46, 627–635.
- Mahon, R. (2010). After neo-liberalism? The OECD, the World Bank and the child. *Global Social Policy*, 10(2), 172–192.
- Mahon, R., Anttonen, A., Bergqvist, C., Brennan, D., & Hobson, B. (2012). Convergent care regimes? Childcare arrangements in Australia, Canada, Finland and Sweden. *Journal of European social policy*, 22(4), 419–431.
- Mai, N. (2011). Closing the education gap: A case for Aboriginal early childhood education in Canada: A look at the Aboriginal headstart program. *Canadian Journal of Education*, 34(3), 229–248.
- Malaguzzi, L. (1993). For an education based on relationships. *Young Children*, 49(1), 9–12.
- Malaguzzi, L. (1998). History, ideas, and basic philosophy: An interview with Lella Gandini. In C. Edwards, L. Gandini, & G. Forman (Eds.), *The hundred languages of children: The Reggio Emilia approach to early childhood education*. (49-98). Norwood, NJ: Ablex Publishing Corporation.
- Mandler, J. M. (2014). *Stories, scripts, and scenes: Aspects of schema theory*. New York, NY: Psychology Press.
- Manning, S. L. (2008). Playcentre parents-as-educators: Links between background experiences and teaching practice. Retrieved <http://hdl.handle.net/10063/291>
- Mansour, N. (2010). Impact of the knowledge and beliefs of Egyptian science teachers in integrating a STS based curriculum: A sociocultural perspective. *Journal of Science Teacher Education*, 21(5), 513–534.

- Mariotti, M. A. (2009). Artifacts and signs after a Vygotskian perspective: the role of the teacher. *ZDM*, 41(4), 427-440.
- Marks, F., & Yardley, L. (2004). *Research methods for clinical and health psychology*. Thousand Oaks, CA: Sage.
- Marotz, L., & Allen, E. (2013). *Developmental profiles: Pre-birth through adolescence*. Belmont, CA: Wadsworth.
- Marston, G. (2004). *Social policy and discourse analysis: Policy change in public change in public housing*. UK: Ashgate.
- Martin, F., & Carmen, R. (2007). Australian early childhood education and care: The fourth discourse. *Canadian Journal of Native Education*, 30(1), 190–191.
- Martin-Beltran, M., & Percy, M. M. (2014). Collaboration to teach English language learners: Opportunities for shared teacher learning. *Teachers and Teaching*, 20(6), 721–737.
- McCain, M., Mustard, F., & Shanker, S. (2007). *Early years study 2: Putting science into action*. Toronto, ON: Council for Early Child Development. Retrieved from <http://www.scribd.com/doc/75669768/Early-Years-Study-2-Putting-Science-into-Action-McCain-Shanker-Mustard>
- McDonagh, J., & McDonagh, S. (2008). Learning to talk, talking to learn. In J. Marsh & E. Hallet (Eds.), *Desirable literacies: Approaches to language and literacy in the early years*, (1-17). London: Sage.
- McGregor, S. (2003). Critical science approach: A primer. (Kappa Omicron Nu Working Paper Series). Retrieved from http://www.kon.org/cfp/critical_science_primer.pdf
- McLachlan, C., Fler, M., & Edwards, S. (2013). *Early childhood curriculum: Planning, assessment, and implementation*. Port Melbourne, VIC: Cambridge University Press.
- McLaughlin, D. S., & Barton, A. C. (2013). Preservice teachers' uptake and understanding of funds of knowledge in elementary science. *Journal of Science Teacher Education*, 24(1), 13–36.
- McLaughlin-Smith, C., & St. George, A. (2000). Children learn by doing? Teachers' beliefs about learning, teaching and literacy. *New Zealand Journal of Educational Studies*, 35(1), 37–47.
- McLean, L. D. (1985). *The craft of student evaluation in Canada*. Toronto: Canadian Education Association.

- McMullen, M. B. (2001). Distinct in beliefs/united in concerns: Listening to strongly DAP and strongly traditional k-primary teachers. *Journal of Early Childhood Teacher Education*, 22(3), 123–133.
- McMullen, M., Elicker, J., Wang, J., Erdiller, Z., Lee, S. M., Lin, C. H., & Sun, P. Y. (2005). Comparing beliefs about appropriate practice among early childhood education and care professionals from the US, China, Taiwan, Korea and Turkey. *Early Childhood Research Quarterly*, 20(4), 451–464.
- Mehan, H. (1979). *Learning lessons*. Cambridge, MA: Harvard University Press.
- Meier, D., & Wood, G. H. (Eds.). (2004). *Many children left behind: How the No Child Left Behind Act is damaging our children and our schools*. Boston, MA: Beacon Press.
- Meisels, S. (1999). Assessing readiness. In R. Pianta & M. Cox (Eds.), *The transition to kindergarten* (pp. 39–66). Baltimore: Brookes.
- Mey, J. (1985). *Whose language? A study in linguistic pragmatics*. Amsterdam: John Benjamins.
- Mikkola, A. (2001). Finnish teacher education and research. In P. Erixon, G. Franberg, & D. Kallos (Eds.), *The role of graduate and postgraduate studies and research in teacher education reform policies in the European Union*. Umea Universitet, Sweden: European Network on Teachers Policies.
- Miller, L., Cable, C., & Devereux, J. (2013). *Developing early years practice*. London: Routledge.
- Minichiello, V., Aroni, R., Timewell, E., & Alexander, L. (1992). *In-depth interviewing*. Melbourne, VIC: Longman Cheshire.
- Mitchell, L. (2010). Constructions of childhood in early childhood education policy debate in New Zealand. *Contemporary Issues in Early Childhood*, 11(4), 328–341.
- Moen, T. (2008). Reflections on the narrative research approach. *International Journal of Qualitative Methods*, 5(4), 56–69.
- Moll, L. C. (2000). Inspired by Vygotsky: Ethnographic experiments in education. In C. D. Lee & P. Smargorinsky (Eds.), *Vygotskian perspectives on literacy research: Constructing meaning through collaborative inquiry* (pp. 256–268). Cambridge, UK: Cambridge University Press.

- Moll, L., & Greenberg, J. B. (1990). Creating zones of possibilities: Combining social contexts for instruction. In L. C. Moll (ed.), *Vygotsky and Education* (pp. 319–348). Cambridge, UK: Cambridge University Press.
- Moll, L., Amanti, C., Neff, D., & Gonzalez, N. (2005). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. In N. Gonzales, L. Moll, & C. Amanti, *Funds of knowledge: Theorizing practices in households, communities, and classrooms* (pp. 71–87). New York, NY: Routledge.
- Moller, S., Stearns, E., Blau, J. R., & Land, K. C. (2006). Smooth and rough roads to academic achievement: Retention and race/class disparities in high school. *Social Science Research*, 35(1), 157–180.
- Moloney, M. (2010). Professional identity in early childhood care and education: Perspectives of pre-school and infant teachers. *Irish Educational Studies*, 29(2), 167–187.
- Moloney, M., & Pope, J. (2015). Where to now for early childhood care and education (ECCE) graduates? A study of the experiences of Irish BA ECCE degree graduates. *Education 3–13*, 43(2), 142–152.
- Monk, D. (1994). Subject area preparation of secondary mathematics and science teachers and student achievement. *Economics of Education Review*, 13(2), 125–145.
- Moon, M. (2014). *Defining 'success' in Indigenous education: exploring the perspectives of Indigenous educators in a Canadian city* (unpublished doctoral dissertation). University of Toronto.
- Morgan, W., & Taylor, S. (2005). Interrogating critical discourse analysis for educational research in new spaces and places. *Melbourne Studies in Education*, 46(2), 1–8.
- Morrissey, T. W., & Warner, M. E. (2007). Why early care and education deserves as much attention, or more, than prekindergarten alone. *Applied Development Science*, 11(2), 57–70.
- Mort, J. (2009). *The Early Development Instrument (EDI) in British Columbia: Documenting impact and action in schools, communities and childhood development*. Vancouver, BC: Council for Early Child Development.

- Moss, P. (2006). Structures, understandings and discourses: possibilities for re-envisioning the early childhood worker. *Contemporary issues in early childhood*, 7(1), 30-41.
- Moss, P., & Dahlberg, G. (2008). Beyond quality in early childhood education and care: Languages of evaluation. *New Zealand Journal of Teachers' Work*, 5(1), 3-12.
- Moss, P., & Pence, A. (Eds.). (1994). *Valuing quality in early childhood services*. London: Paul Chapman Publishing.
- Munby, H., Russell, T., & Martin, A. K. (2001). Teachers' knowledge and how it develops. *Handbook of Research on Teaching*, 4, 877-904.
- Muspratt, S., Luke, A., & Freebody, P. (Eds.). (1997). *Constructing critical literacies*. Creskill, NJ: Hampton Press.
- Mustard, F. (2008). *Investing in the early years: Closing the gap between what we know and what we do*. Australia: Government of South Australia.
- Neuman, W. L., & Kreuger, L. (2003). *Social work research methods: Qualitative and quantitative approaches*. Boston, MA: Allyn and Bacon.
- New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review*, 66, 60-92.
- Newman, D., Griffin, P., & Cole, M. (1989). *The construction zone: Working for cognitive change in school*. Cambridge, MA: Cambridge University Press.
- Neyland, J. (2006). The literary curriculum and the denial of backgrounds. *Curriculum Matters*, 2, 63-81.
- Nicolini, D. (2012). *Practice theory, work, and organization: An introduction*. Oxford, UK: Oxford University Press.
- Niemi, H. (2011). Educating student teachers to become high quality professionals: a Finnish case. *CEPS Journal*, 1(1), 43-66.
- Nolan, A., & Raban, B. (2015). *Theories into practice: Understanding and rethinking our work with young children and the EYLF*. Albert Park, VIC: Teaching Solutions.
- Palix Foundation. (2013). Sharing the brain story. AFWI's knowledge mobilization strategy: Transforming research, policy, and practice in Alberta. Retrieved from <http://www.albertafamilywellness.org/system/files/report-files/Sharing%20the%20Brain%20Story%20Final%20jan%2027%202014.pdf>
- Nuttall, J., & Edwards, S. (2007). Theory, policy, and practice: Three contexts for the development of Australasia's early childhood curriculum documents. In

- Keesing-Styles, L., & Hedges, H. (Eds.). *Theorising early childhood practice: Emerging dialogues*. Castle Hill, NSW: Pademelon Press.
- Oberhuemer, P. (2005). Conceptualising the early childhood pedagogue: Policy approaches and issues of professionalism. *European Early Childhood Education Research Journal*, 13(1), 5–16.
- O’Connell, R. (2011). Paperwork, rotas, words and posters: An anthropological account of some inner London childminders’ encounters with professionalisation. *The Sociological Review*, 59(4), 779–802.
- O’Connor, K. E. (2008). ‘You choose to care’: Teachers, emotions and professional identity. *Teaching and Teacher Education*, 24(1), 117–126.
- Offord, D. (2000). Selection of levels of prevention. *Addictive Behaviours*, 25(6), 833–842.
- Offord, D., & Lipman, E. (1996). Emotional and behavioural problems. In *Growing up in Canada: National longitudinal survey of children and youth* (pp. 119–126). Ottawa: Human Resources Development Canada.
- O’Neil, M. (2010a). *Between cowboys and barnraisers: The challenge of explaining children’s mental health and development in Alberta*. Washington, DC: FrameWorks Institute.
- O’Neil, M. (2010b). *Scientists, holy terrors and lax parents: How the Alberta media tell stories about early child development and its disrupters*. Washington, DC: FrameWorks Institute.
- O’Neil, M., & Kendall-Taylor, N. (2014). Taking the First Steps: Using Metaphor to Open Space for the Science of Child Development in the field of International Development. A Frameworks Research Report: April 2014. Washington, DC: FrameWorks Institute.
- Organisation for Economic Co-operation and Development (OECD). (2001). *Starting strong: Early childhood education and care*. Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD). (2009). *Education today: The OECD perspective*. Paris: OECD.
- Osgood, J. (2006). Deconstructing professionalism in early childhood education: Resisting the regulatory gaze. *Contemporary Issues in Early Childhood*, 7(1), 5–14.

- Osgood, J. (2009). Childcare workforce reform in England and ‘the early years professional’: A critical discourse analysis. *Journal of Education Policy*, 24(6), 733–751.
- Osgood, J. (2010). Reconstructing professionalism in ECEC: the case for the ‘critically reflective emotional professional’. *Early Years*, 30(2), 119–133.
- Palincsar, A. S. (2005). 12 Social constructivist perspectives on teaching and learning. In H. Daniels (Ed.), *An introduction to Vygotsky* (pp. 285–314). East Sussex: Routledge.
- Pascal, C. E. (2009). With our best future in mind: Implementing early learning in Ontario. Report to the Premier by the Special Advisor on Early Learning. Toronto, ON: Government of Ontario.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- Pavarini, G., De Hollanda Souza, D. & Hawk, C.K. (2012). Parental practices and theory of mind development. *Journal of Child and Family Studies*, 147, 231–252.
- Payne, R. K. (2013). *A framework for understanding poverty*. Highlands, TX: Aha! Process.
- Payne, R. K., DeVol, P. E., & Smith, T. D. (2001). *Bridges out of poverty: Strategies for professionals and communities*. Highlands, TX: Aha Process.
- Pearson, E., & Rao, N. (2012). Early childhood education policy reform in Hong Kong: Challenges in effecting change in practices. *Childhood Education*, 82(6), 363–368.
- Peers, C. (2011). The Australian Early Development Index: Reshaping family–child relationships in early childhood education. *Contemporary Issues in Early Childhood*, 12(2), 134–147.
- Pettit, G., & Arsiwalla, D. (2008). Commentary on special section on ‘Bidirectional parent-child relationships’: The continuing evolution of dynamic, transactional models of parenting and youth behavior problems. *Journal of Abnormal Child Psychology*, 36, 711–718.
- Phillips, B. (1976). *Social research: Strategy and tactics*. New York, NY: Macmillan.
- Piaget, J. (1952). Jean Piaget. In E. Boring, H. Langfeld, H. Werner, & R. Yerkes (Eds.), *History of psychology in autobiography* (Vol. IV, pp. 237–256). Worcester, MA: Clark University Press.

- Piaget, J. (1954). Language and thought from a genetic perspective. *Acta Psychologica*, 10, 51–60.
- Piaget, J. (1964). Part I: Cognitive development in children: Piaget development and learning. *Journal of Research in Science Teaching*, 2(3), 176–186.
- Piaget, J. (1976). *Piaget's theory* Berlin: Springer.
- Piaget, J. (1977). *The development of thought: Equilibration of cognitive structures*. (Trans A. Rosin). New York, NY: Viking.
- Piaget, J. (1981). *Intelligence and affectivity: Their relationship during child development*. (Trans. & Eds. T. A. Brown & C. E. Kaegi). Palo Alto, CA: Annual reviews.
- Piaget, J. (2000). Commentary on Vygotsky's criticisms of Language and thought of the child and Judgement and reasoning in the child. *New Ideas in Psychology*, 2(18), 241–259.
- Piaget, J. (2007). *The child's conception of the world*. London: Rowman and Littlefield.
- Piaget, J., & Inhelder, B. (1969). *The psychology of the child*. New York, NY: Basic Books.
- Pianta, R. C., & Stuhlman, M. W. (2004). Teacher–child relationships and children's success in the first years of school. *School Psychology Review*, 33(3), 444.
- Pintrich, P. R. (2002). Future challenges and directions for theory and research on personal epistemology. In B. K. Hofer & P.R. Pintrich, *Personal epistemology: The psychology of beliefs about knowledge and knowing* (pp. 389–414). Mahwah, NJ: Lawrence Erlbaum.
- Pivik, J. (2012). Environmental scan of school readiness for health: Definitions, determinants, indicators and interventions. Retrieved from http://earlylearning.ubc.ca/media/uploads/publications/environmental_scan_health_and_school_readiness_2012_pivik.pdf
- Poster, M. (1990). *The mode of information*. Cambridge, UK: Polity Press.
- Postill, J. (2010) Introduction: Theorising media and practice. In B. Bräuchler & J. Postill (Eds.), *Theorising media and practice*. Oxford, UK: Berghahn.
- Power, M. (1997). *The audit society: Rituals of verification*. Oxford: Oxford University Press.
- Prentice, S. (2009). High stakes: The 'investable' child and the economic reframing of childcare. *Signs*, 34(3), 687–710.

- Price, L. (2002). *Industry and sustainability: A pre-review through critical discourse analysis*. Zimbabwe: Kubatana Trust. Retrieved from http://www.kubatana.net/docs/env/indsust_lp020812.pdf
- Price, R. (2010). The psychology of identity: The black refugee experience. In J. Guishard Pine (Ed.), *Psychology, equality and working with children* (pp. 69–78). Stoke on Trent: Trentham Books.
- Pring, R. (2014). *Philosophy of educational research*. London: Continuum.
- Puchta, C. (2004). *Focus group practice*. Thousand Oaks, CA: Sage.
- Punch, K. (2005). *Introduction to social research: Quantitative and qualitative approaches*. London: Sage.
- Punch, M. (1994). Politics and ethics in qualitative research. *Handbook of qualitative research*, 2, 83–98.
- Quebec Provincial Poverty Profile. (2012) (1st ed.). Retrieved from <http://www.cwp-csp.ca/wp-content/uploads/2012/05/Quebec-Provincial-Poverty-Profile-FINAL-May-2012.pdf>
- Recchia, H., & Howe, N. (2009). Sibling relationship quality moderates the associations between parental interventions and siblings' independent conflict strategies and outcomes. *Journal of Family Psychology*, 23, 551–561.
- Recchia, S. L., Beck, L., Esposito, A., & Tarrant, K. (2009). Diverse field experiences as a catalyst for preparing high quality early childhood teachers. *Journal of Early Childhood Teacher Education*, 30(2), 105–122.
- Reid, C., & Collins, J. (2013). 'No-one ever asked me': The invisible experiences and contribution of Australian emigrant teachers. *Race Ethnicity and Education*, 16(2), 268–290.
- Remlinger, K. (2002). Crossing methodological borders: Critical discourse analysis and dialectology. Paper presented at the *Methods in Dialectology XI Conference*, University of Joensuu, Finland.
- Renwick, K. Drawing from Funds of Knowledge. In Canadian Symposium XIII Issues and Directions for Home Economics/Family Studies/Human Ecology Education February 27-28 and March 1, 2015 Winnipeg, Manitoba (p. 86). Retrieved from <http://www.canadiansymposium.ca/final-cs-xiii-proceedings-2015.pdf>
- Reynolds, A. (2000). *Success in early intervention: The Chicago child–parent centers*. Lincoln, NE: University of Nebraska Press.

- Rikhy, S., Tough, S., Trute, B., Benzies, K., Davey, H., & Johnson, D. (2008). The Alberta Benchmark Survey: What adults know about child development. *Knowledge Translation in Alberta: Health Research with Impact* 3, 97–102.
- Riley, T., & Ungerleider, C. (2012). Self-fulfilling prophecy: How teachers' attributions, expectations, and stereotypes influence the learning opportunities afforded Aboriginal students. *Canadian Journal of Education*, 35(2), 303–333.
- Riley, T., & Ungerleider, C. (2012). Self-fulfilling prophecy: How teachers' attributions, expectations, and stereotypes influence the learning opportunities afforded Aboriginal students. *Canadian Journal of Education*, 35(2), 303–333.
- Rinaldi, C. (2006). *In dialogue with Reggio Emilia: Listening, researching and learning*. Hove, UK: Psychology Press.
- Rinaldi, C. M., & Howe, N. (2012). Mothers' and fathers' parenting styles and associations with toddlers' externalizing, internalizing, and adaptive behaviors. *Early Childhood Research Quarterly*, 27, 266–273.
- Rivalland, C. M. P. (2006). When are beliefs just 'the tip of the iceberg'? Exploring early childhood professionals' beliefs and practices about teaching and learning. *Australian Journal of Early Childhood*, 32(1), 30.
- Rodriguez, G. M. (2013). Power and Agency in Education Exploring the Pedagogical Dimensions of Funds of Knowledge. *Review of Research in Education*, 37(1), 87–120.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. Oxford: Oxford University Press.
- Rogoff, B. (1995). Observing Sociocultural activity on three planes: Participatory appropriation, guided participation, and apprenticeship. In J. V. Wertsch, P. Del Rio and A. Alvarez (Eds.), *Sociocultural studies of mind* (pp.139–165). Cambridge, UK: Cambridge University Press.
- Rogoff, B. (1998). Cognition as a collaborative process. In D. Kuhn & R. S. Siegler (Eds.), *Handbook of child psychology* (vol. 2), (5th ed.) (pp. 679–744). New York, NY: John Wiley.
- Rogoff, B. (2003) *The cultural nature of human development*. New York, NY: Oxford University Press.
- Rogoff, B. (2008). Observing sociocultural activity on three planes: Participatory appropriation, guided participation, and apprenticeship. In K. Hall & P. Murphy

- (Eds.), *Pedagogy and practice: Culture and identities* (pp. 58–74). London: Sage.
- Rogoff, B., Goodman-Turkanis, C., & Bartlett, L. (2001). *A community of learners*. Oxford, UK: Oxford University Press.
- Rosa, M., & Orey, D. C. (2014). A theoretical discussion to reveal the principles of culturally relevant education in an ethnomathematical perspective. *International Journal for Research in Mathematics Education*, 4(1), 42–67.
- Ross, H. S., & Perlman, M. (2005). If–then contingencies in children's sibling conflicts. *Merrill–Palmer Quarterly*, 51(1), 42–66.
- Rossmann, R. B., & Rallis, S. F. (1998). *Learning in the field: An introduction to qualitative research*. Thousand Oaks, CA: Sage.
- Rouse, J., (2007). Practice theory. In D. M. Gabbay, P. Thagard & J. Woods (Eds.), *Philosophy of anthropology and sociology* (pp. 639–682). Kidlington, Oxford: Elsevier.
- Rubie-Davies, C. M. (2015). Teaching relationships: Broadening understandings through the social psychology of the classroom. *Knowledge Cultures*, 3(2), 155–155.
- Rubin, H., & Rubin, I. (2004). *Qualitative interviewing: The art of hearing data*. Thousand Oaks, CA: Sage.
- Rupert, M. (1997). *What is postmodernism?* (Unpublished manuscript). Maxwell School of Citizenship and Public Affairs, Syracuse, NY.
- Russell, T. L., & Munby, H. (1991). Reframing: The role of experience in developing teachers' professional knowledge. In D. Shon (Ed.), *The reflective turn: Case studies of reflective practice*. New York, NY: Teachers College Press.
- Rutherford, L. (2006). *Language-minority students' cognitive school readiness and success in elementary school*. (CSE technical report 683). Los Angeles, CA: Center for the Study of Evaluation.
- Ryan, S., & Grieshaber, S. (2005). Shifting from developmental to postmodern practices in early childhood teacher education. *Journal of Teacher Education*, 56(1), 34–45.
- Rymarz, R. (2011). Catechesis and religious education in Canadian Catholic schools. *Religious Education*, 106(5), 537–549.
- Sachs, J. (2001). Teacher professional identity: Competing discourses, competing outcomes. *Journal of Education Policy*, 16(2), 149–161.

- Saklofske, D., & Janzen, K. (1990). School based assessment research in Canada. *McGill Journal of Education*, 25(1), 5–19.
- Salamon, A., Sumsion, J., Press, F., & Harrison, L. (2014). Implicit theories and naïve beliefs: Using the theory of practice architectures to deconstruct the practices of early childhood educators. *Journal of Early Childhood Research*, 1, 13.
- Satterly, D. (1987). Piaget and education. In R. L. Gregory (Ed.), *The Oxford companion to the mind*. Oxford, UK: Oxford University Press.
- Schatzki, T. R. (1996). *Social practices: A Wittgensteinian approach to human activity and the social*. Cambridge, UK: Cambridge University Press.
- Schnellert, L., Kozak, D., & Moore, S. (2015). Professional development that positions teachers as inquirers and possibilizers. *Learning Landscapes: Professional Development in Education: Pushing the Boundaries of Possibility*, 9(1), 217–236.
- Schunk, D. (2000). Motivation for achievement: Past, present, and future. *Issues in Education: Contributions from Educational Psychology*, 6, 161–165.
- Seifert, K. (2001). Sociable thinking: Cognitive development in early childhood education. In O. Saracho & B. Spodek (Eds.), *Contemporary perspectives on early childhood education* (pp. 15–40). Greenwich, CT: Information Age Publishers.
- Sfard, A. (1998) On two metaphors for learning and the dangers of choosing just one. *Educational Researcher*, 27(2), 4–13.
- Sfard, A. (2002). There is more to discourse than meets the ears: Looking at thinking as communicating to learn more about mathematical learning. *Educational Studies in Mathematics* 46(1), 13–57.
- Sfard, A. (2008a). On two metaphors for learning and the dangers of choosing just one. In P. Murphy & R McCormick (Eds.). *Knowledge and Practice: Representations and identities* (pp. 30–45). Thousand Oaks, California: SAGE Publications.
- Sfard, A. (2008b). Thinking as communicating: Human development, the growth of discourses, and mathematizing. New York, NY: Cambridge University Press.
- Sheriden, S., & Schuster, K. (2001). Evaluation of pedagogical quality in early childhood education: A cross-national perspective. *Journal of Research in Childhood Education*, 16(1), 109–124.

- Shonkoff, J. P., & Fisher, P. A. (2013). Rethinking evidence-based practice and two-generation programs to create the future of early childhood policy. *Development and Psychopathology*, 25(4, pt 2), 1635–1653.
- Shonkoff, J. P., & Phillips, D. A. (2002). *From Neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy of Sciences.
- Shonkoff, J. P., Boyce, W. T., & McEwen, B. S. (2009). Neuroscience, molecular biology, and the childhood roots of health disparities: Building a new framework for health promotion and disease prevention. *Jama*, 301(21), 2252–2259.
- Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 15(2), 4–14.
- Siddiqi, A., Kawachi, I., Berkman, L., Hertzman, C., & Subramanian, S. (2012). Education determines a nation's health, but what determines educational outcomes? A cross-national comparative analysis. *Journal of Public Health Policy*, 33(1), 1–15.
- Silin, J. (1987). The early childhood educator's knowledge base: A reconsideration. In G. Katz (Ed.), *Current topics in early childhood education* (Vol 7). Norwood, NJ: Ablex Publishing.
- Simon, A. (2010). *Moving north: Translating child mental health values and models to Canada*. Washington, DC: FrameWorks Institute.
- Simon, S., Millett, A., & Askew, M. (2004). The dynamics of teacher decision-making: Case studies of teachers responding to the national numeracy strategy. In A. Millett, M. Brown, & M. Askew (Eds.), *Primary mathematics and the developing professional* (pp. 155–184). Netherlands: Kluwer.
- Sims, M. (2013). The importance of early years education. In D. Pendergast & S. Garvis (Eds.), *Teaching early years: Curriculum, pedagogy and assessment* (pp. 20–32). Crows Nest, NSW: Allen and Unwin.
- Sims, M. (2014). Is the care–education dichotomy behind us? Should it be? *Australasian Journal of Early Childhood*, 39(4), 4–12.
- Simpson, D., Lumsden, E., & McDowall Clark, R. (2015). Neoliberalism, global poverty policy and early childhood education and care: a critique of local uptake in England. *Early Years*, 35(1), 96–109.

- Singleton, N. C., & Shulman, B. B. (2013). *Language development: Foundations, processes, and clinical applications*. Burlington, MA: Jones & Bartlett.
- Skwarchuk, S. (2004). Teachers' attitudes toward government-mandated provincial testing in Manitoba. *Alberta Journal of Educational Research*, 50(3), 123–131.
- Small, M. (2006). *The culture of our discontent: Beyond the medical model of mental illness*. Washington, DC: Joseph Henry Press.
- Smidt, S. (2012). *Introducing Malaguzzi: Exploring the life and work of Reggio Emilia founding father*. New York, NY: Routledge.
- Smith, A. B. (2011). Relationships with people, places and things: Te Whāriki. In L. Miller & L. Pound (Eds.), *Theories and approaches to learning in the early years* (pp. 149–162). Thousand Oaks, CA: Sage.
- Smith, K. E., & Croom, L. (2000). Multidimensional self-concepts of children and teacher beliefs about developmentally appropriate practices. *The Journal of Educational Research*, 93(5), 312–321.
- Smith, M. K., (2003). Jean Lave, Etienne Wenger and communities of practice. *Encyclopaedia of Informal Education*. Retrieved from <http://infed.org/mobi/jean-lave-etienne-wenger-and-communities-of-practice/>.
- Solso, R. (1995). *Cognitive psychology*. Boston, MA: Allyn and Bacon.
- Spodek, B. (1988). The implicit theories of early childhood teachers. *Early Child Development and Care*, 38(1), 13–31.
- Squires, J., Bricker, D., & Twombly, E. (2002). *Ages and stages questionnaires: Social-emotional (ASQ:SE), a parent-completed, child-monitoring system for social-emotional behaviors*. Baltimore, MD: Paul H. Brookes.
- Stairs, A. H., & Bernhard, J. K. (2002). Considerations for evaluating 'good care' in Canadian Aboriginal early childhood settings. *McGill Journal of Education*, 37(3), 309.
- Stephenson, A. M. (2009). Skirmishes on the border: How children experienced, influenced and enacted the boundaries of curriculum in an early childhood education centre setting. Unpublished doctoral dissertation, Victoria University of Wellington, New Zealand.
- Stewart, C., & Cash, J. (1988). *Interviewing principles and practices*. Dubuque, IA: William C. Brown Publishers.

- Stipek, D., & Byler, P. (2001). Academic achievement and social behaviours associated with age of entry into kindergarten. *Applied Developmental Psychology, 22*, 175–189.
- Stone, C. A. (1998a). The metaphor of scaffolding: Its utility for the field of learning disabilities. *Journal of Learning Disabilities, 31*(4), 344–364.
- Stone, C. A. (1998b). Should we salvage the scaffolding metaphor? *Journal of Learning Disabilities, 31*(4), 409–413.
- Strand, P., Cerna, S., & Saucy, J. (2007). Assessment and decision-making in early childhood education and intervention. *Journal of Child and Family Studies, 16*(2), 209–218.
- Sumsion, J. (2002). Becoming, being and unbecoming an early childhood educator: A phenomenological case study of teacher attrition. *Teaching and Teacher Education, 18*(7), 869–885.
- Sutherland, P. (1992). *Cognitive development today: Piaget and his critics*. London: Chapman.
- Taguchi, H. L. (2007). Deconstructing and transgressing the theory–practice dichotomy in early childhood education. *Educational Philosophy and Theory, 39*(3), 275–290.
- Thompson, I. (2013). The mediation of learning in the zone of proximal development through a co-constructed writing activity. *Research in the Teaching of English, 47*(3), 247–276.
- Thompson, M. P. A. (2002). ICT, power, and developmental discourse: A critical analysis. In W. Wynn, E. Whitley, M. Myers & J. DeGross (Eds.), *Proceedings of the Global and Organizational Discourse about Information Technology Conference* (pp. 347–373). New York, NY: Kluwer.
- Toward a provincial framework for early learning and care in Alberta: What we heard: A report on fall 2012 consultations with early learning and care stakeholders (2013). Edmonton, AB: The Muttart Foundation.
- Turner, D. (2010). *Using the medical model in education: Can pills make you clever?* London: Continuum.
- Turner, K., & Sanders, M. (2006). Help when it's needed first: A controlled evaluation of brief, preventive behavioral family intervention in a primary care setting. *Behavior Therapy, 37*(2), 131–142.

- Turuk, M. C. (2008). The relevance and implications of Vygotsky's sociocultural theory in the second language classroom. *ARECLS*, 5, 244-262.
- UNICEF (2006). *State of the world's children: Excluded and invisible*. New York: Oxford University Press.
- Urban, M. (2008). Dealing with uncertainty: Challenges and possibilities for the early childhood profession. *European Early Childhood Education Research Journal*, 16(2), 135-152.
- Valentin, S. (2006). Addressing diversity in teacher education programs. *Education*, 127(2), 196.
- van Dijk, T.A. (1988). *News as discourse*. Hillsdale, NJ: Erlbaum.
- van Dijk, T.A. (1993). Critical discourse analysis and conversation analysis. *Discourse and Society*, 10(4), 459-480.
- van Dijk, T.A. (2001). Critical discourse analysis. In D. Schiffrin, D. Tannen & H. Hamilton (Eds.), *The handbook of discourse analysis* (pp. 352-371). Malden, MA: Blackwell Publishing.
- Vandivere, S. (2004). *Indicators of early school success and child well-being*. Washington, DC: Child Trends Data Bank. Retrieved from <http://www.childtrends.databank.org>
- Vartuli, S. (2005). Beliefs: The heart of teaching. *YC: Young Children*, 60(5), 76.
- Velasquez, A., West, R., Graham, C., & Osguthorpe, R. (2013). Developing caring relationships in schools: A review of the research on caring and nurturing pedagogies. *Review of Education*, 1(2), 162-190.
- Verenikina, I. (2003). Understanding scaffolding and the ZPD in educational research.
- Volante, L. (2007). Educational quality and accountability in Ontario: Past, present, future. *Canadian Journal of Educational Administration and Policy*, 58, 2-21.
- Vygotsky, L. (1978a). Interaction between learning and development. *Readings on the development of children*, 23(3), 34-41.
- Vygotsky, L. S. (1978b). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Vygotsky, L. (1981). The genesis of higher mental functions. In J.V. Wertsch (Ed.), *The concept of activity in Soviet psychology* (pp. 144-188). Armonk, NY: M.E. Sharpe.

- Wagner, M. G. (1998). *The Progressive Conservative Government and education policy in Alberta: Leadership and continuity* (unpublished doctoral dissertation). University of Alberta, Edmonton, AB.
- Wall, G. (2013). 'Putting family first': Shifting discourses of motherhood and childhood in representations of mothers' employment and child care. *Women's Studies International Forum*, 40, 162–171).
- Wastell, D., & White, S. (2012). Blinded by neuroscience: Social policy and the myth of the infant brain. *Families, Relationships and Societies: An International Journal of Research and Debate*, 1(3), 397–414).
- Watson, C. (2006). Narratives of practice and the construction of identity in teaching. *Teachers and Teaching: Theory and Practice*, 12(5), 509–526.
- Wei, L. (2014). Negotiating funds of knowledge and symbolic competence in the complementary school classrooms. *Language and Education*, 28(2), 161–180.
- Wellington, J. (2015). *Educational research: Contemporary issues and practical approaches*. London: Bloomsbury Publishing.
- Wells, G. (1994). Learning and teaching scientific concepts: Vygotsky's ideas revisited. Paper presented at the *Vygotsky and the Human Sciences Conference*, Moscow. Retrieved from people.ucsc.edu/~gwells/Files/Papers_Folder/ScientificConcepts.pdf
- Wells, G. (1999). *Dialogic inquiry: Towards a sociocultural practice and theory of education*. Cambridge, UK: Cambridge University Press.
- Wells, G. (2000). Dialogic inquiry in education. In C. D. Lee & P Smagorinsky (Eds.), *Vygotskian perspectives on literacy research* (pp. 51–85). Cambridge, UK: Cambridge University Press.
- Wells, G. (2007). Semiotic mediation, dialogue and the construction of knowledge. *Human Development*, 50(5), 244–274.
- Wells, G., & Claxton, G. (Eds.). (2008). *Learning for life in the 21st century: Sociocultural perspectives on the future of education*. John Wiley & Sons.
- Wertsch, J. (Ed.) (1981). *The concept of activity in Soviet psychology*. Armonk, NY: Sharpe.
- Wertsch, J. (1985). *Vygotsky and the social formation of mind*. Cambridge, MA: Harvard University Press.

- Wertsch, J. (1991). *Voices of the mind: A sociocultural approach to mediated action*. Cambridge, MA: Harvard University Press.
- Wertsch, J. (1995a) *The social formation of mind: A Vygotskian approach*. Cambridge, MA: Harvard University Press.
- Wertsch, J. (1998). *Mind as action*. New York, NY: Oxford University Press.
- Wertsch, J. (2005). Mediation. In H. Daniels, M. Cole, & J. Wertsch (Eds.), *The Cambridge Companion to Vygotsky* (pp. 178–792). Cambridge, UK: Cambridge University Press.
- Wertsch, J. V. (2007). Mediation. In H. Daniels, M. Cole & J. V. Wertsch (Eds.), *The Cambridge companion to Vygotsky* (pp. 178–192). Cambridge, UK: Cambridge University Press.
- Wertsch, J., & Kazak, S. (2005). Saying more than you know in instructional settings. In T. Koschmann (Ed.), *Theorizing learning practice*. Mahwah, NJ: Erlbaum.
- Wertsch, J. V., Tulviste, P., & Hagstrom, F. (1993). A sociocultural approach to agency. *Contexts for learning: Sociocultural Dynamics in Children's Development*, 23, 336–356.
- Wetherell, M., Yates, S., & Taylor, S. (2001). *Discourse theory and practice: A reader*. London: Sage.
- Widdowson, H. (2000). On the limitations of linguistics applied. *Applied Linguistics*, 21(1), 3–5.
- Williams, G. (1992). *Sociolinguistics: A sociological critique*. London: Routledge.
- Williams, P. (1994). *Making sense of quality: A review of approaches to quality in early childhood services*. London: National Children's Bureau.
- Williamson, B., & Morgan, J. (2009). Educational reform, enquiry-based learning and the re-professionalisation of teachers. *The Curriculum Journal*, 20(3), 287–304.
- Willms, J. D., & Beswick, J. (2002). *Early years evaluation: Teacher assessment: Revised*. Fredericton, NB: KSI Research International.
- Wittgenstein, L. (2009). *Philosophical investigations*. (Trans. G.E.M Anscombe). (4th ed.). Wiley Blackwell.
- Wodak, R., & Ludwig, C. (Eds). (1999). *Challenges in a changing world: Issues in critical discourse analysis*. Vienna: Passagenverlag.
- Wong, S. (2003). A narrative inquiry into teaching of in-service kindergarten teachers: Implications for re-conceptualizing early childhood teacher education in Hong Kong. *Early Child Development and Care*, 173(1), 73–81.

- Wood, E. A. (2014). Free choice and free play in early childhood education: Troubling the discourse. *International Journal of Early Years Education*, 22(1), 4-18.
- Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, 17(2), 89-100.
- Wood, E., & Attfield, J. (2005). *Play, learning and the early childhood curriculum*. London: Sage.
- Wood, E., & Bennett, N. (2000). Changing theories, changing practice: Exploring early childhood teachers' professional learning. *Teaching and Teacher Education*, 16(5/6), 635-647.
- Wood, E., & Hedges, H. (2016). Curriculum in early childhood education: Critical questions about content, coherence, and control. *The Curriculum Journal*, 1-19.
- Woodhead, M. (2000). Towards a global paradigm for research into early childhood. In H. Penn (Ed.), *Early childhood services: Theory, policy and practice*. Buckingham, UK: Open University Press.
- Woodhead, M. (2006). Changing perspectives on early childhood: Theory, research and policy. United Nations Educational, Scientific and Cultural Organization. Retrieved from www.councilecd.ca/cecd/home.nsf/pages/EYS2.html
- Wylie, C., & Thompson, J. (2003). The long-term contribution of early childhood education to children's performance: Evidence from New Zealand. *International Journal of Early Years Education*, 11(1), 69-78.
- Wynn, L. (2011). Ethnographers' experience of institutional ethics oversight: Results from a quantitative and qualitative survey. *Journal of Policy History*, 23(1), 94-114.
- Yardley, L., & Marks, D. (2004). Introduction to clinical and health psychology research. In D. Marks & L. Yardley (Eds.), *Research methods for clinical and health psychology* (pp. 1-20). London: Sage.
- Yinger, R., & Hendricks-Lee, M. (1993). Working knowledge in teaching. In C. Day, J. Calderhead, & P. Denicolo (Eds.), *Research on teacher thinking: Understanding professional development* (pp. 100-123). London: Falmer Press.
- Young, C. (1994). Ethnic Diversity and Public Policy: An overview (Occasional Paper No. 8). World summit for social development. Geneva: UNSRD.