EARLY CHILDHOOD EDUCATORS’ KNOWLEDGE AND SELF-EFFICACY IN FOUNDATIONAL LITERACY INSTRUCTION

by

Julia Claire Forgie

A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Graduate Department of Applied Psychology and Human Development
Ontario Institute for Studies in Education
University of Toronto

© Copyright by Julia Claire Forgie (2019)
EARLY CHILDHOOD EDUCATORS’ KNOWLEDGE AND SELF-EFFICACY IN FOUNDATIONAL LITERACY INSTRUCTION

Julia Claire Forgie

Doctor of Philosophy

Department of Applied Psychology and Human Development

University of Toronto

2019

Abstract

This thesis is comprised of two studies. The first utilizes a mixed-method approach and explores early childhood educators’ early literacy knowledge and self-efficacy for early literacy instruction. Fifty-four ECEs participated in this research, of which 29 were pre-service ECEs and 25 were in-service ECEs. Participants were assessed on their early literacy knowledge and self-efficacy for early literacy instruction. They were also assessed on their early literacy-related experiences, including assessments of their literacy-related training and practicum experiences as well as assessments of their professional experiences. Study 1 revealed significant gaps in ECEs’ early literacy knowledge, and identified differences between pre-service and in-service ECEs in their early literacy knowledge and experiences. The findings of study 1 showed that despite their varied early literacy-related experiences and training, both pre-service and in-service ECEs lacked adequate knowledge and self-efficacy in phonemic awareness and oral language instruction, two essential components of early literacy education.

The second study is a mixed methods study examining the impact of a targeted professional development intervention designed to improve knowledge and self-efficacy
in phonemic awareness and oral language instruction. Study 2 found that the professional
development intervention was effective in improving both knowledge and self-efficacy in
phonemic awareness and oral language instruction. Qualitative findings provided further
insight as to specific components of the intervention that were seen as beneficial in
improving the knowledge and self-efficacy of ECEs, which included opportunities to
apply theoretical learning through hands-on activities and video demonstrations.

Overall, the findings of this thesis provide insight into the early literacy
experiences, knowledge and self-efficacy for early literacy instruction of pre-service and
in-service ECEs. Furthermore, the findings suggest that ECEs can make significant
improvements in knowledge and self-efficacy through a targeted professional
development intervention.
Acknowledgements

I am indebted to the many people who have supported me on this journey to completing my dissertation. I am truly grateful to have been supervised by such a remarkable mentor. Dr. Dale Willows has been a consistent source of support, motivation and inspiration and without her ongoing encouragement and guidance, this project would not have been possible. I feel very fortunate to have worked so closely with such an inspirational leader and only hope that I can provide for my students the mentorship and encouragement that Dr. Willows has done for me.

I want to extend my gratitude to my thesis committee, Dr. Rhonda Martinussen and Dr. Janette Pelletier. Their willingness to share their expertise, provide meaningful feedback and answer my questions so thoughtfully, has allowed me to refine my thoughts and the development of my thesis accordingly. I am also thankful to my external examiner, Dr. Ruth McQuirter Scott, for her insightful comments, suggestions and contributions. An additional thank you to Dr. Olesya Falenchuck, for her expertise and support in the research design and data analyses of this project.

I want to especially thank Angela Lenis, a colleague and fellow OISE graduate, for her assistance in collecting and coding data and assisting in the delivery of the professional development workshops.

On a personal note, I cannot begin to express my gratitude to my family for all of the love, support and encouragement they have sent my way along this journey. I want to dedicate this thesis to my parents who have been a true source of unconditional love and support. This has been a long journey and throughout every stage, their unwavering support and confidence in my abilities, has given me the strength to persevere. Thank you for always being my number #1 fan!
To my extended family, thank for you for believing in me and for all of your help with the boys when I needed it the most. To my grandparents, your love and support has meant the world to me, I hope that I have made you proud.

To my wonderful husband, who has believed in me even in moments when I did not believe in myself. You always helped me to see the bigger picture and without your support and encouragement, I would not have been able to see the light at the end of the tunnel, and complete this long journey. I want to thank him for being there, right by my side, every step of the way. I feel very fortunate to have such a caring and supportive partner.

Finally, I want to thank my children, Atticus and Bennett. You are the reason I feel so passionate about the quality of early childhood education and care. Being your mother has made me stronger, better and more fulfilled than I could have ever imagined. You are my inspiration to achieve greatness. Without you, I would not be here today.
Dedication

This work is dedicated to my children who were the inspiration for this research.

May the early experiences you have with caring and competent early childhood educators enable you to foster a passion for reading, writing and life-long learning.
Table of Contents

Abstract ............................................................................................................................... ii
Acknowledgements ........................................................................................................ iv
Dedication .......................................................................................................................... vi
Table of Contents ............................................................................................................ vii
List of Tables .................................................................................................................... x
List of Figures .................................................................................................................. xiii
List of Appendices .......................................................................................................... xiv

CHAPTER 1 – General Introduction ............................................................................. 1
  Introduction to the Studies............................................................................................. 1
  Thesis Overview ............................................................................................................. 6

CHAPTER 2 – General Methodology ........................................................................... 8
  Mixed Methods Research Approach ........................................................................... 8
  Sample and Sampling Strategy ................................................................................... 11
    Pre-service ECEs ......................................................................................................... 12
    In-service ECEs ........................................................................................................... 13
  Participant Recruitment ............................................................................................... 14
  Data Collection ............................................................................................................. 15
  Data Analysis and Validity Procedures ...................................................................... 16
    Integration of Quantitative and Qualitative Analyses ............................................. 17
    Role of the Researcher ............................................................................................... 19
  Ethical Considerations ................................................................................................. 20

CHAPTER 3 – Study 1: Assessing ECEs’ Foundational Literacy Knowledge and Self-Efficacy for Early Literacy Instruction ........................................................................ 21
  Literature Review ........................................................................................................ 21
    Research Foundations for Early Literacy Instruction ............................................. 22
      The Role of Early Childhood Educators ................................................................. 22
      Effective Early Literacy Instruction ...................................................................... 25
      Instructional Expectations of Early Childhood Educators .................................... 28
    Professional Knowledge in Early Literacy Instruction ......................................... 30
      Literacy Knowledge Among Pre-Service Educators ........................................... 31
      Literacy Knowledge Among In-Service Educators ............................................. 33
    Self-Efficacy for Teaching Early Literacy ............................................................... 35
  Study Purpose and Research Questions .................................................................... 38
    Quantitative Research Questions ............................................................................ 39
    Qualitative Research Questions ............................................................................. 40
  Methods ........................................................................................................................ 41
    Research Design ...................................................................................................... 41
    Measures ................................................................................................................... 42
      Quantitative Measures ......................................................................................... 42
      Qualitative Measures ............................................................................................ 46
    Data Analysis ............................................................................................................ 47
Quantitative Results and Discussion ................................................................. 49
Research Question 1: What are the early literacy experiences of pre-service and
in-service ECEs? ........................................................................................................ 49
Discussion for Research Question 1 .................................................................... 54
Research Question 2: What knowledge and skills do pre-service and in-service
ECEs have in the area of early literacy development and instruction? ................ 55
Discussion for Research Question 2 .................................................................... 68
Research Question 3: What is the self-efficacy of pre-service and in-service
ECEs in terms of their perceived ability to provide quality early literacy instruction
and support to their students? .............................................................................. 69
Discussion for Research Question 3 .................................................................... 76
Qualitative Results and Discussion ..................................................................... 77
Theme 1: Sources of Knowledge ........................................................................ 78
Theme 2: ECEs’ Knowledge and Skills ................................................................. 86
Theme 3: Feelings of Self-Efficacy to Teach Early Literacy ................................. 94
Discussion of Qualitative Findings ..................................................................... 99
General Discussion of Study 1 ........................................................................... 104
Integrating Quantitative and Qualitative Data ..................................................... 105
Data Comparison ................................................................................................. 105
Early Literacy Experiences ................................................................................... 105
ECEs’ Professional Knowledge of Early Literacy Instruction .......................... 108
ECEs’ Self-Efficacy for Teaching Early Literacy .............................................. 110
Limitations of Study 1 .......................................................................................... 113
Significance and Educational Implications ....................................................... 114
Conclusion ........................................................................................................... 116

CHAPTER 4–Study 2: Improving ECEs’ Early Literacy Knowledge and Self-
Efficacy for Teaching through a Targeted Professional Development Intervention
................................................................................................................................... 117
Literature Review ................................................................................................. 117
Improving Knowledge of Early Literacy ............................................................ 118
Improving Knowledge of Phonemic Awareness ............................................ 118
Improving Knowledge of Oral Language and Vocabulary Development .......... 121
Creating Meaningful Change Through Professional Development ............... 123
Strategies for Improving Knowledge – General Principles of Adult Learning ........ 127
Active Learning .................................................................................................... 128
Content Focus .................................................................................................... 128
Coherence ........................................................................................................... 129
Duration ............................................................................................................. 130
Collective Participation ...................................................................................... 130
Study Purpose and Research Questions ............................................................. 132
Quantitative Research Questions ....................................................................... 133
Qualitative Research Questions ......................................................................... 135
Methods .............................................................................................................. 135
Research Design ................................................................................................. 135
List of Tables

Table 2.0 Demographic characteristics of pre-service and in-service participants ..........13
Table 2.1 Quantitative measures used in both study 1 and study 2 ........................................15
Table 3.0 Components of effective early literacy instruction .................................................26
Table 3.1 Quantitative measures in study 1 ...........................................................................43
Table 3.2 Qualitative measures in study 1 ...........................................................................47
Table 3.3 Internal consistency reliability of scales .................................................................48
Table 3.4 Number of hours pre-service and in-service ECEs completed in literacy-focused courses ..................................................................................................................50
Table 3.5 Number of required literacy-focused courses that pre-service and in-service ECEs completed ..................................................................................................................51
Table 3.6 Average (M) number of hours pre-service and in-service ECEs completed in practicum ..................................................................................................................................52
Table 3.7 Number of years of ECE-related work experience of in-service ECEs .............53
Table 3.8 Percentage of in-service ECEs employed in ECE-related careers ..................53
Table 3.9 Percentages of correct answers on the Linguistic Knowledge Survey ............56
Table 3.10 95% Confidence intervals of pairwise differences in mean linguistic knowledge scores ..........................................................................................................................59
Table 3.11 Percentages of correct answers on the Early Literacy Assessment - Phonemic Awareness ..............................................................................................................................60
Table 3.12 Percentages of correct answers on the Early Literacy Assessment - Oral Language ........................................................................................................................................62
Table 3.13 Correlations among the knowledge measures .....................................................64
Table 3.14 Percentages of correct answers on the Linguistic Knowledge Survey for pre-service and in-service ECEs ........................................................................................................66
Table 3.15 Means and standard deviations for Self-Efficacy for Phonemic Awareness Instruction Scale items ..............................................................................................................71
Table 3.16 Means and standard deviations for Self-Efficacy for Oral Language Instruction Scale items .......................................................... 72

Table 3.17 Means and standard deviations for Self-Efficacy for Writing Instruction Scale items ........................................................................................................ 73

Table 3.18 Means and standard deviations for Self-Efficacy for Reading Instruction Scale items ........................................................................................................ 74

Table 3.19 Correlations among the four self-efficacy scales ........................................ 75

Table 3.20 Exploration of ECEs’ early literacy experiences........................................ 106

Table 3.21 Exploration of ECEs’ professional knowledge of early literacy instruction .......................................................... 109

Table 3.22 Exploration of ECEs’ self-efficacy for early literacy instruction............. 111

Table 4.0 Quantitative and qualitative assessments conducted at each time point ...... 138

Table 4.1 Quantitative measures in study 2.............................................................. 144

Table 4.2 Qualitative Measures in study 2 ................................................................ 145

Table 4.3 Results of pairwise comparisons for scores on the Early Literacy Assessment – Phonemic Awareness ............................................................................ 151

Table 4.4 Results of pairwise comparisons for scores on the Early Literacy Assessment – Oral Language ...................................................................................... 154

Table 4.5 Results of pairwise comparisons for scores on the Self-Efficacy for Early Literacy Instruction Scale – Phonemic Awareness .............................................. 166

Table 4.6 Results of pairwise comparisons for scores on the Self-Efficacy for Early Literacy Instruction Scale – Oral Language .............................................................................. 169

Table 4.7 Correlations among phonemic awareness (PA) and oral language (OL) self-efficacy and knowledge gain scores ............................................................... 178

Table 4.8 ECEs’ gains in early literacy knowledge following intervention................. 217

Table 4.9 ECEs’ gains in self-efficacy for early literacy instruction following intervention .................................................................................................................. 220

Table 4.10 Examining the relationship between knowledge and self-efficacy .......... 222
Table 4.11 ECEs’ retention of knowledge and self-efficacy gains at follow-up..........224
List of Figures

Figure 2.0 Concurrent Triangulation Model .................................................................11

Figure 3.0 Overview of qualitative results for study 1 ..................................................77

Figure 4.0 Early Literacy Professional Development Intervention timeline ....................137

Figure 4.1 Differences in phonemic awareness knowledge scores .............................152

Figure 4.2 Differences in pre- and post-intervention phonemic awareness knowledge scores following the phonemic awareness workshop ........................................153

Figure 4.3 Differences in oral language knowledge scores .......................................154

Figure 4.4 Differences in pre- and post-intervention oral language knowledge - scores following the oral language workshop .........................................................156

Figure 4.5 Differences in self-efficacy for phonemic awareness instruction scores .......166

Figure 4.6 Differences in pre- and post-intervention self-efficacy for phonemic awareness instruction scores following the phonemic awareness workshop ....................168

Figure 4.7 Differences in self-efficacy for oral language instruction scores ...............169

Figure 4.8 Differences in pre- and post-intervention self-efficacy for oral language instruction scores following the oral language workshop .........................171

Figure 4.9 Differences in self-efficacy for phonemic awareness instruction scores at post-test and one month following the phonemic awareness workshop ......................182

Figure 4.10 Differences in self-efficacy for oral language instruction scores at post-test and one month following the oral language workshop ........................................183

Figure 4.11 Overview of qualitative results .................................................................186
List of Appendices

Appendix A – Participant Recruitment Emails .................................................................241
Appendix B – Participant Recruitment Posters .................................................................243
Appendix C – Information Letters and Consent Forms ......................................................245
Appendix D – Lists of Participant Responses by Participant Number, Participant Group and Qualitative Theme ..............................................................................................................251
Appendix E - Linguistic Knowledge and Experiences Survey ...........................................263
Appendix F – Linguistic Knowledge Assessment ...............................................................267
Appendix G – Early Literacy Assessment ...........................................................................269
Appendix H - Self-Efficacy for Early Literacy Instruction Scale .......................................275
Appendix I – Knowledge and Self-Efficacy Self-Reflection .............................................279
Appendix J – Correlation Analysis ...................................................................................282
Appendix K – Recruitment Email/Telephone Script – Interview Candidates .................283
Appendix L – Phonemic Awareness Workshop Curriculum ..............................................284
Appendix M – Oral Language Workshop Curriculum ......................................................336
Appendix N – Early Literacy Workshop Reflection Questionnaire ..................................396
Appendix O – Early Literacy Perceptions Interview Protocol .........................................399
CHAPTER 1
General Introduction

This thesis presents two studies. The first explored the range of knowledge and understanding that pre-service and in-service Early Childhood Educators (ECEs) possess in key areas of early literacy development and instruction. Specifically, the study sought to assess pre-service and in-service ECEs’ detailed knowledge of specific components of early literacy instruction and to investigate their self-efficacy in their ability to teach foundational literacy skills. The second study explored the influence of targeted professional development on improving early literacy knowledge and self-efficacy for instruction. Specifically, this study examined the impact of intensive one-day professional development interventions on early literacy-related knowledge and self-efficacy for pre-service and in-service ECEs. Below is a brief introduction to the studies.

Introduction to the Studies

Young children’s language and literacy skills form the foundation for all other academic learning. Literacy development begins early in life, before formal schooling, and accelerates as young children enter structured learning settings. The foundational literacy skills developed in early childhood are strongly correlated with a child’s future reading success (Blachman, 2000; Crampton & Hall, 2017; Crim et al., 2008). There is a growing body of research identifying the risks associated with delayed development of early literacy skills and highlighting the importance of high quality early learning environments for teaching foundational literacy skills (Crampton & Hall, 2017). Research shows that those children who have difficulty developing certain early literacy skills, such as phonological awareness and other oral language competencies, may be at risk for reading difficulties or reading failure (Burgess, 1999). Fortunately, for children
lacking these abilities, targeted and explicit skill instruction has proven to be effective in improving the development of early reading and spelling skills (Ball & Blachman, 1991). Furthermore, research examining young children at an increased risk of reading failure and low academic self-concept, highlight the role of high quality preschool programs in providing opportunities for skill and self-concept building (Crampton & Hall, 2017). Thus, literacy development can and should be taught and supported within the context of early learning environments.

In the case of childcare programs, preschool programs and many public and privately funded kindergarten classrooms, ECEs are responsible for teaching and supporting children as they are developing beginning skills in reading and writing, and yet little is known about how effective they are in doing so. Consequently, it is important to assess ECEs’ understanding of basic literacy development. Particularly so, since they work with our youngest learners and, given the model of kindergarten in Ontario, they have a prominent role in Ontario's kindergarten classrooms. In view of the critical role that ECEs play in terms of educating young learners, the main objectives of this research were to determine how well they are prepared to teach early literacy skills in terms of their knowledge and self-efficacy, and to attempt to raise the level of their knowledge and self-efficacy through a literacy intervention.

Much of the current research on teacher preparation, instructional practices and self-efficacy for instruction focuses on elementary schoolteachers (Cunningham, Perry, Stanovich, & Stanovich, 2004; Mather, Bos, & Babur, 2001; Moats & Foorman, 2003; Taschannen-Moran & Johnson, 2011), with little attention being directed to ECEs, particularly in the area of early literacy knowledge and instructional practices (Alghazo &
Hilawani, 2010; Crim et al., 2008; Hammond, 2015). Several researchers have identified gaps in elementary schoolteachers’ knowledge related to early literacy development and instruction and have discussed the need for additional training opportunities to target these gaps and provide further clarification of challenging instructional concepts (Cunningham et al., 2004; Mather et al., 2001; Moats & Foreman, 2003). Given that there is limited empirical literature with respect to this important topic, especially as it applies to ECEs (Crim et al., 2008; Hammond, 2015; Schachter, Spear, Piasta, Justice, & Logan, 2016), there is a clear need for further study in this area.

The limited research literature addressing ECEs’ understanding of foundational components of literacy education, as well as the lack of information about the impact of professional development interventions on ECEs’ knowledge and practice in early literacy education are concerning because of the important role that educators’ knowledge has on their classroom practice (Blachman, 2000; Crim et al., 2008). Thus, an additional purpose of this thesis was to expand the current literature by exploring how knowledge and self-efficacy in the area of early literacy foundations may impact ECEs’ practice, how relevant professional experience may impact their practice, and also how knowledge, professional experience and self-efficacy are related.

Study 1 involved 54 ECEs who were enrolled in one of two Early Childhood Studies programs at a university in the Greater Toronto Area. Twenty-nine participants were pre-service ECEs who were enrolled in the final year of their full-time university program. Twenty-five ECEs were in-service ECEs, who were full-time professionals in early childhood-related careers, enrolled in a part-time university program to upgrade their ECE diploma to a 4-year bachelors degree. Participants completed a comprehensive
survey examining ECEs’ early literacy-related experiences including assessments of their literacy-related training and practicum experiences as well as assessments of their professional experiences. The study examined participants’ general linguistic knowledge as well as specific knowledge of key areas foundational to literacy development. The study also examined participants’ self-efficacy for early literacy instruction. Through the implementation of a mixed-methods approach, study 1 aimed to generate a more robust analysis of the trends and details of the early literacy instructional profiles of ECEs than can be provided by quantitative or qualitative studies alone. Analyses of survey data about early literacy experiences used both quantitative and qualitative methods. In addition, both quantitative and qualitative methods assessed ECEs’ knowledge and self-efficacy.

Study 1 identified significant gaps in ECEs’ early literacy knowledge. It also showed differences in the experiences and knowledge of participants, based on whether they were pre-service or in-service ECEs. Using qualitative methods including self-reflection questionnaires, study 1 followed a grounded theory approach to gain an in-depth understanding of participants’ perceptions about their knowledge and self-efficacy in phonemic awareness and oral language instruction. Three phases of coding—open coding, axial coding and selective coding—led to the emergence of 3 themes: (1) sources of knowledge, (2) ECEs’ knowledge and skills, and (3) feelings of self-efficacy to teach early literacy. Overall the findings of study 1 showed that despite their varied early literacy-related experiences and training, both pre-service and in-service ECEs lacked adequate knowledge and self-efficacy in phonemic awareness and oral language instruction, two essential components of early literacy education.
Following from study 1, study 2 examined the impact of targeted professional development workshops designed to improve key areas of foundational literacy knowledge. Since the findings of study 1 showed that participants lacked adequate knowledge and self-efficacy in the areas of phonemic and oral language development, study 2 implemented targeted, intensive professional development to determine whether significant gains in knowledge and self-efficacy could be attained in these areas.

While research examining the need for educators of young children (especially primary schoolteachers) to enhance their knowledge of phonemic awareness and oral language instruction is extensive (Cheesman, McGuire, Shankweiler & Coyne, 2009; Fielding-Barnsley, 2010; Hammond, 2015; Tetley & Jones, 2014), research examining the learning processes and experiences of ECEs as they engage in targeted professional development related to improving that knowledge, is limited (Ely, Pullen, Kennedy, Hirsch & Williams, 2014; Visay & Gischlar, 2013). Thus, study 2 sought to expand the current literature by exploring how a relevant professional development intervention may impact ECEs’ knowledge, self-efficacy and future educational practices, and also to explore the relationship between knowledge and self-efficacy.

Study 2 utilized quantitative methods to analyze potential gains in knowledge and self-efficacy resulting from the professional development intervention and also to explore the relationship between knowledge and self-efficacy. Study 2 found that the professional development workshops were effective in improving both knowledge and self-efficacy. The study also utilized qualitative analysis of self-reflection questionnaires, and interview data with a subsection of participants. Specifically, study 2 followed a grounded theory approach to gain an in-depth understanding of 8 participants’ learning experiences.
following participation in the professional development workshops. Three phases of coding—open coding, axial coding and selective coding—led to the emergence of 4 themes: (1) knowledge building and reinforcement, (2) applications of theory to practice, (3) perceptions of professional development, and (4) workshop perceptions and evaluation.

As was the case in study 1, study 2 employed a mixed-methods approach. By means of a quantitative methodology, study 2 examined whether the early literacy professional development intervention helped enhance related knowledge and self-efficacy. Through a qualitative methodology, the study aimed to deepen understanding and explore the perceptions of ECEs following the professional development interventions. Overall the mixed-methods approach allowed for a comprehensive analysis of the scope of ECEs’ knowledge, skills and self-efficacy in relation to participating in the professional development intervention.

**Thesis Overview**

The remainder of this thesis is divided into four chapters. Chapter 2 provides the general methodology relevant to both study 1 and study 2. There are similarities between the mixed-methods approach, sample and sampling strategy, participant recruitment process, data collection, data analysis and validity procedures, and ethical considerations for study 1 and study 2; and therefore, to minimize redundancy and duplication of discussions, chapter 2 presents the general methodology for this thesis.

Chapter 3 presents study 1, a mixed-methods study that examines the early literacy knowledge, experiences, perceptions and self-efficacy of pre-service and in-
service ECEs. First, the chapter presents the relevant literature that provides a framework for the study’s research questions. Then it continues with a description of the study’s purpose and research questions as well as the relevant methods. Following that are the results and discussion, presented in two sections: quantitative results and discussion and qualitative results and discussion. Chapter 3 concludes with a general discussion, including study 1 limitations, significance and implications, and future directions.

Building on the findings of study 1, chapter 4 presents study 2, a mixed-methods study that examines the impact of a targeted professional development intervention on ECEs’ knowledge and self-efficacy. First, chapter 4 presents the relevant literature providing a foundation for the study’s research questions. Chapter 4 continues with a description of the study’s purpose, research questions and the relevant methods. Following that are the results and discussion, presented in two sections: quantitative results and discussion and qualitative results and discussion. Chapter 4 concludes with a general discussion, including study 2 limitations, significance and implications, and future directions.

Chapter 5, the final chapter of the thesis, presents some general conclusions based on the two studies. The final chapter also reflects on the research and on practical implications of the research.
CHAPTER 2
General Methodology

This chapter outlines the general methodology for study 1 and study 2. This general methodology chapter describes shared components of the two studies, such as the mixed-methods approach, sample and sampling strategy, participant recruitment process, data collection procedures, data analysis and validity procedures, and ethical considerations. Chapter 3 and chapter 4 detail the methods specific to study 1 and study 2, respectively, including the research design, the use of particular measures and data analysis procedures. This chapter begins with an overview of the mixed-methods approach adopted for this research. Then, the chapter describes the participant sample and sampling procedures, along with the participant recruitment process. The next section presents a description of the data collection procedures including a brief description of shared measures as well as data analysis and validity procedures. This chapter ends with discussion of the ethical considerations of the research.

Mixed-Methods Research Approach

This thesis employs a mixed-methods design, where mixed methods, is defined as “research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both quantitative and qualitative approaches” (Tashakkori & Creswell, 2007, p. 4). Tashakkori and Teddlie (2003) suggest that a mixed-methods approach exists when multiple stages of the research process include both quantitative and qualitative methodologies. Given that, in both study 1 and study 2 of this thesis, research questions, data collection, and analysis methods are both quantitative and
qualitative in nature, a mixed-methods approach is adopted.

Berg and Lune (2012) argue that each unique research methodology reveals a slightly distinct facet of the same “symbolic reality” (p. 6). These distinct facets are described as “site lines”. According to this argument, a research approach that combines multiple methods (or lines of site) provides the potential for researchers to obtain a more substantive picture of reality (Berg & Lune, 2012). This process is also known as triangulation.

Triangulation, or obtaining convergence across data, may look different depending on the way in which quantitative and qualitative methods are mixed (Creswell, 2009). For example, mixed-methods procedures may be sequential, where findings using one method are expanded on using another method. They can also be concurrent, where both quantitative and qualitative data are gathered at the same time and interpreted together. Finally, procedures may be transformative in nature, where an overarching theoretical lens dictates the way in which both methods are mixed (Creswell, 2009).

In both study 1 and study 2, a concurrent triangulation design (Tashakkori & Teddlie, 2003), as identified by the notation QUAN + QUAL (Creswell, 2009), was selected as the most appropriate choice to explore the research questions (see Figure 2.0). Mixed-methods approaches provide researchers with the opportunity to generalize research findings and understand them in context (Johnson & Onwuegbuzie, Turner, 2004; Teddlie & Tashakkori, 2009). Given that study 1 included assessments involving closed- and open-ended questions asking participants to reflect on their knowledge, perceptions and experiences, and that the findings needed to be understood in the context of this study and beyond, the research called for quantitative and qualitative analyses.
For study 2 there were additional reasons making a mixed-methods design the preferred choice. First, quantitative methods were particularly useful in measuring participant knowledge before and after professional development workshops. Workshop participants were learning literacy terminology, concepts, and strategies that could be measured effectively using a pre-post, quasi-experimental research design. However, the questions around the impact of these professional development workshops could not be measured strictly in a quantitative manner; the context and activities that took place within the workshops, including the interactions, perceptions, and thoughts of the participants throughout, were relevant in developing a deeper understanding of the research questions. Thus, qualitative components of study 2, including the use of open-ended questionnaires and face-to-face interviews, added an essential dimension, allowing for a deeper understanding of the research questions (Johnson, Onwuegbuzie, & Turner, 2007). The quantitative data collected provide information regarding participants’ knowledge and skills in early literacy instruction based on measures including likert-scales and multiple-choice questionnaires. The qualitative data provide more in-depth information about early literacy experiences, perceptions and the impact of the workshops. Both quantitative and qualitative analyses produced essential components of the research findings. These findings will be discussed in the results and discussion sections of this dissertation.

The goal of pragmatic research is to understand the problem at hand, and to use any approaches necessary to accomplish this task (Creswell, 2009). Given the nature and goals of the present research, the mixed-methods model summarized in Figure 2.0 offered the most appropriate choice.
Sample and Sampling Procedure

Fifty-four adults consented to participate in this research. All 54 participants completed study 1. All 54 participants also completed one of two professional
development workshops offered in the first stage of the intervention in study 2, and 31 of
those participants returned for a second round of workshops one-month later. A
subsample of 8 participants, who participated in both workshops, completed face-to-face
interviews. All participants were female (n=54). Participants’ ages were classified
according to specific categories of age range, which are presented in Table 2.0. All
participants (n=54) spoke English, with 44% of participants (n=24) speaking English
only and 56% of participants (n=30) speaking English and at least one other language.
Demographic information about race and ethnicity was not collected because such
information was not seen as relevant to the research questions.

Participants were classified into two groups based on whether they were pre-
service or in-service ECEs. Pre-service ECEs had no prior ECE training and, at the time
of data collection, were not employed on a full-time basis, nor had any full-time work
experience in the field of early childhood education. Fifty-four percent of participants
(n=29) were classified as pre-service ECEs. In-service ECEs had previously obtained a
college diploma in early childhood education and were registered with the College of
Early Childhood Educators. They were also, at the time of data collection, employed on a
full-time basis in the field of early childhood education. Forty-six percent of participants
(n=25) were classified as in-service ECEs. The demographic characteristics of both
groups can be found in Table 2.0.

**Pre-service ECEs.** Of the pre-service ECEs, 100% of participants (n=29) fell into
the 18-24-age range category. All pre-service participants (n=29) spoke English, where
38% of pre-service participants (n=11) spoke English only and 62% of pre-service
participants (n=18) spoke English and at least one other language. All pre-service
participants were, at the time of data collection, undertaking full-time undergraduate studies in early childhood education and none had previously experienced training in early childhood education nor obtained an ECE diploma. At the time of data collection, all pre-service participants had completed all required program courses related to early literacy development and instruction.

Table 2.0

*Demographic characteristics of pre-service and in-service participants*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Pre-service ECEs ((n=29))</th>
<th>In-service ECEs ((n=25))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>29</td>
<td>25</td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-24</td>
<td>29</td>
<td>10</td>
</tr>
<tr>
<td>25-29</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>30-34</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>35-39</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>40-44</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>45-50</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>50+</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

*In-service ECEs.* The distribution of participants’ ages is presented in Table 2.0. All in-service participants \((n=25)\) spoke English, with 52% of in-service participants \((n=13)\) speaking English only and 48% of in-service participants \((n=12)\) speaking English
and at least one other language. All in-service participants had obtained an ECE diploma from a college in Ontario, Canada. All in-service participants had completed all courses required of their college programs related to early literacy development and instruction.

**Participant Recruitment**

A pool of 418 undergraduate students was invited to participate in this research. Of the 418 undergraduate students invited, 306 were full-time, pre-service candidates, and the remaining 112 were in-service candidates who were enrolled in a “direct entry” university program whereby they were upgrading their ECE diploma in order to obtain a bachelors degree through part-time studies. These students were all employed on a full-time basis in the field of early childhood education. All participants were invited to participate in this research via an email communication, advertising the project and professional development workshops (see Appendix A). Additionally, flyers describing the research were posted on campus bulletin boards (see Appendix B).

Initial confirmation of interest in participating in the research occurred at the time of each participant’s responding to the email communication or contacting the researcher directly to enroll. Of the 418 candidates invited to participate, 67 candidates communicated their interest. Interested participants were invited to attend one of two randomly assigned workshops, at which they were presented with a detailed information letter and consent form (see Appendix C) stating the particulars of the project and outlining the possible risks and benefits. Once written consent was obtained, participants were asked to take part in study 1, which included measures of literacy perceptions and experiences, knowledge and self-efficacy. A knowledge measure and the measure of self-
efficacy were also used as baseline assessments for study 2. Of the 67 candidates who expressed interest in participating, 54 actually attended the workshop they were invited to, and consented to participate in the research.

Data Collection

Both studies involved participants completing assessments and questionnaires exclusive to the research questions of the specific study. However, for both study 1 and study 2, participants completed the same quantitative measures of phonemic awareness and oral language knowledge and self-efficacy. A brief description of these assessments is found in Table 2.1. A detailed discussion of these measures as well as the study-specific data collection procedures and measures, including qualitative measures and data collection procedures, will be presented in subsequent chapters. The following measures were selected, adapted and developed to explore and answer the specific research questions of studies 1 and 2 pertaining to ECEs’ knowledge and self-efficacy for phonemic awareness and oral language instruction:

Table 2.1
Quantitative measures used in both study 1 and study 2

<table>
<thead>
<tr>
<th>Measures of Early Literacy Knowledge</th>
<th>Early Literacy Assessment - adapted from Cheesman et al.’s (2009) Phonemic Awareness Survey, and expanded to include items specific to oral language development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measures of Self-Efficacy</td>
<td>Self-Efficacy for Early Literacy Instruction Scale - adapted from Tschannen-Moran and Johnson’s, (2010) scale, to include items specific to early literacy instruction</td>
</tr>
</tbody>
</table>
Data Analysis and Validity Procedures

A mixed-methods concurrent triangulation research design involves collecting both quantitative and qualitative data in tandem, and analyzing them concurrently so that each is given equal priority in the research. Both study 1 and study 2 involved analyzing quantitative data statistically and analyzing qualitative data through content analysis.

Quantitative data were analyzed using a variety of statistical tests, such as independent and paired-samples $t$-tests, mixed-model analyses of variance (ANOVAs), Pearson $r$ correlations and Phi correlations. Where independent and paired-samples $t$-tests were conducted, effect sizes were estimated using Cohen’s $d$, which indicates the standardized difference between two means. Cohen (1988) proposed interpretative guidelines for $d$. A $d$ value of 0.20 is considered a small effect size, a value of 0.50 is a medium effect size, and 0.80 is considered a large effect size. Where ANOVAs were conducted, effect size was reported as partial $\eta^2$. Values less than .06 were considered small effect sizes, values of .06 to .14 medium effect sizes, and values greater than .14 large effect sizes (Green & Salkind, 2011). Quantitative methodologies (ANOVAs and post-hoc comparisons) were also used to examine group differences among the pre-service and in-service participants. Additionally, trend and pattern analyses were performed to investigate the relationship between gains in early literacy knowledge and gains in self-efficacy.

Qualitative methodologies were employed to develop a deeper understanding of the nature and complexity of the factors that influence ECEs’ knowledge and self-efficacy in their professional training and practice and as they undertake a professional development intervention. Although the qualitative components of this thesis were not
common to both study 1 and study 2, the qualitative analysis procedures of each study were the same. Open-ended questions and interview responses were coded inductively using the strategies from grounded theory methodology (Strauss & Corbin, 1998), including: (1) Open coding (i.e., breaking down data into concepts which are grouped and labeled to form categories); (2) Axial coding (i.e., putting data back together in new ways after open coding by making connections between categories); and (3) Selective coding (i.e., selecting a story line or core category, and relating all major categories both to it and to each other). There are a number of conventions for representing prevalence in qualitative analysis (Boyatzis, 1998). In both study 1 and study 2, “the majority of participants”, “many participants” and “a few participants” were the descriptors used to represent the prevalence of themes as they emerged in the data. In reporting the results, a few quotations were selected from the participants rather than presenting all of the extracts related to the theme, consistent with the guidelines of the grounded theory approach (Strauss & Corbin, 1998). Lists of participant responses categorized by participant number, participant group and qualitative theme are found in Appendix D.

Throughout the data analysis process, strategies were employed to ensure the reliability and validity of the research findings. To increase the likelihood of credible findings, Lincoln and Guba (1985) suggest the use of triangulation and member checking. In this mixed-methods research, different sources of information (i.e., questionnaires and interviews) were crosschecked to validate the results of the quantitative data with the results from the qualitative data.

Integration of Quantitative and Qualitative Data. Quantitative and qualitative findings were integrated to bring richer meaning to the data and to reveal areas of
convergence, elaboration, and/or discrepancy. Specifically, study 1 sought to better understand the nature and complexity of ECEs’ early literacy experiences, perceptions, knowledge and self-efficacy. Study 2 sought to understand the factors that influence ECEs as they undertake a professional development intervention and the changes in early literacy knowledge and self-efficacy for early literacy instruction that result from participating in targeted professional development.

The integration of quantitative and qualitative data can significantly enhance the value of mixed-methods research (Bryman, 2006; Creswell & Plano Clark, 2011). Many benefits are seen from integrating the two forms of data. For example, the validity of interpretations of quantitative findings can be assessed using qualitative data and, conversely, the results of qualitative analyses can be interpreted and corroborated using quantitative data (Fetters, Curry, & Creswell, 2013).

There are several specific approaches established in order to integrate quantitative and qualitative research procedures and data (O'Cathain, Murphy, & Nicholl, 2010; Creswell & Plano Clark, 2011). In both study 1 and study 2, the quantitative data and qualitative data were merged using a data comparison approach known as joint display (Fetters et al., 2013). According to Fetters et al. (2013):

When integrating through joint displays, researchers integrate the data by bringing the data together through a visual means to draw out new insights beyond the information gained from the separate quantitative and qualitative results. This can occur through organizing related data in a figure, table, matrix, or graph. (p. 2143)
Role of the Researcher. As a methodological safeguard, engaging in self-reflection must be a foundational step in the data collection and analysis processes (Horsburgh, 2003). It is critical that one recognize the impact that a researcher’s expectations and preconceived notions can have on the meaning and context of a study (Horsburgh, 2003). As such, a process of self-reflection was undertaken by the researcher in order to advance the rigor of this research. The following assumptions were considered:

- That participants are truthful in their responses
- That participants are seen as equal in value to the researcher
- That examining the knowledge and self-efficacy skills of pre-service and in-service ECEs is important and necessary to ensure that they are adequately trained to support young learners in their literacy development (study 1).
- That ECEs will participate in professional development opportunities if they believe that it will improve their practice as educators (study 2).

It is also important to note that the researcher had an existing relationship with the university from which the pool of participants was selected, but had no prior relationship with any participant. Therefore, it can be concluded that a conflict of interest did not exist and thus this relationship did not influence the ECEs’ decision to participate.

As part of the self-reflection process, reasons for conducting the present investigation have also been considered:

Over the past several years, I have become increasingly aware of what I perceive to be “gaps” in the knowledge base of ECEs, particularly in the area of early literacy. As
I observe pre-service and in-service ECEs working directly with young children, I have formed the impression that many educators do not possess the necessary knowledge or skills to promote and support young children in their developing language and literacy skills. The implications of inadequately trained educators are potentially devastating. Yet, in my experience, educators are willing to engage in professional development opportunities to improve their skills and knowledge base. Therefore, I conducted the present research to empirically assess whether these apparent “gaps” in knowledge truly do exist, and to give educators the opportunity to close these “gaps” through professional development. It is my hope that the present investigation will lead to improvements in the knowledge, skills and self-efficacy of early childhood educators.

**Ethical Considerations**

Before the commencement of this research, ethical approval was obtained from the University of Toronto and from Ryerson University, the institution from which participants were selected. Informed consent was obtained from each participant after they were provided with a written information letter and consent form, stating the particulars of the project and outlining the possible risks and benefits. All participants were informed that their participation was voluntary and that they could withdraw from the study at any time. Copies of the informed consent letters are included in Appendix C.
CHAPTER 3
Study 1: Assessing ECEs’ Foundational Literacy Knowledge and Self-efficacy for Early Literacy Instruction

Chapter 3 describes the first mixed-methods study, presented in seven major sections. First, the literature review discusses research foundations for early literacy instruction, professional knowledge in early literacy instruction and self-efficacy for teaching early literacy. Next, this chapter presents the study purpose and research questions. The third section of this chapter is the methods section, which includes a discussion of the research design and the quantitative and qualitative measures used. This section concludes with a description of the data analysis procedures. The fourth major section of this chapter is the results and discussion as they pertain to the quantitative research data. The fifth major section presents the qualitative results and discussion. A general discussion including the limitations, significance and research implications of study 1 follows the quantitative and qualitative results and discussion sections. The final section of the chapter is the conclusion.

Literature Review

This literature review is presented in three major sections. The first section provides a framework for understanding what ECEs are expected to know about early literacy instruction. This section gives an overview of the roles and responsibilities of ECEs. It also provides a context for understanding what effective early literacy instruction entails, and what the literature says about the responsibility of ECEs to possess this knowledge. Section two addresses the main research questions of study 1 concerning ECEs’ early literacy knowledge. It discusses the literature on what educators
of young children know about key areas of foundational literacy and also presents the literature on differences between pre-service and in-service ECEs in terms of their understanding of key foundational literacy concepts. This third section provides a discussion of the literature related to ECEs’ self-efficacy for early literacy instruction.

**Research Foundations for Early Literacy Instruction**

The following section provides a context for understanding the roles and responsibilities of ECEs in Ontario. As well, an overview of the literature on evidence-based practice in early literacy instruction lays the foundation for what educators of young children should know when teaching and supporting young children in their developing literacy skills.

**The Role of Early Childhood Educators**

Definitions and professional roles of ECEs vary depending on geographical context. Because the current study is situated in the context of Ontario, Canada, the focus here was on literature relevant to definitions and professional roles of ECEs in Ontario. According to the Early Childhood Educators Act (2007), the practice of early childhood education is defined as: “the planning and delivery of inclusive play-based learning and care programs for children in order to promote the well-being and holistic development of children” (Part 1, subsection 2). In accordance with the Early Childhood Education Act, 2007, the College of Early Childhood Educators (CECE) regulates the practice of early childhood education in Ontario. The CECE has articulated very clear principles and standards of professional practice for ECEs, including specific requirements that must be met in order for an ECE to become a registered member with the College. The CECE
(2017) also provides a detailed description of the professional roles of ECEs, which include the following:

- Assessing children’s developmental needs and stages in all areas of development
- Designing curriculum to address children’s developmental needs and interests
- Planning play-based learning environments that help children make developmental progress
- Maintaining healthy social and emotional learning contexts for children; and
- Reporting to parents and supervisors on children’s developmental progress

Of noteworthy importance is that both the CECE and the Early Childhood Education Act, 2007 emphasize that planning and implementing a developmentally appropriate curriculum is a key responsibility of ECEs. As such, it is essential to identify whether ECEs are prepared to accomplish this task.

Throughout this study ECEs are identified and classified according to whether they have completed their ECE training (at accredited universities and colleges) and have become registered members of the CECE. In this study the term *pre-service* refers to ECE candidates who are currently undergoing their ECE training and have not yet completed the requisite qualifications needed to obtain membership with the CECE. The term *in-service* is used to refer to ECEs who have completed their ECE training and are currently active and registered members of the CECE of Ontario.

Early childhood education programs in Ontario must provide training that ensures that their graduates possess the requisite knowledge and skills needed to perform the duties and professional roles of ECEs, as stipulated by the CECE and the Early Childhood Education Act, 2007. That being said, it is important to note that ECE
programs and the content delivered by them may vary across Canada, and the roles of ECEs can differ somewhat across provinces and territories. For example, in Ontario, ECEs can work in childcare centres and family support programs, they teach in preschool programs and they can also co-teach with qualified teachers in full-day kindergarten classrooms that have more than 15 students. By contrast, in British Columbia, there are 4 categories of certification for ECEs allowing them to teach in various early education, care, and special education settings. In the Northwest Territories, an ECE with a two-year diploma who completes 25 hours of teacher training can independently teach in a kindergarten classroom (Childcare Resource and Research Unit, 2014). Despite such differences in training and certification, ECEs across Canada have significant responsibility in teaching young children through all of their roles. Thus, the roles and responsibilities of ECEs across Canada make them a fundamental component of the education system for young children. Thus, it is imperative that ECEs be knowledgeable in early literacy development and instruction to meet children’s needs in the various settings and roles in which they may be employed.

As in Canada, the roles and responsibilities of ECEs in the United States also vary somewhat from region to region, but despite these variations, ECEs share similar roles and responsibilities in supporting young learners in early learning contexts such as preschool, pre-kindergarten, kindergarten, compensatory education or early intervention programs, and childcare programs, both privately and publicly funded (Kamerman & Gatenio-Gabel, 2007). Likewise, in Australia, ECEs provide both leadership and supportive roles in delivering early childhood education programs through a range of settings, including childcare centres and preschools (also referred to as kindergartens in
some parts of Australia) in the years before compulsory schooling begins (Australian Government, 2018).

ECEs in Ontario and elsewhere play a prominent role in supporting the development of young learners in multiple settings. In the context of Ontario, ECEs are expected to plan and implement a developmentally appropriate curriculum for young children. Thus, it is important to identify what is expected of ECEs in terms of supporting and instructing young children in key curriculum areas: in the case of this study, specifically in the area of early literacy. A discussion of what constitutes evidence-based practice in early literacy instruction follows.

*Effective Early Literacy Instruction*

The foundations of effective early literacy instruction are clear in the literature (Learning First Alliance, 2000; National Early Literacy Panel, 2008; National Reading Panel, 2000). Both the Learning First Alliance (LFA) and the National Reading Panel (NRP) describe what constitutes evidence-based, effective literacy instruction. This includes important skills and components of literacy that need to be taught, as well as effective ways to teach them. In addition, the National Early Literacy Panel (NELP) completed their own analysis and list six-precursor literacy skills predictive of future literacy outcomes. In these reports, phonological awareness (specifically phonemic awareness instruction) and phonics instruction are listed as key components of effective early literacy instruction (LFA, 2000; NELP, 2008; NRP, 2000). The NRP (2000) and LFA (2000) also list other components, including fluency, vocabulary instruction, comprehension strategies, spelling, assessment, motivation, and written expression as
important components of literacy instruction (see Table 3.0 for a full list and description of components). Below is a discussion of effective early literacy instruction, focusing on the two components that were established as essential foundational components in the current study: phonemic awareness and oral language development.

Table 3.0

<table>
<thead>
<tr>
<th>Literacy Component</th>
<th>Description and Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonemic Awareness</td>
<td>Explicit teaching of the smallest units of sound in spoken language, and the blending and segmenting of these sounds in the oral and written word</td>
</tr>
<tr>
<td>Phonics &amp; Alphabetic Knowledge</td>
<td>Systematic, sequential, and explicit instruction about the relationship between letters and sounds. In the early years, this includes the knowledge of letter names and the ability to name strings of letters automatically</td>
</tr>
<tr>
<td>Oral Language</td>
<td>Direct and indirect instruction that supports the production and comprehension of spoken language, including vocabulary and grammar</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>Direct and indirect instruction of word meanings through repeated exposure, descriptions before, during, and after reading, exposure in various contexts, and building connections between words</td>
</tr>
<tr>
<td>Fluency</td>
<td>Reading with accuracy, speed, and appropriate expression through guided repeated oral reading</td>
</tr>
<tr>
<td>Text Comprehension</td>
<td>Constructing meaning of texts during and after reading through the use of explicitly taught reading comprehension strategies, including questioning, making connections, cooperative learning, and summarizing</td>
</tr>
<tr>
<td>Spelling</td>
<td>Explicit, sequential instruction in sound segmentation, letter-sound association, and spelling patterns that are used through transcription and meaningful writing exercises</td>
</tr>
<tr>
<td>Writing</td>
<td>Teaching and modelling of writing structures and processes, including the organization of ideas and writing conventions. In the early years, this includes writing individual letters and letters in one’s own name</td>
</tr>
<tr>
<td>Motivation for Literacy</td>
<td>Offering enriching language, print, and reading opportunities, connecting student interests to literacy</td>
</tr>
<tr>
<td>Assessment</td>
<td>Ongoing assessment of literacy development and the use of assessment data to inform instruction</td>
</tr>
</tbody>
</table>


**Phonemic Awareness Instruction.** Phonemic awareness, which is a component of phonological awareness, is particularly important in the early years. According to
multiple sources (NELP, 2008; NRP, 2000), phonemic awareness (PA), which is the awareness of the individual sounds in words, is a key predictor of reading success later on in a child’s literacy development. According to the NRP (2000) findings, PA skills are teachable, and training children to manipulate individual sounds in words leads to improvements in reading in children of different ages, grades, and developmental levels. Findings also suggest that PA instruction leads to improved spelling outcomes for most children. The evidence also showed that PA instruction using one or two different forms of PA training, in which small groups of children are taught to manipulate individual phonemes, was the most effective approach to teaching PA skills.

Findings from the NRP (2000) meta-analysis suggest that explicitly teaching PA is effective and contributes directly to improvement in children’s PA skills. While very young children may primarily be developing skills in phonological awareness (for example, rhyming and segmenting words into syllables), by senior kindergarten in Ontario schools, the expectation is that children will be developing skills in phonemic awareness (OME, 2016). Therefore teachers and ECEs must have a deep understanding of PA – what is it, why it is important and how to teach it, in order to teach it effectively. As indicated by the LFA (2000), educators themselves need to be aware of speech sounds in order to help students learn about them. Thus it is critical that professional development for educators includes PA training and deepens their understanding of language processes.

**Oral Language and Vocabulary Instruction.** Oral language is a broad term that encompasses all aspects of spoken language, which include the sounds, structures, meaning, and uses of language (NELP, 2008). Vocabulary development is a significant
component of oral language development, and much of the literature examining oral language development, tends to focus on vocabulary development (LFA, 2000; NRP, 2000). Evidence suggests that vocabulary instruction needs to be developmentally appropriate, and that both incidental instruction (e.g., learning word meanings in context) and explicit vocabulary instruction (e.g., teaching word meanings directly before reading a text) are needed. Indeed, in order for students to develop their understanding of words and make connections between word concepts, students need repeated and various exposure to words (LFA, 2000; NRP, 2000). Explicit vocabulary instruction can include teaching words before, during, or after reading a text, task restructuring and repeated exposure to words, and word substitutions to learn more challenging words. The use of computer technology has also been found to support vocabulary development (NRP, 2000).

Interestingly, the NELP (2008) found that vocabulary instruction alone is only one piece of a greater need to support overall oral language development in the early years. The NELP (2008) suggests that reading comprehension and decoding skills are strongly related to the development of multiple oral language skills, including grammar, listening comprehension, and vocabulary in the early years. Nevertheless, vocabulary is an important foundation for the development of other language and early literacy skills (NELP, 2008).

**Instructional Expectations of Early Childhood Educators**

Given the importance of establishing a foundation for literacy in the early years, ECEs hold a significant responsibility in providing young children with the fundamental
concepts and skills that will support their future literacy learning. To do so ECEs themselves must be confident educators with sufficient knowledge and training in these areas. However, exactly what is expected of ECEs, in terms of their expertise and responsibilities in supporting and instructing young children in their early literacy development, must be examined.

In the context of Ontario, documents explicitly outlining expectations of ECEs in the field do not specifically relay the importance of ECEs’ having literacy knowledge. The Code of Ethics and Standards of Practice in Ontario, for example, sets out 6 standards of professional practice that are meant to promote excellence and consistency in the field (College of Early Childhood Educators, 2011). However, none of the standards, including Standard IV: Professional Knowledge and Competence, include an expectation for ECEs to have specific literacy knowledge. While knowledge of “pedagogy related to early learning, curriculum, [and] program planning…” (College of ECEs, 2011, p. 19) is broadly referred to, clearer language related to learning expectations, including expected learning in literacy, is lacking.

In the case of kindergarten in Ontario, the classroom teacher and ECE share a partnership in establishing the learning environment and in planning and implementing the early learning curriculum (Ontario Ministry of Education (OME), 2016). The Kindergarten Program curriculum (OME, 2016) does not specifically differentiate the roles of the classroom teacher but rather describes the “educator team” and uses the term, “educator” to refer to both the ECE and teacher (OME, 2016). The curriculum (OME, 2016) for schoolteachers clearly identifies key expectations for educators in terms of establishing a learning environment and planning and implementing curriculum that will
foster early literacy development. Drawing specific attention to expectations related to phonological and phonemic awareness, it is expected that as children progress through kindergarten, they develop skills in exploring sound, rhythm, and language structures, both with guidance and independently (OME, 2016, Expectation 1.1, p. 184). As well, children are expected to demonstrate phonemic awareness in their ability to identify and manipulate the sounds within words (OME, 2016, Expectation 1.11, p. 193). In the area of oral language development and vocabulary, there are a number of expectations pertaining to using language and specialized vocabulary in a number of contexts (OME, 2016; 1.5, 1.6, 1.7, 1.9; pp. 183-193). Therefore, in the case of kindergarten in Ontario, there are clearly articulated expectations of educators to support developing early literacy skills, and, given that ECEs are an integral part of this educator team, it is essential that they possess the knowledge and skills necessary to support and instruct kindergarten children effectively in order to achieve these learning goals.

While there are inconsistencies in terms of explicit early literacy-related teaching expectations for ECEs articulated in the documents that govern their practice, there is consensus that ECEs play an important role in planning and implementing developmentally appropriate curriculum for young children, of which early literacy is a key component. The following section provides an overview of the literature related to what educators of young children know about supporting and instructing young children in early literacy, and identifies key gaps in this knowledge.

**Professional Knowledge in Early Literacy Instruction**

One of the major objectives of study 1 was to examine the quality of knowledge
that ECEs possess in key areas related to foundational literacy skills. What follows is a
discussion of literacy knowledge among pre-service and in-service educators of young
children, specifically pertaining to the areas that are central to this study: phonological
and phonemic awareness and oral language and vocabulary instruction.

**Literacy Knowledge Among Pre-Service Educators**

The relevant literature examining pre-service educators of young children and
their literacy knowledge and practices tends to combine the findings involving pre-
service ECEs with pre-service schoolteachers, despite the fact that their pre-service
education is in entirely separate programs. Where evidence does exist, however, there are
similar patterns related to these two distinct groups of early educators. Researchers have
worked with various pre-service educators of young children to understand potential gaps
in knowledge. Findings suggest that pre-service educators (both ECEs and
kindergarten/primary schoolteachers) need more training around key literacy concepts,
including phonemic awareness, to be more effective literacy teachers (Cheesman et al.,
the phonemic awareness knowledge of 223 first-year teachers who recently graduated
from teacher education programs. The results indicate that performance on items related
to phonemic awareness knowledge was weak; on average, participants scored 53% on 9
knowledge questions. While the sample represented special educators, ECEs, and
elementary teachers, early childhood results did not differ significantly from the full
sample, with a 56% average score. Questions related to the application of phonemic
awareness concepts were slightly higher; participants answered 63% of the 6 skill
questions correctly. These results differ from other studies which indicate that application of phonemic awareness yield lower scores than the knowledge questions (Fielding-Barnsley, 2010). In their study with 162 pre-service primary schoolteachers, Fielding-Barnsley found that 73% of participants could correctly define a phoneme. However, when asked to apply their knowledge of phonemes to the counting of sounds in words, just 22% answered correctly. Half of that sample was pre-service students enrolled in the early childhood program, and no significant difference was found between pre-service ECEs and schoolteachers.

Similar trends are found in the research looking explicitly at schoolteachers. Mather et al. (2001) studied the knowledge and perceptions of 293 pre-service teachers and 131 in-service teachers using a perception survey and a knowledge assessment. Results suggest that the pre-service kindergarten/primary educators were not sufficiently prepared to teach early reading skills. Specifically, their knowledge scores of early literacy constructs were low (50% accuracy for pre-service and 68% accuracy for in-service). Also, Stainthorp (2004) in their study of 38 pre-service primary teachers, found that the participants did not have sufficient phonological/phonemic awareness knowledge to teach young children phonemic awareness skills effectively.

Given the limited evidence directly addressing the early literacy knowledge of pre-service ECEs, one of the goals of this study is to provide a comprehensive examination of the theoretical and practical knowledge of pre-service ECEs in early literacy development and instruction.
Literacy Knowledge Among In-Service Educators

Few studies have focused explicitly on the literacy knowledge of in-service ECEs. Despite the lack of attention that has been given to documenting their knowledge, practicing ECEs are well placed to play an important role in establishing an early foundation for literacy development. Although ECE programs cover a broad range of content, some of which is related to early literacy and instruction, professionals in the field have been found to demonstrate deficiencies in certain areas of knowledge. Two recent studies of in-service ECEs’ knowledge of language and literacy have suggested that ECEs may have knowledge deficits in key areas of early literacy and language instruction that could impact their practice (Hammond, 2015; Schachter et al., 2016).

In Hammond’s study (2015), examining 30 experienced ECEs’ actual and perceived knowledge about teaching early reading, ECEs demonstrated significant deficits in their understanding of concepts related to phonological and phonemic awareness. The participants had between 6 to 35 years of teaching experience, with an average of 22 years of experience in early childhood settings. This study found that many ECEs lacked the knowledge to develop systematic and clear instruction in phonological awareness, despite their recognition of its importance in literacy development. While all participants responded that it is “very important” for ECE teachers to understand the literacy precursors for beginning reading, their actual knowledge was not consistent with their beliefs. When asked to differentiate between phonological and phonemic awareness, the average number of correct responses was below 50%. Similarly, when asked what “segmenting speech sounds in a word” referred to, only 43% of participants answered correctly. Thus, the study identified clear deficits in knowledge of phonological and
phonemic awareness, concepts that are foundational for teaching young children to read.

Schachter et al. (2016), in their study of 222 ECEs examining the relationships among knowledge, beliefs and practice in children’s language and literacy-learning, found that in-service ECEs scored an average of just 65% on measures of language and literacy knowledge, which included specific measures related to phonological awareness and oral language and vocabulary. They also found that while overall content knowledge in the area of oral language and vocabulary instruction was relatively low, that knowledge was predictive of instruction, demonstrating a positive relationship between ECEs’ knowledge and instructional opportunities given to children.

Also Crim et al. (2008), in a study of 64 randomly selected early childhood educators, determined that in-service ECEs did not have the requisite knowledge to build an adequate foundation for early literacy in their classrooms. This study found that ECE teachers had difficulty identifying specific print-to-speech concepts that are foundational skills related to beginning reading instruction. Specifically, ECEs were found to be lacking in instructional skills related to the area of oral language development, especially with respect to phonology and phonemic awareness (with accuracy scores ranging from 15%-65%), including knowledge of concepts such as counting syllables in words and identifying the number of morphemes and phonemes in words.

Although there has been relatively little research pertaining specifically to in-service ECEs’ understanding of key early literacy concepts and their application, there have been some relevant studies in this area involving primary schoolteachers. A few substantial studies of in-service kindergarten/primary (K-3) schoolteachers have demonstrated that many practicing educators appear to lack sufficient knowledge in
critical areas of literacy development related to beginning reading instruction – areas such as phonology and language structure (e.g., Cunningham et al., 2004; Mather et al., 2001; McCutchen, Abbott et al., 2002; Moats & Foreman, 2003). Of particular note, McCutchen, Abbott et al. (2002) found that in their study of 24 kindergarten teachers, and 27 first grade teachers, the participants were significantly lacking knowledge about phonemic awareness, and thus the researchers doubted that the teachers possessed the necessary phonology-related instructional skills to assist struggling beginning readers. Similarly, in their study of 50 K-3 teachers’ understanding of foundational literacy skills, Moats and Foorman (2003) found “surprising gaps in teachers’ insights about learning to read” (p. 36). They found that nearly 20% of participants could not demonstrate the literacy-related knowledge that would seem required for elementary certification (Moats & Foorman, 2003).

Given the limited evidence addressing the literacy-related knowledge of ECEs (both pre-service and in-service), one of the goals of this research was to provide a more in-depth examination of pre-service and in-service ECEs’ knowledge – using quantitative and qualitative methodologies – in two foundational areas known to be essential to the literacy success of young learners – phonemic awareness and oral language.

Self-Efficacy for Teaching Early Literacy

Effective instruction in literacy depends on educators’ ability to make complex and instantaneous teaching decisions to meet the diverse needs of their students (Pinnell, 2002). Effective action depends on one’s perceived self-efficacy that the knowledge and skills required to perform a given task can be accessed successfully under varied
circumstances (Tschannen-Moran & Johnson, 2011). For example, an educator with a high sense of efficacy would be more likely to try different instructional approaches until the students are successful (Allinder, 1994). In contrast, an educator with low self-efficacy is more likely to persist with ineffective instruction (Soodak & Podell, 1993). Therefore, the instructional outcomes for students are highly impacted by the self-efficacy beliefs of educators.

Very little research pertains directly to self-efficacy for literacy instruction among ECEs. One study examining 67 ECEs teaching in an early intervention program, and the relationship between the self-efficacy and instructional practices in science, literacy and math, found that while ECEs demonstrated the highest level of self-efficacy for literacy instruction (compared to math or science), their self-efficacy was significantly lower than classroom teachers’ self-efficacy for literacy instruction (Gerde, Pierce, Lee, & Van Egeren, 2018). This study also found a significant relationship between self-efficacy for instruction and instructional practices: ECEs were less likely to instruct children in a given curriculum area if their self-efficacy levels were low.

Because there has been very little research directly examining self-efficacy for literacy instruction among ECEs, this review considers literature related to self-efficacy for teaching early literacy among other educators of young children. The literature pertaining to kindergarten/primary schoolteachers suggests that pre-service educators’ self-efficacy can change with experience. Shaw, Dvorak, and Bates (2007) examined the self-efficacy of 52 pre-service primary teachers and found that levels of self-efficacy increased after taking a literacy course. Similarly, in a study conducted by Tetley and Jones (2014), a survey was given to 150 second-year and 74 third-year pre-service
teachers assessing their perceived confidence levels for teaching reading. Results indicate that, on average, participants had some confidence in teaching different aspects of literacy, including phonics, phonemic awareness, and language terms (such as phoneme segmentation and phoneme isolation). Third-year students, who had completed kindergarten or grade 1 placements, showed higher confidence levels compared to second-year participants. Bostock and Boon (2012) examined the self-efficacy of 180 pre-service educators completing a 4-year Bachelor of Education degree in elementary education, and found similar results: self-efficacy scores were highest for third year students, and showed a gradual increase from first year to third year. Interestingly, however, self-efficacy scores decreased slightly in 4th year students. While these studies provide some insights into self-efficacy and pre-service schoolteachers, they have not directly examined self-efficacy in pre-service ECEs.

Educators’ self-efficacy for literacy instruction is also strongly affected by the kind and quality of their teacher training. One study, involving 101 pre-service primary teachers, found that the quality of training in reading instruction they received influenced their teaching in terms of differences in understandings, beliefs and decision-making, which ultimately impacted their levels of self-efficacy (Maloch et al., 2003). While the impact of self-efficacy on teaching and the relationship between teacher training, knowledge and self-efficacy has been explored for kindergarten/primary schoolteachers, little is known about self-efficacy for literacy instruction among the ECE population. Some literature suggests that self-efficacy is an important target in professional development for ECEs (Ottley et al., 2015), however direct evidence is lacking. Therefore, the present study seeks to shed some light on this matter by assessing pre-
service and in-service ECEs’ self-efficacy for early literacy instruction.

In summary, the literature looking at literacy knowledge and self-efficacy among educators of young children is limited in terms of its focus on ECEs. Thus, study 1 sought to add to the literature by investigating pre-service and in-service ECEs’ early literacy perceptions, experiences, knowledge and self-efficacy for early literacy instruction.

**Study Purpose and Research Questions**

Given that previous research with in-service ECEs (Crim et al., 2008; Hammond, 2015; Schachter et al., 2016) and other educators working with young children (Cunningham et al., 2004; Mather et al., 2001; Moats & Foorman, 2003) has exposed inconsistencies and deficits in knowledge of effective early literacy practices, this study seeks to provide greater clarity with respect to the knowledge of effective early literacy practices among pre-service and in-service ECEs.

Despite the widespread research on schoolteachers’ literacy knowledge and practices (Bostock & Boon, 2012; Cunningham et al., 2004; Mather et al., 2001; Moats & Foorman, 2003), there have been remarkably few studies examining literacy knowledge and instructional practices among ECEs (Alghazo & Hilawani, 2010; Crim et al., 2008, Hammond, 2015). Of the investigations conducted, none has concentrated on the differences between pre-service and in-service ECEs. Rather, the few existing investigations have focused on in-service ECEs (Crim et al., 2008; Hammond, 2015; Schachter et al., 2016). There is an urgent need to examine both pre-service and in-service ECEs’ knowledge of literacy concepts and instructional practices in greater depth, since ECEs work with our youngest and most vulnerable learners. Likewise, despite
existing research examining schoolteachers’ self-efficacy for literacy instruction (Taschannen-Moran & Johnson, 2011), few methodologically-sound studies have investigated this area for ECEs (Gerde et al., 2018).

Thus, a primary goal of the present study was to examine some key questions in this very important, and understudied area. In an attempt to achieve the goals of this research, the present study utilized a mixed-methods approach that combined both quantitative and qualitative methodologies. The quantitative component included adapted versions of published measures to assess pre-service and in-service ECEs’ early literacy knowledge and self-efficacy. The study also included a questionnaire to gather information about participants’ early literacy experiences. Concurrently, the qualitative component of the study investigated the nature of the ECEs’ self-perceptions of knowledge and self-efficacy and their literacy experiences.

Given that few research initiatives have investigated the extent of ECEs’ early literacy knowledge, experiences and self-efficacy for early literacy instruction, this study has the potential to make a valuable contribution to the field. The following over-arching questions guided study 1:

**Quantitative Research Questions:**

*Early Literacy Experiences:*

1. What are the early literacy experiences of pre-service and in-service ECEs?
   a) What are the early literacy experiences of pre-service and in-service ECEs related to their professional preparation (coursework and formal schooling)?
b) What are the early literacy experiences of pre-service and in-service ECEs related to the professional field (work experiences, fieldwork)?

c) Are there differences between pre-service and in-service ECEs in the above-mentioned topics?

*Early Literacy Knowledge:*

2. What knowledge and skills do pre-service and in-service ECEs have in the area of early literacy development and instruction?

   a) How well do pre-service and in-service ECEs understand key literacy concepts and instructional strategies?

   b) Are there differences between pre-service and in-service ECEs in the above-mentioned topics?

*Self-Efficacy for Early Literacy Instruction*

3. What is the self-efficacy of pre-service and in-service ECEs in terms of their perceived ability to support and instruct children in early literacy development?

   a) What is the self-efficacy of ECEs with respect to their perceived ability to provide quality early literacy instruction and support to their students?

   b) Are there differences between pre-service and in-service ECEs in self-efficacy?

*Qualitative Research Questions*

*Early Literacy Knowledge and Skills*
4. How do ECEs feel about their early literacy knowledge and skills?
   a) How do ECEs feel about their phonemic awareness knowledge and skills?
   b) How do ECEs feel about their oral language and vocabulary knowledge and skills?

Self-Efficacy for Early Literacy Instruction

5. How do ECEs feel about their self-efficacy for early literacy instruction?
   a) What are ECEs’ feelings of preparedness for phonemic awareness instruction?
   b) What are ECEs’ feelings of preparedness for oral language instruction?

Methods

The methods section of this chapter begins with a description of the research design and overall process for study 1. Next, it discusses the quantitative and qualitative measures. Finally, this methods section concludes with a description of the data analysis process.

Research Design

Study 1 employed a mixed-methods concurrent triangulation research design that involved collecting both quantitative and qualitative data together and analyzing them concurrently so that each was given equal priority in the research. This study utilized the approach to combine statistical results with qualitative findings to better understand the
early literacy experiences, knowledge and self-efficacy of pre-service and in-service ECEs.

The data collection process involved participants’ completing a series of assessments during a single testing session. This session consisted of completing written assessments, using both closed-ended and open-ended questioning, where participants were asked to reflect on their experiences, knowledge of early literacy concepts and practices, and self-efficacy for early literacy instruction. The close-ended questions were analyzed quantitatively and the open-ended questions were analyzed qualitatively. This entire session took 45-60 minutes to complete, and all participants gave their written and verbal consent to participate. During completion of the assessments, if any question was unclear to a participant, the question was explained verbally or simplified. This ensured that all participants had a clear understanding of the questions being asked of them.

**Research Measures**

*Quantitative Measures*

The purpose of the quantitative measures was to assess what pre-service and in-service ECEs know about key early literacy concepts, to develop a greater understanding of their early literacy perceptions, and to explore the nature and extent of the literacy education component and practicum experiences of early childhood educators in their pre-service programs. The following measures were selected, adapted and developed to explore and answer the specific research questions of this study (see summary of measures in Table 3.1).
Table 3.1

**Quantitative measures in study 1**

| Measures of Experiences and Demographic Variables | *Linguistic Knowledge and Experiences Survey* - adapted from the Linguistic Knowledge Assessment (Fielding-Barnsley & Purdie, 2005) and the Informal Survey of Linguistic Knowledge (Moats, 1994) |
| Measures of Early Literacy Knowledge | *Linguistic Knowledge Assessment* – adapted from the Survey of Linguistic Knowledge (Moats, 1994) |
| *Early Literacy Assessment* - adapted from the Phonemic Awareness Survey (Cheesman et al. 2009) and the Teachers’ Knowledge of Oral Language Development (TKOLD) instrument (Prestwich, 2012) and expanded to include items specific to early literacy |
| Measures of Self-Efficacy | *Self-Efficacy for Early Literacy Instruction Scale* - adapted from the Self-Efficacy for Literacy Instruction Scale (Tschannen-Moran & Johnson, 2010) to focus on early literacy |

**Measures of Experiences and Demographic Variables.** A survey was developed in order to identify the demographic characteristics of participants, to obtain a better understanding of participants’ early literacy experiences, including professional experiences and those experiences that were a component of their pre-service early childhood education programs.

*Linguistic Knowledge and Experiences Survey* – This survey was adapted from the Linguistic Knowledge Assessment (Fielding-Barnsley & Purdie, 2005) and the Informal Survey of Linguistic Knowledge (Moats, 1994).

The survey included close-ended questions, checklists and multiple-choice items. The survey was divided into three sections. The first section included general...
demographic information. The second section asked participants to report on their educational, employment and practicum experiences. The final section included the Linguistic Knowledge Assessment, which is discussed in the following paragraph. For a complete copy of the Linguistic Knowledge and Experiences Survey, please see Appendix E.

**Measures of Early Literacy Knowledge.** As a means of assessing ECEs’ general linguistic knowledge, all participants completed the Linguistic Knowledge Assessment. A second knowledge assessment, that focused explicitly on phonemic awareness and oral language development, the Early Literacy Assessment, was also completed, to provide a more comprehensive understanding of ECEs’ scope of literacy knowledge and to determine whether their knowledge (or lack of knowledge) is consistent with existing research examining early literacy knowledge among ECEs and schoolteachers.

*Linguistic Knowledge Assessment* – This assessment was adapted from the Informal Survey of Linguistic Knowledge (Moats, 1994). It consisted of ten multiple-choice questions related to linguistic knowledge. This assessment was used to provide a general idea of the participants’ understanding of specific components of spoken language and linguistic knowledge. Sample items from this assessment include: 1) How many syllables are in the word, decidedly: (a) one; (b) two; (c) three; (d) four; (e) five, and 2) If you say the word, then reverse the order of sounds, “enough” would be: (a) fun; (b) phone; (c) funny; (d) honey; (e) gone. The assessment can be found in Appendix F.

*Early Literacy Assessment* – This assessment included items from the Phonemic Awareness Survey (Cheesman et al., 2009) and the Teachers’ Knowledge of Oral Language Development (TKOLD) instrument (Prestwich, 2012) and was expanded to
include specific items related to early literacy. It consisted of thirty multiple-choice content questions related to phonemic awareness and oral language development. It was used to examine the scope of ECEs’ knowledge in study 1 and also as a pre- and post-test, to measure the impact of the intervention on knowledge gains in study 2. Sample items from this assessment include: 1) A phoneme is (a) the smallest part of written language; (b) the smallest part of spoken language; (c) a word part that contains a vowel sound; (d) I’m not sure, and 2) A child’s receptive vocabulary refers to: (a) the words a child can say; (b) the words a child can both say and understand; (c) the words a child can understand; (d) I’m not sure. Multiple forms/orders of this assessment were systematically used to counterbalance for possible order effects. The complete assessment can be found in Appendix G.

**Measures of Self-Efficacy.** All participants completed a measure of self-efficacy to explore ECEs’ self-efficacy for early literacy instruction including their self-efficacy for teaching skills and concepts related to phonemic awareness and oral language development, and also to assess the relationship between knowledge and self-efficacy.

*Self-Efficacy for Early Literacy Instruction Scale* – This twenty-five-item scale assessment was adapted from Tschannen-Moran and Johnson (2011). It assessed participants’ perceptions of their competence to engage in various literacy-oriented instructional activities. Five items focused on phonemic awareness, five on oral language, four on early writing, nine on early reading, one on assessment of general early literacy skills and the last item focused on integrating play and literacy. A sample item includes: “To what extent can you help students figure out unknown words they are reading?” The original version of the scale, had an internal reliability of .96, in a sample of practicing
teachers, and all items loaded on a single factor. The assessment used in this research was adapted to include items relevant only to early literacy instruction, and this adapted scale had an internal reliability of .97. This assessment was used to explore ECEs’ self-efficacy for early literacy instruction in study 1 and also as a pre- and post-test to measure the impact of the intervention on self-efficacy gains in study 2. A complete copy of the Self-Efficacy for Early Literacy Instruction Scale is included in Appendix H.

Qualitative Measures

For the qualitative component, a multiple case study approach was used to help understand the feelings and experiences that ECEs have related to their knowledge and self-efficacy in early literacy. This qualitative case study approach facilitates exploration of a phenomenon within its context using a variety of data sources. This ensures that the research questions are not explored through one lens, but rather a variety of lenses, which allow for multiple facets of the phenomenon to be revealed and understood (Baxter & Jack, 2008). A multiple case study design includes more than one case, and the analysis is performed at two levels: “within each case and across the cases” (Ivankova, Creswell, & Stick, 2006, p. 25). The following measure was developed to examine the study’s research questions through a qualitative lens (see Table 3.2).

Knowledge and Self-Efficacy Self-Reflection. This qualitative written assessment asked participants to reflect on their perceived knowledge and self-efficacy using open-ended questioning. The first section asked participants to reflect on the sources of information they felt were most valuable in preparing them for early literacy instruction. The second section asked participants to reflect on their overall knowledge
and skills in phonemic awareness and oral language instruction. In the final section, participants reflected on their feelings of preparedness or confidence to teach young children phonemic awareness and oral language skills. These responses were analyzed using thematic coding. A complete copy of this assessment is included in Appendix I.

Table 3.2

Qualitative measures in study 1

<table>
<thead>
<tr>
<th>Knowledge and Self-Efficacy Self-Reflection</th>
<th>Knowledge and Self-Efficacy Self-Reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative reflection consisting of several open-ended written questions.</td>
<td>Qualitative reflection consisting of several open-ended written questions.</td>
</tr>
<tr>
<td>Sample item: &quot;Please tell me what you know about phonemic awareness and phonemic awareness instruction. Try to discuss specific things you know or strategies you have learned/used.&quot;</td>
<td>Sample item: &quot;Please tell me what you know about phonemic awareness and phonemic awareness instruction. Try to discuss specific things you know or strategies you have learned/used.&quot;</td>
</tr>
</tbody>
</table>

Data Analysis

A mixed-methods concurrent triangulation research design was used for study 1, which involved collecting both quantitative and qualitative data, concurrently. This study involved analyzing quantitative data statistically and analyzing qualitative data through content analysis.

Quantitative methodologies were utilized to analyze likert-scale and multiple-choice items included in the Linguistic Knowledge & Experiences Survey, the Early Literacy Knowledge Assessment and the Self-Efficacy for Early Literacy Instruction Scale. A variety of quantitative statistical tests were employed including, independent sample t-tests, mixed-model analyses of variance (ANOVAs) and correlation analyses (using Pearson r and Phi correlations). ANOVAs and post-hoc comparisons were also used to examine group differences among the pre-service and in-service ECEs.
In order to determine the internal consistency of the self-efficacy scales, reliability analyses were conducted, using Cronbach’s alpha. Table 3.3 presents the results of the reliability analyses performed on specific items of the self-efficacy scale for early literacy instruction.

Table 3.3

<table>
<thead>
<tr>
<th>Scale</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy for early literacy instruction</td>
<td>0.97</td>
</tr>
<tr>
<td>Self-efficacy for early reading instruction</td>
<td>0.95</td>
</tr>
<tr>
<td>Self-efficacy for early writing instruction</td>
<td>0.93</td>
</tr>
<tr>
<td>Self-efficacy for oral language instruction</td>
<td>0.88</td>
</tr>
<tr>
<td>Self-efficacy for phonemic awareness instruction</td>
<td>0.91</td>
</tr>
</tbody>
</table>

As Table 3.3 shows, the reliability for the five scales was above 0.70, reflecting an acceptable level of internal consistency reliability. Thus, average composite scores for each self-efficacy scale were computed and group differences were examined using independent-samples t tests.

Qualitative methodologies were employed to develop a deeper understanding of the nature and complexity of ECEs’ knowledge, skills, self-efficacy and experiences related to their early literacy training. Open-ended questions from the Knowledge and Self-Efficacy Self-Reflection, were coded inductively using the strategies from grounded theory methodology (Strauss & Corbin, 1998). Strategies to ensure the reliability and validity of findings were employed throughout the data analysis process. In integrating
the quantitative and qualitative data, different sources of information (i.e., close-ended and open-ended survey questions) were crosschecked to validate the results.

**Quantitative Results and Discussion**

Given the complexity of study 1, quantitative and qualitative results are discussed in separate sections. In each of these sections, the results and discussion are combined according to the overarching research questions. This section on the quantitative findings begins with a description of the results related to the early literacy experiences of ECEs. Next this section provides a discussion of the findings related to ECEs’ knowledge of early literacy development and instruction, and finally it concludes with a description of the results and a discussion about ECEs’ self-efficacy for early literacy instruction.

**Research Question 1: What are the early literacy experiences of pre-service and in-service ECEs?**

Participants answered a series of questions about their early literacy experiences during their early childhood education-training program and also about professional experiences in the ECE field. Participants quantified the number of instructional hours they received in literacy-related courses, and reported on the number of literacy courses they completed. They reported the number of hours they spent in practicum, and the kinds of placements they experienced. As well, in-service participants described their work experiences and the duration for which they had been employed in an early childhood education setting.
Early Literacy Experiences in Professional Preparation

Participants were asked to recall the amount of time (number of hours) spent in literacy-focused courses during their ECE training program. Table 3.4 presents the average number of hours for pre-service and in-service ECEs. Across the sample, the overall numbers of hours reported were quite variable and there were no significant differences between pre-service ECEs ($M = 60.17$, $SD = 25.92$, $N = 29$) and in-service ECEs ($M = 71.12$, $SD = 32.53$, $N = 25$), $t(52) = -1.35$, $p = .183$, $d = -.37$.

Table 3.4

<table>
<thead>
<tr>
<th>Number of Hours in Literacy-Focused Courses</th>
<th>Percentage of Pre-service ECEs ($n = 29$)</th>
<th>Percentage of In-service ECEs ($n = 25$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 50 hours</td>
<td>41.4%</td>
<td>40.0%</td>
</tr>
<tr>
<td>51 – 100 hours</td>
<td>48.3%</td>
<td>56.0%</td>
</tr>
<tr>
<td>Greater than 100 hours</td>
<td>10.3%</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

Participants were also asked how many literacy-focused courses they were required to complete as part of their ECE program. Table 3.5 presents the descriptive statistics. Again, no significant differences were found between pre-service ($M = 1.76$, $SD = .79$, $N = 29$) and in-service ECEs ($M = 1.84$, $SD = .85$, $N = 25$), $t(52) = -.363$, $p = .716$, $d = -.10$.

Although there are no statistically significant differences in the comparison of pre-service and in-service ECEs, either in terms of the number of hours they had spent
completing literacy-focused courses or the number of courses they had completed, Table 3.4 reveals that the majority of participants in both groups had spent more than 50 hours in literacy-focused courses. Table 3.5 also reveals that the majority of both groups completed at least two literacy-focused courses.

Table 3.5

<table>
<thead>
<tr>
<th>Number of Literacy-Focused Courses</th>
<th>Percentage of Pre-service ECEs (n = 29)</th>
<th>Percentage of In-service ECEs (n = 25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One course</td>
<td>44.8%</td>
<td>44.0%</td>
</tr>
<tr>
<td>Two courses</td>
<td>34.5%</td>
<td>28.0%</td>
</tr>
<tr>
<td>Three courses</td>
<td>20.7%</td>
<td>28.0%</td>
</tr>
</tbody>
</table>

*Early Literacy Experiences in the Field*

Participants reported on the amount of time (number of hours) spent in practicum placements during their ECE training program. Pre-service ECEs ($M = 407.52, SD = 158.35, N = 29$) reported spending significantly fewer hours in practicum than did in-service ECEs ($M = 641.96, SD = 241.25, N = 25$), $t(40.37) = -4.15, p = .000, d = 1.15$. There were also significant differences among pre-service and in-service ECEs in terms of the number of hours spent in certain types of practicum placements. Specifically, pre-service ECEs ($M = 27.72, SD = 62.19, N = 29$), spent significantly less time in infant placements as compared to in-service ECEs ($M = 124.44, SD = 124.91, N = 25$), $t(52) = -3.68, p = .001, d = .98$. Similarly, pre-service ECEs ($M = 48.72, SD = 67.77, N = 29$),
spent fewer hours in toddler placements, than in-service ECEs \((M = 155.92, SD = 127.81, N = 25)\), \(t (52) = -3.96, p = .000, d = 1.05\). There were no significant differences between pre-service and in-service ECEs in terms of the number of practicum hours spent in preschool, kindergarten and primary school placements. In order to explore the practicum experiences of ECEs in their ECE training program, Table 3.6 presents the average number of hours pre-service and in-service ECEs completed in specific types of placements, during their ECE training programs.

Table 3.6

Average \((M)\) number of hours pre-service and in-service ECEs completed in practicum

<table>
<thead>
<tr>
<th>Number of Hours in Practicum Placements</th>
<th>Pre-Service ((n = 29))</th>
<th>In-Service ((n = 25))</th>
<th>(T)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Hours in Practicum</td>
<td>407.52</td>
<td>641.96</td>
<td>-4.28*</td>
</tr>
<tr>
<td>Infant Placements</td>
<td>27.72</td>
<td>124.44</td>
<td>-3.51*</td>
</tr>
<tr>
<td>Toddler Placements</td>
<td>48.72</td>
<td>155.92</td>
<td>-3.76*</td>
</tr>
<tr>
<td>Preschool Placements</td>
<td>128.59</td>
<td>161.96</td>
<td>-1.03</td>
</tr>
<tr>
<td>Kindergarten Placements</td>
<td>127.97</td>
<td>144.60</td>
<td>-.59</td>
</tr>
<tr>
<td>Primary Placements</td>
<td>71.07</td>
<td>45.44</td>
<td>1.24</td>
</tr>
</tbody>
</table>

* Significant at the \(p < .05\) level.

The study also examined ECEs’ professional experiences. In-service participants, who were currently employed on a full-time basis, classified their profession and indicated how many years of professional experience they had. Table 3.7 details the number of years that in-service ECEs have of ECE-related professional experience.
Table 3.7

Number of years of ECE-related work experience of in-service ECEs

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than two years</td>
<td>2</td>
<td>8.0%</td>
</tr>
<tr>
<td>2-5 years</td>
<td>7</td>
<td>28.0%</td>
</tr>
<tr>
<td>6-10 years</td>
<td>13</td>
<td>52.0%</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>3</td>
<td>12.0%</td>
</tr>
</tbody>
</table>

Table 3.8 details the percentage of in-service ECEs employed in various careers in the ECE sector. Pre-service ECEs were excluded from these analyses because none held full-time work positions at the time of this study.

Table 3.8

Percentage of in-service ECEs employed in ECE-related careers

<table>
<thead>
<tr>
<th>Career</th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childcare worker</td>
<td>10</td>
<td>40.0%</td>
</tr>
<tr>
<td>Designated ECE in a kindergarten classroom</td>
<td>8</td>
<td>32.0%</td>
</tr>
<tr>
<td>Childcare supervisor</td>
<td>2</td>
<td>8.0%</td>
</tr>
<tr>
<td>Kindergarten teacher</td>
<td>2</td>
<td>8.0%</td>
</tr>
<tr>
<td>Preschool teacher</td>
<td>2</td>
<td>8.0%</td>
</tr>
<tr>
<td>Resource program teacher</td>
<td>1</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

Table 3.7 shows the distribution of the number of years that in-service ECEs had been professionally employed. Ninety-two percent of in-service ECEs had more than two years of full-time work experience, and 64% had more than five years of experience.
Table 3.8 shows that the most common professions were childcare worker and designated ECE in a kindergarten classroom. These two professions accounted for 72% of in-service participants and involve the ECE in an educator role, having direct contact with children. In these contexts understanding how to support their students’ developing literacy would be of importance. Other professions were childcare supervisor, kindergarten teacher, preschool teacher and resource program teacher. These positions, as well, involve direct contact with children or the direct supervision of those who do. Therefore, having adequate knowledge to support the early literacy development of children would also be of importance.

**Discussion for Research Question 1**

This section discusses the findings in relation to research question 1: What are the early literacy experiences of pre-service and in-service ECEs? First, this section explored the literacy course experiences of ECEs in terms of the number of literacy-focused courses they completed and the number of instructional hours spent in these courses. The descriptive statistics show that the majority of both pre-service and in-service ECEs spent more than 50 hours in literacy focused courses and had completed two courses. There were no statistically significant differences between pre-service and in-service ECEs in terms of the number of literacy courses they completed or the total number of instructional hours they completed in these courses. It is reassuring to learn that both college and university ECE programs do offer literacy courses as part of their required curriculum but this information, in and of itself, does not indicate whether ECEs who
have taken these courses have acquired the foundational knowledge needed to provide evidence-based early literacy instruction to young children.

Secondly, this section identified differences in ECEs practicum and professional experiences. The amount of time the ECEs in this study reportedly spent in practicum placements ranged from 150 to 1320 hours. Pre-service ECEs reported spending considerably less time in practicum placements, particularly in infant and toddler placements, than did in-service ECEs. This difference may reflect one of the differences between college and university ECE programs, with the college programs including more practicum hours overall, primarily due to the inclusion of considerably more placement time in infant and toddler settings. In addition, this section found that nearly all in-service ECEs \((n=23)\) worked in professions that involved direct contact with children. Thus, it would seem to be central for them to have an adequate understanding of how to support children’s developing foundational literacy skills.

The next main section discusses the extent to which pre-service and in-service ECEs possess the knowledge and skills concerning early literacy that research would suggest are essential.

**Research Question 2: What knowledge and skills do pre-service and in-service ECEs have in the area of early literacy development and instruction?**

Participants completed a series of multiple-choice questions related to their understanding of key early literacy concepts. Questions specifically assessed participants’ general linguistic knowledge as well as their understanding of phonemic awareness and oral language development. This section presents the quantitative results pertaining to
their responses to these questions. The section also presents any significant differences in knowledge between the pre-service and in-service ECEs.

*Professional Knowledge in Early Literacy Instruction*

Assessments of early literacy knowledge included measures of general linguistic knowledge (Linguistic Knowledge Survey), phonemic awareness knowledge (Early Literacy Assessment – Phonemic Awareness), and oral language knowledge (Early Literacy Assessment – Oral Language).

**General Linguistic Knowledge.** Pre-service and in-service ECE participants \((n=54)\) were assessed on their general linguistic knowledge. The measure consisted of 10 multiple-choice questions. Results indicated that linguistic knowledge was variable and, on average, participants answered fewer than 50% of questions correctly \((M=4.46, SD=1.73)\). Table 3.9 presents the percentage of participants who answered each of the 10 Linguistic Knowledge Survey questions correctly.

Table 3.9

*Percentages of correct answers on the Linguistic Knowledge Survey*

<table>
<thead>
<tr>
<th>Question</th>
<th>Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which word contains a short vowel sound:</td>
<td>42.6%</td>
</tr>
<tr>
<td>A pronounceable group of letters containing a vowel is a:</td>
<td>50.0%</td>
</tr>
<tr>
<td>A diphthong is found in the word:</td>
<td>5.6%</td>
</tr>
<tr>
<td>How many phonemes or speech sounds are in the word “fix”?</td>
<td>1.9%</td>
</tr>
<tr>
<td>How many syllables are in the word “decidedly”?</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Why may students confuse the sounds /b/ and /p/ or /f/ and /v/?  
A schwa sound (non distinct vowel sound) is found in the word:  
If you say the word, then reverse the order of the sounds “enough” would be:  
Select the word that contains the same sound as the underlined letters in the word “weigh”:  
What letters signal that a c is pronounced /s/?

Overall the percentage of correct responses on this test of general linguistic knowledge was low. As can be seen in Table 3.9, on only 4 questions did 50% or more of the participants select the correct item on the 10-item multiple-choice test. Some items were easier for participants, yielding higher percentages of correct performance. For example, 100% of participants chose the correct response on an item that required them to identify the number of syllables in the word “decidedly” and 63% of participants correctly selected the word that had the same sound as the ending phoneme in the word “weigh”. On the remaining 6 questions 57.4% to 98.1% of participants chose an incorrect response. Several items were particularly difficult for participants. For example, 94.4% of participants could not correctly identify the word containing a diphthong and nearly all participants (98.1%) could not correctly identify the number of speech sounds in the word “fix”.

Further analyses of participants’ general linguistic knowledge indicated that general linguistic knowledge scores were positively correlated with the total number of hours spent in literacy-focused courses and with the number of literacy courses completed. A one-way analysis of variance was performed to evaluate the relationship between the amount of time spent in literacy-focused courses and knowledge scores on
the Linguistic Knowledge Survey. The independent variable was number of hours spent in literacy-focused courses (3 groups of ECEs who had: less than 50 hours, 51-100 hours, or greater than 100 hours in literacy-focused courses, respectively) and the dependent variable was linguistic knowledge scores. The ANOVA was significant at the .05 level, $F(2, 51) = 11.20, p<.001$. The strength of the relationship between hours spent in literacy-focused courses and knowledge scores, as assessed by $\eta^2$, was large, with number of hours of literacy-focused courses taken, accounting for 44% of the variance of the dependent variable. This finding indicated that the more time spent in literacy-focused courses during their ECE training program, the higher their scores of general linguistic knowledge.

A one-way analysis of variance was also performed to examine the relationship between number of required literacy courses taken and linguistic knowledge. The independent variable was number of literacy courses (3 groups of ECEs who had: one, two, or three literacy-focused courses, respectively) and the dependent variable was linguistic knowledge scores. The ANOVA was significant at the .05 level, $F(2, 51) = 14.72, p<.001$. The strength of the relationship between number of literacy courses and knowledge scores, as assessed by $\eta^2$, was large, with number of literacy courses taken accounting for 37% of the variance of the dependent variable.

Follow-up tests were performed to evaluate pairwise differences among the means. Because of the high variances among the three groups, it was assumed that the variances were not homogenous and thus, post hoc comparisons with the use of Dunnet’s C test were conducted, a test that does not assume equal variances among the three groups. There was a significant difference in the means between the group that took one
literacy course and the group that took three literacy courses, as well as a significant difference in the means between the group that took two literacy courses, and the group that took three courses. There were no significant differences however, between the group that took one course and the group that took two courses. The group that took three literacy courses showed higher linguistic knowledge mean scores in comparison to the groups that took one and two literacy courses. The 95% confidence intervals for the pairwise differences, as well as the means and standard deviations for the three groups, are reported in Table 3.10.

Table 3.10

<table>
<thead>
<tr>
<th>Number of Literacy Course</th>
<th>M</th>
<th>SD</th>
<th>Two Courses</th>
<th>Three Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Literacy Course</td>
<td>3.91</td>
<td>1.51</td>
<td>[-1.10, 1.50]</td>
<td>[-3.24, -1.20*]</td>
</tr>
<tr>
<td>Two Literacy Courses</td>
<td>3.71</td>
<td>1.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three Literacy Courses</td>
<td>6.13</td>
<td>1.73</td>
<td>[1.25, 3.61*]</td>
<td></td>
</tr>
</tbody>
</table>

Note: An asterisk indicates that the 95% confidence interval does not contain zero, and therefore the difference in means is significant at the .05 significance using Dunnett’s C procedure.

Phonemic Awareness Knowledge. Pre-service and in-service ECEs (n=54) were assessed on their specific knowledge of phonemic awareness. The measure consisted of fifteen multiple-choice questions. The distribution of raw scores, ranged from 1 to 12 questions answered correctly, with a mean of 6.39, a median of 7 and a mode of 7. Performance was generally low, with 81% of participants answering 8 or fewer out of 15 questions correctly, and 68.5 % of participants answering fewer than half of the questions correctly. Only 3 out of 54 participants answered more than 10 questions correctly. Table
3.11 presents the percentage of participants who answered each of the 15 questions correctly and incorrectly.

Table 3.11

*Percentages of correct answers on the Early Literacy Assessment - Phonemic Awareness*

<table>
<thead>
<tr>
<th>Question</th>
<th>Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>A phoneme is:</td>
<td>53.7%</td>
</tr>
<tr>
<td>Phonemic Awareness is:</td>
<td>25.9%</td>
</tr>
<tr>
<td>Effective phonemic awareness teaches children to:</td>
<td>33.3%</td>
</tr>
<tr>
<td>What type of activity focuses specifically on phonemic awareness skills?</td>
<td>61.1%</td>
</tr>
<tr>
<td>Which of the following tasks would be the most difficult for children to perform?</td>
<td>18.5%</td>
</tr>
<tr>
<td>What activity explicitly links spelling with phonemic awareness?</td>
<td>46.3%</td>
</tr>
<tr>
<td>An example of explicit phonemic awareness instruction is:</td>
<td>13.0%</td>
</tr>
<tr>
<td>Can the words <em>shoe, do, flew,</em> and <em>you</em> be used to illustrate oral rhyming?</td>
<td>72.2%</td>
</tr>
<tr>
<td>An example of matching words with the same final sound is:</td>
<td>22.2%</td>
</tr>
<tr>
<td>An example of grouping words with a common vowel <em>sound is:</em></td>
<td>87.0%</td>
</tr>
<tr>
<td>You are helping students break a word into its separate sounds. How many sounds are in the word “cube”?</td>
<td>53.7%</td>
</tr>
<tr>
<td>How many sounds are in the word <em>grape</em>?</td>
<td>31.5%</td>
</tr>
<tr>
<td>How many sounds are in the word <em>fish</em>?</td>
<td>38.9%</td>
</tr>
<tr>
<td>If you said the word <em>faxed</em> without the sound /k/, you would say:</td>
<td>37.0%</td>
</tr>
<tr>
<td>How many syllables are in the word <em>crocodile</em>?</td>
<td>44.4%</td>
</tr>
</tbody>
</table>
As can be seen in Table 3.11, there were only four questions that over 50% of participants answered correctly: 87% of participants were able to correctly identify a group of words with a common vowel sound, 61.1% of participants were able to correctly identify the activity that focused specifically on phonemic awareness skills, and 53.7% of participants could correctly identify the definition of the word phoneme, as well as correctly identify the number of sounds in the word cube. Beyond these 4 (out of 15) items on which at least 50% of participants chose correct responses, overwhelmingly, participants failed to correctly answer questions on this test reflecting their understanding of assessment and instruction of phonemic awareness. For example: 87% of participants could not correctly identify which activity was an example of explicit phonemic awareness instruction; 81.5% of participants could not correctly identify which phonemic awareness activity would be considered the most difficult for children to perform; 77.8% of participants could not correctly identify a pair of matching words with the same final sound; and 74.1% of participants could not correctly identify the definition of phonemic awareness.

**Oral Language Knowledge.** Pre-service and in-service ECE participants (n=54) were assessed on their specific knowledge of oral language. The measure consisted of 15 multiple-choice questions. The distribution of raw scores, ranged from 4 to 12 questions answered correctly, with a mean of 8.93, a median of 9 and a mode of 9. Thirty-five percent of participants answered fewer than 9 out of 15 questions correctly, and 16.5% of participants answered fewer than half of the questions correctly. Nine participants answered more than 10 questions correctly. Table 3.12 presents the percentage of participants who answered each of the 15 oral language questions correctly.
Table 3.12

Percentages of correct answers on the Early Literacy Assessment - Oral Language

<table>
<thead>
<tr>
<th>Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>A child’s <em>receptive</em> vocabulary refers to:</td>
</tr>
<tr>
<td>Expressive language refers to:</td>
</tr>
<tr>
<td>Syntax refers to:</td>
</tr>
<tr>
<td>During book reading activities, the most effective types of questions for building oral language skills include:</td>
</tr>
<tr>
<td>During book reading activities, teachers of young children should deal with new and unfamiliar vocabulary by:</td>
</tr>
<tr>
<td>Shared reading has a significant effect on children’s:</td>
</tr>
<tr>
<td>In order to support oral language development during free play, teachers of young children should:</td>
</tr>
<tr>
<td>Throughout the day, teachers of young children can model how our language works by:</td>
</tr>
<tr>
<td>During a conversation, a child points to a toy and says, “A car.” The best way to respond in order to stimulate oral language development is:</td>
</tr>
<tr>
<td>An effective strategy for teaching new words is to:</td>
</tr>
<tr>
<td>The predominant way that children acquire vocabulary is by:</td>
</tr>
<tr>
<td>Singing and music help support early language development by helping children to:</td>
</tr>
<tr>
<td>Which strategy is most beneficial for helping English Language Learners (or Dual Language Learners) to develop oral language competencies in English:</td>
</tr>
<tr>
<td>At what age do typically developing children possess a vocabulary of 150-300 words?</td>
</tr>
<tr>
<td>At what age do typically developing children begin to use one or more words (or to communicate meaning)?</td>
</tr>
</tbody>
</table>

As can be seen in Table 3.12, performance on this test of ECEs’ oral language knowledge was variable: On some questions nearly all participants selected the correct response, and on other questions very few participants responded correctly. There were 9
out of the 15 questions on which over 50% of participants answered correctly. On a few items nearly all participants selected the correct response. For example, on a question requiring them to identify the predominant way that young children acquire vocabulary, 98.1% of participants selected the correct response; on a question asking how singing and music help to support early language development, 94.4% of participants responded correctly; and on a question asking which strategy is most beneficial for helping ELLs develop oral language competencies in English, 88.9% selected the correct response. In contrast, some other items were especially challenging for all, or nearly all, participants. For example, 100% of participants were not able to correctly identify the most effective types of questions for building oral language skills when reading; 81.5% of participants could not correctly identify how educators should introduce new and unfamiliar vocabulary when reading a book; and 77.8% of participants could not correctly identify the definition of expressive language. Differences between pre-service and in-service ECEs on this assessment are discussed in a later subsection.

**Relations Among Variables**

Pearson correlation coefficients were computed in order to explore potential relations among the demographic measures and the knowledge measures. A correlation coefficient was computed among the Linguistic Knowledge Survey scores and the Early Literacy Assessment – Phonemic Awareness scores. Using the Bonferroni approach to control for Type I errors, a p value of less than .017 (.05/3 = .017) was required for significance. The correlation analysis was statistically significant and was equal to .437. The results suggest that those participants, who had higher linguistic knowledge scores,
also had higher phonemic awareness scores. A correlation coefficient was also computed among the Linguistic Knowledge Survey scores and the Early Literacy Assessment – Oral Language scores. Using the Bonferroni approach to control for Type I errors, a \( p \) value of less than .017 (.05/3 = .017) was required for significance. The correlation analysis was statistically significant and was equal to .340. The results suggest that those participants, who had higher linguistic knowledge scores, also had higher oral language scores. As well, a correlation coefficient was computed among the Early Literacy Assessment – Phonemic Awareness scores and the Early Literacy Assessment – Oral Language scores. Using the Bonferroni approach to control for Type I errors, a \( p \) value of less than .017 (.05/3 = .017) was required for significance. The correlation analysis was statistically significant and was equal to .515. This suggests that those participants that had greater knowledge of phonemic awareness development and instruction \((M=6.39, SD=2.30)\) also had greater knowledge of oral language development and instruction \((M=8.93, SD=1.66)\). The results of these correlations are presented in Table 3.13.

Table 3.13

*Correlations among the knowledge measures*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Linguistic Knowledge Survey</th>
<th>Early Literacy Assessment - PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linguistic Knowledge Survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Literacy Assessment - PA</td>
<td>.437*</td>
<td></td>
</tr>
<tr>
<td>Early Literacy Assessment - OL</td>
<td>.340*</td>
<td>.515*</td>
</tr>
</tbody>
</table>

\( *p < .017 \)
Analyses were also performed to assess whether participants had higher knowledge scores in one domain (e.g., phonemic awareness) than in the other (e.g., oral language). A paired-samples *t* test was conducted to evaluate whether there were significant differences between phonemic awareness and oral language knowledge scores. The results indicate that the mean phonemic awareness knowledge score (*M* = 6.41, *SD* = 2.34) was significantly lower than the mean oral language development knowledge score (*M* = 8.93, *SD* = 1.67), *t*(53) = -9.013, *p* < .01. The effect size index, Cohen’s *d*, was 1.25, showing a large effect. These results indicate that ECEs performed less well on the test of phonemic awareness and related concepts than they did on the oral language test.

**Differences in Pre-Service and In-Service ECEs’ Knowledge**

In order to determine whether the pre-service and in-service ECEs in this study had comparable levels of background preparation relevant to early literacy, analyses were performed on each of the measures of early literacy knowledge, including: the measure of general linguistic knowledge (Linguistic Knowledge Survey), the measure of phonemic awareness knowledge (Early Literacy Assessment – Phonemic Awareness), and the measure of oral language knowledge (Early Literacy Assessment – Oral Language).

An independent samples *t* test was calculated to compare the linguistic knowledge scores of pre-service (*n* = 29) and in-service ECEs (*n* = 25). The results showed significant differences between these two groups, *t*(52) = -2.213, *p* = .031. Pre-service ECEs (*M* = 3.92, *SD* = 1.78) scored lower than in-service ECEs (*M* = 4.93, *SD* = 1.58). To illustrate these differences in the performance of pre-service and in-service ECEs, Table 3.14 shows the
percentage of participants with correct responses for each item of the Linguistic Knowledge Survey.

Table 3.14

Percentages of correct answers on the Linguistic Knowledge Survey for pre-service and in-service ECEs

<table>
<thead>
<tr>
<th></th>
<th>Pre-service</th>
<th>In-service</th>
<th>Phi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which word contains a short vowel sound:</td>
<td>31.0%</td>
<td>56.0%</td>
<td>-.124</td>
</tr>
<tr>
<td>A pronounceable group of letters containing a vowel is a:</td>
<td>20.7%</td>
<td>84.0%</td>
<td>-.483*</td>
</tr>
<tr>
<td>A diphthong is found in the word:</td>
<td>3.4%</td>
<td>8.0%</td>
<td>-.063</td>
</tr>
<tr>
<td>How many phonemes or speech sounds are in the word “fix”?</td>
<td>-</td>
<td>4.0%</td>
<td>.148</td>
</tr>
<tr>
<td>How many syllables are in the word “decidedly”?</td>
<td>100.0%</td>
<td>100.0%</td>
<td>-</td>
</tr>
<tr>
<td>Why may students confuse the sounds /b/ and /p/ or /f/ and /v/ ?</td>
<td>44.8%</td>
<td>68.0%</td>
<td>-.066</td>
</tr>
<tr>
<td>A schwa sound (non distinct vowel sound) is found in the word:</td>
<td>3.4%</td>
<td>32.0%</td>
<td>-.316*</td>
</tr>
<tr>
<td>If you say the word, then reverse the order of the sounds “enough” would be:</td>
<td>24.1%</td>
<td>48.0%</td>
<td>-.140</td>
</tr>
<tr>
<td>Select the word that contains the same sound as the underlined letters in the word “weigh”:</td>
<td>58.6%</td>
<td>68.0%</td>
<td>.097</td>
</tr>
<tr>
<td>What letters signal that a c is pronounced /s/?</td>
<td>27.6%</td>
<td>36.0%</td>
<td>.010</td>
</tr>
</tbody>
</table>

Note: Phi<.3 indicates small effect, Phi>.6 indicates strong effect.
* Significant at the p < .05 level.

As can be seen in Table 3.14, on virtually every question, pre-service ECEs performed more poorly than in-service ECEs. Differences in percentage of participants selecting the correct responses were statistically significant on two questions. Pre-service
ECEs were less likely than in-service ECEs to correctly identify what a pronounceable group of letters containing a vowel is, and to correctly identify the word containing a schwa vowel sound.

It is important to note that one of the background preparation differences between the pre-service and in-service ECEs is their professional work experience. To explore the potential relationship between years of professional work experience and knowledge among in-service ECEs, one-way analyses of variance were performed to evaluate the relation between years of work experience and knowledge scores on the Linguistic Knowledge Survey. The independent variable was number of years of work experience (the 4 levels of experience were: Less than two years, 2-5 years, 6-10 years, More than 10 years) and the dependent variable was linguistic knowledge scores. The ANOVA was significant at the .005 level, \( F(2,30) = 5.24, p = .011 \). The strength of the relationship between years of work experience and knowledge scores, as assessed by \( \eta^2 \), was strong, with years of work experience accounting for 35% of the variance of the dependent variable. Thus, it appears that professional work experience may play a role in providing in-service ECEs with opportunities to develop general linguistic knowledge.

Analyses examining potential knowledge differences between pre-service and in-service ECEs on the other background knowledge measures yielded no significant findings. Pre-service and in-service ECEs did not demonstrate significantly different levels of knowledge in phonemic awareness (as measured by the ELA-PA) or in oral language (as measured by the ELA-OL).
Discussion for Research Question 2

This section presented the findings in relation to research question 2: What knowledge and skills do pre-service and in-service ECEs have in the area of early literacy development and instruction? First, this section reported the findings of ECEs’ general linguistic knowledge. Overall knowledge scores were low and variable. Participants’ performance on the test of general linguistic knowledge was positively related to the number of hours they spent in literacy focused courses, and the overall number of literacy courses they took. However, these variables were not correlated with the measures of phonemic awareness and oral language knowledge. Consistent with the findings of other studies examining general linguistic knowledge among educators of young children (Crim et al., 2008; Fielding-Barnsley & Purdie, 2005; Mather et al., 2001; McCutchen et al., 2002; Moats, 1994), the results suggest that participants had insufficient knowledge about key concepts of English language structure, with overall mean scores of 4.46 out of 10 (45% correct). These findings are of concern, when considering the implications that ECEs’ lack of knowledge may have on their educational practices and, in turn, the developing skills of young children.

This section also reported the findings of ECEs’ phonemic awareness and oral language knowledge. Phonemic awareness knowledge was generally low and variable with average scores of 42.6% ($M=4.26$). Consistent with other studies of ECEs’ and primary teachers’ phonemic awareness knowledge and skills (Cheesman et al., 2009; Fielding-Barnsley, 2010; Hammond, 2015; Stainthorp, 2004), ECEs demonstrated very limited understanding of phonemic awareness concepts and instruction. While participants had higher scores on the test of oral language knowledge than they did on the
test assessing phonemic awareness knowledge, ECEs demonstrated a lack of understanding of how to use book reading as an opportunity to build on children’s developing vocabularies and oral language competencies. This finding is consistent with other research looking at educators’ knowledge of oral language and vocabulary development (Moats & Foreman, 2003; Schachter, 2016). Statistically significant correlations among the knowledge measures showed that those participants who demonstrated higher scores on one measure, tended to show higher scores on the other measures.

This section also examined knowledge differences between pre-service and in-service ECEs. While there were no significant differences between pre-service and in-service ECES in terms of their phonemic awareness and oral language knowledge, notable differences were found on their general linguistic knowledge. Specifically, pre-service ECEs demonstrated lower linguistic knowledge scores as compared to in-service ECEs. A similar finding was made by Mather et al. (2001) who found that in their study of pre-service and in-service primary teachers, that pre-service teachers possessed significantly less general linguistic knowledge than the in-service teachers, but results suggested that both groups had insufficient knowledge. The next main section presents the results and discussion on ECEs’ self-efficacy for early literacy instruction.

**Research Question 3: What is the self-efficacy of pre-service and in-service ECEs in terms of their perceived ability to support and instruct children in early literacy development?**

In an assessment of self-efficacy for early literacy instruction, participants
completed rating scales identifying their feelings of self-efficacy for teaching and assessing young children in different areas of early literacy instruction. What follows are quantitative analyses related to participants’ perceptions of self-efficacy, including any significant differences in self-efficacy between pre-service and in-service ECEs.

*Self-Efficacy for Early Literacy Instruction*

Self-efficacy assessments included the Self-Efficacy Scale for Early Literacy Instruction (adapted). This scale consisted of several subscales examining different aspects of self-efficacy for early literacy instruction. This study focused specifically on the phonemic awareness and oral language subscales.

All ECE participants ($n=54$) were assessed on their self-efficacy for early literacy instruction immediately following the completion of the knowledge assessments. The self-efficacy measure consisted of twenty-five questions where participants were asked to indicate their level of agreement on a nine-point likert-scale, with possible responses ranging from *not at all* to *a great deal*. Ratings of 1 to 3 (*not at all or very little*) on the scale indicated a low score on self-efficacy. Ratings at the mid-point of the scale (values of 4 to 6, denoting *some influence*) indicated a modest score. Ratings of 7 to 9 (*quite a bit or a great deal*) indicated a high score on self-efficacy. Results indicated that self-efficacy for early literacy instruction was variable and modest as the mean total score for the 25 items (max score 225) was situated around the mid-point ($M=136.87$, $SD=32.481$), an average of 5.47 per item.

As a subscale of this assessment, participants were assessed on their self-efficacy for phonemic awareness instruction. The measure consisted of five questions where
participants were asked to indicate their level of agreement on the same nine-point likert-scale (maximum score for these 5 items was 45). Results indicated that self-efficacy for phonemic awareness instruction was variable and overall modest as the mean total score was situated around the mid-point ($M=24.78$, $SD=6.880$), an average of 4.96 per item. Table 3.15 presents the results, item by item, for the phonemic awareness instruction subscale.

Table 3.15  
Means and standard deviations for Self-Efficacy for Phonemic Awareness Instruction Scale items

<table>
<thead>
<tr>
<th>Description</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent can you explicitly teach children about segmenting words into phonemes?</td>
<td>4.89</td>
<td>1.72</td>
</tr>
<tr>
<td>To what extent can you explicitly teach children about blending phonemes together to form words?</td>
<td>4.91</td>
<td>1.64</td>
</tr>
<tr>
<td>To what extent can you assess a child’s developing phonemic awareness?</td>
<td>5.0</td>
<td>1.67</td>
</tr>
<tr>
<td>To what extent can you meet the needs of students who are struggling developing phonemic awareness?</td>
<td>4.76</td>
<td>1.55</td>
</tr>
<tr>
<td>To what extent can you plan and implement phonemic awareness instruction for a Kindergarten program?</td>
<td>5.22</td>
<td>1.48</td>
</tr>
</tbody>
</table>

In addition, in a subscale consisting of five questions (max score 45), participants were assessed on their self-efficacy for oral language instruction. Results indicated that self-efficacy for oral language instruction was also variable and modest as the mean total score was situated around the mid-point ($M=26.78$, $SD=6.341$), an average of 5.36 per item. Table 3.16 presents the results of the oral language instruction, item by item, for the 5 questions in the subscale.
Table 3.16

Means and standard deviations for Self-Efficacy for Oral Language Instruction Scale items

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent can you meet the needs of students who are struggling in developing oral language?</td>
<td>4.87</td>
<td>1.166</td>
</tr>
<tr>
<td>To what extent can you use a variety of formal and informal assessments to evaluate oral language competencies?</td>
<td>5.02</td>
<td>1.536</td>
</tr>
<tr>
<td>To what extent can you teach young children strategies for learning new vocabulary?</td>
<td>5.39</td>
<td>1.323</td>
</tr>
<tr>
<td>To what extent can you provide specific, targeted feedback to students’ as they are learning to say new words?</td>
<td>5.33</td>
<td>1.952</td>
</tr>
<tr>
<td>To what extent can you use informal conversation to help young children to develop oral language?</td>
<td>6.17</td>
<td>1.756</td>
</tr>
</tbody>
</table>

Because a special focus of this study was on self-efficacy for phonemic awareness and oral language development specifically, analyses were performed to evaluate any differences between self-efficacy on these subscales. A paired-samples t test was performed to determine whether self-efficacy for phonemic awareness scores were significantly different from self-efficacy for oral language development scores. Results indicated that the mean phonemic awareness self-efficacy score ($M=24.78$, $SD=6.88$) was significantly lower than the mean oral language development self-efficacy score ($M=26.94$, $SD=6.57$), $t(53)=-2.71$, $p<.01$. The effect size index, Cohen’s $d$, was 0.32, indicating a small effect. These results show that while only a modest difference, ECEs appear to be slightly more confident in their ability to instruct young children in oral language development and related concepts than in phonemic awareness, based on a comparison of their ratings on the 5 items in the two respective subscales.
Subscales of early writing instruction and early reading instruction were also examined. The self-efficacy for writing instruction measure consisted of four questions (max score 36). Results indicated that self-efficacy for writing instruction was variable and modest as the mean total score was situated around the mid-point ($M=21.5$, $SD=6.544$), an average of 5.38 per item. Table 3.17 presents the item-by-item results of the early writing instruction subscale.

Table 3.17
*Means and standard deviations for Self-Efficacy for Writing Instruction Scale items*

<table>
<thead>
<tr>
<th>Item</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much can you do to meet the needs of struggling writers?</td>
<td>5.02</td>
<td>1.807</td>
</tr>
<tr>
<td>To what extent can you teach young children early writing strategies?</td>
<td>5.37</td>
<td>1.762</td>
</tr>
<tr>
<td>To what extent can you use students’ early writing to teach grammar and spelling strategies?</td>
<td>5.02</td>
<td>1.838</td>
</tr>
<tr>
<td>To what extent can you model effective printing strategies?</td>
<td>6.09</td>
<td>1.825</td>
</tr>
</tbody>
</table>

All participants ($n=54$) were also assessed on the self-efficacy for reading instruction subcale which consisted of nine questions (max score 81). Results indicated that self-efficacy for reading instruction was variable and modest as the mean total score was situated around the mid-point ($M=52.43$, $SD=12.984$), an average of 5.83 per item. Table 3.18 presents the item-by-item results of the early reading instruction subscale.
Table 3.18

*Means and standard deviations for Self-Efficacy for Reading Instruction Scale items*

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent can you teach young children strategies for decoding words?</td>
<td>5.15</td>
<td>1.806</td>
</tr>
<tr>
<td>How much can you do to meet the needs of struggling readers?</td>
<td>5.48</td>
<td>1.634</td>
</tr>
<tr>
<td>To what extent can you model effective reading strategies?</td>
<td>6.07</td>
<td>1.725</td>
</tr>
<tr>
<td>To what extent could you implement effective reading strategies in your classroom?</td>
<td>5.83</td>
<td>1.702</td>
</tr>
<tr>
<td>To what extent can you help your students to monitor their own use of early reading strategies?</td>
<td>5.41</td>
<td>1.631</td>
</tr>
<tr>
<td>To what extent can you help your students figure out unknown words they are reading?</td>
<td>5.89</td>
<td>1.513</td>
</tr>
<tr>
<td>To what extent can you recommend/select a variety of quality children’s literature for your students?</td>
<td>6.17</td>
<td>1.911</td>
</tr>
<tr>
<td>To what extent can you choose developmentally appropriate reading materials for children?</td>
<td>6.41</td>
<td>1.807</td>
</tr>
<tr>
<td>How much can you motivate students who show low interest in beginning reading?</td>
<td>6.02</td>
<td>1.498</td>
</tr>
</tbody>
</table>

Correlations were determined among the subscales through correlation analyses. Correlation coefficients were computed among the composite scores of the four self-efficacy scales. Using the Bonferroni approach to control for Type I errors, a p value of less than .008 (.05/6 = .008) was required for significance. The results of the correlation analyses presented in Table 3.19 show that all of the 6 correlations were statistically significant and were greater than or equal to .611. The results suggest that if participants report having higher levels of self-efficacy in one instructional domain, they tended to report having higher levels of self-efficacy in other instructional domains.
Table 3.19

Correlations among the four self-efficacy scales

<table>
<thead>
<tr>
<th>Self-Efficacy Scale</th>
<th>Phonemic Awareness</th>
<th>Oral Language</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonemic Awareness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Language</td>
<td>.611*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>.647*</td>
<td>.885*</td>
<td></td>
</tr>
<tr>
<td>Writing</td>
<td>.829*</td>
<td>.706*</td>
<td>.748*</td>
</tr>
</tbody>
</table>

*p < .005

Surprisingly, however, no such relationships existed between the self-efficacy scales and the knowledge measures. Correlation coefficients were computed among the self-efficacy scales and knowledge measure scores. Using the Bonferroni approach to control for Type I errors, a p value of less than .008 (.05/6 = .008) was required for significance. The results of the correlation analyses were not significant, suggesting that participants’ knowledge scores were not related to their self-efficacy for instruction. The correlation matrix is presented in Appendix J.

Differences in Pre-Service and In-Service ECEs’ Self-Efficacy

Independent samples t test were performed to determine whether the self-efficacy ratings of pre-service and in-service ECEs differed on the Self-Efficacy for Early Literacy Instruction Scale, as a whole, and also for each subscale within it. Analyses looking for potential self-efficacy differences yielded no significant findings. Pre-service and in-service ECEs did not demonstrate significantly different levels of self-efficacy for early literacy instruction as a whole, or for phonemic awareness instruction, oral language instruction, writing instruction or reading instruction.
Discussion for Research Question 3

This section presented the findings in relation to research question 3: What is the self-efficacy of pre-service and in-service ECEs in terms of their perceived ability to support and instruct children in early literacy development? First, this section reported the findings of ECEs’ overall self-efficacy for early literacy, as well as their self-efficacy in various areas of early literacy instruction. The findings indicate that ECEs felt just moderately confident about their ability to provide meaningful instruction in all areas assessed. These results are consistent with the findings of other research examining educators’ self-efficacy for literacy instruction, demonstrating that ratings of self-efficacy for phonemic awareness, oral language, writing and reading are modest (Gerde et al., 2018; Martinussen, Ferrari, Aitken, & Willows, 2015; Taschannen-Moran & Johnson, 2011).

This section also reported correlations among the self-efficacy subscales. If ECEs reported higher self-efficacy in one instructional area, they were more likely to report higher self-efficacy in other instructional areas. ECEs reported slightly higher self-efficacy levels for oral language instruction as compared to phonemic awareness instruction but, while a statistically significant difference, the effect size was small and scores for both instructional areas were modest.

Analyses also examined whether participants’ feelings of self-efficacy to assess and teach various aspects of early literacy related to their actual knowledge and understanding in these areas. Consistent with research examining the relationship between self-efficacy for literacy instruction and literacy knowledge (Bostock & Boon, 2012; Leader-Janssen & Rankin-Erickson, 2013; Martinussen et al., 2015) no relationship
was found between self-efficacy and knowledge scores. Self-report of greater or lesser feelings of self-efficacy did not mirror underlying differences in early literacy knowledge, as determined by objective tests designed to assess knowledge and understanding.

This section also looked for potential self-efficacy differences between pre-service and in-service ECEs. There were no significant differences between pre-service and in-service ECEs in terms of their self-efficacy for early literacy instruction on any of the subscales. For all participants self-efficacy was modest. This finding is of considerable concern given the literature suggesting that self-efficacy is predicative of effective and successful instruction (Allinder, 1994; Soodak & Podell, 1993).

**Qualitative Results and Discussion**

The previous section presented the quantitative results and discussion of study 1. This section presents the qualitative findings for study 1. The focus in the present section is on participants’ perceptions of their knowledge in the areas of phonemic awareness and oral language and of their ability to implement instruction in these areas. Through the interpretive analysis described in the methods section, three themes emerged (See Figure 3.0). Further information about participant responses categorized by participant number, participant group and qualitative theme are found in Appendix D.

<table>
<thead>
<tr>
<th>Theme 1: Sources of Knowledge</th>
<th>Theme 2: ECE’s Knowledge and Skills</th>
<th>Theme 3: Feelings of Self-Efficacy to Teach Early Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Exposure to key concepts in coursework</td>
<td>• Knowledge of phonemic awareness concepts and development</td>
<td>• Factors associated with feeling confident to teach</td>
</tr>
<tr>
<td>• Opportunities to apply learning</td>
<td>• Knowledge of oral language concepts and development</td>
<td>• ECEs’ apprehension to teach</td>
</tr>
<tr>
<td></td>
<td>• Deficits in knowledge</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 3.0. Overview of qualitative results for study 1*
The first theme presents the sources of ECEs’ early literacy knowledge as developed through their training programs and professional work experiences. The second and third themes reflect ECEs’ accounts of their early literacy knowledge, skills and feelings of preparedness.

**Theme 1: Sources of Knowledge**

- Exposure to key concepts in coursework
- Opportunities to apply learning

Theme 1 includes the data relevant to the acquisition of ECEs’ knowledge of early literacy concepts. These results were derived from the open-ended questions where participants reflected on their knowledge related to phonemic awareness and oral language development and on the sources to which they attributed their knowledge. ECEs’ responses revealed that they attributed primary sources of their knowledge to: (1) exposure to key concepts in coursework, and (2) opportunities to apply learning.

_ECEs’ Exposure to Key Concepts in Coursework_

Throughout ECEs’ accounts of the sources of their literacy-related knowledge, it was evident that they attributed some of their knowledge and feelings to their coursework experiences. Some pre-service and in-service ECEs discussed learning about key early literacy concepts through lecture material during their classes and from their required readings. However, it was also evident that some ECEs felt that these concepts were missing from their coursework experiences and attributed their lack of knowledge and feelings of unpreparedness to these instructional gaps.
**Concepts explicitly taught during lectures.** Some pre-service and in-service ECEs mentioned the value of their lectures in learning key early literacy concepts related to phonemic awareness and oral language. In particular, they emphasized that their instructors explicitly described and explained concepts related to phonemic awareness and oral language development and they felt that this instruction helped them to develop knowledge and self-efficacy in these key areas. For example:

I remember learning about phonemes and breaking words and sentences down into different sounds. At first, I wasn’t sure how knowing this could help children learn to read but my professor explained that an ECE needs to know how to teach these skills. (P9)

I know about phonology and how language is made of sounds. We spent a lot of time on it. I definitely bring it into my daily activities with my kids. The kids love playing games with words and it’s easy to do. (P51)

The class was focused on “ages and stages” so I learned all about what’s happening with language at different ages. Because I understand how language develops, I can work to extend their [children’s] oral skills. (P13)

We were taught about how language develops and what we can do to support their [children’s] language skills. I feel like I would actually know how to do this. (P1)
**Knowledge gained from required readings.** Both pre-service and in-service ECEs mentioned the value of required readings. The required readings were viewed as useful resources that they can use as references for the future. Moreover, there was a recognition and appreciation for the role the readings played in furthering their understanding and knowledge with respect to phonemic awareness and oral language development. However, there were notable differences between pre-service ECEs and in-service ECEs in their perceptions of how applicable these readings were to their roles as ECEs. Pre-service ECEs tended to focus on the *theoretical* value of required readings and related activities. They mentioned the value of the readings in deepening their understanding of the roles of phonemic awareness and oral language in the literacy development of young children. For example:

The readings let me develop an overall understanding of how oral language develops and then when it was discussed in class, my understanding expanded and I could figure out how this looked in the classroom. (P10)

The textbook helped me understand how different elements of literacy are connected and how each part is like a piece of a puzzle. It’s important to understand about how knowing the sounds of words is connected to reading and writing. (P11)

In contrast to pre-service ECEs, in-service ECEs valued readings, such as those that discussed instructional practices or teaching activities, because they could envision
the *application* of the information from these readings to early childhood education settings. For example:

The readings talked about good teachers, teaching great activities that directly improve language skills. That one article about the structure of language really helped me to understand how children learn to speak and my role in the process. (P14)

Reading about the language curriculum expectations in Ontario was useful for my job in learning what is expected from me and the centre. (P50)

**Lack of exposure to key concepts in coursework.** Throughout ECEs’ accounts of the sources of their literacy-related knowledge, it was evident that a preponderance of participants felt that certain components were not sufficiently taught in their literacy-focused courses. Both pre-service and in-service ECEs attributed their perceived lack of knowledge and self-efficacy to not learning about phonemic awareness and oral language concepts in their coursework. For example:

I didn't learn anything about phonemic awareness in my language classes. It was never even mentioned. (P32)

These concepts weren’t taught in my program. We focused on general language development and didn’t get into the specifics. (P17)
We spent a lot of time talking about language milestones but I don’t remember ever hearing phonemic awareness. I’m worried now that I don't have the information I need for working as an ECE. (P23)

I wouldn’t say that I have any source of knowledge. I’m definitely missing some concepts. I don’t think we spent enough time learning about them in school. (P2)

It’s obvious now that stuff was missing from the literacy courses at [college program]. Some concepts were covered but definitely not enough. I’m definitely missing some things that I should know. (P52)

I’m not confident in my knowledge and ability to help children develop their language skills. It was hard to name one thing I know. I don’t remember learning about phonemic awareness in depth. (P40)

*Opportunities to Apply Learning.*

In ECEs’ accounts of their literacy-related knowledge and self-efficacy, it was evident that having opportunities to apply their learning was seen as valuable for solidifying their knowledge and increasing their self-efficacy for phonemic awareness and oral language instruction. These opportunities for application of knowledge and skills were discussed in the contexts of required assignments and practicum/professional experiences. Some pre-service and in-service ECEs discussed the value of having the opportunity to apply concepts and skills taught during their courses, in completing the
required assignments. Others discussed the value of applying concepts and skills taught in class, when working directly with children in practicum and professional experiences. However, it was also evident that a preponderance of ECEs felt that they lacked the opportunity to apply concepts discussed in class, and attributed their lack of knowledge and feelings of unpreparedness to lacking these opportunities.

**Required assignments and applied learning.** Pre-service and in-service ECEs discussed their assignments as an opportunity to apply course learning about concepts related to phonemic awareness and oral language. There was one specific assignment that six pre-service ECEs mentioned as being a particularly useful learning and application experience. For this assignment, pre-service ECEs were required to develop an early literacy curriculum program, placing emphasis on developing foundational literacy skills and to explain this program in a newsletter intended for families. Participants identified this assignment not only as valuable for learning and implementing early literacy curriculum, but also for developing skills in creating classroom resources and in communicating with families. For example:

> I had to do research on games and activities that extend children’s speech for the literacy newsletter assignment. I learned about little games that ask children to swop out letters and sounds which I think is building these phonemic awareness. (P19)

The home-school literacy assignment made us explore the language curriculum for kindergarten, which included specific learning of phonemic awareness. And to
show this information in a format that appeals to families, really helped me to
develop an understanding of how to communicate the literacy curriculum to
families. (P9)

Other valuable assignments that both pre-service and in-service ECEs identified
as contributing to their phonemic awareness and oral language-related learning and self-
efficacy, involved integrating early learning curriculum into applied assignments.
Participants mentioned analyzing case studies, developing learning plans and developing
assessment tools. Through these assignments, ECEs developed a deeper understanding of
how to interpret and implement the early learning curriculum and how to develop
resources they would use in the field. For example:

When I had to use the ELECT document to analyze the case study, I began to
understand exactly how language progresses in the preschool years. It was helpful
for me to see how one skill extends into another skill. (P11)

When we made our learning plans, we would have to link them to the curriculum
and it helped me to understand what children are learning in terms of letter sounds
and names. I feel like I have more ideas about what to do now. (P52)

I had to develop a developmental assessment that used the language domain. I
really had to think about how language develops and translate that into an
observation-based tool. (P3)
Practicum/Professional experiences and applied learning. Pre-service and in-service ECEs also discussed their practicum experiences as providing valuable opportunities to apply course learning about concepts related to phonemic awareness and oral language. In-service ECEs also emphasized the role of professional experiences in applying knowledge and skills. Participants emphasized the role of direct contact with children, in developing a deeper understanding of key concepts related to phonemic awareness and oral language, and the role of applied learning in increasing their sense of self-efficacy. For example:

In my infant placement, I could see how the babies were trying to communicate with me and I knew how to mimic their sounds because we learned that strategy and we could have a bit of a conversation. They loved that. (P49)

I did a game where they used the tambourine to tap out the beats in their names. I remember reading about breaking words up into parts and how that’s good for developing language skills. (P7)

I remember bringing my class notes and doing the “sound switch” game with the JKs. They thought it was so funny and all the while, they were developing better skills. (P54)

Lack of opportunities to apply learning. It was evident that a preponderance of participants felt that they were lacking sufficient opportunities to apply concepts that
were introduced in class and in readings. Both pre-service and in-service ECEs felt that their phonemic awareness and oral language knowledge and self-efficacy was lacking, in part because they weren’t able to solidify their understanding of concepts through practical application. For example:

I remember learning about how to help a child break apart a word into sounds but I never had the chance to practice this strategy with a child because my placements were finished and now I doubt I could do it well. (P 51)

There was this really great article talking about beginning reading skills and about understanding the sounds in language but I forgot it all because I didn’t get a chance to try it out on the kids. (P2)

My literacy course happened after my practicum was over so I never had a chance to teach the methods I had learned. I would be more confident if I had the chance. (P40)

<table>
<thead>
<tr>
<th>Theme 2: ECEs’ Knowledge and Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Knowledge of phonemic awareness concepts and development</td>
</tr>
<tr>
<td>• Knowledge of oral language concepts and development</td>
</tr>
<tr>
<td>• Deficits in knowledge</td>
</tr>
</tbody>
</table>

Theme 2 includes ECEs’ accounts of their knowledge of phonemic awareness and oral language development. ECEs’ accounts of their knowledge were explored through
open-ended questions asking them to describe specific information about what they know about phonemic awareness and oral language as well as to describe any strategies they know about teaching these concepts. ECEs’ responses revealed that their knowledge and skills could be categorized according to the following topics: (1) knowledge of phonemic awareness concepts and phonemic awareness development, (2) knowledge of oral language concepts and oral language development, and (3) deficits in knowledge.

**ECEs’ Knowledge of Phonemic Awareness Concepts and Development.**

ECEs’ knowledge of phonemic awareness was explored through an open-ended question asking them to identify specific things that they knew about phonemic awareness and phonemic awareness instruction, as well as instructional strategies that they had learned. Accounts of their knowledge and skills highlighted the variability of the phonemic awareness-related knowledge that ECEs possess. ECEs’ responses revealed their knowledge base and skills in three areas: theoretical knowledge of phonemic awareness, applied phonemic awareness knowledge and strategies, and phonemic awareness assessment.

**Theoretical knowledge of phonemic awareness.** Pre-service and in-service ECEs identified theoretical concepts of phonemic awareness. Specifically, some ECEs were able to articulate the role of phonemic awareness and developing phonemic awareness skills in the context of language development as a whole. As well, some ECEs discussed their theoretical understanding of phonemic awareness in the context of their understanding of principles related to phonology and linguistics. For example:
I know that a phoneme is a small unit of sound in oral language and that words and sentences are made of many units of sound combined together. (P22)

I think it [phonemic awareness] has something to do with the pronunciation of the sounds in words. (P5)

Being fluent in a language begins with being able to hear and identify the tiniest parts of words. These are phonemes, and to become fluent in a language you need to be able to make sense of phonemes and how to identify them. (P24)

**Applied phonemic awareness knowledge and strategies.** Some pre-service and in-service ECEs mentioned that they had applied knowledge of phonemic awareness by discussing specific activities and strategies they had implemented with children. These activities related to identifying, blending and segmenting phonemes. As well, some ECEs mentioned phonological awareness and phonics activities related to rhyming and segmenting words into syllables, and to making letter-sound associations. For example:

An example of an activity to develop these skills would be counting the sounds in words and discussing which letters make these sounds. (P14)

I learned a game called “soundswap”, where you swap the beginning and end sounds in words. This is a game I would play with children. (P51)
I know that it is important to sing rhyming songs and play games that make children think about the sounds in words. Using their names is a great way to do this. (P12)

Something I have tried is to clap the beats in words and then play a guessing game about the sounds that make up the beats. (P30)

**Phonemic awareness assessment.** A few pre-service and in-service ECEs also mentioned informal ways in which they assess phonemic awareness. Specifically, some ECEs discussed how they would be able to identify whether a child was developing phonemic awareness skills or struggling to do so. For example:

I know how to tell if a child knows that language is made of different sounds. You have to be able to tell if a child can hear these sounds and knows they are there. If they can’t they will have trouble learning to read. (P12)

I remember learning about how children use their phonemic awareness to sound out words when they are reading. So I learned some games to play with the children to tell if they are developing these skills. (P51)

_ECEs’ Knowledge of Oral Language Concepts and Development._

ECEs’ knowledge of oral language was explored through an open-ended question asking them to identify specific things that they knew about oral language and oral
language instruction, as well as instructional strategies that they had learned. Accounts of
their knowledge and skills highlighted that most ECEs felt they had some level of
knowledge and instructional skills related to oral language. ECEs’ responses revealed
their knowledge base and skills in three areas: theoretical knowledge of oral language
development, applied oral language knowledge and strategies, and oral language
assessment.

**Theoretical knowledge of oral language development.** Pre-service and in-
service ECEs discussed theoretical concepts related to oral language development.
Specifically, some ECEs were able to articulate how language is acquired and factors that
influence language development. As well, some ECEs described their theoretical
understanding of oral language in the context of their understanding of literacy as a
whole, and the role that oral language plays in developing skills in reading and writing.

For example:

I know oral language development begins before birth and provides the
foundation for all language and literacy abilities. (P41)

There are many factors that influence language development like culture, poverty
and access to resources. (P35)

There is a sequence of language development that begins with babies and their
skills gradually increase over time. The role of the ECE is important in
accelerating language learning. (P14)
I know that the process of learning a language changes depending on the language that is spoken, and that oral language is the first skill before reading and writing. (P16)

**Applied oral language knowledge and strategies.** Some pre-service and in-service ECEs explained how they had applied knowledge of oral language development by discussing specific activities and strategies they had implemented with children. These activities often involved using a book or other text as an opportunity to model the use of oral language and build children’s vocabulary. As well, ECEs emphasized the importance of informal conversation as a strategy for developing language. For example:

Reading stories out loud is good for modeling oral language and teaching children new words. (P18)

Engaging in conversation throughout the day. During transitions, at snack time, during play-time. The ECE gets to model how language is used in a stress-free way. (P4)

Let the child ask lots of questions and take the time to answer them. (P11)

The use of oral language in applied contexts was also seen a valuable. In-service ECEs specifically mentioned the value of dramatic play in promoting oral language development. For example:
The dress-up centre is a great place for children to practice using oral language and a good opportunity to learn new vocabulary (like about cooking or a doctor’s office). (P50)

I remember learning that make-believe play is one of the best opportunities for children’s language skills to improve. (P49)

**Oral language assessment.** A few pre-service and in-service ECEs also mentioned informal ways in which they assess oral language skills. Specifically, some ECEs discussed how they would be able to recognize whether a child was demonstrating developmentally appropriate language capabilities. For example:

I know when to expect the first words and then, after that, they can combine words to form simple sentences. I know around 3 years old, that vocabulary expands a lot. (P37)

If a child hasn’t said their first word by 18 months, there could be a concern. (P8)

*Deficits in Knowledge.*

Despite the knowledge and practical understandings of a few (represented above), overwhelmingly, pre-service and in-service ECEs reported that they were unfamiliar with or lacked adequate knowledge of phonemic awareness and oral language. There were
considerably more accounts of knowledge deficits in the area of phonemic awareness, however, several pre-service and in-service ECEs did mention deficits in oral language knowledge as well. ECEs’ responses did not reveal any particular trends in terms of what specific knowledge they lacked but rather that their overall knowledge base was inadequate.

**Deficits in phonemic awareness knowledge.** The majority of both pre-service and in-service responses indicated that ECEs felt they did not possess adequate knowledge in phonemic and phonemic awareness instruction. Their responses did not indicate that any specific concepts were missing but that, overall, their perceptions of their general knowledge was low. For example:

I have honestly never heard of phonemic awareness before. I have no idea what it means or how to teach it. (P32)

I cannot name one specific thing about phonemic awareness. Am I supposed to know this? (P35)

What is phonemic awareness? (P27)

I don’t know anything about phonemic awareness. (P15)

**Deficits in oral language knowledge.** Several pre-service and in-service ECEs discussed deficits in their knowledge of oral language and oral language instruction,
although not as many as those who discussed deficits in phonemic awareness knowledge. Their responses revealed that, while they had some basic knowledge, their overall knowledge was low and they felt that their knowledge was inadequate for supporting young children’s oral language development. For example:

I know a little bit about how language develops but definitely not enough. (P21)

There is a lot I don’t know. I should probably learn more about what I can do to help develop children’s language. (P44)

I don’t know enough. Let’s just leave it at that. (P6)

Theme 3: Feelings of Self-Efficacy to Teach Early Literacy

• Factors associated with feeling confident to teach
• ECEs’ apprehension to teach

Theme 3 includes ECEs’ accounts of their self-efficacy to teach early literacy. ECEs’ accounts of their self-efficacy were explored through open-ended questions asking them to describe their feelings of preparedness and their confidence in teaching phonemic awareness and oral language. ECEs’ responses revealed that their self-efficacy could be categorized according to the following topics: (1) factors associated with feeling confident to teach, and (2) ECEs’ apprehension to teach.
Factors Associated with Feeling Confident to Teach.

In describing their feelings of preparedness to teach phonemic awareness and oral language, pre-service and in-service ECEs highlighted three factors that contributed to whether or not they felt confident as instructors: (1) coursework-related knowledge foundation, (2) opportunities to apply their knowledge and skills in an ECE setting, and (3) accumulation of relevant resources.

**Coursework-related knowledge foundation.** ECEs’ confidence as instructors related to their perception of whether their literacy coursework enabled them to build an adequate base of knowledge. Thus, ECEs who thought their program provided them with a comprehensive knowledge base with respect to phonemic awareness and oral language felt confident about being able to teach young children these skills effectively. For example:

I feel like I learned so much about phonemic awareness from my language course that I can be an effective teacher in helping my students develop their skills. I also have a number of books and articles that I can look at for ideas. That course really improved my confidence, I felt ready to teach after that course. (P25)

I learned a lot about language and how it develops in my program. I know what to expect and when and it’s really made me feel well prepared to work with children of any age. I would say that I feel very confident. (P1)
In contrast, several ECEs described feeling uncertain about their ability to teach phonemic awareness and oral language, and related this to a failure of their literacy courses to provide them with the necessary knowledge to teach these skills. For example:

I expected to learn more about specific skills and strategies to support children in their developing language but there was nothing. We didn’t spend any time on phonemic awareness and so I don’t feel prepared at all. (P44)

I wouldn’t even know where to begin. While we talked about phonemic awareness a little, I don’t remember anything specific and I don’t remember any readings or activities about it. I would have no clue what to do with children. (P32).

**Opportunities to apply their knowledge and skills in an ECE setting.** ECEs’ confidence as instructors also related to the opportunities they had to apply their learning of concepts related to phonemic awareness and oral language in instructional settings. Specifically, in-service ECEs who were professionally employed in an ECE setting, where they worked directly with children, mentioned the role of applying their skills and knowledge in their daily interactions with children, in solidifying their knowledge and building their confidence for teaching. For example:

I feel pretty confident about teaching skills in phonemic awareness because I have practiced lots of games with my children. Having the opportunity to learn about a
strategy and then try it out at work has helped me to better understand how the strategies work. (P29)

Because of my job I had the chance to learn about language milestones in class and then see them in real-life. This really helped me to understand the content and feel confident about how to extend their development. (P16)

**Accumulation of relevant resources.** Another factor that ECEs associated with their feeling of preparedness to teach phonemic awareness and oral language was the amount and variety of resources they accumulated through their coursework and professional experiences. Thus, even for those ECEs who identified deficits in their knowledge, some felt they could potentially fill in those gaps by reviewing the material and resources they had accumulated. For example:

I have a really good literacy textbook and several handouts that I feel will give me some great ideas when I have my own classroom. (P6)

I definitely don't remember everything we were taught, but I know I can always go back to my course notes. So I feel good about that. I think with a bit of a “refresher”, I would feel pretty confident. (P10)
Although a few pre-service and in-service ECEs expressed feeling at least somewhat prepared to teach phonemic awareness and oral language, the majority conveyed an apprehension to teach. In describing their apprehensions to teach, pre-service and in-service ECEs highlighted two primary concerns: (1) identifying and assessing the needs of their students, and (2) meeting the needs of all children.

**Identifying and assessing the needs of their students.** Both pre-service and in-service ECEs were concerned about their unpreparedness to assess and identify the needs of their students in terms of their varying levels of phonemic awareness and oral language development. For example:

I’m not really sure how I would go about identifying what the children’s language skills are and how to help them to improve. I feel confused about where to begin with this. (P28)

I’m not confident in my ability to assess phonemic awareness and then plan activities to challenge the children appropriately. (P47)

I don’t feel prepared to figure out who needs the most support and then provide it to those who do need it. (P21)

**Meeting the needs of all children.** Both pre-service and in-service ECEs expressed apprehension about being able to adequately address the needs of the diverse
learners they would encounter. This was particularly evident in ECEs’ reports of feelings of unpreparedness to support oral language development. For example:

I’m concerned about how I will be able to give the right instruction to all the kids because they will be at different levels in their language. I feel like I don’t have enough knowledge to do this well. (P19)

How will I know where they should be in terms of their oral language and how to teach them what they need to know? There will be different skills in the class and I don’t know how I will meet their needs. (P49)

Discussion of Qualitative Findings

This discussion provides a brief overview of the emergent themes, summarizes the key findings and discusses the conclusions of the qualitative component of study 1. There has been limited research exploring pre-service (Cheesman et al., 2009; Fielding- Barnsley, 2010; Tetley & Jones, 2014) and in-service (Hammond, 2015; Schachter et al., 2016) ECEs’ early literacy knowledge. Moreover, the potential usefulness of qualitative research to better understand the sources and nature of ECEs’ early literacy knowledge has not been adequately explored. No known qualitative research has examined pre-service and in-service ECEs’ perceptions of their phonemic awareness and oral language-related knowledge and related self-efficacy. Therefore, this study provides unique insights. The research questions focused on exploring what ECEs know about key early literacy concepts and how their knowledge impacted their confidence and feelings of
preparedness to provide instruction to young children. Three themes emerged from the study: 1) sources of knowledge, 2) ECEs’ knowledge and skills, 3) feelings of self-efficacy to teach early literacy. These themes addressed the research questions of the present study. The following subsections summarize the key findings and examine links between the findings and existing theory and research.

Theme 1: Sources of Knowledge

When reflecting on their knowledge and self-efficacy of key early literacy concepts, ECEs in the present study emphasized the role that specific sources of knowledge played in their acquisition of phonemic awareness and oral language knowledge. While representing a minority of participants, both pre-service and in-service ECEs described how exposure to key concepts in their coursework and readings positively contributed to their growing knowledge of phonemic awareness and oral language instruction. However, overwhelmingly, pre-service and in-service ECEs described the lack of exposure to phonemic awareness and oral language concepts in their coursework and readings, and attributed this as a leading cause of their perceived knowledge deficits. These perceived knowledge deficits are consistent with those identified in the literature examining pre-service ECEs and schoolteachers (Cheesman et al., 2009; Fielding-Barnsley, 2010; Mather et al, 2001; Stainthorp, 2004; Tetley & Jones, 2014).

The present study also found that both pre-service and in-service valued the opportunity to apply the theoretical learning they gained through coursework and readings, through completing assignments and practicum placements, consistent with the
literature on principles of adult learning which state that active learning is an essential component of the process of acquiring knowledge (Gregson & Sturko, 2007; Kang, Cha, & Wa, 2013). Those participants who mentioned the value of opportunities for applied learning were more likely to articulate a sense of having at least some level of knowledge in phonemic awareness and oral language development. The majority of participants, however, commented on the lack of opportunities to apply their learning and attributed their perceived early literacy-related knowledge deficits to this lack of opportunity.

Overall, a few participants reported the value of exposure to early literacy concepts in their coursework and indicated that opportunities to apply this knowledge positively contributed to their developing understanding of phonemic awareness and oral language. However, the majority of participants reported a lack of exposure to early literacy concepts in their coursework and a lack of opportunities to apply whatever learning they may have received; and they attributed their perceived knowledge deficits concerning phonemic awareness and oral language instruction to these limitations in their programs.

**Theme 2: ECEs’ Knowledge and Skills**

Participants reflected on their perceived knowledge of phonemic awareness and oral language development and provided specific examples of concepts they knew. While a few participants were able to recall specific concepts or bits of knowledge, the majority of ECEs discussed their lack of knowledge. Many participants could not identify any examples of phonemic awareness or oral language knowledge. Overall, it was evident that ECEs had significant deficits in their knowledge of phonemic and oral language.
In relation to knowledge of phonemic awareness, some ECEs discussed a theoretical understanding of the role that phonemic awareness plays in language and reading development. Applied understandings of phonemic awareness, such as how to identify and manipulate phonemes, was also mentioned by a few ECEs. As well, a few ECEs discussed strategies for assessing phonemic awareness. However, the majority of participants could not recall even one aspect of phonemic awareness-related knowledge, consistent with the existing research involving ECEs and schoolteachers that has examined theoretical knowledge (Cheesman et al., 2009; Fielding-Barnsley, 2010; Hammond, 2015) and applied knowledge (Cheesman et al., 2009; Crim et al., 2008; Fielding-Barnsley, 2010) concerning phonemic awareness.

Regarding knowledge of oral language development and instruction, some ECEs discussed their theoretical understanding of oral language development in terms of how oral language develops and the role that oral language plays in reading and writing. As well, some ECEs mentioned applied strategies about oral language instruction, such as how to use books to support vocabulary development. A few ECEs discussed their knowledge of oral language milestones and how they could assess oral language development.

Many ECEs, however, discussed their lack of knowledge of oral language development and instruction. This finding is consistent with the research conducted by Schachter (2015), who reported that ECEs lacked adequate knowledge in oral language and vocabulary. Their finding was of particular concern since their study also found that knowledge was highly predictive of positive instructional opportunities given to children. While many participants discussed their perceived knowledge deficits in oral language
development, even more reported deficits in phonemic awareness knowledge, a finding that could potentially suggest that ECEs are less knowledgeable concerning phonemic awareness than oral language development.

Theme 3: Feelings of Self-Efficacy to Teach Early Literacy

Many of the participants discussed aspects of self-efficacy for early literacy instruction in their responses. Participants mentioned factors associated with feeling confident to teach and also articulated their apprehensions to teach.

Some of those participants who articulated confidence to teach early literacy concepts mentioned how their coursework and practicum experiences provided them with a foundation of knowledge, consistent with the findings of Tetley and Jones (2014) in their study of the instructional self-efficacy of pre-service teachers. In the current study, ECEs discussed how the theoretical components of their coursework and applied experiences contributed to their feelings of preparedness to instruct and support their students. A few participants, in particular, emphasized the value of their practicum placements in increasing their confidence, consistent with the literature on experience and self-efficacy (Bostock & Boon, 2012).

However, participants who articulated uncertainty in their knowledge and skills discussed how their courses and practicum placements did not provide them with an adequate foundation. This finding is consistent with that of Maloch et al. (2003) who examined the relationship between self-efficacy for literacy instruction and the quality of their teacher education program. Many participants in the current study discussed feeling concerned about their ability to identify and assess the needs of their students and
ultimately to meet their students’ needs. Consistent with the literature on self-efficacy and instructional practices (Allinder, 1994; Pinnell, 2002; Tschannen-Moran & Johnson, 2011), these apprehensions impacted participants’ feelings of confidence in their ability to provide effective instruction in phonemic awareness and oral language in the classroom.

**General Discussion of Study 1**

The previous sections presented the quantitative and qualitative results and discussion of study 1. This general discussion section highlights the relation between the quantitative and qualitative findings. It begins with a description of the model used for integrating the quantitative and qualitative findings of study 1. Then it presents a synopsis of the major quantitative and qualitative findings along with a discussion of how the qualitative results both converge and diverge from the quantitative findings. This integrative discussion is organized around the three research questions that guided the study. Finally, the general discussion considers some limitations of the research and ends with some thoughts on the significance and implications of study 1.

**Integrating Quantitative and Qualitative Data**

This mixed-methods study adopted a concurrent triangulation design, where quantitative and qualitative data were collected concurrently (Tashakkori & Teddlie, 2003). The data were analyzed separately and then merged for comparison, using an approach known as *joint display*, in which quantitative and qualitative data are brought together through a visual means to present the findings using a side-by-side comparison (Fetters et al., 2003).
The joint display comparison approach allows for the presentation and discussion of convergent and divergent quantitative and qualitative results. The integrated quantitative and qualitative results are presented in the following section. In addition to highlighting where quantitative and qualitative findings converged, the joint display comparison approach revealed that some of the qualitative findings extended understanding of ECEs’ knowledge and self-efficacy perceptions that were not captured by the quantitative data. These additional contributions are also presented in the following section.

Data Comparison

This exploratory study sought to examine pre-service and in-service ECEs’ knowledge and self-efficacy related to phonemic awareness and oral language instruction, and to compare any differences between pre-service and in-service ECEs in terms of this knowledge and self-efficacy. Relevant findings are related to early literacy experiences, ECEs’ professional knowledge of early literacy instruction, and ECEs’ self-efficacy for teaching early literacy.

Early literacy experiences. The findings of this study indicate that pre-service and in-service ECEs completed diverse early literacy experiences as part of their academic program and their professional lives. While the early literacy experiences of ECEs were examined both quantitatively and qualitatively, the quantitative results focused on the duration and types of early literacy experiences whereas the qualitative results also captured the impact of these experiences on developing early literacy
knowledge and self-efficacy. See Table 3.20 for merged data related to the early literacy experiences of ECEs.

Table 3.20

*Exploration of ECEs’ early literacy experiences*

<table>
<thead>
<tr>
<th>QUAN Results</th>
<th>QUAL Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>All ECEs had completed at least one literacy-focused course and the majority had spent more than 50 hours in literacy focused courses:</td>
<td>All ECEs mentioned having completed literacy-focused courses and many discussed the role of their coursework in contributing to their knowledge:</td>
</tr>
<tr>
<td>• 58.6% of pre-service and 60% of in-service ECEs had received more than 50 hours of literacy-focused instruction.</td>
<td>• Some ECEs mentioned the value of required readings and assignments in developing their knowledge.</td>
</tr>
<tr>
<td>All ECEs completed a range of practicum placements in the early years. There were notable differences between pre-service and in-service ECEs:</td>
<td>• The majority of ECEs did not feel that their coursework provided them with adequate foundational knowledge in phonemic awareness or oral language instruction.</td>
</tr>
<tr>
<td>• Pre-service ECEs spent considerably fewer total hours in practicum placements ($M = 407.52$) as compared to in-service ECEs ($M = 641.96$).</td>
<td>Some ECEs discussed the role of their practicum experiences in contributing to their knowledge:</td>
</tr>
<tr>
<td>• Pre-service ECEs spent considerably fewer placement hours in infant and toddler placements ($M = 27.72; M = 48.72$) as compared to in-service ECEs ($M = 124.4; M = 155.92$)</td>
<td>• Those pre-service and in-service ECEs that mentioned their practicum experiences discussed how they positively influenced their developing knowledge in terms of giving them the chance to apply theoretical concepts taught in coursework.</td>
</tr>
<tr>
<td>In-service ECEs were professionally employed and the majority had direct contact with children:</td>
<td>Some in-service ECEs discussed the role of their professional experiences in contributing to their knowledge:</td>
</tr>
<tr>
<td>• The majority of in-service ECEs (72%) were employed in an educator role where they had direct contact with children.</td>
<td>• Some ECEs mentioned the role of direct contact with children in developing a deeper understanding of key concepts related to phonemic awareness and oral language instruction.</td>
</tr>
<tr>
<td>• The large majority of in-service ECEs (92%) had at least two years of professional experience.</td>
<td></td>
</tr>
</tbody>
</table>
The quantitative results highlighted that both pre-service and in-service ECEs had a range of early literacy experiences including literacy-focused coursework and a variety of placements involving direct contact with young children. These findings also highlighted the differences between pre-service and in-service ECEs in that pre-service ECEs had fewer total practicum hours and fewer hours in infant and toddler placements, as compared to in-service ECEs. As well, quantitative results indicated that the majority of in-service ECEs who were professionally employed in the field had been employed for at least two years and held a position involving direct contact with children, suggesting the importance of having an adequate knowledge and self-efficacy base in early literacy instruction, so that they may support their students in their developing literacy.

While the quantitative results revealed some interesting findings about the types and durations of early literacy experiences ECEs had, they did not evaluate the potential impact of these experiences on ECEs’ developing knowledge. The qualitative data provided some insight into these potential impacts.

The qualitative findings indicated that ECEs’ early literacy experiences were influential in contributing to their knowledge and self-efficacy, both positively and negatively. Where they mentioned that their experiences in coursework, practicum and professional experiences were satisfactory and seen as positive, ECEs attributed these experiences to be a valuable source of knowledge and developing self-efficacy in respect to their teaching concepts related to phonemic awareness and oral language. Whereas ECEs who felt unprepared by their early literacy experiences in coursework, practicum and professional experiences, attributed their lack of knowledge and lower feelings of self-efficacy to these limitations in their early literacy experiences.
Overall the quantitative and qualitative results converge to suggest that ECEs completed diverse early literacy experiences in terms of their coursework, practicum experiences and professional experiences. Furthermore, the qualitative findings suggest that the perceived value of these experiences in developing foundational knowledge of phonemic awareness and oral language instruction was highly variable.

**ECEs’ professional knowledge of early literacy instruction.** The quantitative and qualitative findings of this exploratory study indicate that there are deficits in ECEs’ knowledge of phonemic awareness and oral language instruction, which is consistent with comparable research examining early literacy knowledge among ECEs (Crim et al., 2008; Fielding-Barnsley & Purdie, 2005; Mather et al., 2001; McCutchen et al., 2002; Moats, 1994) and primary schoolteachers (Cheesman et al., 2009; Fielding-Barnsley, 2010; Hammond, 2015; Stainthorp, 2004). See Table 3.21 for a comparison of the quantitative and qualitative results in relation to ECEs’ professional knowledge of early literacy instruction.

Quantitative comparisons of performance on the tests of phonemic awareness and oral language knowledge indicate that ECEs appear to be less knowledgeable in phonemic awareness instruction than in oral language instruction. Comparisons between pre-service and in-service ECEs indicate that in-service ECEs have higher general linguistic knowledge, which could potentially be attributed to their having more experience working with young children in an early childhood education context.
ECEs’ general linguistic knowledge scores were variable and on average, participants answered fewer than 50% of questions correctly ($M=4.46$, $SD=1.73$; 10-item assessment).

- Number of hours spent in literacy courses and number of literacy courses taken were positively correlated with general linguistic knowledge scores.
- Pre-service ECEs had significantly lower general linguistic knowledge scores ($M=3.92$, $SD=1.78$), as compared to in-service ECEs ($M=4.93$, $SD=1.58$).

ECEs’ phonemic awareness knowledge scores were variable and on average, participants answered fewer than 50% correctly ($M=6.39$, $SD=2.30$; 15-item assessment).

- ECEs scored lowest on questions related to instruction and assessment of phonemic awareness.
- Pre-service and in-service ECEs were not significantly different in terms of their phonemic awareness knowledge scores.

ECEs’ oral language knowledge scores were variable and on average, participants answered fewer than 60% correctly ($M=8.93$, $SD=1.66$; 15-item assessment).

- ECEs scored lowest on questions related to building oral language skills and introducing new vocabulary when reading to children.
- Pre-service and in-service ECEs were not significantly different in terms of their phonemic awareness knowledge scores.
- Phonemic awareness knowledge scores ($M=6.39$, $SD=2.30$) were significantly lower than oral language knowledge scores ($M=8.93$, $SD=1.66$), suggesting that ECEs are less knowledgeable in phonemic awareness.

Some ECEs were able to recall specific knowledge of phonemic awareness but, overall, they perceived their knowledge to be unsatisfactory:

- Some ECEs expressed concern about their ability to identify and assess the needs of their students.
- The majority of ECEs could not recall any specific knowledge of phonemic awareness and their perceptions of their knowledge was generally low.
- There were no notable differences between pre-service ECEs and in-service ECEs in terms of their knowledge perceptions.

Most ECEs were able to recall specific knowledge of oral language but some perceived their knowledge to be unsatisfactory:

- Specific areas of knowledge demonstrated, related to theoretical and applied aspects of oral language instruction. In particular, strategies involving the use of informal conversation and dramatic play were seen as valuable.
- There were no notable differences between pre-service ECEs and in-service ECEs in terms of their knowledge perceptions
- Most ECEs felt that they had some level of knowledge and instructional skills in oral language.
- There were considerably more accounts of knowledge deficits in the area of phonemic awareness than there were in the area of oral language.
The qualitative findings indicated that the majority of both pre-service and in-service ECEs reported having inadequate knowledge of phonemic awareness and oral language instruction and were concerned about the implications of their knowledge deficits. While some ECEs were able to recall specific theoretical or applied facts about phonemic awareness and oral language, a number of ECEs could not articulate even one piece of knowledge and expressed great concern about their inability to do so. There were considerably more accounts of knowledge deficits in the areas of phonemic awareness as compared to oral language, suggesting that ECEs may be more knowledgeable about oral language instruction than they are about phonemic awareness instruction.

Overall the quantitative and qualitative results converge to suggest that ECEs have significant deficits in their knowledge of phonemic awareness and oral language instruction. As well, the quantitative and qualitative results corroborate findings related to specific areas of knowledge deficits. Both quantitative and qualitative results indicated that ECEs show particular gaps in their knowledge of how to assess phonemic awareness. The quantitative and qualitative results also converge to suggest that ECEs are less knowledgeable in concepts related to phonemic awareness than they are in concepts related to oral language instruction. The qualitative findings extend the quantitative results in highlighting the potential impact of these knowledge deficits in contributing to a general feeling of unpreparedness to teach developing early literacy skills.

**ECEs’ self-efficacy for teaching early literacy.** The quantitative and qualitative findings indicated that self-efficacy for teaching early literacy was modest for both pre-service and in-service ECEs which is consistent with comparable research examining educators’ self-efficacy for early literacy instruction (Gerde et al., 2018; Martinussen et
ECEs’ self-efficacy for phonemic awareness instruction scores were variable and modest, as the mean total score was situated around the mid-point ($M=24.78, SD=6.880; M=4.96$ per item on a 9-point interval scale)

- Pre-service and in-service ECEs were not significantly different in terms of their self-efficacy for phonemic awareness instruction scores.

ECEs’ self-efficacy for oral language instruction scores were variable and modest, as the mean total score was situated around the mid-point ($M=26.78, SD=6.341; M=5.36$ per item on a 9-point interval scale)

- Pre-service and in-service ECEs were not significantly different in terms of their self-efficacy for oral language instruction scores.
- Self-efficacy for phonemic awareness instruction scores ($M= 24.78, SD=6.88$) were significantly lower than self-efficacy for oral language instruction ($M=26.94, SD=6.57$), suggesting that ECEs are less confident in their ability to teach phonemic awareness.
- No relationship between self-efficacy and knowledge was found.

Several ECEs identified certain factors associated with feeling confident to teach phonemic awareness and oral language:

- Several ECEs attributed feelings of uncertainty to teach to the failure of their literacy courses to provide them with adequate knowledge and skills.
- A few ECEs mentioned the role of practical experiences working directly with children as positively contributing to their confidence to teach.
- A few ECEs mentioned the role of resources (articles, books, etc.) they had obtained in their program as positively contributing to their confidence to teach.

Many ECEs articulated their apprehension to teach phonemic awareness and oral language:

- Some ECEs expressed concern about their ability to assess the needs of their students (particularly in phonemic awareness).
- Some ECEs expressed concern about their ability to meet the needs of diverse learners.
- Fewer positive accounts of confidence to teach phonemic awareness were given as compared to oral language.

Quantitative comparisons of self-efficacy for phonemic awareness and oral language instruction indicated that self-efficacy was modest in both areas, however, ECEs reported lower levels of self-efficacy in phonemic awareness instruction than in oral language instruction. Quantitative analyses found that no relationship existed between knowledge and self-efficacy, consistent with the findings in comparable

Table 3.22

<table>
<thead>
<tr>
<th>QUAN Results</th>
<th>QUAL Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECEs’ self-efficacy for phonemic awareness instruction scores were variable and modest, as the mean total score was situated around the mid-point ($M=24.78, SD=6.880; M=4.96$ per item on a 9-point interval scale)</td>
<td>Several ECEs identified certain factors associated with feeling confident to teach phonemic awareness and oral language:</td>
</tr>
<tr>
<td>Pre-service and in-service ECEs were not significantly different in terms of their self-efficacy for phonemic awareness instruction scores.</td>
<td>- Several ECEs attributed feelings of uncertainty to teach to the failure of their literacy courses to provide them with adequate knowledge and skills.</td>
</tr>
<tr>
<td>Self-efficacy for phonemic awareness instruction scores ($M= 24.78, SD=6.88$) were significantly lower than self-efficacy for oral language instruction ($M=26.94, SD=6.57$), suggesting that ECEs are less confident in their ability to teach phonemic awareness.</td>
<td>- A few ECEs mentioned the role of practical experiences working directly with children as positively contributing to their confidence to teach.</td>
</tr>
<tr>
<td>No relationship between self-efficacy and knowledge was found.</td>
<td>- A few ECEs mentioned the role of resources (articles, books, etc.) they had obtained in their program as positively contributing to their confidence to teach.</td>
</tr>
</tbody>
</table>

See Table 3.22 for a comparison of the quantitative and qualitative results.
previous research (Bostock & Boon, 2012; Leader-Janssen & Rankin-Erickson, 2013; Martinussen et al., 2015).

The qualitative findings indicated that certain factors were associated with confidence to teach: Having applied teaching experiences and an accumulation of valuable resources were seen as contributing to confidence. Exposure to instruction in phonemic awareness and oral language in their coursework was either seen as a positive influence on confidence or a negative influence on confidence, depending on the volume and quality of exposure. The majority of ECEs expressed some apprehension to teach phonemic awareness and oral language, particularly in the areas of identifying, assessing and meeting the needs of diverse learners. There were considerably fewer positive accounts of confidence to teach phonemic awareness skills as compared to oral language skills, suggesting that ECEs have lower self-efficacy for phonemic awareness instruction as compared to oral language instruction.

Convergence of quantitative and qualitative results in relation to self-efficacy for teaching is indicated by ECEs’ modest accounts of self-efficacy for phonemic awareness and oral language instruction. As well, quantitative and qualitative results also converge to suggest that ECEs have lower self-efficacy for phonemic awareness instruction as compared to oral language instruction. The qualitative results add an additional dimension to the findings in providing insight into the specific areas of instruction that ECEs are most apprehensive to teach.
Limitations of Study 1

There were four main areas of limitation in this study: (1) the reliability and credibility of the measures, (2) the reliance on self-report data, (3) the potential influence of confounding variables, and (4) the participant sample.

First and foremost, the reliability and credibility of the measures are of importance to note as a potential limitation of this study. Because of the lack of existing research examining ECEs’ specific knowledge and self-efficacy of phonemic awareness and oral language instruction, there were no known published normed measures that could be used to evaluate the research questions of this study. Instead, existing measures examining literacy in a different context (for example, among older children) and with a different population (for example, primary schoolteachers) were adapted for an early literacy focus and used for this study. While the investigator made every effort to adapt measures using content supported by the literature on what educators of young children should know about phonemic awareness and oral language, the lack of literature and psychometric procedures conducted to support their validity, reliability, and credibility, limits the implications of the findings from this study. Standardized measures of early literacy knowledge and self-efficacy are needed so that future research may examine ECEs’ knowledge and self-efficacy with greater confidence in the reliability and credibility of findings.

Another limitation of this study is the reliance of self-report data. There are limitations to self-report data, especially concerning the its accuracy as it pertains to evaluating feelings of preparedness and educators’ report of their knowledge (Cunningham et al., 2004). Moreover, self-report measures are subject to challenges, such
as response biases, selective memory and attribution, which may influence participants’ responses. This study relied heavily on self-report data to examine the qualitative questions about participants’ knowledge and perceptions of confidence to teach and, thus, the implications of the qualitative findings must be considered with this limitation in mind.

A third limitation was that the design of this study did not allow for an examination of possible confounding variables that might explain some of the findings. This is particularly the case in the comparison of pre-service and in-service ECEs, where variables such as program admission requirements, differences in practicum experiences, length of program, nature of program (college vs. university) and core content of required literacy courses might explain some of the identified differences.

Finally, the composition of the participant sample may be considered a limitation of the study. The participant sample was context-specific in that it focused on ECE participants from two programs at the same university. Future research examining knowledge and self-efficacy of ECEs should be conducted using participants from a variety of both college and university ECE programs which would enhance the credibility and transferability of the results.

Significance and Educational Implications

Much is known about how language and literacy develop in young children, and also about evidence-based expectations in terms of what educators should know about early literacy instruction. However, relatively little is known about how well pre-service and in-service ECEs are prepared to support young children’s developing language and literacy. Research examining schoolteachers’ early literacy knowledge and self-efficacy
for literacy instruction is extensive, but research that specifically examines ECEs’ knowledge and self-efficacy of phonemic awareness and oral language instruction is scarce. Research is needed to ensure that educators of young children, and particularly ECEs, are prepared to teach and support young children’s developing literacy skills effectively. The present study contributed to the limited existing evidence by providing a better understanding of pre-service and in-service ECEs’ knowledge and self-efficacy in foundational areas of early literacy instruction.

Given that study 1 found significant deficits in knowledge and only modest levels of self-efficacy for early literacy instruction, a reasonable sequel to this study would be research examining potential ways to remediate these shortcomings in knowledge and self-efficacy. Professional development opportunities that seek to promote evidence-based practices need to be developed, implemented, and tested. That was the focus of study 2, which attempted, through brief, targeted professional development workshops, to raise ECEs’ knowledge and self-efficacy in two foundational components of early literacy development and instruction: phonemic awareness and oral language.

An additional important aspect of study 1 involved comparisons between pre-service and in-service ECEs. Both quantitative and qualitative comparisons indicated that there are differences between pre-service and in-service ECEs in general linguistic knowledge, practical experiences in practicum placements involving young children, and professional experiences in jobs involving direct contact with children. Given the skills, knowledge, and understanding that ECEs must possess in order to be effective educators, it seems as though having greater practical and professional experiences in early childhood education would produce more knowledgeable educators. Future research
efforts are needed to clarify the role of practical and professional experiences on knowledge and self-efficacy for early literacy instruction.

**Conclusion**

Based on the findings of study 1, pre-service and in-service ECEs appear to have significant deficits in early literacy knowledge related to phonemic awareness and oral language, and demonstrate only modest levels of self-efficacy for early literacy instruction. ECEs play a primary role in the learning experiences of young children in early childhood education settings. As such, they have the opportunity to positively influence the early literacy development of young children. In order to help ensure that ECEs are prepared for their teaching roles and responsibilities in supporting early literacy development, an examination of their knowledge and self-efficacy is required. The present study represents an important early step toward understanding what pre-service and in-service ECEs know, and feel confident to implement, in key aspects of early literacy education. There is a need for additional research to corroborate the present findings and to explore the potential benefits of offering professional development opportunities to pre-service and in-service ECEs to raise their understanding and self-efficacy in foundational aspects of early literacy education.
CHAPTER 4
Study 2: Improving ECEs’ Early Literacy Knowledge and Self-Efficacy for Teaching through a Targeted Professional Development Intervention

Results from study 1 suggested that ECEs have limited understanding of key literacy concepts and that they lack a sense of self-efficacy related to phonemic awareness and oral language, foundational components in the development of literacy skills in young children. The purpose of study 2 was to examine the impact of targeted multimedia professional development workshops on the foundational early literacy knowledge and related self-efficacy of pre-service and in-service ECEs. Specifically, these workshops were designed to promote gains in ECEs’ phonemic awareness and oral language knowledge as well as to raise their sense of self-efficacy for early literacy instruction.

Chapter 4 presents study 2 in seven major sections: (1) a literature review, (2) the study purpose and research questions, (3) methods, (4) quantitative results and discussion, (5) qualitative results and discussion, (6) general discussion including limitations and implications, and (7) conclusion.

Literature Review

This literature review is presented in three major sections. The first section describes the literature related to improving knowledge in key areas of early literacy development, specifically discussing the literature on improving knowledge of phonemic awareness and oral language. The second section discusses the literature examining the role of professional development in creating meaningful change in knowledge and related self-efficacy. The third section provides a framework for understanding strategies for
improving knowledge, based on the literature pertaining to the principles of adult learning.

**Improving Knowledge of Early Literacy**

This portion of the review examines previous studies that have attempted to promote increased understanding of early literacy instruction, specifically in phonemic awareness and oral language instruction. A goal of this review is to develop an understanding of the ways in which ECEs acquire knowledge about early literacy instruction.

**Improving Knowledge of Phonemic Awareness**

As was confirmed by the findings of study 1, research suggests that many pre-service educators of young children need to enhance their knowledge of phonemic awareness (Cheesman et al., 2009; Fielding-Barnsley, 2010; Hammond, 2015; Tetley & Jones, 2014). There is also some evidence indicating that understanding of phonemic awareness can be improved through explicit teacher instruction supported by many opportunities for practice applying the skills (Fielding-Barnsley, 2010).

The National Reading Panel (2000) found that phonemic awareness instruction is one of the five essential components of beginning reading instruction. Phonemes are the smallest units of sound in oral language, and phonemic awareness is the ability to recognize and manipulate phonemes (for example, blending and segmenting). Given its central importance in early literacy programs, teacher education programs must teach about phonemic awareness. However, multiple studies report that many educators of young children do not have sufficient knowledge and skills to provide effective phonemic
awareness instruction (Cheesman et al., 2009; Fielding-Barnsley, 2010; Justice, Mashburn, Hamre, & Pianta, 2008; Mather et al., 2001).

Research examining the defining characteristics of high-quality literacy instruction in preschool classrooms, emphasizes the importance of systematic and explicit instruction in phonological structures (Justice et al., 2008). In their study examining the quality of language and literacy instruction of 135 preschool classrooms, of which 52 were ECEs, Justice et al. (2008) found that the quality of language and literacy instruction observed was characteristically low with little evidence of literacy instruction that was explicit, systematic, and purposeful.

While the research pertaining directly to ECEs is limited, research conducted with kindergarten and primary schoolteachers can provide a framework for understanding how phonemic awareness knowledge is acquired. The literature suggests that pre-service educators need explicit instruction about phonemic awareness, presented in an organized manner (Fielding-Barnsley, 2010; Tetley & Jones, 2014). In their study of 224 primary pre-service teacher candidates, Tetley and Jones (2014) looked at the relationship between knowledge-based phonological construct scores of pre-service teachers and their exposure to explicit instruction in phonological awareness and phonemic awareness. Knowledge scores were unrelated to placements in kindergarten or first grade. However, they were positively related to exposure to explicit and systematic instruction in phonological and phonemic awareness (in the case of that study, through instruction in commercial phonics packages). This suggests that pre-service educators may benefit from systematic, organized phonological and phonemic awareness experiences, and like phonics, phonemic awareness is developed effectively through explicit and systematic
instruction. In the current study, participants attended two professional development workshops, one of which incorporated explicit and systematic instruction in phonemic awareness.

In a study by Fielding-Barnsley (2010), a group of 162 pre-service teachers responded to a questionnaire related to their knowledge of phonemic awareness, and how well prepared they felt to teach beginning reading. While most teachers were able to correctly define a phoneme, the teachers could not transfer this knowledge to the counting of phonemes in words. Similarly, Cheesman et al. (2009), found that many first-year educators in their study had limited understanding about what constitutes phonemic awareness instruction and how to count phonemes in written words. Therefore, it is suggested that teachers themselves need explicit training to help them understand the sound structure of language, and that teacher education programs need to better prepare students in phonemic awareness instruction in order for them to become effective literacy educators (Learning First Alliance, 2000).

Kennedy, Driver, Pullen, Ely, and Cole (2013) suggest that to better prepare pre-service educators and improve their knowledge, a multimedia approach to phonological awareness could be effective. Kennedy et al. (2013) found, in their study of 103 pre-service educators enrolled in an introductory special education course, that those who participated in “Content Acquisition Podcasts,” as opposed to accessing content solely through text, performed significantly better on knowledge and skill-based measures, both immediately after the experience and several weeks later. Given that the Learning First Alliance (2000), the National Reading Panel (2000) and the National Early Literacy Panel (2008) suggest that children need explicit instruction in phoneme identification,
matching, segmentation and blending, multimedia methods in teacher and ECE preparation, including videos and podcasts, can bring a “practice-focused curriculum” to the forefront. In the current study, a multimedia approach was taken by showing video clips of evidence-based practices in action during both workshops.

Research with children around phonemic awareness also has implications for ECEs and teachers. Cunningham (1990) conducted a study with 48 kindergarteners and 48 first-graders who received two forms of instruction in phonemic awareness: (1) a “skill and drill” approach where the procedural knowledge of segmentation and blending of phonemes was taught, and (2) a “metalevel” approach that explicitly emphasized the application, value, and utility of phonemic awareness for reading, in addition to teaching the procedural knowledge of segmentation and blending. Results indicated that the children who received the “metalevel” approach (which involved more explicit attention to the specific goals and purposes of the lessons, connections to other areas of learning, understanding of the use and application of skills, and opportunities for supervised skill practice involving direct feedback) performed significantly better on a transfer measure of reading achievement than the “skill and drill” group. Thus, instructing ECEs and teachers to include this metacognitive form of instruction in their planning is important for both pre-service and professional development training.

*Improving Knowledge of Oral Language and Vocabulary Development*

Oral language and vocabulary development are foundational in children’s reading comprehension and overall literacy development. Oral vocabulary refers to the words we use when speaking and understand when listening to spoken language. While most
vocabulary is learned indirectly, some vocabulary must be taught directly (NRP, 2000).

Given the very significant developments in young children’s language during the early years, ECEs play an important role in promoting language skills in young children (Bouchard et al., 2010). Thus, in order to promote language skills, educators must be knowledgeable of language and literacy development in young children (Moats, 2014). Some researchers have found that the language knowledge of teachers, including kindergarten teachers, predicts children’s oral language and expressive vocabulary skills (Cash, Cabell, Hamre, DeCoster, & Pianta, 2015). However, other studies have found that the language support provided by ECEs is unsatisfactory (Bouchard et al., 2010; Justice et al., 2008). Moats (2014), suggests that many educators are unaware of the components of language they are supposed to teach, and this can consequently affect their attitudes towards teaching oral language skills. Research examining the preschool linguistic environment (Justice, Jiang, & Strasser, 2018), found that the instructional dimension most strongly associated with children’s linguistic trajectories was teachers’ use of communication-facilitating behaviours yet evidence of these teaching behaviours was lacking in most preschool classrooms (Justice et al., 2018).

In pre-service literacy courses for educators, only a limited number of hours are allotted to studying language, language learning, and instruction, and this may not be sufficient time for educators to master teaching this area (Spear-Swerling, 2009; Walsh, Glaser, & Dunne-Wilcox, 2006). Letts and Hall (2003) surveyed over 800 ECEs and found that the majority of participants had less than 8 hours of training in language development. Therefore, various researchers have expressed the importance of training educators more effectively to increase their knowledge of language development, and
consequently promote language development in children (Girolametto & Weitzman, 2002; Letts & Hall, 2003). Interestingly, Schachter et al. (2016) found that ECEs’ content knowledge was predictive of their oral language and vocabulary instruction, in that higher content knowledge increased the amount of oral language instruction they provided to their students. As such, improving ECEs’ knowledge is very important for their practice.

As with research on phonemic awareness (e.g., Kennedy et al., 2013), employing multiple media is seen as an effective way to improve knowledge in vocabulary instruction. Ely and colleagues (2014) found that in their study of 49 pre-service elementary educators, those who participated in “Content Acquisition Podcasts”, as opposed to accessing vocabulary instruction content solely through text, performed significantly better on knowledge measures immediately after the intervention and several weeks later on a maintenance test. Given these and similar findings with respect to phonemic awareness, the use of multimedia videos is a central component of the professional development workshops featured in this study.

Creating Meaningful Change Through Professional Development

Both pre-service and in-service ECEs can benefit from effective professional development opportunities. Visay and Gischlar (2013) found that professional development was the most commonly used type of training for in-service ECEs to acquire knowledge and skills in teaching “The Big 5” literacy areas, of which both phonemic awareness and vocabulary are named, as outlined by the National Reading Panel (2000). Thus, whereas professional development can come in many forms,
including: workshops, courses, conferences, reading, and direct work experience; multiple studies have indicated that professional development interventions must be targeted and specific to be effective (Desimone, 2009; Domitrovich, Gest, Gill, Jones, & DeRousie, 2009; Landry, Swank, Smith, Assel, & Gunnewig, 2006; Neuman & Wright, 2010). Similarly, research examining the impact of professional development experiences among primary schoolteachers found that teachers learn best if professional development is focused on content, includes practice opportunities and is consistent with the goals and objectives of the classroom (Garet, Porter, Desimone, Birman, & Yoon, 2001). Furthermore, those participating in professional development experiences must receive guidance and feedback from those teaching them. In their study of 30 experienced ECEs, Hammond (2015) found that an ECE’s knowledge of early literacy skills does not necessarily ensure they have the skills to plan an appropriate literacy program incorporating effective practices. With this in mind, guidance and coaching from teacher educators, along with professional development opportunities that incorporate practical and planning components into the learning, could be helpful to improve teaching practice.

Various studies have reported improvements in ECE practices related to early language and literacy development after the implementation of interventions (Jackson et al., 2006; McCutchen et al., 2002; Scarinci, Rose, Pee, & Webb, 2015). Scarinci and colleagues (2015) examined the impact of an in-service language development training program with 42 ECEs. In the study, speech and language pathologists led the training program, which examined stages of language development and strategies to promote language development in early learning settings. Pre- and post-measures examined participant perceptions of their knowledge and confidence using language-promoting
strategies. Results showed that ECEs’ knowledge of language development, specifically vocabulary development, and their knowledge of language-promoting strategies, increased after the intervention. Furthermore, participant confidence levels and ratings related to the role of the educator in facilitating language development in children increased post-intervention (Scarinci et al., 2015).

Additional studies examining the impact of professional development for in-service ECEs in an Ontario context, have demonstrated a positive impact on gains of knowledge and literacy-related behaviours for educators and children (Girolametto, Weitzman, Lefebvre, & Greenberg, 2007; Girolametto, Weitzman, & Greenburg, 2003). Girolametto et al. (2007) conducted a study of 16 in-service ECEs completing a two-day professional development program on strategies for promoting emergent oral language skills. The outcome of this program, taught by speech and language pathologists, was that the ECEs made measurable gains in promoting emergent oral language skills with their students, relative to the control group. Likewise, in their study examining the impact of a 14-week professional development program (taking place in 2.5-hour sessions) on 16 in-service ECEs’ language facilitation strategies, Girolametto et al. (2003) found that the in-service training program was effective in teaching ECEs to implement effective strategies for facilitating language use, such as increasing their own language output in appropriate ways, and using children’s language initiations as a starting point for extending language.

Recent studies examining the impact of in-service professional development for ECEs in Ontario have provided further evidence of the potential benefit of improving knowledge and related skills (Milburn et al., 2015; Namasivayam et al., 2016; Rezzonico et al., 2015). In their study examining the impact of in-service workshops on the
phonological awareness and print knowledge of 31 ECEs, Milburn et al. (2015) found that educators in the experimental group made significantly more references to phonological awareness in their teaching, contributing to a more enriched learning environment for all children in their classrooms (p.105). Furthermore, in their study of 32 in-service ECEs, Namasivayam et al. (2015) found that a professional development program consisting of in-service workshops and individual coaching sessions, was highly effective in improving ECEs’ vocabulary teaching strategies in interactions with children.

Jackson and colleagues (2006) also found positive outcomes after a group of 22 in-service ECEs completed a 15-hour, evidence-based intervention that promoted effective instructional strategies, developmentally appropriate practices, and highlighted phonological awareness and written language awareness. Findings, which compared outcomes between ECEs who completed the intervention with ECEs who did not complete the intervention, suggest that the intervention group improved classroom practices significantly more, and children in their classes performed better on standardized language and literacy measures. Furthermore, research conducted with primary schoolteachers has found a similar pattern. McCutchen, Harry et al. (2002) completed a 2-week summer institute with a group of 59 kindergarten and first-grade teachers to develop their understandings of early literacy concepts, such as phonological awareness. Pre- and post-measures confirm that teachers who completed the intervention significantly improved their phonological knowledge and learning outcomes for their students.

As demonstrated by these studies, early literacy interventions can improve the knowledge, skills, and self-efficacy of educators, and this, in turn, appears to make them
more effective in promoting the language and literacy development in young children. In fact, a meta-analysis of studies examining early educators’ language and literacy-focused professional development experiences suggests that these experiences have positive benefits on child outcomes, including a statistically significant effect on children’s phonological awareness (Markussen-Brown et al., 2017). Based on these findings, the current study aimed to improve the knowledge, skills, and efficacy of pre-service and in-service ECEs in the areas of phonemic awareness and oral language and vocabulary instruction.

**Strategies for Improving Knowledge – General Principles of Adult Learning**

In order for ECEs to improve their knowledge of early literacy instruction through targeted professional development, certain principles of adult learning must be considered. Professional development for educators can look very different in various contexts, however the research literature suggests that there are certain core principles of adult learning that foster effective professional development. The literature is inconsistent in labeling the core principles, however, five principles of adult learning have emerged through various research, and many other principles can fall under the following five categories: active learning, content focus, coherence, duration, and collective participation (Desimone, 2009; Gravani, 2012; Gregson & Sturko, 2007; Hunzicker, 2011; Yates, 2007).
Active Learning

Active learning refers to teacher engagement and participation in the analysis of teaching and learning (Desimone, 2009; Garet et al., 2001; Gregson & Sturko, 2007). Educators can be actively engaged in their professional development and learning in a variety of ways, including participating in discussions and activities, observing teachers, preparing lessons, or reviewing children’s work. Gravani (2012) explores principles of adult learning in relation to teacher development, and active learning is distinguished as a key feature as well. Two additional principles highlighted in Gravani (2012), Beavers (2009), and Gregson and Sturko (2007) – voluntary participation and reflection – can also connect to the active learning principle.

Voluntary participation is preferred in adult learning, because commitment to learning will be stronger and engagement levels will be higher when participants are internally motivated to learn (Beavers, 2009; Gravani, 2012). Reflection is naturally a subsequent step to action, as consolidating what has been done and learned is important to make meaning of the experience and to applying learning after the experience (Gravani, 2012; Gregson & Sturko, 2007).

Content Focus

Content refers to what is being learned through a professional development experience (Desimone, 2009; Garet et al., 2001). Typically, content is divided into 2 main components: knowledge of the subject matter and pedagogical content knowledge. In this study, knowledge of subject matter refers to participants’ theoretical understandings of phonemic awareness and oral language development. Their pedagogical content
knowledge refers to their learning about the ways in which they can effectively develop phonemic awareness and oral language in young children. Some literature suggests that pedagogical content knowledge is the most important feature of professional development (Desimone, 2009). Indeed, pedagogical content knowledge is a significant part of the professional development workshops that were designed and implemented as part of this study.

**Coherence**

Coherence connects professional development to the educator, their beliefs, and their environment. In the field, this refers to connecting professional development with policies, reforms, and mandates (Garet et al., 2001). At the pre-service level, this could connect professional development to a student’s courses and/or school philosophy. In the professional development experience explored through this study, the focus of the workshops connects directly to concepts and skills learned through courses that pre-service and in-service ECEs took during their ECE training programs. At the in-service level, the professional development opportunities are connected to what Ontario professional standards and curriculum suggest that educators if young children should know about early literacy (College of Early Childhood Educators, 2011; OME, 2016).

The literature suggests that professional development should guide learning for immediate application; that it should connect to and derive from an educator’s work and experiences with students (Beavers, 2009; Desimone, 2009; Gravani, 2012; Gregson & Sturko, 2007). In this study, the topics selected as the foci of the workshops were relevant to the participants in their roles as ECEs as they support young children in their
developing literacy skills.

**Duration**

Duration refers to the length of the professional development experience. Specifically, duration would be the length of time participants remain engaged in the professional development activities (Desimone, 2009; Garet et al., 2001). Generally, longer, sustained, or ongoing professional development is promoted in the literature (Desimone, 2009; Garet et al., 2001). While the design of this study does not allow for longer, sustained periods of professional development, ongoing opportunities to continue professional learning are supported and advocated through providing participants with resources they may continue to use following completion of the study.

**Collective Participation**

Collective participation refers to a group of people from the same context participating in a professional development experience together (Desimone, 2009; Garet et al., 2001; Gregson & Sturko, 2007). Multiple studies suggest that employing collaborative inquiry, where a group of individuals can learn together in a safe and comfortable environment, improves adult learning and practice (Garet et al., 2001; Gravani, 2012; Gregson & Sturko, 2007).

Whereas collective participation is a core feature of professional development, some literature points to the importance of the self-directed adult learner. Gravani (2012) and Beavers (2009) write that professional development facilitators must recognize the learning needs and styles of the adults they are working with, and to ensure the adult
learners’ personal goals are accounted for in the professional learning experience.

The five principles of adult learning described are sometimes examined collectively and sometimes examined separately in various studies. Given that professional development is a complex and multi-faceted domain, Desimone (2009) constructed a core conceptual framework to study professional development in its many forms. This framework, including all five principles of adult learning, aims to capture the components necessary to change teacher knowledge, practice, and, ultimately, student outcomes through professional development experiences. The design of the professional development workshops for this study adopted this core conceptual framework and adhered to all five principles of adult learning. The methods section of this chapter discusses the design of the workshops and how their elements incorporate the principles of adult learning.

While not explicitly tied to one of the general principles of adult learning, an additional element of importance with respect to the features of effective professional development is adherence to models of effective practice (Bates & Morgan, 2018; Borko, 2004; Doppelt et al., 2009). ECEs benefit from seeing instructional practices in action. One way to provide opportunities for ECEs to observe educators in practice is through the use of video demonstrations. The use of videos is increasingly prominent in professional development. Research promoting the use of videos in professional development suggests that it is a valuable means of demonstrating exemplary practice and provide the opportunity for viewers to observe the enactment of specific forms of curricula or instruction (Lambert & Ball, 1998; Schrader et al., 2003). As well, videos can be used as a common reference for collaborative discussion (Hewitt, Pendretti,
Bencze, Dale-Vallaincourt, & Yoon, 2003) and they provide the opportunity for educators to examine teaching from multiple perspectives (Putnam & Borko, 2000). In the current study, the use of videos is a prominent feature of the professional development workshops.

**Study Purpose and Research Questions**

As evidenced by the results of study 1, as well as by previous research with in-service ECEs (Crim et al., 2008; Hammond, 2015; Schachter et al., 2016) and schoolteachers (Cunningham et al., 2004; Mather et al., 2001; Moats & Foorman, 2003), educators of young children have shown to demonstrate inconsistencies and deficits in their knowledge of effective early literacy practices. Thus, the current study sought to determine whether pre-service and in-service ECEs would benefit from a professional development intervention designed to improve the scope and quality of early literacy knowledge and related self-efficacy.

The objectives of the present study are unique in their focus, since no known studies to date have investigated the impact of targeted professional development on pre-service and in-service ECEs’ early literacy knowledge and self-efficacy. It extends on other intervention studies examining literacy knowledge and practices among ECEs by examining the impact of an intensive, multi-modal professional development intervention that specifically targets early literacy knowledge and self-efficacy. In an attempt to achieve the research goals, the present study utilized a mixed-methods approach that combined both quantitative and qualitative methodologies. The study used adapted versions of published measures of early literacy knowledge and self-efficacy to assess
baseline levels of knowledge and self-efficacy, in the area of phonemic awareness as well as oral language development, among pre-service and in-service ECEs. These measures also assessed the impact of the literacy intervention on knowledge development and self-efficacy for early literacy instruction. The study also employed questionnaires to measure the impact of the professional development intervention on perceived knowledge, self-efficacy and future practice. Concurrently, the study investigated the nature of the ECEs’ self-perceptions and literacy experiences using insights gained from in-depth interviews conducted following the professional development intervention.

Results of this work are intended to further the current knowledge base and theoretical frameworks of curriculum studies, and educational and developmental psychology, and to augment the endeavours of educators, teacher educators, and policy makers to optimally support and promote meaningful opportunities for the initial training and further professional development of educators of young children. The following overarching questions guide study 2:

**Quantitative Research Questions:**

*Improving Knowledge in Key Components of Early Literacy*

1. What impact will a professional development intervention have on ECEs’ understanding of key literacy concepts and strategies related to early literacy?
   
   a) What impact will a professional development intervention have on ECEs’ understanding of key literacy concepts and strategies related to phonemic awareness?
   
   b) What impact will a professional development intervention have on ECEs’
understanding of key literacy concepts and strategies related to oral language and vocabulary development?

c) Are there differences between pre-service and in-service ECEs in the above-mentioned topics?

*Improving Self-Efficacy in Key Components of Early Literacy:*

2. What impact will a professional development intervention have on ECEs’ feelings of self-efficacy to provide quality early literacy instruction and support to young children?

   a) What impact will a professional development intervention have on ECEs’ feelings of self-efficacy to provide quality phonemic awareness instruction and support to young children?

   b) What impact will a professional development intervention have on ECEs’ feelings of self-efficacy to provide quality oral language and vocabulary instruction and support to young children?

   c) Are there differences between pre-service and in-service ECEs in the above-mentioned topics?

*Relationship Between Knowledge and Self-Efficacy Gains*

3. What do the trends of pre-post literacy intervention gain scores indicate about the relationship between knowledge and self-efficacy?

*Maintenance of Gains at 1-Month Follow-Up*

4. What do ECEs’ knowledge and self-efficacy look like one month following the
intervention? Will potential gains made remain?

**Qualitative Research Questions**
*Professional Development and Meaningful Change*

5. Has participation in the professional development intervention created meaningful change in the knowledge and self-efficacy of ECEs?
   a) How has participating in the intervention changed their knowledge and understanding?
   b) How has participating in the intervention changed their feelings of self-efficacy for early literacy instruction?
   c) How has participating in the intervention influenced their perceptions about implementing early literacy instruction?

**Methods**

The methods section of this chapter begins with a description of the research design and overall process for study 2. Next, it discusses the details of the professional development workshops. Then it describes the quantitative and qualitative measures used. Finally, this methods section concludes with a description of the data analysis process.

**Research Design**

As in study 1, study 2 also employed a mixed-methods concurrent triangulation research design. This involved collecting both quantitative and qualitative data together and analyzing them concurrently, but separately, in order to best understand the research problem (Creswell & Piano Clark, 2011). This study adopted a mixed-methods approach
in order to evaluate the impact of a professional development intervention on the knowledge and self-efficacy of pre-service and in-service ECEs.

This quasi-experimental study employed a repeated measures, pre-post design whereby the participants in the professional development intervention served as their own within-subject controls. Participants were randomly assigned to one of the two experimental conditions, either the phonemic awareness workshop or the oral language development workshop. A classic experimental design was not appropriate due to the relatively small sample size and the ethical concern of denying participants the opportunity to potentially improve their knowledge and instructional skills in key early literacy concepts. All consenting participants \((n=54)\) were randomly assigned to one of the two workshops \((n=26\) for each workshop). One month following these initial workshops, participants were invited back to participate in the alternate workshop to the one they had already completed. Thus, every participant had the opportunity to participate in both workshops. However, just 57% of participants returned for the second round of workshops \((n=31)\). As a token of gratitude for participating in this study, participants were given a $10 gift card to Indigo for their participation in each workshop. As well, participants received a “certificate of completion” upon completing a workshop and its associated measures.

Assessments occurred at five time points. Figure 4.0 presents a timeline summary of assessments and intervention for the study. Baseline data were gathered at the time of the initial workshops from both the phonemic awareness and oral language workshop groups, prior to commencing the delivery of the workshop curriculum (Test Point 1). Assessments continued for both the initial phonemic awareness and oral language
workshop groups, immediately following the conclusion of the workshops’ curriculum (Test Point 2). One month following the initial workshops, several participants returned for a second round of workshops, and assessments occurred immediately preceding the commencement of these workshops (Test Point 3) and again, assessments continued for both the second round of phonemic awareness and oral language workshop groups, immediately following the conclusion of the workshops (Test Point 4). Finally, to capture a qualitative assessment of the impact and value of the workshops, a stratified random subsample of participants were selected to complete face-to-face interviews, six-weeks following the conclusion of the second round of workshops (Test Point 5). Table 4.0 presents a summary of the assessments conducted at each time point.

![Figure 4.0. Early Literacy Professional Development Intervention timeline.](image)

The initial testing session (Test Point 1) consisted of completing written assessments, where participants reflected on their experiences, knowledge of early
literacy concepts and practices, and self-efficacy for early literacy instruction, using both closed-ended and open-ended questioning. The close-ended questions were analyzed quantitatively and the open-ended questions were analyzed qualitatively. All other testing sessions consisted of assessments evaluating participants’ early literacy-related knowledge and self-efficacy for early literacy instruction. Testing sessions took place immediately preceding and immediately following the workshops. The first testing session took approximately 45 minutes to complete and all other testing sessions took approximately 30 minutes to complete. During completion of the assessments, if any question was unclear to a participant, the question was explained verbally or simplified. This ensured that all participants had a clear understanding of the questions being asked.

Table 4.0

*Quantitative and qualitative assessments conducted at each time point*

<table>
<thead>
<tr>
<th>Time Point</th>
<th>Quantitative Assessments</th>
<th>Qualitative Assessments</th>
</tr>
</thead>
</table>
| 1          | *Early Literacy Assessment*  
  *Self-Efficacy for Early Literacy Instruction Scale* – phonemic awareness and oral language subscales |                                      |
| 2          | *Early Literacy Assessment*  
  *Self-Efficacy for Early Literacy Instruction Scale* – phonemic awareness and oral language subscales | *Early Literacy Workshop Reflection Questionnaire* |
| 3          | *Early Literacy Assessment*  
  *Self-Efficacy for Early Literacy Instruction Scale* – phonemic awareness and oral language subscales |                                      |
| 4          | *Early Literacy Assessment*  
  *Self-Efficacy for Early Literacy Instruction Scale* – phonemic awareness and oral language subscales | *Early Literacy Workshop Reflection Questionnaire* |
| 5          |                                      | *Early Literacy Perceptions Interview* |
Following the completion of both rounds of workshops, participants also completed a written questionnaire consisting of open-ended questions, asking them to reflect on their professional development experiences. These questionnaires were analyzed qualitatively. As well, six-weeks following completion of the second round of workshops, a subsample of participants completed in-depth, semi-structured interviews, to cross-validate, and expand upon the information gathered through the previous assessments. Eight participants completed the face-to-face interview, four in-service participants and four pre-service participants. Participants from each group were randomly selected to complete the interview and those participants were contacted via email to participate in the interviews (see Appendix K). Each of the eight randomly selected participants agreed to participate in the interviews. Interviews took approximately 20 minutes to complete and were administered by a trained education graduate student. As was the case for the written assessments, if any interview question was unclear to a participant, the question was repeated and/or asked in a simplified manner. Participant responses were both initially hand recorded in point form and audio-recorded for later verbatim transcription. Those participants who completed the interview received a $10 gift card to Indigo, as a token of appreciation for their participation.

*Professional Development Intervention Workshops*

The professional development intervention consisted of two separate workshops: one that focused on the development of skills and understanding in phonemic awareness, and the other that focused on the development of skills and understanding in oral language. The content of these workshops involved integrating well-researched
documentation highlighting the consensus on what educators should know about phonemic awareness and oral language, and how to teach related skills to young children.

Consistent with the literature on principles of adult learning, specific attention to each of the following aspects in the design and implementation of the workshops was given: content focus, coherence, duration, active learning and collective participation (Garet et al., 2001; Gravani, 2012; Gregson & Sturko, 2007; Hunzicker, 2011; Yates, 2007).

In terms of content focus, each workshop consisted of a core module, which presented both subject matter knowledge and pedagogical content knowledge. These core modules, provided information (via PowerPoint slides and readings) about the nature of specific components critical to phonemic awareness/oral language: their importance to early literacy development, how to teach them to young children, and how to assess them. Several brief video clips highlighting effective instructional practices were also a key part of the workshops. These video clips demonstrated real teachers working in authentic contexts as they instructed their students in early literacy practices.

In terms of coherence, the focus of the workshops connected directly to concepts and skills learned through courses that pre-service and in-service ECEs took during their ECE training programs, and also connected to skills and knowledge that they would be expected to apply in their professional lives, thus ensuring that the content was coherent and relevant and connected to ECE beliefs and professional environment (Beavers, 2009; Desimone, 2009; Gravani, 2012; Gregson & Sturko, 2007).

While the literature on the duration of professional development (Desimone, 2009; Garet et al., 2001), suggests that longer, sustained sessions of professional
development are more effective, the current study is limited in that the professional development opportunities could not to be offered on an ongoing basis. However, in an attempt to extend the professional development learning beyond the duration of the workshops, participants were provided with several resources (both hard copy and electronic) that they could access for future uses.

*Active learning* refers to teacher engagement and participation in the analysis of teaching and learning (Garet et al., 2001; Gregson & Sturko, 2007). In the context of the professional development workshops, each workshop consisted of applied activities and discussions, giving participants the opportunity to apply concepts taught during the workshops, in partners and in small groups.

Lastly, *collective participation* refers to a group of people from the same context participating in a professional development experience together (Desimone, 2009; Garet et al., 2001; Gregson & Sturko, 2007). In the context of this study, all participants came from the same context: ECE students in the same undergraduate program, pursuing this professional development experience, in order to improve their knowledge of early literacy instruction. What follows are detailed descriptions of the phonemic awareness and oral language workshops.

**Phonemic Awareness Workshop.** Participants of the phonemic awareness workshop received approximately 90 minutes of instruction and spent an additional 30 minutes engaging in applied activities designed to connect the theory presented in the workshops to applied practice in the field of early childhood education. This intervention focused on developing an understanding of key concepts related to phonemic awareness and phonological awareness and how to teach and support young children in developing
phonemic awareness skills. Adopting a model that draws from social cognitive learning theory (Bandura, 1986), the phonemic awareness workshop involved an instructional method whereby, for each general concept taught (for example, how to identify and segment words into syllables), participants were given the opportunity to “learn, observe and apply”. Specifically, they were presented with evidence-based instruction about a specific concept and how to teach it (“learn”). Next, participants observed video clips of teachers, teaching these skills to children (“observe”). Following these video clips, participants were then given the opportunity to apply the knowledge and skills, in small group activities (“apply”).

The major concepts taught during the phonemic awareness workshop consisted of: 1) a definition of phonemic awareness and its relationship to phonological awareness, reading and writing; 2) why phonemic awareness is important to early literacy development; 3) how to teach phonemic awareness to young children (including learning and applying skills in identifying, manipulating, segmenting and blending phonemes within words); and 4) how to assess children’s developing phonemic awareness skills. The curriculum of the phonemic awareness workshop, including a description of the video clips shown and applied activities used, is found in Appendix L.

**Oral Language Workshop.** As in the phonemic awareness workshop, participants in the oral language workshop received approximately 90 minutes of instruction and spent an additional 30 minutes engaging in applied activities designed to connect the theory presented in the workshops to applied practice. This intervention focused on developing an understanding of key concepts related to oral language and how to support young children in developing their oral language, including vocabulary.
Identically to the phonemic awareness workshop, the oral language workshop also involved the “learn, observe and apply” instructional model.

The major concepts taught during the oral language workshop consisted of: 1) a definition of oral language and an understanding of how oral language develops; 2) how oral language and vocabulary development are connected to reading and writing and other areas of early literacy; 3) how to support and instruct young children in developing oral language (including building expressive and receptive vocabulary); and 4) how to assess children’s developing oral language skills. The curriculum of the oral language workshop, including a description of the video clips shown and applied activities used, is found in Appendix M.

**Research Measures**

*Quantitative Measures*

The purpose of the quantitative measures was to assess what pre-service and in-service ECEs know about key early literacy concepts, to determine their levels of self-efficacy for early literacy instruction and ultimately to evaluate whether participating in an intensive professional development intervention in targeted areas of literacy knowledge and instruction, would enhance their knowledge, skills and self-efficacy in phonemic awareness and oral language instruction. The following measures were selected, adapted and developed to explore and answer the specific research questions of this study (see Table 4.1).
Table 4.1

**Quantitative measures in study 2**

| Measure of Early Literacy Knowledge | Early Literacy Assessment  - adapted from the Phonemic Awareness Survey (Cheesman et al. 2009) and the Teachers’ Knowledge of Oral Language Development (TKOLD) instrument (Prestwich, 2012) and expanded to include items specific to early literacy |
| Measure of Self-Efficacy | Self-Efficacy for Early Literacy Instruction Scale – phonemic awareness and oral language subscales - adapted from the Self-Efficacy for Literacy Instruction Scale (Tschannen-Moran & Johnson, 2010) to focus on early literacy |

**Measure of Early Literacy Knowledge.** ECEs’ specific knowledge of phonemic awareness and oral language was assessed using the *Early Literacy Assessment*, which consisted of 30 multiple-choice questions. Half of the questions focused on theoretical and applied knowledge of phonemic awareness and the other half of the questions focused on theoretical and applied knowledge of oral language. A detailed description of this assessment, including sample items can be found in the methods section of chapter 3. As well, the complete assessment can be found in Appendix G.

**Measure of Self-Efficacy.** ECEs’ self-efficacy for early literacy instruction was assessed using two subscales from the *Self-Efficacy for Early Literacy Instruction Scale*, the phonemic awareness subscale and the oral language subscale. Each of the two subscales consisted of 5 items asking participants to indicate their level of agreement on a 9-point likert scale. A detailed description of this assessment including the phonemic awareness and oral language instruction subscales and sample items can be found in the methods section of chapter 3. As well, the complete assessment can be found in Appendix H.
Qualitative Measures

In order to better understand the feelings and experiences that ECEs have related to their early literacy knowledge and self-efficacy, as well as to explain the experience of participating in the professional development intervention, a multiple case study approach was employed. Using a variety of data sources, this qualitative approach facilitates the thorough exploration of a phenomenon, so that the research questions are explored through multiple lenses (Baxter & Jack, 2008). The following measures were developed to examine the study’s research questions through a qualitative lens (see Table 4.2).

Table 4.2

<table>
<thead>
<tr>
<th>Qualitative measures in study 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Literacy Workshop Reflection Questionnaire</td>
</tr>
<tr>
<td>Qualitative reflection consisting of several open-ended questions.</td>
</tr>
<tr>
<td>Early Literacy Perceptions Interview</td>
</tr>
<tr>
<td>Semi-structured interview consisting of several open-ended questions.</td>
</tr>
</tbody>
</table>

**Early Literacy Workshop Reflection Questionnaire.** In order to delve deeper into participants’ experiences completing the professional development workshop, following each workshop participants completed a written questionnaire consisting of open-ended questions. These questions asked participants to reflect on their experiences...
in the workshop, focusing on their rationales for participating in the workshops as well as
on the impact of the workshops. These questionnaires were analyzed qualitatively using
thematic coding. A sample question was: “How has or how do you expect what you have
learned to translate into your work with children?” A complete copy of the questionnaire
is found in Appendix N.

**Early Literacy Perceptions Interview.** To obtain a richer and deeper
understanding of ECEs’ knowledge of early literacy concepts and experiences
participating in the intervention, a subsample of those participants who completed both
workshops participated in in-depth, semi-structured interviews. The interview protocol
asked a subsample of participants to reflect on their feelings and perceptions of what they
know about early literacy development and instruction and how they would apply this
knowledge in teaching young children. The interview also asked participants to reflect on
the impact of the workshop. The interviews consisted primarily of open-ended questions
in order to develop a comprehensive understanding of their experiences participating in
the workshops (Roberts & Cairns, 1999). A sample question related to the impact of the
workshops was: “How have these workshops directly influenced your practice, or how do
you anticipate them influencing your future practice?” A sample question that asks
participants to apply theory to practice was: “You are working with preschoolers (ages 3-
4). You want them to develop a better understanding of rhyming. What kind of activity
might you plan for these children?” A complete copy of the interview protocol is found in
Appendix O.
Data Analysis

Study 2 employed a mixed-methods concurrent triangulation research design, which involved concurrently collecting quantitative and qualitative data, analyzing them separately and then integrating the results for discussion. This study involved analyzing quantitative data statistically and analyzing qualitative data through content analysis.

Quantitative methodologies were used to answer research questions about pre-service and in-service ECEs early literacy knowledge and self-efficacy. Independent and paired-samples t-tests and repeated measure ANOVAs were conducted to evaluate whether these variables significantly differed between the two groups (pre-service versus in-service ECEs) and whether the variables were impacted following the intervention period. Additionally, trend and pattern analyses were performed to investigate the relationship between the gain scores in early literacy knowledge and the gain scores in self-efficacy for early literacy instruction.

Qualitative methodologies were employed to develop a deeper understanding of ECEs’ knowledge and self-efficacy as well as to further understand the nature and complexity of the factors that influence ECEs in their practice as they undertake a professional development intervention. Open-ended questions from the reflection questionnaires were coded inductively using the strategies from grounded theory methodology (Strauss & Corbin, 1998). Semi-structured interviews were also analyzed thematically using strategies from grounded theory methodology (Strauss & Corbin, 1998). Specifically, participants’ responses were broken down into words or phrases that represented meaning units or codes. These codes were then refined and sorted into sub...
categories, which subsequently formed four overarching categories. Lastly, these
categories were analyzed to reveal underlying themes and patterns.

**Quantitative Results and Discussion**

As presented in study 1, study 2 discusses quantitative and qualitative results in
separate sections. In this section, the quantitative results and discussion are combined
according to the overarching research questions. This section on the quantitative findings
begins with a comparison of the pre-intervention and post-intervention knowledge
profiles of ECEs and discusses the impact of the professional development intervention
on ECEs’ phonemic awareness and oral language knowledge. Then this section provides
a comparison of the pre-intervention and post-intervention self-efficacy profiles of ECEs
and discusses the impact of the professional development intervention on ECEs’ self-
efficacy for early literacy instruction. Next this section presents and discusses results of
analyses pertaining to the relationship between knowledge and self-efficacy gains.
Finally, this section concludes with a description of the results and a discussion about
ECEs’ knowledge and self-efficacy gains, one month following the intervention.

**Research Question 1: What impact will a professional development intervention
have on ECEs’ understanding of key literacy concepts and strategies related to early
literacy?**

In this study, participants completed a series of multiple-choice questions related
to their understanding of phonemic awareness and oral language development. This
section presents the quantitative results pertaining to their responses to these questions
both prior to, and following completion of the professional development intervention. The section also discusses the findings of any significant differences in knowledge between the pre-service and in-service ECEs both prior to, and following completion of the professional development intervention.

Improving Knowledge in Key Components of Early Literacy

Pre- and post-intervention assessments of early literacy knowledge included measures of phonemic awareness knowledge (Early Literacy Assessment – Phonemic Awareness), and oral language knowledge (Early Literacy Assessment – Oral Language).

Repeated-measures ANOVAs and paired-samples $t$-tests were conducted to determine whether pre-service and in-service ECEs’ mean phonemic awareness and oral language knowledge scores would significantly improve following intervention. Effect sizes for all within-subjects ANOVAs are reported using the multivariate eta square ($\eta^2_{\text{multivariate}}$). Effect sizes for the paired-samples $t$-tests are reported as Cohen’s $d$ or $r$ values.

It was hypothesized that participants’ knowledge scores would significantly improve only in the area of instruction related to the workshop(s) they completed. For example, participants completing the phonemic awareness workshop would show gains in their phonemic awareness knowledge and, likewise, participants completing the oral language workshop would show gains in their oral language knowledge.

Participants were evaluated at 4 time points. Initial baseline data were gathered immediately preceding the first professional development workshop (Test Point 1). Further testing was done immediately following completion of the first professional
development workshop (Test Point 2). One month later, a subsample of participants returned to complete the second round of professional development workshops and were tested immediately preceding the second professional development workshop (Test Point 3) and again, immediately following completion of the second professional development workshop (Test Point 4).

**Phonemic Awareness Knowledge.** A mixed-design ANOVA with time as a within-subjects effect and workshop group as a between-subjects effect was conducted to evaluate the change in the average phonemic awareness test scores following participation in a professional development intervention. The results of the ANOVA indicated a significant interaction effect between time and workshop group, Wilk’s $\Lambda = .17$, $F(3,27) = 45.67, p < .001$, multivariate $n^2 = .84$.

Considering the significant interaction effect, simple main effects analyses with Bonferroni correction were performed to explore the nature of the interaction effect. As shown in Table 4.3 and Figure 4.1, phonemic awareness knowledge scores (max score = 15) improved for both groups following the phonemic awareness intervention. For the group who completed the phonemic awareness workshop first, knowledge scores improved at Time Point 2. For the group who completed the oral language workshop first, phonemic awareness knowledge scores improved at Time Point 4, following their completion of the phonemic awareness intervention.

Because the mixed-design ANOVA showed a significant interaction effect, further analyses to explore the impact of the intervention for all participants who completed the phonemic awareness workshop ($n = 44$), controlling for workshop order, was conducted. To investigate whether workshop order had an effect on knowledge
gains, a one-way ANCOVA was conducted. The independent variable, workshop order, included two levels corresponding to two orders of workshops, the first order involving the phonemic awareness workshop followed by the oral language workshop, and the second order involving the oral language workshop followed by the phonemic awareness workshop. The ANCOVA was not significant, indicating that no statistically significant differences were found between pre- and post-workshop phonemic awareness knowledge scores on the basis of workshop order. Therefore, because workshop order was not a confounding variable, paired-samples $t$-tests were used to examine the impact of the workshops on phonemic awareness knowledge scores.

Table 4.3

Results of pairwise comparisons for scores on the Early Literacy Assessment – Phonemic Awareness

<table>
<thead>
<tr>
<th>Workshop Group</th>
<th>Time$^1$</th>
<th>Time$^2$</th>
<th>$MD$</th>
<th>$SE$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonemic Awareness workshop first</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>($n = 15$)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>-5.47*</td>
<td>.40</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>-4.20*</td>
<td>.68</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>-4.33*</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>1.27</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>1.13</td>
<td>.79</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>-.13</td>
<td>.63</td>
<td></td>
</tr>
<tr>
<td>Oral Language workshop first</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>($n = 16$)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>-.44</td>
<td>.39</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>.94</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>-6.25*</td>
<td>.72</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>1.38</td>
<td>.71</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>-5.81*</td>
<td>.77</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>-7.19*</td>
<td>.61</td>
<td></td>
</tr>
</tbody>
</table>

Note. *$p < 0.001$
Forty-four ($n = 44$) ECEs completed the phonemic awareness professional development workshop. A paired-samples $t$-test was conducted to evaluate whether phonemic awareness knowledge improved following the phonemic awareness workshop. The results indicate that the mean post-workshop phonemic awareness knowledge score ($M=11.57$, $SD=1.73$) was significantly greater than the mean pre-workshop phonemic awareness knowledge score ($M=6.16$, $SD=2.06$), $t(43) = -19.56$, $p<.001$. The effect size index, Cohen’s $d$, was $-2.82$, showing a large effect. The distributions of the pre- and post-workshop scores are shown in Figure 4.2. The 95% confidence interval for the mean difference between the pre- and post-workshop scores was $-5.97$ and $-4.85$.

A paired-samples $t$-test was also conducted to evaluate whether phonemic awareness knowledge improved following the oral language workshop. The results were not significant indicating that phonemic awareness knowledge scores were not improved as a result of participating in the oral language workshop.
Oral Language Knowledge. A mixed-design ANOVA with time as a within-subjects effect and workshop group as a between-subjects effect was conducted to evaluate the change in the average oral language test scores following participation in the intervention. The ANOVA showed a significant interaction effect between time and workshop group, Wilk’s $\Lambda = .17$, $F(3,27) = 45.37$, $p < .001$, multivariate $n^2 = .83$.

Simple main effects analyses with Bonferroni correction were conducted to explore the nature of the interaction effect. As shown in Table 4.4 and Figure 4.3, oral language knowledge scores (max score = 15) improved for both groups following the oral language intervention. For the group who completed the oral language workshop first, knowledge scores improved at Time Point 2. For the group that completed the phonemic awareness workshop first, oral language knowledge scores improved at Time Point 4, following their completion of the oral language intervention.

Figure 4.2. Differences in pre- and post-intervention phonemic awareness knowledge scores following the phonemic awareness workshop.
Table 4.4

Results of pairwise comparisons for scores on the Early Literacy Assessment – Oral Language

<table>
<thead>
<tr>
<th>Workshop Group</th>
<th>Time¹</th>
<th>Time²</th>
<th>MD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Language workshop first</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 16)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>-4.00**</td>
<td>.36</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>-2.86*</td>
<td>.84</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>-3.07**</td>
<td>.60</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>1.16</td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>.94</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>-.19</td>
<td>.76</td>
<td></td>
</tr>
<tr>
<td>Phonemic Awareness workshop first</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>.40</td>
<td>.37</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>1.67</td>
<td>.87</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>-4.93**</td>
<td>.72</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>1.27</td>
<td>.85</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>-5.33**</td>
<td>.57</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>-6.60**</td>
<td>.75</td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < 0.01, **p < 0.001

Figure 4.3. Differences in oral language knowledge scores (max score = 15)
Because the mixed-design ANOVA showed a significant interaction effect, further analyses to explore the impact of the intervention for all participants that completed the oral language workshop \((n = 41)\), controlling for workshop order, was conducted. To investigate whether workshop order had an effect on knowledge gains, a one-way ANCOVA was conducted. The independent variable, workshop order, included two levels corresponding to two orders of workshops, the first order involving the phonemic awareness workshop followed by the oral language workshop and the second order involving the oral language workshop, followed by the phonemic awareness workshop. The ANCOVA was not significant, indicating that no statistically significant differences were found between pre- and post-workshop oral language knowledge scores on the basis of workshop order. Therefore, because workshop order was not a confounding variable, paired-samples \(t\)-tests were used to examine the impact of the workshops on oral language knowledge scores.

Forty-one \((n = 41)\) ECEs completed the oral language professional development workshop. A paired-samples \(t\)-test was conducted to evaluate whether oral language knowledge improved following the oral language workshop. The results indicate that the mean post-workshop oral language knowledge score \((M=13.29, SD=1.56)\) was significantly greater than the mean pre-workshop oral language knowledge score \((M=8.63, SD=2.32)\), \(t(40) = -17.72, p<.001\). The effect size index, Cohen’s \(d\), was -2.21, showing a large effect. The differences between the pre- and post-workshop scores are represented in Figure 4.4. The 95% confidence interval for the mean difference between the pre- and post-workshop scores was -4.86 and -3.87.
A paired-samples $t$-test was also conducted to evaluate whether oral language knowledge improved following the phonemic awareness workshop. The results were not significant, indicating that oral language knowledge scores were not improved as a result of participating in the phonemic awareness workshop.

**Relations Among Variables**

Pearson correlation coefficients were computed in order to explore potential relationships among pre- and post- phonemic awareness knowledge scores and pre- and post- oral language knowledge scores. Correlation coefficients of .10, .30, and .50 are interpreted as weak, moderate, and strong effect sizes, respectively (Green & Salkind, 2005). Correlation coefficients were computed among the Early Literacy Assessment – Phonemic Awareness scores at pre-test and post-test. Using the Bonferroni approach to control for Type I errors, a $p$ value of less than .008 (.05/6 = .008) was required to
Correlation coefficients were also computed among the Early Literacy Assessment – Oral Language scores at pre-test and post-test. Using the Bonferroni approach to control for Type I errors, a p value of less than .008 (.05/6 =.01) was required to determine a significant correlation. The correlation analysis was statistically significant and was equal to .648, representing a strong effect size. This finding suggests that those participants with higher pre-test oral language knowledge scores also had higher oral language knowledge scores at post-test, following the oral language intervention.

In order to examine any possible relationships among the phonemic awareness and oral language knowledge measures, correlation coefficients were computed among the Early Literacy Assessment – Phonemic Awareness scores and the Early Literacy Assessment – Oral Language scores at pre-test and following the intervention. Using the Bonferroni approach to control for Type I errors, a p value of less than .008 (.05/6 =.008) was required for significance. The results of the correlation analyses at pre-test were not significant, suggesting that higher baseline phonemic awareness scores were not related to higher baseline oral language scores. Likewise, the results of the correlation analyses at post-test were not significant, suggesting that higher post-test phonemic awareness scores were not related to higher post-test oral language scores.
**Differences in Phonemic Awareness and Oral Language Knowledge Scores**

Analyses were performed to determine whether participants demonstrated higher knowledge scores in either phonemic awareness or oral language, both prior to and following the interventions. A paired-samples t-test was conducted to evaluate whether there were significant differences between phonemic awareness and oral language knowledge scores at pre-test (each test had a max score of 15). The results indicate that the mean phonemic awareness knowledge pre-test score \( (M=6.39, SD=1.67) \) was lower than the mean oral language knowledge pre-test score \( (M=8.52, SD=2.53) \), \( t(30) = -4.403, p<.001 \). The effect size index, Cohen’s \( d \), was 0.99, showing a large effect. The 95% confidence interval for the mean difference between the pre- and post-workshop scores was -3.12 and -1.14. These results indicate that ECEs demonstrated lower test scores in phonemic awareness knowledge as compared to oral language knowledge, prior to the interventions.

This trend was identified again at post-test. A paired-samples t-test was conducted to determine whether there were significant differences between phonemic awareness and oral language knowledge scores at post-test, following the interventions. The results indicate that the mean phonemic awareness knowledge post-test score \( (M=11.90, SD=1.56) \) was lower than the mean oral language knowledge post-test score \( (M=13.13, SD=1.69) \), \( t(30) = -3.121, p=.004 \). The effect size index, Cohen’s \( d \), was 0.76, showing a large effect. The 95% confidence interval for the mean difference between the pre- and post-workshop scores was -2.03 and -.42. These results indicate that ECEs continued to demonstrate lower scores in phonemic awareness knowledge, as compared to oral language knowledge scores, following completion of the interventions.
Further analyses were performed to determine whether there were significant differences in phonemic awareness and oral language knowledge gains made following the interventions. A paired-samples $t$-test was conducted to evaluate whether there were significant differences between phonemic awareness and oral language knowledge gain scores. The results indicate that the mean phonemic awareness knowledge gains score ($M=5.52$, $SD=1.87$) was higher than the mean oral language knowledge gains score ($M=4.61$, $SD=1.89$), $t(30) = -2.215$, $p=.035$. The effect size index, Cohen’s $d$, was 0.52, showing a medium effect. The 95% confidence interval for the mean difference between the pre- and post-workshop scores was .07 and 1.74. These results indicate that ECEs made higher gains on the phonemic awareness knowledge assessment than they did on the oral language knowledge assessment, following the intervention. Thus, while their phonemic knowledge scores were lower than their oral language knowledge scores, following intervention, the results suggest that participants made higher gains in their understanding of phonemic awareness concepts and instruction, as measured by the Early Literacy Assessment – Phonemic Awareness.

Differences in Pre-Service and In-Service ECEs’ Knowledge

In order to determine whether there were significant differences between pre-service and in-service ECEs in their phonemic awareness knowledge (as measured by the Early Literacy Assessment – Phonemic Awareness), and their oral language knowledge (as measured by the Early Literacy Assessment – Oral Language) both prior to and following completion of the professional development intervention, independent samples $t$-tests were performed. Analyses examining potential knowledge differences between
pre-service and in-service ECEs on these measures yielded no significant findings. Pre-service and in-service ECEs did not demonstrate significantly different levels of knowledge in phonemic awareness (as measured by the ELA-PA) or in oral language (as measured by the ELA-OL) both prior to and following the professional development interventions.

**Discussion for Research Question 1**

This section presented the findings in relation to research question 1: What impact will a professional development intervention have on ECEs’ understanding of key literacy concepts and strategies related to early literacy? The results from the repeated measures tests and follow up pairwise comparisons supported the initial hypothesis that the ECEs would show gains in their phonemic awareness and oral language knowledge scores, following the targeted professional development interventions. First, this section reported significant gains in phonemic awareness knowledge scores following the phonemic awareness intervention. Prior to the professional development workshops, phonemic awareness knowledge scores were generally low and variable with average scores of 41.1% ($M=6.16$). Following the intervention, phonemic awareness knowledge scores significantly increased with average scores of 77.1% ($M=11.57$). Consistent with research examining effective ways of improving phonemic awareness knowledge, the professional development intervention may have been particularly effective in improving knowledge scores because it provided explicit instruction in concepts of phonological awareness (Tetley & Jones, 2014), and phonemic awareness (Cheesman et al., 2009; Fielding-Barnsley, 2010) as well as offered a metacognitive component where the
application and utility of phonemic awareness instruction was emphasized (Cunningham, 1990). As well, the multimedia approach used in delivering the curriculum, may have contributed to greater engagement, and thus, may have positively influenced the impact on knowledge gains (Kennedy et al., 2013).

This section also reported significant gains in oral language knowledge scores following the oral language intervention. Prior to the professional development workshops, oral language knowledge scores were generally low and variable with average scores of 57.5% ($M=8.63$). Following the intervention, oral language knowledge scores significantly increased with average scores of 88.5% ($M=13.29$). Consistent with research examining effective ways of improving oral language knowledge, the professional development intervention may have been particularly effective in improving knowledge scores because it provided explicit and dedicated instruction in oral language concepts and oral language instruction (Girolametto & Weitzman, 2002; Scarinci et al., 2015; Schachter et al., 2016), which has been shown to be lacking in some ECE training programs (Letts & Hall, 2003). As well, the multimedia approach used in delivering the curriculum may have contributed to greater engagement, and, thus, may have positively influenced the impact on knowledge gains (Elly et al., 2014).

Statistically significant correlations among the phonemic awareness knowledge measure at pre-test and post-test as well as among the oral language knowledge measure at pre-test and post-test showed that those participants who demonstrated higher scores at pre-test tended to show higher scores at post-test. However, this relationship was not apparent in a comparison of phonemic awareness and oral language knowledge scores, suggesting that scores in phonemic awareness knowledge were not correlated with scores
in oral language knowledge. Analyses comparing the phonemic awareness and oral language knowledge scores showed that phonemic awareness knowledge scores were lower than oral language knowledge scores at both pre-test and post-test. Furthermore, analyses comparing the phonemic awareness knowledge gains to the oral language knowledge gains indicated that, following the intervention, ECEs made more significant gains in phonemic awareness knowledge scores than they did in their oral language knowledge scores. This finding is supported by the literature suggesting that knowledge of phonemic awareness concepts and development is particularly lacking for educators of young children (Cheesman et al., 2009; Fielding-Barnsley, 2010; Hammond, 2015; Tetley & Jones, 2014), and thus, targeted professional development can provide a meaningful and effective opportunity to improve this knowledge.

This section also examined knowledge differences between pre-service and in-service ECEs. There were no significant differences between pre-service and in-service ECEs in terms of their phonemic awareness and oral language knowledge at any of the four time points. Thus, it is suggested that pre-service and in-service ECEs do not differ in their baseline knowledge of phonemic awareness and oral language, or in their ability to make significant knowledge gains following a professional development intervention. The next main section presents the results and discussion of the impact of the professional development intervention on ECEs’ self-efficacy for early literacy instruction.
Research Question 2: What impact will a professional development intervention have on ECEs’ feelings of self-efficacy to provide quality early literacy instruction and support to young children?

In this study, participants rated their level of agreement on a number of statements about early literacy instruction that assessed their self-efficacy for phonemic awareness and oral language instruction. This section presents the quantitative results pertaining to their responses to these questions both prior to and following completion of the professional development intervention. The section also discusses the findings of any significant differences in self-efficacy between the pre-service and in-service ECEs both prior to and following completion of the professional development intervention.

Improving Self-Efficacy for Early Literacy Instruction

Pre- and post-intervention assessments of self-efficacy for early literacy instruction included measures of self-efficacy for phonemic awareness instruction (Self-Efficacy for Early Literacy Instruction Scale – Phonemic Awareness), and self-efficacy for oral language instruction (Self-Efficacy for Early Literacy Instruction Scale – Oral Language).

Repeated-measures ANOVAs and paired-samples t-tests were conducted to determine whether pre-service and in-service ECEs’ mean self-efficacy for phonemic awareness instruction and self-efficacy for oral language instruction scores would significantly improve following intervention. Effect sizes for all within-subjects ANOVAs are reported using the multivariate eta square (multivariate $\eta^2$). Effect sizes for the paired-samples t-tests are reported as Cohen’s $d$ or $r$ values.
It was hypothesized that participants’ self-efficacy scores would significantly improve in the area of instruction related to the workshop(s) they completed. For example, participants completing the phonemic awareness workshop would show gains in their self-efficacy for phonemic awareness instruction and likewise, participants completing the oral language workshop would show gains in their self-efficacy for oral language instruction.

Participants were evaluated at 4 time points. Initial baseline data were gathered immediately preceding the first professional development workshop (Test Point 1). Further testing was done immediately following completion of the first professional development workshop (Test Point 2). One month later, a subsample of participants returned to complete a second professional development workshop and were tested immediately preceding the second workshop (Test Point 3) and again, immediately following completion of the second workshop (Test Point 4).

**Self-Efficacy for Phonemic Awareness Instruction.** A mixed-design ANOVA with time as a within-subjects effect and workshop group as a between-subjects effect was conducted to evaluate the change in the average self-efficacy for phonemic awareness instruction scores following participation in a professional development intervention (max score = 45). The results of the ANOVA indicated a significant interaction effect between time and workshop group, Wilk’s $\Lambda = .30$, $F(3,27) = 20.56$, $p < .001$, multivariate $n^2 = .70$.

Considering the significant interaction effect, simple main effects analyses with Bonferroni correction were conducted to explore the nature of the interaction effect. As
shown in Table 4.5 and Figure 4.5, self-efficacy for phonemic awareness instruction scores improved for both groups following the phonemic awareness intervention.

For the group that completed the phonemic awareness workshop first, self-efficacy scores improved at Time Point 2. For the group that completed the oral language workshop first, self-efficacy for phonemic awareness instruction scores improved at Time Point 4, following their completion of the phonemic awareness intervention.

Because the mixed-design ANOVA showed a significant interaction effect, further analyses to explore the impact of the intervention for all participants that completed the phonemic awareness workshop \((n = 44)\), controlling for workshop order, was conducted. To investigate whether workshop order had an effect on self-efficacy gains, a one-way ANCOVA was conducted. The independent variable, workshop order, included two levels corresponding to two orders of workshops, the first order involving the phonemic awareness workshop followed by the oral language workshop, and the second order involving the oral language workshop followed by the phonemic awareness workshop. The ANCOVA was not significant, indicating that no statistically significant differences were found between pre- and post-workshop self-efficacy for phonemic awareness instruction scores on the basis of workshop order. Therefore, because workshop order was not a confounding variable, paired-samples \(t\)-tests were used to further examine the impact of the workshops on self-efficacy for phonemic awareness instruction.
Table 4.5

Results of pairwise comparisons for scores on the self-efficacy for Early Literacy Instruction Scale – Phonemic Awareness

<table>
<thead>
<tr>
<th>Workshop Group</th>
<th>Time¹</th>
<th>Time²</th>
<th>MD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonemic Awareness workshop first (n =15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>-12.40**</td>
<td>1.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 4</td>
<td>-6.93*</td>
<td>1.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 4</td>
<td>-9.27**</td>
<td>1.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 3</td>
<td>5.47</td>
<td>1.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 4</td>
<td>3.13</td>
<td>1.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Language workshop first (n =16)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 2</td>
<td>-2.94</td>
<td>1.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 4</td>
<td>-2.81</td>
<td>1.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 4</td>
<td>-14.00**</td>
<td>1.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 3</td>
<td>.13</td>
<td>1.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 4</td>
<td>-11.06**</td>
<td>1.53</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. **p < 0.001, *p < 0.01

Figure 4.5. Differences in self-efficacy for phonemic awareness instruction scores (max score = 45)
Forty-four ($n = 44$) ECEs completed the phonemic awareness professional development workshop. A paired-samples $t$-test was conducted to determine whether self-efficacy for phonemic awareness instruction improved following the phonemic awareness workshop. The results indicate that the mean post-workshop phonemic awareness self-efficacy score ($M=37.52$, $SD=4.13$) was significantly greater than the mean pre-workshop phonemic awareness self-efficacy score ($M=24.77$, $SD=4.13$), $t(43) = -16.69$, $p<.001$. The effect size index, Cohen’s $d$, was -2.71, showing a large effect. The distributions of the pre- and post-workshop scores are shown in Figure 4.6. The 95% confidence interval for the mean difference between the pre- and post-workshop scores was -14.29 and -11.21.

A paired-samples $t$-test was also performed to determine whether self-efficacy for phonemic awareness instruction improved following the oral language workshop. The results were not significant indicating that self-efficacy for phonemic awareness instruction scores were not improved as a result of participating in the oral language workshop.

**Self-Efficacy for Oral Language Instruction.** A mixed-design ANOVA with time as a within-subjects effect and workshop group as a between-subjects effect was also performed to evaluate the change in the average self-efficacy for oral language scores following participation in a professional development intervention. The results of the ANOVA indicated a significant interaction effect between time and workshop group, Wilk’s $\Lambda = .26$, $F(3,27) = 25.70$, $p < .001$, multivariate $n^2 = .74$. 
Considering the significant interaction effect, simple main effects analyses with Bonferroni correction were conducted to explore the nature of the interaction effect. As shown in Table 4.6 and Figure 4.7, self-efficacy for oral language scores improved for both groups following the oral language intervention (max score = 45). For the group that completed the oral language workshop first, self-efficacy for oral language instruction scores improved at Time Point 2. For the group that completed the phonemic awareness workshop first, self-efficacy for oral language instruction scores improved at Time Point 4, following completion of the oral language intervention.
Table 4.6

*Results of pairwise comparisons for scores on the Self-Efficacy for Early Literacy Instruction Scale – Oral Language*

<table>
<thead>
<tr>
<th>Workshop Group</th>
<th>Time¹</th>
<th>Time²</th>
<th>MD</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Language workshop first</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 16)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>-11.75**</td>
<td>1.22</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>-7.13*</td>
<td>1.91</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>-8.20**</td>
<td>1.55</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>4.63</td>
<td>1.90</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>3.56</td>
<td>1.43</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>-2.16</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>Phonemic Awareness workshop first</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>-4.20</td>
<td>1.26</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>-2.80</td>
<td>1.97</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>-10.27**</td>
<td>1.60</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>1.40</td>
<td>1.96</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>-6.07*</td>
<td>1.48</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>-7.47**</td>
<td>.83</td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < 0.01, **p < 0.001

*Figure 4.7.* Differences in self-efficacy for oral language instruction scores (max score = 45)
Because the mixed-design ANOVA showed a significant interaction effect, further analyses to explore the impact of the intervention for all participants that completed the oral language workshop \((n = 41)\), controlling for workshop order, was conducted. To investigate whether workshop order had an effect on self-efficacy gains, a one-way ANCOVA was conducted. The independent variable, workshop order, included two levels corresponding to two orders of workshops, the first order involving the phonemic awareness workshop followed by the oral language workshop and the second order involving the oral language workshop, followed by the phonemic awareness workshop. The ANCOVA was not significant, indicating that no statistically significant differences were found between pre- and post-workshop self-efficacy for oral language instruction scores on the basis of workshop order. Therefore, because workshop order was not a confounding variable, paired-samples \(t\)-tests were used to examine the impact of the workshops on oral language knowledge scores.

Forty-one \((n = 41)\) ECEs completed the oral language professional development workshop. A paired-samples \(t\)-test was performed to determine whether self-efficacy for oral language instruction improved following the oral language workshop. The results indicate that the mean post-workshop oral language self-efficacy score \((M=39.63, SD=3.97)\) was significantly greater than the mean pre-workshop oral language self-efficacy score \((M=27.83, SD=6.19)\), \(t(40) = -13.75, p<.001\). The effect size index, Cohen’s \(d\), was -2.21, showing a large effect. The differences between the pre- and post-workshop scores are shown in Figure 4.8. The 95% confidence interval for the mean difference between the pre- and post-workshop scores was -13.54 and -10.07.
A paired-samples $t$-test was also performed to determine whether self-efficacy for oral language instruction improved following the phonemic awareness workshop. The results were not significant indicating that self-efficacy for oral language instruction scores were not improved as a result of participating in the phonemic awareness workshop.

*Relations Among Variables*

Pearson correlation coefficients were computed in order to explore potential relations among pre- and post- self-efficacy for phonemic awareness instruction scores and among pre- and post- self-efficacy for oral language instruction scores. Correlation coefficients of .10, .30, and .50 are interpreted as weak, moderate, and strong effect sizes, respectively (Green & Salkind, 2005). Correlation coefficients were computed among the Self-Efficacy for Early Literacy Instruction Scale – Phonemic Awareness scores at pre-
test and post-test. Using the Bonferroni approach to control for Type I errors, a $p$ value of less than .008 ($0.05/6 = .008$) was required for significance. The correlation analysis was statistically significant and was equal to .420, representing a moderate effect. This finding suggests that those participants with higher pre-test phonemic awareness self-efficacy scores also had higher phonemic awareness self-efficacy scores at post-test, following the phonemic awareness intervention.

Correlation coefficients were also computed among the Self-Efficacy for Early Literacy Instruction Scale – Oral Language scores at pre-test and post-test. Using the Bonferroni approach to control for Type I errors, a $p$ value of less than .008 ($0.05/6 = .008$) was required for significance. The correlation analysis was statistically significant and was equal to .486, representing a strong effect. This finding suggests that those participants with higher pre-test oral language self-efficacy scores also had higher oral language self-efficacy scores at post-test, following the oral language intervention.

In order to examine any possible relationships among the self-efficacy measures, correlation coefficients were computed among the Self-Efficacy for Early Literacy Instruction Scale – Phonemic Awareness scores and the Self-Efficacy for Early Literacy Instruction Scale – Oral Language scores at pre-test and following the intervention. Using the Bonferroni approach to control for Type I errors, a $p$ value of less than .008 ($0.05/6 = .008$) was required for significance. The results of the correlation analyses at pre-test were not significant, suggesting that higher baseline phonemic awareness self-efficacy scores, were not related to higher baseline oral language self-efficacy scores. Likewise, the results of the correlation analyses at post-test were not significant, suggesting that
higher post-test self-efficacy for phonemic awareness instruction scores, were not related to higher post-test self-efficacy for oral language instruction.

**Differences in Phonemic Awareness and Oral Language Knowledge Scores**

Analyses were performed to determine whether participants demonstrated higher self-efficacy scores in either phonemic awareness or oral language, both prior to and following the interventions. A paired-samples t-test was conducted to determine whether there were significant differences between phonemic awareness and oral language self-efficacy scores at pre-test. The results indicate that the mean phonemic awareness self-efficacy pre-test score \((M=24.13, SD=4.99)\) was lower than the mean oral language self-efficacy pre-test score \((M=28.16, SD=5.87)\), \(t(30) = -3.772, p=.001\). The effect size index, Cohen’s \(d\), was 0.74, showing a medium effect. The 95% confidence interval for the mean difference between the pre- and post-workshop scores was -6.22 and -1.85. These results indicate that ECEs demonstrated lower scores in self-efficacy for phonemic awareness instruction as compared to self-efficacy for oral language instruction, prior to the interventions. This trend was identified again at post-test. A paired-samples t-test was conducted to determine whether there were significant differences between phonemic awareness and oral language self-efficacy scores at post-test, following the interventions. The results indicate that the mean phonemic awareness self-efficacy post-test score \((M=37.35, SD=4.68)\) was lower than the mean oral language self-efficacy post-test score \((M=39.90, SD=3.88)\), \(t(30) = -3.122, p=.004\). The effect size index, Cohen’s \(d\), was 0.58, showing a medium effect. The 95% confidence interval for the mean difference between the pre- and post-workshop scores was -4.21 and -0.88. These results indicate that ECEs continued to demonstrate lower scores in self-efficacy for phonemic awareness instruction.
instruction, as compared to scores in self-efficacy for oral language knowledge instruction, following completion of the interventions.

Further analyses were performed to assess whether there were significant differences in gains of self-efficacy made following the interventions for phonemic awareness instruction as compared to gains of self-efficacy for oral language instruction. A paired-samples t-test was conducted to determine whether there were significant differences between phonemic awareness and oral language self-efficacy gain scores. The results were not significant, indicating that ECEs’ gains in self-efficacy for phonemic awareness instruction were not significantly different from their gains in self-efficacy for oral language instruction.

*Differences in Pre-Service and In-Service ECEs’ Knowledge*

In order to determine whether there were significant differences between pre-service and in-service ECEs in their self-efficacy for phonemic awareness instruction (as measured by the Self-Efficacy for Early Literacy Instruction Scale – Phonemic Awareness), and their self-efficacy for oral language instruction (as measured by the Self-Efficacy for Early Literacy Instruction Scale – Oral Language) both prior to and following completion of the professional development intervention, independent samples t-tests were performed. Analyses examining potential self-efficacy differences between pre-service and in-service ECEs on these measures yielded no significant findings. Pre-service and in-service ECEs did not demonstrate significantly different levels self-efficacy in phonemic awareness instruction or in oral language instruction, prior to or following the professional development interventions.
Discussion for Research Question 2

This section presented the findings in relation to research question 2: What impact will a professional development intervention have on ECEs’ feelings of self-efficacy to provide quality early literacy instruction and support to young children? The results from the repeated measures tests and follow-up pairwise comparisons supported the initial hypothesis that the ECEs would show gains in their self-efficacy for phonemic awareness and oral language instruction scores, following the targeted professional development interventions. First, this section reported significant gains in self-efficacy for phonemic awareness instruction scores following the phonemic awareness intervention. Prior to the professional development workshops, self-efficacy for phonemic awareness instruction scores were modest and variable with average scores of 24.77. Following the intervention, self-efficacy for phonemic awareness instruction scores significantly increased with average scores of 37.52. Consistent with research examining the impact of professional development on improving ECEs’ confidence for teaching and facilitating phonological awareness and written language awareness, significant improvements in self-efficacy were made followings the professional development intervention in study 2 (Jackson et al., 2016).

This section also reported significant gains in self-efficacy for oral language instruction scores following the oral language intervention. Prior to the professional development workshops, self-efficacy for oral language instruction scores were modest and variable with average scores of 27.83. Following the intervention, self-efficacy for oral language scores significantly increased with average scores of 39.63. Consistent with research examining the impact of targeted professional development on increasing ECEs’
confidence for supporting and facilitating language development (Scarinci et al., 2015),
the professional development intervention was also effective in improving self-efficacy
for teaching oral language, as is seen by gains in self-efficacy for oral language
instruction scores.

Statistically significant correlations among the self-efficacy for phonemic
awareness instruction measure at pre-test and post-test as well as among the self-efficacy
for oral language instruction measure at pre-test and post-test, showed that those
participants who demonstrated higher scores at pre-test, tended to show higher scores at
post-test. However, this relationship was not demonstrated when comparing phonemic
awareness and oral language self-efficacy scores, indicating that self-efficacy scores in
phonemic awareness instruction were not correlated with self-efficacy scores in oral
language instruction.

Analyses comparing the phonemic awareness and oral language self-efficacy
scores, showed that phonemic awareness self-efficacy scores were lower than the oral
language self-efficacy scores at both pre-test and post-test. Furthermore, analyses
comparing the phonemic awareness self-efficacy score gains to the oral language self-
efficacy score gains indicated that ECEs made higher gains in their self-efficacy for
phonemic awareness instruction scores than they did in their self-efficacy for oral
language instruction scores, following the intervention.

This section also examined self-efficacy differences between pre-service and in-
service ECEs. There were no significant differences between pre-service and in-service
ECEs in terms of their self-efficacy for phonemic awareness and self-efficacy for oral
language instruction scores at any of the four time points. Thus, it is suggested that pre-
service and in-service ECEs do not differ in their baseline self-efficacy for phonemic awareness and oral language, or in their ability to make significant self-efficacy gains following a professional development intervention. The next main section presents the results and discussion of analyses examining the relationship between knowledge and self-efficacy gains.

**Research Question 3: What do the trends of pre-post literacy intervention gain scores indicate about the relationship between knowledge and self-efficacy?**

This section presents the results of analyses examining the relationships between knowledge gain scores and self-efficacy gain scores following the professional development interventions. The trends and patterns of these relationships were explored through correlations. Correlation coefficients of .10, .30, and .50 are interpreted as weak, moderate, and strong effect sizes, respectively (Green & Salkind, 2005).

**Relationships Between Knowledge and Self-Efficacy Gains**

Correlation coefficients were computed to explore the relationship between phonemic awareness and oral language self-efficacy and knowledge gains, following the interventions. Using the Bonferroni approach to control for Type I errors, a $p$ value of less than .008 (.05/6 = .008) was required for significance. The results of the correlation analyses presented in Table 4.7 show that 1 of the 6 correlations was statistically significant and was equal to .412. The results tend to suggest that improved knowledge in phonemic awareness is related to improved self-efficacy for phonemic awareness instruction, as reported by participants.
Table 4.7

Correlations Among Phonemic Awareness (PA) and Oral language (OL) Self-Efficacy and Knowledge Gain Scores

<table>
<thead>
<tr>
<th></th>
<th>Self-efficacy (PA)</th>
<th>Knowledge (PA)</th>
<th>Self-efficacy (OL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy (PA)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge (PA)</td>
<td>.412*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-efficacy (OL)</td>
<td>-.016</td>
<td>.120</td>
<td></td>
</tr>
<tr>
<td>Knowledge (OL)</td>
<td>.174</td>
<td>.174</td>
<td>.116</td>
</tr>
</tbody>
</table>

*p < .008

Discussion for Research Question 3

This section presented the findings in relation to research question 3: What do the trends of pre-post literacy intervention gain scores indicate about the relationship between knowledge and self-efficacy? The results of the correlations analyses suggest that there is a moderate relationship between phonemic awareness knowledge gains and phonemic awareness self-efficacy gains, in that improvements in knowledge scores were positively correlated with improvements in self-efficacy scores. However, no other relationships were identified among the knowledge and self-efficacy gain scores which is consistent with research examining the lack of relationship between self-efficacy for literacy instruction and literacy knowledge (Bostock & Boon, 2012; Leader-Janssen & Rankin-Erickson, 2013; Martinussen et al., 2015). In study 2, with the exception of phonemic awareness knowledge and self-efficacy scores, self-report of greater or lesser feelings of self-efficacy did not mirror underlying differences in early literacy knowledge, as determined by objective tests designed to assess knowledge and understanding.
Research Question 4: What do ECEs’ knowledge and self-efficacy look like one month following intervention? Will potential gains made remain?

In this study, following completion of the first professional development intervention, participants were invited to return one month later, to complete a second professional development intervention. Pre- and post-tests of knowledge and self-efficacy were completed prior to and following each intervention. This section presents the quantitative results of comparisons of knowledge and self-efficacy scores at Test Point 2, following the first professional development intervention, to the knowledge and self-efficacy scores at Test Point 3, which took place one month following the first professional development intervention. These analyses will determine whether gains made from the first professional development intervention, remain one month later.

Maintenance of Gains at One-Month Follow-Up

Pre- and post-intervention assessments of early literacy knowledge included measures of phonemic awareness knowledge (Early Literacy Assessment – Phonemic Awareness) and oral language knowledge (Early Literacy Assessment – Oral Language). Pre- and post-intervention assessments of self-efficacy for early literacy instruction included measures of self-efficacy for phonemic awareness instruction (Self-Efficacy for Early Literacy Instruction Scale – Phonemic Awareness) and self-efficacy for oral language instruction (Self-Efficacy for Early Literacy Instruction Scale – Oral Language).

Paired-samples t-tests were conducted to determine whether ECEs’ (pre-service and in-service combined) mean phonemic awareness and oral language self-efficacy and
knowledge scores would differ significantly, one month following the intervention. Effect sizes are reported as Cohen’s $d$ or $r$ values.

*Changes in Knowledge Over Time*

**Changes in phonemic awareness knowledge.** Fifteen ($n=15$) ECEs completed the phonemic awareness workshop and then returned one month later for follow-up assessments. A paired-samples $t$-test was performed to determine whether phonemic awareness knowledge scores fluctuated one month following intervention. The results indicate that the mean phonemic awareness knowledge score one month following intervention ($M=10.07, SD=3.51$) was not significantly different from the mean phonemic awareness knowledge score immediately following the intervention (Time Point 2) ($M=11.33, SD=1.29$). These results suggest that at one month following the intervention, participants were able to retain phonemic awareness knowledge gains.

**Changes in oral language knowledge.** Sixteen ($n=16$) ECEs completed the oral language workshop and then returned one month later for follow-up assessments. A paired-samples $t$-test was performed to determine whether oral language knowledge scores fluctuated one month following intervention. The results indicate that the mean oral language knowledge score one month following intervention ($M=12.13, SD=2.60$) was not significantly different from the mean oral language knowledge score immediately following the intervention (Time Point 2) ($M=13.25, SD=1.44$). These results suggest that one month following the intervention, participants were able to retain oral language knowledge gains.
 Changes in Self-Efficacy Over Time

Changes in self-efficacy for phonemic awareness instruction. Fifteen ($n=15$) ECEs completed the phonemic awareness workshop and then returned one month later for follow-up assessments. A paired-samples $t$-test was performed to determine whether self-efficacy for phonemic awareness instruction fluctuated one-month following intervention. The results indicate that the mean phonemic awareness self-efficacy score, one month following intervention ($M=32.73$, $SD=5.57$), was significantly lower than the mean phonemic awareness self-efficacy score immediately following the intervention (Time Point 2) ($M=38.20$, $SD=3.14$), $t(14)=3.37$, $p=.005$. The effect size index, Cohen’s $d$, was 1.21, showing a large effect. The differences between the scores one month following the intervention are shown in Figure 4.9. The 95% confidence interval for the mean difference between the scores was 1.98 and 8.95.

However, despite this apparent regression in scores of self-efficacy for phonemic awareness instruction one month following the intervention, it’s important to note that self-efficacy scores were still considerably higher than they were at baseline. Thus, not all gains were lost. A paired-samples $t$-test was performed to determine whether self-efficacy for phonemic awareness instruction scores at one month following the phonemic awareness intervention were significantly different from the baseline scores. The results indicate that the mean phonemic awareness self-efficacy score, one month following intervention ($M=32.73$, $SD=5.57$), was significantly higher than the mean phonemic awareness self-efficacy score at baseline (Time Point 1) ($M=25.8$, $SD=3.82$), $t(14)=-4.92$, $p<.001$. The effect size index, Cohen’s $d$, was 1.45, showing a large effect. The 95% confidence interval for the mean difference between the scores was -9.96 and -3.91.
This result suggests that despite the loss of some self-efficacy for phonemic awareness instruction gains one month following the intervention, self-efficacy scores were still significantly higher one month following the intervention than they were prior to the intervention.

![Figure 4.9](image-url)

**Figure 4.9.** Differences in self-efficacy for phonemic awareness instruction scores at post-test and one month following the phonemic awareness workshop

**Changes in self-efficacy for oral language instruction.** Sixteen \((n=16)\) ECEs completed the oral language workshop and then returned one month later for follow-up assessments. A paired-samples \(t\)-test was conducted to evaluate whether self-efficacy for oral language instruction fluctuated one month following intervention. The results indicate that the mean oral language self-efficacy score, one month following intervention \((M=32.69, SD=7.90)\), was significantly lower than the mean oral language self-efficacy score immediately following the intervention \((M=38.31, SD=3.93)\), \(t(15)=3.10, p=.007\). The effect size index, Cohen’s \(d\), was 0.90, showing a
The differences between the scores one month following the intervention are shown in Figure 4.10. The 95% confidence interval for the mean difference between the scores was 1.76 and 9.49.

![Figure 4.10. Differences in self-efficacy for oral language instruction scores at post-test and one month following the oral language workshop](image)

However, despite this apparent regression in scores of self-efficacy for oral language instruction one month following the intervention, it’s important to note that self-efficacy scores were still considerably higher than they were at baseline. Thus, not all gains were lost. A paired-samples t-test was conducted to evaluate whether self-efficacy for oral language instruction scores at one month following the oral language intervention, were significantly different from the baseline scores. The results indicate that the mean oral language self-efficacy score, one month following intervention ($M=32.69$, $SD=7.90$), was significantly higher than the mean oral language self-efficacy score at baseline (Time Point 1) ($M=26.57$, $SD=6.64$), $t(15) = -3.98$, $p=.001$. The effect
size index, Cohen’s $d$, was 1.00, showing a large effect. The 95% confidence interval for the mean difference between the scores was -9.40 and -2.85. This result suggests that despite the loss of some self-efficacy for phonemic awareness instruction gains one month following the intervention, self-efficacy scores were still significantly higher one month post intervention than they were prior to the intervention.

**Discussion for Research Question 4**

This section presented the findings in relation to research question 4: What do ECEs’ knowledge and self-efficacy look like one month following intervention? Will potential gains made remain? First, this section reported no significant differences in both phonemic awareness and oral language knowledge one month following the professional development interventions. This finding suggests that knowledge gains were retained one month following intervention. This is a promising finding about the effectiveness of short-term professional development opportunities and their potential to contribute to long-term knowledge gains, which has also been demonstrated in other studies examining short-term professional development and its impact on knowledge and practices (Girolametto et al., 2007; Jackson et al., 2006).

This section also reported significant differences in self-efficacy for phonemic awareness instruction scores one month following the intervention. Immediately following the phonemic awareness intervention, the mean self-efficacy for phonemic awareness instruction score was 31.64. One month later, however, the mean self-efficacy for phonemic awareness instruction score dropped to 28.94. Despite this apparent regression however, self-efficacy for phonemic awareness instruction scores remained
significantly higher one month following intervention than they were at baseline (M=25.80). A similar trend was found with self-efficacy for oral language instruction scores. Immediately following the oral language intervention the mean self-efficacy for oral language instruction score was 38.31. One month later, however, the mean self-efficacy for oral language instruction score dropped to 32.69. Despite this apparent regression, however, self-efficacy for oral language instruction scores remained significantly higher one month following intervention than they were at baseline (M=26.57).

The results, therefore, indicate that although not all self-efficacy gains in phonemic awareness and oral language instruction were retained, self-efficacy scores in both phonemic awareness and oral language instruction were significantly higher one month following the intervention than they were prior to the intervention. Thus, some gains were lost, but not all. This apparent regression of self-efficacy for instruction is supported by the literature that suggests that in order for professional development to have lasting influence on teacher practices and children’s learning outcomes, it must be ongoing (Desimone, 2009; Garet et al., 2001), which was not the case for the professional development interventions offered in study 2.

**Qualitative Results and Discussion**

The previous section presented the quantitative results and discussion of study 2. This section presents the qualitative findings for study 2. The focus in the present section is on participants’ experiences taking part in a professional development intervention and the impact of the intervention on early literacy knowledge and self-efficacy. Through the
interpreive analysis described in the methods section, four themes emerged. These themes are summarized in Figure 4.1. The first and second themes reflect ECEs’ accounts of their perceptions and experiences in building knowledge and self-efficacy and learning to apply theory to practice, through participation in the professional development interventions. The third and fourth themes reflect ECEs’ accounts of the value of professional development and their perceptions of the overall impact of participating in the professional development interventions. Further information about participant responses categorized by participant number, participant group and qualitative theme are found in Appendix D.

<table>
<thead>
<tr>
<th>Theme 1: Knowledge Building and Reinforcing</th>
<th>Theme 2: Applications of Theory to Practice</th>
<th>Theme 3: Perceptions of Professional Development</th>
<th>Theme 4: Workshop Evaluation &amp; Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• New skills/knowledge learned</td>
<td>• Learning from practical applications</td>
<td>• Opportunities for collaborative learning</td>
<td>• Workshop expectations and motivations</td>
</tr>
<tr>
<td>• Skill/knowledge reinforcement</td>
<td>• Learning from video demonstrations</td>
<td>• Importance of maintaining currency</td>
<td>• Workshop evaluation and outcomes</td>
</tr>
<tr>
<td>• Connecting knowledge and self-efficacy</td>
<td>• Reflecting on applying theory to practice</td>
<td>• Value of multimodal learning</td>
<td>• Future directions</td>
</tr>
</tbody>
</table>

_Figure 4.11. Overview of qualitative results of study 2_

<table>
<thead>
<tr>
<th>Theme 1: Knowledge Building and Reinforcing</th>
</tr>
</thead>
<tbody>
<tr>
<td>• New skills/knowledge learned</td>
</tr>
<tr>
<td>• Skill/knowledge reinforcement</td>
</tr>
<tr>
<td>• Connecting knowledge and self-efficacy</td>
</tr>
</tbody>
</table>

Theme 1 includes the data relevant to ECEs’ accounts of the development and reinforcement of their early-literacy-related knowledge, skills and self-efficacy as a result
of participating in the professional development interventions. These results were derived from the semi-structured interviews as well as from open-ended written questions asking participants to reflect on their experiences participating in the professional development interventions. In order to represent the prevalence of themes as they emerged in the data, “the majority of participants”, “many participants” and “a few participants” were used as descriptors. ECEs’ responses revealed that they perceived the professional development interventions to have influenced their knowledge, skills and self-efficacy in the following ways: (1) new skills/knowledge learned, (2) skill/knowledge reinforcement, and (3) connecting knowledge and self-efficacy.

*New Skills/Knowledge Learned*

Throughout ECEs’ accounts of their experiences participating in the professional development workshops, it was evident that they perceived themselves to have acquired new knowledge and skills in phonemic awareness and/or oral language. Many pre-service and in-service ECEs discussed learning about key early literacy concepts and skills related specifically to phonemic awareness. As well, many pre-service and in-service ECEs discussed learning about key early literacy concepts and skills related specifically to oral language.

*New Skills and Knowledge in Phonemic Awareness.* Many pre-service and in-service ECEs mentioned that the phonemic awareness workshop contributed to their acquisition of new skills and knowledge in phonemic awareness. In particular, they emphasized that the content and applied activities of the workshop taught them
information about phonemic awareness concepts and instruction that they didn’t know prior to their participation in the intervention. For example:

Phonemes, like I didn’t even know that term before this workshop. (P17)

Referring to letter sounds and symbol with back slashes: I’m a university student and I don’t know those. (P45)

Now I know some fun games to help children learn about how to break words apart and then put them back together. (P2)

I really learned so much from the workshop. I had no idea about phonemic awareness before and now I feel like I could actually help a child develop their own skills. (P23)

**New skills and knowledge in oral language.** Both pre-service and in-service ECEs mentioned the impact of the oral language workshop on improving their oral language-related knowledge and skills. They emphasized that the content and applied activities of the workshop taught them information about oral language concepts and instruction that they didn’t know prior to their participation in the intervention. For example:
The session taught me about what skills to expect to see developing at certain
times, so I know what to watch for and how to support the development. (P40)

I know how to use books to introduce new words and I wasn’t good at that before. (P40)

I learned how personal experiences can influence language development and I
wasn’t aware of how there are so many factors that can contribute to language
differences in children. (P21)

Skill/Knowledge Reinforcement

In ECEs’ accounts of the impact of the professional development interventions on
their knowledge and skill learning, it was evident that they saw the workshops as
contributing to the existing, albeit limited, knowledge they already had about phonemic
awareness and oral language instruction. In this sense, the workshops served to reinforce
skills and knowledge they had acquired previously. Some pre-service and in-service
ECEs discussed the value of the phonemic awareness workshop in reinforcing their
existing phonemic awareness-related knowledge and skills. As well, some pre-service
and in-service ECEs discussed the value of the oral language workshop in reinforcing
their existing oral language-related knowledge and skills.

Phonemic awareness-related knowledge and skill reinforcement. Pre-service
and in-service ECEs discussed how the phonemic awareness workshop gave them the
opportunity to consolidate and reinforce knowledge and skills they had acquired prior to
the workshop. Some ECEs mentioned the workshop as reinforcing knowledge they had acquired as a result of their pre-service programs. Other ECEs mentioned the value of the workshop in redefining existing knowledge in an applied context that brought greater clarity to the concepts and ideas. For example:

I kind of forgot the terminology and had to rethink it. (P15)

I remember learning a bit about phonemic awareness but the workshop really helped to actually understand what it means. (P24)

I thought I knew a lot about phonemic awareness but now I realize that was more on a superficial level. Now I feel like I have a much deeper understanding of what phonemic awareness is and what it means for language and reading. Having the chance to learn the definitions and then practice teaching the strategies was really helpful. (P9)

**Oral language-related knowledge and skill reinforcement.** Pre-service and in-service ECEs also discussed how the oral language workshop gave them the opportunity to consolidate and reinforce knowledge and skills they had acquired prior to the workshop. Some ECEs mentioned the workshop as reinforcing knowledge they had acquired as a result of their pre-service programs. Others mentioned the workshops as reinforcing knowledge they had acquired in professional settings. ECEs mentioned the
value of the workshop in redefining existing knowledge in an applied context that brought greater clarity to the concepts and ideas. For example:

It helped me to connect what I was seeing at work, with children’s beginning speech and vocabulary skills. (P18)

I remember learning about the stages of language in my [university] class, but now I feel like I can actually picture what is happening with the children and the teacher. (P48)

The language courses that I took kind of helped, and then the two workshops redefined what the meanings of everything were cause like you have the brief overview of it in class and you’re struggling to understand it so you can be tested on it, where at least with this there was no test so you could just sit and absorb it. Plus I didn’t take literacy this year – like I didn’t have any language courses, so this was a good refresher. (P35)

*Connecting Knowledge and Self-Efficacy*

In ECEs’ accounts of the impact of the professional development interventions on their knowledge and skill learning, some ECEs made explicit connections between their perceived knowledge and skills and their feelings of self-efficacy for early literacy instruction. Connections between knowledge and self-efficacy were made in two ways. First, a few ECEs connected their lack of self-efficacy for early literacy instruction to
their perceived lack of early literacy-related knowledge. Second, a few ECEs connected improvements in their feelings of self-efficacy for early literacy instruction to improvements in early literacy-related knowledge.

**Connecting a lack of self-efficacy to a lack of knowledge.** It was evident that a few ECEs felt that their lack of confidence in teaching specific early literacy concepts was directly related to their lack of early literacy-related knowledge. For example:

> It’s obvious to me now that there is a lot that I don’t know and that’s why I don’t feel confident about planning a literacy program. (P23)

> Yeah, um, well, personally, I’m not very strong in language, my language skills, so, when I go to teach language with young children, I’m myself not very confident. (P26)

**Connecting gains in knowledge to gains in self-efficacy.** As well, it was evident that a few ECEs saw the value of the workshops in improving their knowledge and, subsequently, raising their self-efficacy for teaching early literacy-related concepts and mentioned this connection explicitly. For example:

> Because, not only did it break it down for me, because I hate phonetics and sound building, I’m so bad at it. Just because I don’t understand it myself. So I have no idea how to teach someone else. At least in the workshop, it kind of simplifies it all and now I know more and now I feel more confident. (P5)
Because of the workshops, I know so much more about how these skills develop and what I can do as a teacher to help them develop. I think I could do a good job, supporting these children and wouldn't be so afraid to make a mistake. (P30)

Theme 2: Applications of Theory to Practice

- Learning from practical applications
- Learning from video demonstrations
- Reflecting on applying theory to practice

Theme 2 includes ECEs’ accounts of their experiences applying theory to practice, in the context of the professional development workshops. ECEs’ accounts of their experiences applying theory to practice emerged through open-ended questions asking them to describe elements of the workshops they found to be particularly beneficial to their learning. ECEs’ responses revealed that their experiences applying theory to practice could be categorized according to the following topics: (1) learning from practical applications, (2) learning from video demonstrations, and (3) reflecting on how to apply theory to practice.

Learning from Practical Applications

In reflecting on their experiences participating in the professional development workshops, several ECEs mentioned the value of learning from practical applications. ECEs’ responses revealed that they valued the opportunity to apply the learning of theoretical concepts using hands-on activities. As well, ECEs’ responses revealed that
they valued the opportunity to connect their theoretical learning to practice, through the use of multiple examples illustrating the connection between concepts and how these concepts would be applied in practice.

**Practical applications using hands-on activities.** Pre-service and in-service ECEs identified the hands-on activities as being an effective and enjoyable component of the workshops. Specifically, many ECEs were able to articulate the role of the hands-on activities in enabling them to make connections between theory and practice, further consolidating the information they were taught. For example:

You learn it and then right away you do an activity based on it. It was fun and helped me to understand the information better. (P22)

Unlike our classes, the workshop was less about memory and more about application, which was a very good thing. (P24)

It got me excited about it again, seeing the videos, doing the activities, it helped me understand the ideas and now we can make this fun for kids. (P40)

When she gave activities for us personally to do, it was helpful for me because I’m a hands-on learner, so that was really good. Hopefully we’ll do that in the future, like other classes too! (P15)
Practical applications using examples. A few pre-service and in-service ECEs mentioned that they appreciated the opportunity to learn from practical examples. These participants explained that multiple examples allowed the opportunity to conceptualize how the instructional strategies would be implemented in practice. For example:

I think it’s better to have a lot more examples of how your learning can be applied, I think that’s something that’s usually forgotten. The (literacy course) was more about content and less about application. The examples help you understand how the teaching happens in the classroom. (P5)

It gave explicit examples of what other teachers have done so I thought that was really helpful. (P41)

Learning from Video Demonstrations

In reflecting on their experiences participating in the professional development workshops, many ECEs mentioned the utility of the video demonstrations. ECEs’ responses revealed that they valued the opportunity to see video demonstrations of teachers demonstrating early literacy-related concepts and instructional practices. ECEs mentioned these video demonstrations, not only as a source of knowledge acquisition, but also as an element of the workshops, that they found to be enjoyable.

Video demonstrations contributing to knowledge. Pre-service and in-service ECEs discussed how the video demonstrations were beneficial for consolidating information they had learned elsewhere during the workshops. Specifically, some ECEs
were able to articulate how the video demonstrations were beneficial in presenting theoretical concepts and instructional strategies in practical ways. For example:

So the clips really did help me because I could visually see how you could do this in the classroom, as opposed to just saying it reading off the text. (P12)

Especially the videos that she showed the different teachers doing the activities because you know it showed the response the students gave to the teacher so you could see like it might not work for all age groups or all classrooms but um, I don’t think it would make as much sense coming from a written lesson plan. (P2)

The videos of the classroom teachers gave me a chance to actually see how these ideas look in real-life. (P13)

**Video demonstrations contributing to enjoyment.** Many pre-service and in-service ECEs mentioned that the video demonstrations were a preferred component of the professional development workshops. Many ECEs expressed their enjoyment from viewing the video clips. For example:

I LOVED the videos! I found a lot of the video clips that were showed in the presentation were really beneficial. I also really liked that I think some of them were kind across cultures. I thought that was beneficial. (P18)
The videos of the teachers and kids were so awesome! They were my favourite part for sure. You don’t get to see a lot of good videos like this showing good strategies and stuff. And it’s even better that I can visit the website myself and watch them again. (P27)

I really enjoyed seeing the videos of the kids and teachers. (P4)

The videos were the best part! (P51)

*Reflecting on Applying Theory to Practice*

In their accounts of how the workshops impacted their early literacy knowledge, a few ECEs mentioned the value of the workshops in providing the opportunity to reflect on the process of applying theory to practice. A few ECEs mentioned how engaging in applied learning experiences significantly benefited their growth in knowledge and self-efficacy for early literacy instruction. For example:

I feel a lot more confident going into, um, an early childhood setting and say, you know I can actually do a literacy program, and not have a problem with it. I can actually take the concepts and apply them in a classroom. (P34)

I don’t think enough of us know how to teach literacy effectively and I think that kind of effects our different philosophies I think the workshops has probably impacted the way I think literacy should be taught. I think just teaching in a
simple way, like how we did in the workshops, that’s not too difficult to understand and teach using what you know. (P51)

Theme 3: Perceptions of Professional Development

- Opportunities for collaborative learning
- Importance of maintaining currency
- Value of multimodal learning

Theme 3 includes ECEs’ accounts of their perceptions of professional development. ECEs’ accounts of their perceptions of professional development were explored through open-ended self-reflection and interview questions asking them to reflect on their experiences participating in the professional development workshops, including questions related to their perceptions of the value of the professional development workshops as well as the value of professional development in general. ECEs’ responses revealed that their perceptions of professional development could be categorized according to the following topics: (1) opportunities for collaborative learning, (2) importance of maintaining currency, and (3) value of multimodal learning.

Opportunities for Collaborative Learning

When discussing their perceptions of professional development, several ECEs commented that the professional development workshops provided for the opportunity to learn in a collaborative environment. A few ECEs mentioned the value of collaborative learning and appreciated the opportunity to learn in a group setting with other pre-service and in-service ECEs with shared interests and professional goals. For example:
The literacy course here in the school, it’s more focused on assignments, it doesn’t focus on like interaction, and discussing with people and in the workshop it felt more open and was just more open to talk to whereas in the lecture courses it feels more strict and standardized. (P11)

I also thought the group activities, really threw us into literacy learning, like phonemes, saying one section of the word at a time was really fun and I feel like it loosens people up, it forces people to talk to each other and gets a whole new learning going on. (P29)

Importance of Maintaining Currency

When asked about their perceptions of the role of professional development in ECE training, a few ECEs mentioned the importance of maintaining currency in the professional field. These ECEs mentioned professional development opportunities, such as the professional development workshops, as an opportunity to learn new skills and instructional strategies. For example:

You know how they say if you want to be a teacher, you always got to keep learning, right? (P26)

I always like signing up for workshops and events where I have the chance to learn more. It's the only way to keep growing as a teacher. (P14)
Value of Multimodal Learning

In their accounts of their experiences participating in the professional development workshops and in their reflections of the value of professional development as a whole, many ECEs mentioned the use of multimodal learning in positively contributing to their growing professional knowledge. Many ECEs discussed the value of multimodal learning in capturing and holding their interest and attention during professional development sessions. A few other ECEs mentioned the value of multimodal learning in enabling them to make explicit connections between theory and practice.

Multimodal learning contributing to attention and engagement. Many ECEs discussed the multimodal learning components of the workshops as creating an engaging and dynamic learning context. For example:

I did like that it [the workshops] went over different components of language and it did have the written version, an oral component, and physical activities that we did. So it covered all of the types of learners. Plus the videos had good activities. It was easy to pay attention and stay focused. (P25)

It got me excited about learning. Watching the videos, playing the activities, they just gave it like more concrete examples of how we can make this fun for kids. (P17)
It was nothing like how we are taught in classes. The PowerPoint slides, the discussions, the videos, the books and the activities made it so engaging and easy to learn from. (P37)

All the different elements and uses of technology made it super engaging and I didn't feel like sleeping for once! (P2)

**Multimodal learning connecting theory to practice.** A few ECEs discussed the role of the multimodal learning components of the workshops in contributing to their ability to connect their understanding of theoretical concepts to practice. For example:

Having a lecture about phonemes, then talking about how to identify them and then seeing a video showing how to find them, made me understand how the concept works. (P17)

Seeing the activities on paper and then doing them in person and watching them in the videos, helped me to understand what is happening in the classroom. (P42)

<table>
<thead>
<tr>
<th>Theme 4: Workshop Evaluation &amp; Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Workshop expectations and motivations</td>
</tr>
<tr>
<td>• Workshop evaluation and outcomes</td>
</tr>
<tr>
<td>• Future directions</td>
</tr>
</tbody>
</table>

Theme 4 includes ECEs’ accounts of their experiences participating in the professional development workshops, six-weeks following the intervention. ECEs’
accounts of their experiences of participating in the professional development workshops were explored through interview questions asking them to reflect on their perceptions of how the workshops influenced their knowledge, feelings of self-efficacy and future teaching practices. ECEs’ responses revealed that their accounts of participating in the professional development workshops could be categorized according to the following topics: (1) workshop expectations and motivations, (2) workshop evaluation and outcomes, and (3) future directions.

**Workshop Expectations and Motivations**

In their accounts of participating in the professional development workshops some ECEs made specific comments about their expectations of the professional development workshops and whether these expectations were met. A few other ECEs commented on their reasons for pursuing the professional development opportunity.

**ECEs’ expectations of the professional development intervention.** When reflecting on their reasons for participating in the professional development workshops, a few ECEs made both direct and indirect references to their expectations of the intervention. In particular, a few ECEs mentioned that the professional development workshops exceeded their expectations. For example:

I didn’t really know what to expect from the workshops. I guess I expected it to be similar to my [college] classes, but it was actually very different – in a good way. (P2)
I was hoping to learn more about how language develops and to leave with some helpful strategies and handouts I could use in the classroom. (P32)

It was a great experience and I guess I didn’t really know what it was going to be like but I learned so much. (P17)

**ECEs’ reasons for participating.** A few ECEs discussed the reasons why they pursued the opportunity to participate in the professional development intervention. A few participants made explicit connections to their motivations, whether they were intrinsically or extrinsically motivated to participate. For example:

I usually try to participate in research about education. I think it is really important. Plus I knew it would teach me new things about teaching kids in language. (P17)

I thought it would be a good learning opportunity and thought that a certificate of completion would be valuable to add to my portfolio. (P2)

*Workshop Evaluation and Outcomes*

In their accounts of the experience of participating in the professional development workshops, some ECEs provided an evaluation of the perceived value of the workshops on their professional development and learning. As well, some ECEs discussed how the knowledge and positive feelings of self-efficacy they had gained as a
result of their participation in the workshops had impacted their professional practice in an ECE setting.

**ECEs’ evaluations of the workshops.** In reflecting on participating in the professional development workshops, all interview participants made positive evaluative judgments about the benefits and value of the workshops in contributing to their developing knowledge and self-efficacy for early literacy instruction. For example:

The workshops were highly beneficial to my learning. I’m very satisfied with what was taught and how much I have learned. If there are any future professional development workshops offered, I would like to sign up. (P5)

The phonemic awareness workshop was the best one, in my opinion. I think it was really valuable to my learning and feeling confident to teach children. (P14)

I got a lot out of the workshops. They definitely benefited my understanding. (P17)

I’m really glad I replied to the email and signed up for the workshops. I honestly had no idea how much they would teach me. Because it was like an isolated thing, it wasn’t during the semester. It was with a fantastic leader who was doing the presentation, making it fun and just being really friendly about it. (P51)
Outcomes for professional practice. All of the in-service interview participants mentioned that participating in the professional development workshops had positively impacted their practice in ECE settings. All of the in-service ECEs mentioned how the workshops had improved their early literacy-related knowledge, which in turn positively influenced their teaching with children. For example:

I learned about lots of activities that target specific skills and I have been doing them with my students, almost every day. (P32)

Because I know what phonemic awareness is now, I am aware of what I should be teaching the kids in my class. I know how to help them to develop their own phoneme skills. (P26)

I am using books a lot for teaching new words and new letter sounds. I didn't do that before the workshop. (P51)

We use the songs a lot now for rhyming. The kids love it and I can see how it’s helping them with their sounds. (P2)

The majority of the in-service ECEs also mentioned how the workshops had positively influenced their feelings of self-efficacy for phonemic awareness and oral language instruction. For example:
What I learned about language development has made me more confident about assessing the toddlers’ vocabulary and knowing if they are on track with their learning. (P26)

I feel way more prepared to teach children about listening to and thinking about the sounds in words. (P32)

I feel a lot more confident going into, um, an early childhood setting and say, you know I can actually do a literacy program, and not have a problem with it. (P51)

**Future Directions**

As they were reflecting on their experiences participating in the professional development workshops, some ECEs commented on their intentions for the future in two key areas. A few ECEs mentioned their intention to seek out future professional development opportunities. As well, a few ECEs mentioned their intention to implement knowledge and strategies learned during the professional development interventions in their future practice in ECE settings.

**Future directions in professional development.** During their interviews, a few ECEs mentioned their intentions to participate in future professional development opportunities in the areas of language and literacy and in other areas/topics of instruction. For example:
I really want to see about other programs or workshops to learn about other topics too. I would like to learn more about teaching specific reading skills and also about how to help children understand math concepts better. I really think there is a need for more learning programs outside of the schools [referring to college programs]. (P2)

I would really like to learn more about how to help children who are struggling in their reading. I hope to find a session to help me gain some strategies. (P14)

**Future directions in ECE practice.** During their interviews, a few pre-service ECEs mentioned their intentions to implement specific activities or strategies they learned during the professional development workshops in their future practice in an ECE setting. For example:

I haven’t had the chance yet, but I definitely want to try that “say it and swap it” phonemic awareness activity with kids. I think it would be a lot of fun and would help them learn. (P14)

I plan on keeping my notes and handouts from the workshops and using them in the future when I become a teacher. (P34)
Discussion of Qualitative Findings

This discussion provides a brief overview of the emergent themes, summarizes the key findings and discusses the conclusions of the qualitative component of study 2. Research exploring the impact of targeted professional development on ECEs’ early literacy knowledge and self-efficacy for early literacy instruction tends to focus on quantitative measures of data collection and analyses (e.g., Girolametto et al., 2003; Girolametto et al., 2007; Jackson et al., 2006; Scarcini et al., 2015; Vislay & Gischlar, 2013). Thus the potential usefulness of qualitative research to better understand the experiences of ECEs as they engage in targeted professional development to improve their early literacy-related knowledge and self-efficacy has not been adequately explored. As well, existing research in the area of ECEs’ early literacy-related professional development experiences focuses exclusively on the experiences of in-service ECEs. No known qualitative research has examined the experiences of pre-service and in-service ECEs as they participate in a targeted professional development intervention focused on improving knowledge and self-efficacy in phonemic awareness and oral language instruction. Therefore, this study provides unique insights. The research questions focused on exploring ECEs’ experiences participating in the professional development intervention as well their perceptions of the benefits and value of their participation in terms of perceived gains in knowledge and self-efficacy, and their overall evaluation of the value of the workshops and of professional development beyond the scope of the intervention. Four themes emerged from the study: 1) knowledge building and reinforcing, 2) applications of theory to practice, 3) perceptions of professional development, and 4) workshop evaluation and outcomes. These themes addressed the
research questions of the present study. The following subsections summarize the key findings and examine links between the findings and existing theory and research.

**Theme 1: Knowledge Building and Reinforcing**

When reflecting on their experiences participating in the professional development intervention, ECEs in the present study emphasized how the workshops positively influenced their knowledge, teaching them new concepts and skills in phonemic awareness and oral language instruction. These perceived knowledge gains are consistent with those identified in the literature examining the impact of targeted professional development in early literacy and its role in improving knowledge among ECEs (Girolametto et al., 2003; Girolametto et al., 2007; Jackson et al., 2006; Scarcini et al., 2015; Vislay & Gischlar, 2013) and primary schoolteachers (Desimone, 2009; Domitrovich et al., 2009; Landry et al., 2006; Neuman & Wright, 2010).

The present study also found that ECEs viewed the professional development intervention as providing them with the opportunity to reinforce or practice skills they had previously acquired. ECEs mentioned workshops giving them the opportunity to reinforce knowledge and skills related to phonemic awareness and oral language instruction, in practical ways. This finding is consistent with research examining the role of practice opportunities in professional development learning (Garet et al., 2001). Those participants who mentioned the value of opportunities for applied learning were more likely to articulate a sense of having at least some level of knowledge in phonemic awareness and oral language development. The majority of participants, however,
commented on the lack of opportunities to apply their learning and attributed their perceived early literacy-related knowledge deficits to this lack of opportunity.

Some ECEs also emphasized the relationship between their knowledge and feelings of self-efficacy to teach phonemic awareness and oral language concepts and strategies. Some ECEs identified a connection between their lack of knowledge and low levels of self-efficacy for early literacy instruction, prior to the intervention. As well, some ECEs mentioned that as they gained more knowledge in key areas, they felt more confident to teach those concepts and strategies, which is consistent with literature highlighting the impact of targeted professional development on increasing confidence to teach (Jackson et al., 2016; Scarinci et al., 2015).

**Theme 2: Applications of Theory to Practice**

When participants reflected on their experiences participating in the professional development intervention, the majority of ECEs mentioned the value of opportunities to apply theory to practice. In particular, many ECEs mentioned the value of learning from practical applications involving hands-on activities and examples of the concepts and strategies in practice. Consistent with the literature examining the utility of practical applications in professional development (Beavers, 2009; Garet et al, 2001; Gravani, 2012; Gregson & Sturko, 2007; Kang et al, 2013), participants in this study identified the hands-on activities as a highly valued component of the workshops, a component that they perceived to benefit their understanding of the workshop curriculum.

As well, many ECEs mentioned the value of the video demonstrations as a component of the professional development intervention. ECEs mentioned the video
demonstrations as contributing to their knowledge by enabling them to make more explicit connections between the concepts and strategies taught during the workshops and how they might be implemented in practice. These findings are consistent with the literature on the use of video demonstrations as a means of enacting specific forms of curricula or instruction (Lambert & Ball, 1998; Schrader et al., 2003) and with literature examining the benefits of multimedia approaches to professional development for improving knowledge (Elly et al., 2014; Kennedy et al., 2013).

When reflecting on their experiences participating in the professional development intervention, some participants also mentioned the value of the workshops in providing the opportunity to reflect on the process of applying theory to practice. A few ECEs mentioned how engaging in applied learning experiences significantly benefited their growth in knowledge and self-efficacy for early literacy instruction. This reflection process is also consistent with the literature on the role reflection in professional development in terms of consolidating what has been done and learned in order to make meaning of and apply their learning following completion of the professional development experience (Gravani, 2012; Gregson & Sturko, 2007).

**Theme 3: Perceptions of Professional Development**

Many of the participants discussed their perceptions of professional development in their responses. Participants mentioned professional development as providing opportunities to engage in collaborative learning, maintain currency in the field and engage in multimodal learning.
Many participants discussed the role of collaborative learning in the professional development intervention. Specifically, they discussed the benefit of learning alongside peers who shared similar interests and professional goals. They discussed the value of collaborative learning in contributing to their knowledge. This finding is consistent with research that suggests that employing collaborative inquiry, where a group of individuals can learn together in a safe and comfortable environment, improves adult learning and practice (Garet et al., 2001; Gravani, 2012, Gregon & Sturko, 2007).

The importance of maintaining currency in the field of early childhood education and the role that professional development plays in maintaining currency was also a point of discussion mentioned by a few ECEs. Generally, longer, sustained, or ongoing professional development is promoted in the literature (Desimone, 2009; Garet et al., 2001) and while a long-term, sustainable professional development model was not possible in the design of study 2, participants’ references to the importance of maintaining currency and engaging in ongoing professional development learning, is supported by the literature.

ECEs also emphasized the value of a multimodal format of learning in professional development and its positive contribution to their growing professional knowledge. Many ECEs mentioned the value of learning from written, oral, visual, digital and hands-on learning formats in terms of creating an engaging and stimulating learning environment and also in terms of benefits for knowledge acquisition and reinforcement. Consistent with literature examining the use of multimodal approaches to learning in professional development (Elly et al., 2014; Kennedy et al., 2013; Lambert & Ball, 1998;
Schrader et al., 2003), study 2 found that the multimodal format of the professional development workshops was seen as a benefit to learning and engagement.

Theme 4: Workshop Evaluation and Outcomes

Six-weeks following the professional development intervention, participants reflected on their experiences participating in the intervention and its apparent impact. In their responses, participants discussed their expectations surrounding the workshops as well as their reasons for participating. They also reflected on the perceived impact of the intervention on their professional knowledge and ECE practices. Participants also provided their evaluation of the workshops, essentially describing whether they felt the workshops were beneficial to their learning and professional development as ECEs.

In relation to their expectations for the workshops, following completion of the intervention, the majority of interview participants described feeling that their expectations had been exceeded and expressed feeling satisfied about the concepts and strategies they had learned. In relation to their reasons for participating in the intervention, many participants expressed intrinsic motivations for participating, namely to engage in learning and personally benefit from acquiring new knowledge and understanding which is consistent with literature suggesting that commitment to learn is stronger and engagement levels are higher, when learners are internally motivated (Beavers, 2009; Gravani, 2012).

When asked to reflect on the impact of the professional development intervention, all ECEs mentioned that they saw value in their participation in terms of learning acquisition of new knowledge. Consistent with literature examining the impact of
professional development on knowledge (Cheesman et al., 2009; Fielding-Barnsley, 2010; Girolametto & Weitzman, 2002; Kennedy et al., 2013; Scarinci et al., 2015; Schachter et al., 2016), every interview participant reported the workshops to be beneficial to their learning. Furthermore, consistent with the literature examining the impact of professional development on professional practice (Jackson et al., 2006; McCutchen et al., 2002; Scarinci et al., 2015), many participants reported the specific ways in which the workshops had influenced their teaching practices or the ways in which they saw the workshop influencing future practices. Some of the participants also reflected on the role of the intervention in improving their feelings of self-efficacy for early literacy instruction, which is also consistent with the literature examining the role of professional development in improving feels of self-efficacy for teaching (Jackson et al., 2006; Scarinci et al., 2015).

**General Discussion of Study 2**

The previous sections presented the quantitative and qualitative results and discussion of study 2. This general discussion section highlights the relation between the quantitative and qualitative findings. It begins with a brief description of the model used for integrating the quantitative and qualitative findings of study 2. Then it presents a synopsis of the major quantitative and qualitative findings along with a discussion of how these results both converge and diverge. This integrative discussion is organized around the four research questions that guided the study. Finally, the general discussion considers some limitations of the research and ends with some thoughts on the significance and implications of study 2.
Integrating Quantitative and Qualitative Data

Study 2 employed a mixed-methods concurrent triangulation design (Tashakkori & Teddlie, 2003) in which quantitative and qualitative data were collected concurrently and then analyzed separately. A joint display approach of data comparison was adopted, in order to bring quantitative and qualitative data together using a side-by-side visual comparison (Fetters et al., 2003).

A joint display approach allows for the presentation and discussion of the convergence and divergence of quantitative and qualitative results. The integrated quantitative and qualitative results are presented in the following section. In addition to highlighting where quantitative and qualitative findings converged, the joint display comparison approach revealed that some of the qualitative findings extended understanding of ECEs’ experiences in participating in a targeted professional development intervention, beyond the scope of understanding captured by the quantitative data alone. These additional contributions are also presented in the following section.

Data Comparison

This study sought to examine the impact of a targeted professional development intervention on pre-service and in-service ECEs’ knowledge and self-efficacy related to phonemic awareness and oral language instruction, and to compare any differences between pre-service and in-service ECEs in terms of their intervention outcomes. Relevant findings are related to improving knowledge in key components of early
literacy, improving self-efficacy in key components of early literacy, relationships between knowledge and self-efficacy and maintenance of gains at follow-up.

**Improving knowledge in key components of early literacy.** The findings of this study indicate that pre-service and in-service ECEs made significant gains in their knowledge of phonemic awareness and oral language instruction following completion of the professional development intervention. These findings are consistent with those of comparable research examining the impact of targeted professional development on phonemic awareness (Cheesman et al., 2009; Fielding-Barnsley, 2010; Tetley & Jones, 2014) and oral language knowledge (Girolametto & Weitzman, 2002; Scarinci et al., 2015; Schachter et al., 2016). See Table 4.8 for a comparison of the quantitative and qualitative results in relation to ECEs’ gains in early literacy knowledge following intervention.

Quantitative comparisons of performance on the tests of phonemic awareness and oral language knowledge indicate that ECEs appear to be less knowledgeable in phonemic awareness instruction than in oral language instruction, both prior to and following the intervention. However, quantitative comparisons also revealed that ECEs made higher gains in their phonemic awareness knowledge than their oral language knowledge, following intervention. Comparisons between pre-service and in-service ECEs indicate that they did not show significant differences in their phonemic and oral language knowledge prior to or following the intervention.
Table 4.8

ECEs’ gains in early literacy knowledge following intervention

<table>
<thead>
<tr>
<th>QUAN Results</th>
<th>QUAL Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECEs showed significant gains in their phonemic awareness knowledge scores from pre-test ($M=6.16$, $SD=2.06$) to post-test ($M=11.57$, $SD=1.73$)</td>
<td>Many ECEs described the workshops as positively contributing to their knowledge of phonemic awareness:</td>
</tr>
<tr>
<td></td>
<td>• Some ECEs described acquiring new knowledge and could describe specific facts and strategies they had learned</td>
</tr>
<tr>
<td></td>
<td>• Some ECEs reflected on the workshops reinforcing and consolidating existing knowledge of phonemic awareness</td>
</tr>
<tr>
<td></td>
<td>• Some ECEs emphasized the role of opportunities to apply theory to practice in positively influencing their understanding of phonemic awareness</td>
</tr>
<tr>
<td></td>
<td>• There were no notable differences between pre-service ECEs and in-service ECEs in terms of their knowledge of phonemic awareness following intervention</td>
</tr>
</tbody>
</table>

- Phonemic awareness knowledge gain scores ($M=5.52$, $SD=1.87$) were higher than oral language knowledge gain scores ($M=4.61$, $SD=1.89$)
- Pre-service and in-service ECEs were not significantly different on pre- and post-test phonemic awareness knowledge scores

ECEs showed significant gains in their oral language knowledge scores from pre-test ($M=8.63$, $SD=2.32$) to post-test ($M=13.29$, $SD=1.56$)

- Phonemic awareness knowledge scores ($M=11.90$, $SD=1.56$) were lower than oral language knowledge scores ($M=13.13$, $SD=1.69$)
- Pre-service and in-service ECEs were not significantly different on pre- and post-test oral language knowledge scores

Many ECEs described the workshops as positively contributing to their knowledge of oral language:

- Some ECEs described acquiring new knowledge and could describe specific facts and strategies they had learned
- Some ECEs reflected on the workshops reinforcing and consolidating existing knowledge of phonemic awareness
- Some ECEs emphasized the role of opportunities to apply theory to practice in positively influencing their understanding of oral language concepts

- There were no notable differences between pre-service ECEs and in-service ECEs in terms of their knowledge of oral language following intervention
The qualitative findings indicated that the majority of both pre-service and in-service ECEs reported having improved knowledge of phonemic awareness and oral language instruction following the intervention. Some ECEs reflected on the workshops’ contribution to their development of new knowledge. Some ECEs also reflected on the role of the workshops in reinforcing or consolidating previously acquired knowledge. Furthermore, many ECEs reflected on the role of the workshops’ applied activities as a source of developing knowledge. Overwhelmingly, participants described the workshops as positively contributing to their knowledge of phonemic awareness and oral language.

Overall the quantitative and qualitative results converge to suggest that ECEs made significant gains in their phonemic awareness and oral language knowledge following the intervention. As well, both quantitative and qualitative results indicated that pre-service and in-service ECEs show no differences in their potential for making significant knowledge improvements as a result of participating in the intervention.

The quantitative findings further indicated that ECEs are less knowledgeable in concepts related to phonemic awareness than they are in concepts related to oral language instruction, and that ECEs made higher gains in their knowledge of phonemic awareness than in oral language, following the intervention. The qualitative findings extend the quantitative results in highlighting the potential impact of the workshops in consolidating and reinforcing previously acquired phonemic awareness and oral language knowledge.

**Improving self-efficacy in key components of early literacy.** The quantitative and qualitative findings indicated that self-efficacy for phonemic awareness and oral language instruction significantly increased following the intervention, which is consistent with comparable research examining the impact of targeted professional
development on self-efficacy for early literacy instruction (Jackson et al., 2016; Scarinci et al., 2015). See Table 4.9 for a comparison of the quantitative and qualitative results.

Quantitative comparisons of performance on the tests of self-efficacy for phonemic awareness and oral language instruction indicate that ECEs appear to have lower self-efficacy for phonemic awareness instruction as compared to self-efficacy for oral language instruction, both prior to and following the intervention. Quantitative comparisons also revealed that self-efficacy for phonemic awareness instruction gain scores were not significantly different from self-efficacy for oral language instruction gain scores. Comparisons between pre-service and in-service ECEs indicate that they did not show significant differences in their self-efficacy for phonemic awareness instruction and self-efficacy for oral language knowledge instruction, prior to or following, the intervention.

The qualitative findings indicated that some ECEs believed that their self-efficacy had improved as a result of the intervention. In reflecting on the impact of the workshops, some ECEs were explicit in mentioning how they felt more confident to apply concepts and strategies related to phonemic awareness and oral language. Some ECEs also reflected on opportunities to apply theory to practice during the workshops as positively contributing to their feelings of confidence to provide instruction in phonemic awareness and oral language.
Table 4.9

ECEs’ gains in self-efficacy for early literacy instruction following intervention

<table>
<thead>
<tr>
<th>QUAN Results</th>
<th>QUAL Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECEs showed significant gains in their self-efficacy for phonemic awareness instruction scores from pre-test ($M=24.77$, $SD=4.13$) to post-test ($M=37.52$, $SD=4.13$)</td>
<td>Some ECEs described the workshops as positively contributing to their self-efficacy for oral language instruction</td>
</tr>
<tr>
<td>• Self-efficacy for phonemic awareness knowledge instruction scores ($M=37.35$, $SD=4.68$) were lower than self-efficacy for oral language instruction scores ($M=39.90$, $SD=3.88$)</td>
<td>• Some ECEs emphasized the role of opportunities to apply theory to practice in positively influencing their confidence to provide instruction in phonemic awareness</td>
</tr>
<tr>
<td>• Pre-service and in-service ECEs were not significantly different on pre- and post-test self-efficacy for phonemic awareness instruction scores</td>
<td>• There were no apparent differences between pre-service ECEs and in-service ECEs in terms of their self-efficacy for phonemic awareness instruction following intervention</td>
</tr>
</tbody>
</table>

ECEs showed significant gains in their self-efficacy for oral language instruction scores from pre-test ($M=27.83$, $SD=6.19$) to post-test ($M=39.63$, $SD=3.97$)

| • Pre-service and in-service ECEs were not significantly different on pre- and post-test self-efficacy for oral language instruction scores | Some ECEs described the workshops as positively contributing to their self-efficacy for oral language instruction |
| • Some ECEs emphasized the role of opportunities to apply theory to practice in positively influencing their confidence to provide instruction in phonemic awareness |
| • There were no apparent differences between pre-service ECEs and in-service ECEs in terms of their self-efficacy for oral language instruction following intervention |
Overall the quantitative and qualitative results converge to suggest that ECEs made significant gains in their self-efficacy for phonemic awareness and oral language instruction following the intervention. As well, both quantitative and qualitative results indicated that pre-service and in-service ECEs show no differences in their potential for making significant improvements in self-efficacy as a result of participating in the professional development workshops. The quantitative findings further indicated that ECEs have lower scores in self-efficacy for phonemic awareness than in self-efficacy for oral language instruction. The qualitative findings extend the quantitative results in highlighting the role of applied learning opportunities in improving confidence to provide phonemic awareness and oral language instruction.

**Relationships between knowledge and self-efficacy.** The quantitative and qualitative findings indicated that gains in phonemic awareness knowledge were related to gains in self-efficacy for phonemic awareness instruction, consistent with the findings of research examining the impact of professional development leading to improvements in knowledge and related self-confidence to teach (Jackson et al., 2016; Scarinci et al., 2015). Although the quantitative findings did not provide evidence of a relationship between gains in oral language knowledge and gains in self-efficacy for oral language instruction, the qualitative findings appeared to provide support for a possible relationship between improvements in oral language knowledge and increasing feelings of self-efficacy for oral language instruction. See Table 4.10 for a comparison of the quantitative and qualitative results.
Table 4.10  
*Examining the relationship between knowledge and self-efficacy*

<table>
<thead>
<tr>
<th>QUAN Results</th>
<th>QUAL Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECEs’ phonemic awareness knowledge scores were moderately correlated with self-efficacy for phonemic awareness scores (.412; <em>p</em> &lt;.008)</td>
<td>Several ECEs commented on how improvements in their knowledge of phonemic awareness and/or oral language contributed to increased feelings of confidence to teach phonemic awareness and/or oral language</td>
</tr>
<tr>
<td>ECEs’ oral language knowledge scores were not significantly correlated with self-efficacy for oral language scores (.116)</td>
<td>- A few in-service ECEs mentioned specific ways in which their improved knowledge and self-efficacy had influenced their practice</td>
</tr>
<tr>
<td></td>
<td>- A few pre-service ECEs mentioned specific ways in which their improved knowledge and self-efficacy might influence their future practice</td>
</tr>
<tr>
<td></td>
<td>- Many ECEs mentioned the role of applied learning opportunities (i.e., hands-on practical activities and video demonstrations) as a source of learning and related improvements in self-efficacy</td>
</tr>
</tbody>
</table>

Quantitative analyses identified a moderate relationship between knowledge and self-efficacy gain scores related to phonemic awareness knowledge and self-efficacy for phonemic awareness instruction. However, changes in feelings of self-efficacy for oral language instruction did not mirror changes in oral language knowledge consistent with research that has observed a lack of relationship between literacy knowledge and self-efficacy for literacy instruction (Bostock & Boon, 2012; Leader-Janssen & Rankin-Erickson, 2013; Martinussen et al., 2015). Thus, the quantitative results suggest that knowledge and self-efficacy are related in the area of phonemic awareness but not in the area of oral language, as determined by objective tests designed to assess knowledge and feelings of self-efficacy.
The qualitative findings indicated that ECEs reported feeling a greater sense of confidence to teach, and related these feelings to improvements in their knowledge following the workshops. ECEs reflected on feeling a greater sense of confidence to teach children in both phonemic awareness instruction and oral language instruction. Some ECEs described specific ways in which their increased self-efficacy for instruction had positively influenced their teaching practice. Other ECEs described the ways in which they felt their increased self-efficacy would impact their future practice. Many ECEs were also explicit about the specific components of the workshops that they believed to influence their feelings of confidence. In particular, ECEs mentioned the role of applied learning opportunities such as the hands-on practical activities and video demonstrations as a source of learning and related improvements in self-efficacy.

The quantitative and qualitative results converge in highlighting a positive relationship between gains in phonemic awareness knowledge and self-efficacy for phonemic awareness instruction. The qualitative results extend these findings in providing evidence that participants’ self-reported knowledge gains in oral language were positively related to improved feelings of self-efficacy of oral language instruction. The qualitative results add additional insight to understanding this apparent relationship by highlighting the role of opportunities to observe and engage in applied practice in contributing to knowledge and related self-efficacy.

**Maintenance of Gains at Follow-Up.** The quantitative and qualitative findings indicated that knowledge gains were retained following the intervention. Supported by literature examining the potential of short-term professional development interventions in contributing to long-term improvements in knowledge (Girolametto et al., 2007; Jackson
et al., 2006), these results suggest that ECEs can make significant knowledge gains through participation in a short-term targeted professional development intervention and maintain these gains. See Table 4.11 for a comparison of the quantitative and qualitative results.

Table 4.11

**ECEs’ retention of knowledge and self-efficacy gains at follow-up**

<table>
<thead>
<tr>
<th>QUAN Results</th>
<th>QUAL Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ECEs’ knowledge gains were retained at follow-up:</strong></td>
<td>All ECEs reflected on improvements in phonemic awareness and oral language knowledge at follow-up:</td>
</tr>
<tr>
<td>• There were no significant differences between phonemic awareness knowledge scores at post-test ((M=11.33, SD=1.29)) and at one-month following the intervention ((M=10.07, SD=3.51))</td>
<td>• Some ECEs mentioned the ways in which they had applied the phonemic awareness and/or oral language knowledge they acquired from the workshops</td>
</tr>
<tr>
<td>• There were no significant differences between oral language knowledge scores at post-test ((M=13.25, SD=1.44)) and at one-month following the intervention ((M=12.13, SD=2.60))</td>
<td>• Some ECEs mentioned the ways in which they planned to apply the phonemic awareness and/or oral language knowledge they acquired from the workshops</td>
</tr>
</tbody>
</table>

**ECEs’ self-efficacy gains showed regression at follow-up:**

<table>
<thead>
<tr>
<th>QUAN Results</th>
<th>QUAL Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ECEs’ self-efficacy for phonemic awareness instruction scores were significantly lower at one-month following the intervention ((M=32.73, SD=5.57)) than at post-test ((M=38.20, SD=3.14)) than, but were still significantly higher than the pre-intervention scores ((M=25.8, SD=3.82))</td>
<td>Many ECEs reflected on how the workshops had positively influenced their feelings of self-efficacy for early literacy instruction:</td>
</tr>
<tr>
<td>• ECEs’ self-efficacy for oral language instruction scores were significantly lower at one-month following the intervention ((M=32.69, SD=7.90)) than at post-test ((M=38.31, SD=3.93)), but were still significantly higher than the pre-intervention scores ((M=26.57, SD=6.64))</td>
<td>• A few ECEs mentioned the specific ways in which their self-efficacy for phonemic awareness and/or oral language instruction had positively influenced their teaching practices</td>
</tr>
<tr>
<td>• A few ECEs mentioned the ways in which they believed their improved self-efficacy for phonemic awareness and/or oral language instruction would positively influence their future teaching practices</td>
<td></td>
</tr>
</tbody>
</table>

Quantitative analyses examining the maintenance of knowledge gains at the one-month follow-up indicated that improvements in both phonemic awareness and oral language knowledge following the intervention were retained. While gains in self-
efficacy for both phonemic awareness and oral language instruction showed regressions at the one-month follow-up, participants’ levels of self-efficacy for instruction at follow up were still significantly higher than they were prior to the intervention.

The qualitative findings indicated that perceived knowledge and self-efficacy gains were apparent 6-weeks following the intervention. All of the interview participants mentioned how they had or were planning to apply the knowledge they had acquired as a result of participating in the workshops. Many of the participants also reflected on how their participation in the intervention had positively influenced their feelings of self-efficacy for instruction. While no interview questions explicitly asked participants to comment on knowledge and self-efficacy gain retention over time, it was apparent in their responses that, at the follow-up, participants believed that they had benefited from improvements in knowledge and self-efficacy.

Convergence of quantitative and qualitative results in relation to maintenance of gains at the follow-up is indicated by retention of ECEs’ phonemic awareness and oral language knowledge gains. As well, quantitative and qualitative results converge in showing that improvements in self-efficacy for phonemic awareness and oral language instruction were also maintained.

Limitations of Study 2

Four main limitations were identified in this study: (1) the reliability and credibility of the measures, (2) the reliance on self-report data, (3) issues pertaining to making comparisons across knowledge areas comparing, and (4) the participant sample.
The reliability and credibility of the measures used in study 2 are of importance to note as a potential limitation of this study. No published normed measures exist that could appropriately address the specific questions of study 2. Therefore existing measures examining literacy in a different context (for example, among older children) and with a different population (for example, primary schoolteachers) were adapted for an early literacy focus. These measures were adapted using content supported by the literature on what educators of young children should know about phonemic awareness and oral language, yet because of the lack of literature and psychometric procedures conducted to support their validity, reliability, and credibility, the implications of the findings are potentially limited.

Another limitation of this study is the reliance of self-report data. Self-report data was heavily relied on throughout study 2 in the use of qualitative measures of self-reflection and in the use of open-ended interviews. Cunningham et al., (2004) discuss the limitation to self-report data, especially concerning its accuracy as it pertains to evaluating educators’ reports of their knowledge and feelings of preparedness to teach. Self-report measures are also subject to challenges that may potentially influence participants’ responses such as response biases, selective memory and attribution. Thus, the implications of the qualitative findings must be considered with this limitation in mind.

A third limitation is related to the inherent issues involved in making comparisons across knowledge areas. This study examined comparisons across interventions and assessments in two distinct content areas (phonemic awareness and oral language) yet because these areas of instruction are intrinsically different, the equivalence of the
interventions, assessments and knowledge concepts is unknown. Because of these inherent differences, comparisons across the knowledge and self-efficacy areas of phonemic awareness and oral language may have limited applicability.

Finally, because the participant sample was context-specific and focused only on ECE participants from two programs within the same university who volunteered to participant in a professional development intervention, the composition of the participant sample may be considered a limitation of this study. Future research examining the impact of professional development interventions on ECEs’ knowledge and self-efficacy should be conducted including participants from a variety of both college and university ECE programs. This could enhance the credibility and transferability of the results.

*Significance and Educational Implications*

This quasi-experimental mixed-methods study was conducted to evaluate the impact of a targeted professional development intervention on pre-service and in-service ECEs’ phonemic awareness and oral language knowledge and self-efficacy for instruction. The major contribution of the study is that it revealed that participation in a short-term, targeted professional development intervention can have a significant and lasting impact on ECEs’ early literacy knowledge and self-efficacy for instruction.

Another important contribution of this study is that it adds to the literature on the use of professional development to effect positive change in early literacy knowledge and self-efficacy among pre-service and in-service ECEs. The existing body of literature tends to focus exclusively on the in-service professional development training of ECEs or on professional development among schoolteachers. Thus, the present study contributed
to the limited existing evidence by providing a better understanding of the impact of targeted professional development on pre-service and in-service ECEs’ knowledge and self-efficacy in foundational areas of early literacy instruction.

Results also pointed to the learning format and key components of the intervention as being particularly beneficial to learning and developing feelings of self-efficacy. Thus, another contribution of this study is in extending understanding about effective models of professional development. In the case of study 2, the use of applied learning opportunities through hands-on applications of concepts and the use of video demonstrations were components of the intervention that were found to be particularly beneficial.

An additional important aspect of study 2 involved comparisons between pre-service and in-service ECEs. This study found no differences among pre-service and in-service ECEs in their ability to make significant gains in knowledge and self-efficacy through participation in a targeted professional development intervention.

This research has significant implications for the field of early childhood education in providing a model for ECEs to acquire foundational knowledge in phonemic awareness and oral language instruction. Pre-service early childhood education programs should incorporate explicit and applied instruction in phonemic awareness and oral language instruction in order to provide ECEs with a necessary foundation in early literacy knowledge. Likewise greater opportunities for in-service ECEs to improve their knowledge and self-efficacy through applied professional development are needed.
Conclusion

Based on the findings of study 2, participation in short-term targeted professional development, in the areas of phonemic awareness and oral language, appears to have a significant and lasting effect on ECEs’ early literacy knowledge and related self-efficacy. Despite the significant deficits in phonemic awareness knowledge and self-efficacy that had been identified earlier in study 1, the results of study 2 suggest that such deficits can be significantly remediated through short-term intensive professional development. In their central role in early learning contexts, ECEs have the opportunity to positively influence the early literacy development of young children. Thus, it is critical that ECEs are prepared for their teaching roles and responsibilities by ensuring that they possess the knowledge and feelings of self-efficacy for teaching necessary to be effective practitioners. The present study provides evidence that, through short-term targeted professional development, pre-service and in-service ECEs’ understanding and self-efficacy in foundational aspects of literacy education can be significantly improved. There is need for additional research to corroborate the present findings, to further explore the long-term sustainability of the observed gains, and to examine the impact of such gains in knowledge and self-efficacy on ECEs’ instructional practices and their students’ outcomes.
CHAPTER 5
General Conclusions

The aims of this dissertation were twofold: (1) to explore the scope and nature of pre-service and in-service ECEs’ early literacy knowledge and self-efficacy for early literacy instruction; and (2) to assess the impact of a targeted professional development intervention on improving pre-service and in-service ECEs’ early literacy knowledge and related self-efficacy. The first aim was addressed in study 1 and the second in study 2.

The findings of study 1 suggest that there are significant deficits in pre-service and in-service ECEs’ early literacy knowledge related to phonemic awareness and oral language. Such deficits may impair their ability to provide effective language and literacy instruction to young learners. In addition, the findings of study 1 indicate that there may be unique differences between pre-service and in-service ECEs in terms of their early literacy experiences as well as specific aspects of their early literacy knowledge. Further research to corroborate and extend these findings is essential. Based on the findings of study 1, programs for preparing and supporting pre-service and in-service ECEs need to be aware of the possibility that their students might have serious knowledge deficits that could impact their competence and confidence to provide young learners with the foundation they need to develop early literacy.

The findings of study 1 suggested the potential value of implementing targeted professional development workshops to improve ECEs’ early literacy knowledge and self-efficacy for instruction.

Study 2 developed and implemented a potential model for such professional development. The findings of study 2 demonstrated that short-term, targeted professional development workshops can be an effective means for improving both knowledge and
self-efficacy among educators of young children. The knowledge and self-efficacy improvements in phonemic awareness and oral language, following the professional development intervention in study 2, were significant, and knowledge and self-efficacy gains were retained following the intervention. Furthermore, applied learning components of the intervention, such as the use of hands-on activities and video demonstrations, were seen as highly effective and beneficial to learning. Although clearly more research is needed in this little explored area, the approach implemented in study 2, given its success in promoting growth in knowledge and self-efficacy for instruction, could potentially serve as a model in future professional development endeavours involving practitioners, both at the pre-service and in-service levels.
References


Recruitment Email Text
Pre-Service Candidates

Subject Line: We want your feedback and FREE Workshop opportunity!

Body: Dear ECE student, we want to know more about you and your experiences in ECE. We want to hear about your:
➢ Programs and practicum experiences
➢ Understanding of key literacy concepts
➢ Feelings about your preparedness to work with young children

We would also like to invite you to participate in a FREE 2-hour workshop, we are offering on Early Literacy development for ECE students. It is a professional development workshop, developed by reading experts at the University of Toronto, designed to help ECE students, such as yourself, to further develop strategies for effectively teaching young children how to develop competencies in early language, reading and writing.

You will receive a Chapter’s/Indigo Books Gift Card upon completion of the workshop and it’s related questionnaires. As well, you will be issued a formal certificate, signed by the project investigator and also by a senior professor of language and literacy at the University of Toronto, upon completion.

The workshop will be offered on a Saturday or Sunday afternoon in late-winter or early spring.

To participate in this workshop or to learn more about the project, please contact the project investigator, Julia Forgie, at julia.forgie@utoronto.ca.

Thanks for your contributions to this important project.
Recruitment Email Text
In-Service Candidates

Subject Line: We want your feedback and FREE Workshop opportunity!

Body: Dear ECE professional, we want to know more about you and your experiences in ECE. We want to hear about your:

➢ Professional experiences in ECE
➢ ECE training program
➢ Understanding of key literacy concepts
➢ Feelings about your preparedness to work with young children

We would also like to invite you to participate in a FREE 2-hour workshop, we are offering on Early Literacy development for ECE professionals. It is a professional development workshop, developed by reading experts at the University of Toronto, designed to help ECE professionals, such as yourself, to further develop strategies for effectively teaching young children how to develop competencies in early language, reading and writing.

You will receive a Chapter’s/Indigo Books Gift Card upon completion of the workshop and it’s related questionnaires. As well, you will be issued a formal certificate, signed by the project investigator and also by a senior professor of language and literacy at the University of Toronto, upon completion.

The workshop will be offered on a Saturday or Sunday afternoon in late winter or early spring.

To participate in this workshop or to learn more about the project, please contact the project investigator, Julia Forgie, at julia.forgie@utoronto.ca.

Thanks for your contributions to this important project.
Early Childhood Education Students!

We want to know what you think!

- About your program and practicum experiences
- About your perceptions of what ECEs should know
- About your understanding of key literacy concepts
- About your feelings about your preparedness to work with young children

This study is designed to investigate what ECEs know and feel, and to provide a FREE workshop to improve effective teaching practices for ECEs.

Please contact Julia Forgie at julia.forgie@utoronto.ca for further details.
ECE Professionals!!!!

We want to know what you think!

- About your professional ECE experiences
- About your ECE training program
- About your perceptions of what ECEs should know
- About your understanding of key literacy concepts
- About your feelings of preparedness to teach early literacy concepts to young children

This study is designed to investigate what ECEs know and feel, and to provide a FREE workshop to improve effective teaching practices for ECEs.

Please contact Julia Forgie at julia.forgie@utoronto.ca for further details.
Early Literacy Knowledge, Self-Efficacy & Experiences Questionnaires

INFORMATION LETTER & CONSENT FORM

Dear Participant,

We want to know more about Early Childhood Educators in Ontario. As a practicing ECE or as a student enrolled in an ECE university program, your experiences are unique. We would like to request your participation in helping us learn more about Early Childhood Educators: what you know and how you feel about teaching young children, particularly in the area of literacy instruction. It is our hope that ECE professionals and students like you will help us by sharing what they have learned throughout their coursework and fieldwork experiences. In order to do this, we ask that you respond to a series of four questionnaires, which will take about forty minutes to complete. The first questionnaire will ask you about your program of study or professional environment and your early literacy experiences. You will then be asked to complete two short questionnaires, in which you will be asked general questions about early literacy concepts, and about your feelings related to teaching early literacy concepts. The final questionnaire will ask you to reflect on your knowledge of teaching early literacy and your feelings of preparedness to teach young children.

Please know that your confidentiality is assured. All identifying information will be coded. Only Dr. Willows, a professor at the University of Toronto, and myself, a graduate student conducting the study will have access to the data. We are looking for general trends so the information you provide will be grouped with other information collected from ECE professionals and students.

An additional goal of this study is to find out how ECEs can expand upon their current understanding of early literacy development and instruction. For that reason we have invited participants who complete the questionnaires to participate in a free professional development workshop, if they are interested in doing so. Please note that your participation in this workshop, or at any stage of this study is voluntary, and you may choose to withdraw at any time.

My name is Julia Forgie and, as a graduate student working under the supervision of Dr. Willows, I am conducting this study for my doctoral dissertation. Please do not hesitate to contact me with any questions you may have (julia.forgie@utoronto.ca). You can also contact the Ethics Review office (416-946-3273) if you have any questions about your rights as a participant of this study.

If you are interested in finding out the results of this study, a summary of the overall results can be mailed to you about 1 year after the study completion. If you would like a copy of the results, please place a checkmark in the box .

Thank you,

Julia Forgie, BA, MA
Project Investigator & Doctoral Candidate
Department of Applied Psychology & Human Development, OISE/University of Toronto
julia.forgie@utoronto.ca
Consent – I Choose To Participate:

I agree to complete the survey described in the above letter. I understand that my participation is voluntary and that I am free to withdraw from the study at any time.

I give my permission to participate.

________________________________________
Name (please print)  The persons who may be contacted about the research are:

________________________________________
Signature  Julia Forgie, Project Investigator
(416) 970-7966
Julia.forgie@utoronto.ca

________________________________________
Date  Dr. Dale Willows, Project Supervisor
(416) 934-4505
dale.willows@utoronto.ca

________________________________________
Date of Birth

_____________________________  ______________________________
Home Address/ Postal Code  Home Telephone Number  Other Telephone Number

“I agree that the information gathered in this study can be used for future research as long as my personal information (i.e. name) is not used.”

________________________________________
Signature
Dear Participant,

We are inviting you to join a professional development workshop focused on Early Literacy development and instruction. The goal of this workshop is to provide Early Childhood Education (ECE) students and professionals with the opportunity to expand their skills and knowledge in the area of phonemic awareness, so that they may be better prepared for teaching literacy to their students.

Phonemic Awareness is the ability to identify and manipulate sounds within words and there is strong evidence linking Phonemic Awareness to children’s reading development. Children, who are able to identify individual sounds within words and blend these sounds to form words, have an excellent foundation for learning to read.

We believe that early childhood educators play a critical role in preparing young children for reading and as such, believe that they should have the opportunity to learn more about early literacy if they are interested in doing so.

What’s Involved?

The early literacy workshop will run for a duration of 90 minutes and will include an interactive workshop focused on Phonemic Awareness. The workshop will consist of readings and lecture information (i.e., powerpoint slides), video clips and learning activities. Prior to and following the workshop, you will be asked to complete a short questionnaire, in which you will be asked general questions about early literacy concepts, and about your feelings related to teaching early literacy concepts.

You will be given a $20 gift certificate to Chapter’s/Indigo Books upon completion of the workshop. As well, upon completion of the workshop, you will be presented with a certificate of completion, signed by the project investigator and by Dr. Dale Willows, professor of language and literacy, at the University of Toronto.

Please know that your confidentiality is assured. All identifying information will be coded. Only Dr. Willows, a professor at the University of Toronto, and myself, a graduate student conducting the study will have access to the data. Participation in this workshop/study is voluntary and if at any time prior to, during or following the workshop, you wish to withdraw from the study, you may do so.

My name is Julia Forgie and, as a graduate student working under the supervision of Dr. Willows, I am conducting this study for my doctoral dissertation. Please do not hesitate to contact me with any questions you may have (julia.forgie@utoronto.ca). You can also contact the Ethics Review office (416-946-3273) if you have any questions about your rights as a participant of this study.

Thank you,

Julia Forgie, BA, MA
Project Investigator & Doctoral Candidate
Department of Applied Psychology & Human Development, OISE/University of Toronto
julia.forgie@utoronto.ca
Consent – I Choose To Participate:

I agree to participate in the workshop and the pre- and post-workshop questionnaire described in the above letter. I understand that my participation is voluntary and that I am free to withdraw from the study at any time.

I give my permission to participate.

Name (please print)              The persons who may be contacted about the research are:

Signature                      Julia Forgie, Project Investigator
                                (416) 970-7966
                                Julia.forgie@utoronto.ca

Date                           Dr. Dale Willows, Project Supervisor
                                (416) 934-4505
                                dale.willows@utoronto.ca

Date of Birth

Home Address/ Postal Code

Home Telephone Number          Other Telephone Number

“I agree that the information gathered in this study can be used for future research as long as my personal information (i.e. name) is not used.”

Signature
Dear Participant,

We are inviting you to join a professional development workshop focused on Early Literacy development and instruction. The goal of this workshop is to provide Early Childhood Education (ECE) students and professionals with the opportunity to expand their skills and knowledge in the area of oral language development, so that they may be better prepared for teaching literacy to their students.

It is imperative for early childhood educators to understand the progression of oral language development and how to support young learners as they develop oral language and vocabulary competencies.

We believe that early childhood educators play a critical role in preparing young children for reading and as such, believe that they should have the opportunity to learn more about early literacy if they are interested in doing so.

What’s Involved?

The early literacy workshop will run for a duration of 90 minutes and will include an interactive workshop focused on Oral Language Development. The workshop will consist of readings and lecture information (i.e., powerpoint slides), video clips and learning activities. Prior to and following the workshop, you will be asked to complete a short questionnaire, in which you will be asked general questions about early literacy concepts, and about your feelings related to teaching early literacy concepts.

You will be given a $20 gift certificate to Chapter’s/Indigo Books upon completion of the workshop. As well, upon completion of the workshop, you will be presented with a certificate of completion, signed by the project investigator and by Dr. Dale Willows, professor of language and literacy, at the University of Toronto.

Please know that your confidentiality is assured. All identifying information will be coded. Only Dr. Willows, a professor at the University of Toronto, and myself, a graduate student conducting the study will have access to the data. Participation in this workshop/study is voluntary and if at any time prior to, during or following the workshop, you wish to withdraw from the study, you may do so.

My name is Julia Forgie and, as a graduate student working under the supervision of Dr. Willows, I am conducting this study for my doctoral dissertation. Please do not hesitate to contact me with any questions you may have (julia.forgie@utoronto.ca). You can also contact the Ethics Review office (416-946-3273) if you have any questions about your rights as a participant of this study.

Thank you,

Julia Forgie, BA, MA
Project Investigator & Doctoral Candidate
Department of Applied Psychology & Human Development, OISE/University of Toronto
julia.forgie@utoronto.ca
Consent – I Choose To Participate:

I agree to participate in the workshop and the pre- and post-workshop questionnaire described in the above letter. I understand that my participation is voluntary and that I am free to withdraw from the study at any time.

I give my permission to participate.

Name (please print)  The persons who may be contacted about the research are:

Signature  Julia Forgie, Project Investigator

Date  Dr. Dale Willows, Project Supervisor

Date of Birth

Home Address/ Postal Code

Home Telephone Number  Other Telephone Number

“I agree that the information gathered in this study can be used for future research as long as my personal information (i.e. name) is not used.”

Signature
**Pre-service and In-service Quotes by Participant Number**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Group</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In-service</td>
<td>We were taught about how language develops and what we can do to support their [children’s] language skills. I feel like I would actually know how to do this. (P1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I learned a lot about language and how it develops in my program. I know what to expect and when and it’s really made me feel well prepared to work with children of any age. I would say that I feel very confident. (P1)</td>
</tr>
<tr>
<td>2*</td>
<td>In-service</td>
<td>I wouldn’t say that I have any source of knowledge. I’m definitely missing some concepts. I don’t think we spent enough time learning about them in school. (P2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>There was this really great article talking about beginning reading skills and about understanding the sounds in language but I forgot it all because I didn’t get a chance to try it out on the kids. (P2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Now I know some fun games to help children learn about how to break words apart and then put them back together. (P2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Especially the videos that she showed the different teachers doing the activities because you know it showed the response the students gave to the teacher so you could see like it might not work for all age groups or all classrooms but um, I don’t think it would make as much sense coming from a written lesson plan. (P2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All the different elements and uses of technology made it super engaging and I didn't feel like sleeping for once! (P2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I didn’t really know what to expect from the workshops. I guess I expected it to be similar to my [university] classes, but it was actually very different – in a good way. (P2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I thought it would be a good learning opportunity and thought that a certificate of completion would be valuable to add to my portfolio. (P2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We use the songs a lot now for rhyming. The kids love it and I can see how it’s helping them with their sounds. (P2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I really want to see about other programs or workshops to learn about other topics too. I would like to learn more about teaching specific reading skills and also about how to help children understand math concepts better. I really think there is a need for more learning programs outside of the schools [referring to college programs]. (P2)</td>
</tr>
<tr>
<td>3</td>
<td>Pre-service</td>
<td>I had to develop a developmental assessment that used the language domain. I really had to think about how language develops and translate that into an observation-based tool. (P3)</td>
</tr>
<tr>
<td>4</td>
<td>Pre-service</td>
<td>Engaging in conversation throughout the day. During transitions, at snack time, during play-time. The ECE gets to model how language is used in a stress-free way. (P4)</td>
</tr>
<tr>
<td>5*</td>
<td>Pre-service</td>
<td>I think it [phonemic awareness] has something to do with the pronunciation of the sounds in words. (P5)</td>
</tr>
</tbody>
</table>
### Pre-service and In-service Quotes by Participant Number

<table>
<thead>
<tr>
<th>Participant Number</th>
<th>Pre-service/In-service</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>In-service</td>
<td>Because, not only did it break it down for me, because I hate phonetics and sound building, I’m so bad at it. Just because I don’t understand it myself. So I have no idea how to teach someone else. At least in the workshop, it kind of simplifies it all and now I know more and now I feel more confident. (P5)</td>
</tr>
<tr>
<td>6</td>
<td>In-service</td>
<td>I think it’s better to have a lot more examples of how your learning can be applied, I think that’s something that’s usually forgotten. The (literacy course) was more about content and less about application. The examples help you understand how the teaching happens in the classroom. (P5)</td>
</tr>
<tr>
<td>7</td>
<td>Pre-service</td>
<td>The workshops were highly beneficial to my learning. I’m very satisfied with what was taught and how much I have learned. If there are any future professional development workshops offered, I would like to sign up. (P5)</td>
</tr>
<tr>
<td>6</td>
<td>In-service</td>
<td>I don’t know enough. Let’s just leave it at that. (P6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I have a really good literacy textbook and several handouts that I feel will give me some great ideas when I have my own classroom. (P6)</td>
</tr>
<tr>
<td>7</td>
<td>In-service</td>
<td>I did a game where they used the tambourine to tap out the beats in their names. I remember reading about breaking words up into parts and how that’s good for developing language skills. (P7)</td>
</tr>
<tr>
<td>8</td>
<td>Pre-service</td>
<td>If a child hasn’t said their first word by 18 months, there could be a concern. (P8)</td>
</tr>
<tr>
<td>9</td>
<td>Pre-service</td>
<td>I remember learning about phonemes and breaking words and sentences down into different sounds. At first, I wasn’t sure how knowing this could help children learn to read but my professor explained that an ECE needs to know how to teach these skills. (P9)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The home-school literacy assignment made us explore the language curriculum for kindergarten, which included specific learning of phonemic awareness. And to show this information in a format that appeals to families, really helped me to develop an understanding of how to communicate the literacy curriculum to families. (P9)</td>
</tr>
<tr>
<td>10</td>
<td>Pre-service</td>
<td>I thought I knew a lot about phonemic awareness but now I realize that was more on a superficial level. Now I feel like I have a much deeper understanding of what phonemic awareness is and what it means for language and reading. Having the chance to learn the definitions and then practice teaching the strategies was really helpful. (P9)</td>
</tr>
<tr>
<td>11</td>
<td>Pre-service</td>
<td>The readings let me develop an overall understanding of how oral language develops and then when it was discussed in class, my understanding expanded and I could figure out how this looked in the classroom. (P10)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I definitely don't remember everything we were taught, but I know I can always go back to my course notes. So I feel good about that. I think with a bit of a &quot;refresher&quot;, I would feel pretty confident. (P10)</td>
</tr>
<tr>
<td>11</td>
<td>Pre-service</td>
<td>The textbook helped me understand how different elements of literacy are connected and how each part is like a piece of a puzzle. It’s important to understand about how knowing the sounds of words is connected to reading and writing. (P11)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When I had to use the ELECT document to analyze the case study, I began to understand exactly how language progresses in the preschool years. It was helpful for me to see how one skill extends into another skill. (P11)</td>
</tr>
<tr>
<td>Participant Number</td>
<td>Type</td>
<td>Quote</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12</td>
<td>Pre-service</td>
<td>I know it is important to sing rhyming songs and play games that make children think about the sounds in words. Using their names is a great way to do this. (P12)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I know how to tell if a child knows that language is made of different sounds. You have to be able to tell if a child can hear these sounds and knows they are there. If they can’t they will have trouble learning to read. (P12)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>So the, so the clips really did help me because I could visually see how you could do this in the classroom, as opposed to just saying it reading off the text. (P12)</td>
</tr>
<tr>
<td>13</td>
<td>Pre-service</td>
<td>The class was focused on “ages and stages” so I learned all about what’s happening with language at different ages. Because I understand how language develops, I can work to extend their [children’s] oral skills. (P13)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The videos of the classroom teachers gave me a chance to actually see how these ideas look in real-life. (P13)</td>
</tr>
<tr>
<td>14*</td>
<td>Pre-service</td>
<td>The readings talked about good teachers, teaching great activities that directly improve language skills. That one article about the structure of language really helped me to understand how children learn to speak and my role in the process. (P14)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>An example of an activity to develop these skills would be counting the sounds in words and discussing which letters make these sounds. (P14)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>There is a sequence of language development that begins with babies and their skills gradually increase over time. The role of the ECE is important in accelerating language learning. (P14)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I always like signing up for workshops and events where I have the chance to learn more. It's the only way to keep growing as a teacher. (P14)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The phonemic awareness workshop was the best one, in my opinion. I think it was really valuable to my learning and feeling confident to teach children. (P14)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I would really like to learn more about how to help children who are struggling in their reading. I hope to find a session to help me gain some strategies. (P14)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I haven’t had the chance yet, but I definitely want to try that “say it and swap it” phonemic awareness activity with kids. I think it would be a lot of fun and would help them learn. (P14)</td>
</tr>
<tr>
<td>15</td>
<td>In-service</td>
<td>I don’t know anything about phonemic awareness. (P15)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I kind of forgot the terminology and had to rethink it. (P15)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When she gave activities for us personally to do, it was helpful for me because I’m a hands-on learner, so that was really good. Hopefully we’ll do that in the</td>
</tr>
<tr>
<td>Number</td>
<td>Pre-service/In-service</td>
<td>Quote by Participant</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>16</td>
<td>In-service</td>
<td>I know that the process of learning a language changes depending on the language that is spoken, and that oral language is the first skill before reading and writing. (P16)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Because of my job I had the chance to learn about language milestones in class and then see them in real-life. This really helped me to understand the content and feel confident about how to extend their development. (P16)</td>
</tr>
<tr>
<td>17*</td>
<td>Pre-service</td>
<td>These concepts weren’t taught in my program. We focused on general language development and didn’t get into the specifics. (P17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phonemes, like I didn’t even know that term before this workshop. (P17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It got me excited about learning. Watching the videos, playing the activities, they just gave it like more concrete examples of how we can make this fun for kids. (P17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Having a lecture about phonemes, then talking about how to identify them and then seeing a video showing how to find them, made me understand how the concept works. (P17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It was a great experience and I guess I didn’t really know what it was going to be like but I learned so much. (P17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I usually try to participate in research about education. I think it is really important. Plus I knew it would teach me new things about teaching kids in language. (P17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I got a lot out of the workshops. They definitely benefited my understanding. (P17)</td>
</tr>
<tr>
<td>18</td>
<td>In-service</td>
<td>Reading stories out loud is good for modeling oral language and teaching children new words. (P18)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It helped me to connect what I was seeing at work, with children’s beginning speech and vocabulary skills. (P18)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I LOVED the videos! I found a lot of the video clips that were showed in the presentation were really beneficial. I also really liked that I think some of them were kind across cultures. I thought that was beneficial. (P18)</td>
</tr>
<tr>
<td>19</td>
<td>Pre-service</td>
<td>I had to do research on games and activities that extend children’s speech for the literacy newsletter assignment. I learned about little games that ask children to swop out letters and sounds which I think is building these [phonemic awareness]. (P19)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I’m concerned about how I will be able to give the right instruction to all the kids because they will be at different levels in their language. I feel like I don’t have enough knowledge to do this well. (P19)</td>
</tr>
<tr>
<td>20</td>
<td>In-service</td>
<td>No usable data</td>
</tr>
<tr>
<td>21</td>
<td>In-service</td>
<td>I know a little bit about how language develops but definitely not enough. (P21)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don’t feel prepared to figure out who needs the most support and then provide it to those who do need it. (P21)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I learned how personal experiences can influence language development and I</td>
</tr>
<tr>
<td>Participant Number</td>
<td>Service Type</td>
<td>Quote</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------</td>
<td>-------</td>
</tr>
<tr>
<td>22</td>
<td>In-service</td>
<td>I know that a phoneme is a small unit of sound in oral language and that words and sentences are made of many units of sound combined together. (P22) You learn it and then right away you do an activity based on it. It was fun and helped me to understand the information better. (P22)</td>
</tr>
<tr>
<td>23</td>
<td>Pre-service</td>
<td>We spent a lot of time talking about language milestones but I don’t remember ever hearing phonemic awareness. I’m worried now that I don’t have the information I need for working as an ECE. (P23) I really learned so much from the workshop. I had no idea about phonemic awareness before and now I feel like I could actually help a child develop their own skills. (P23) It’s obvious to me now that there is a lot that I don’t know and that’s why I don’t feel confident about planning a literacy program. (P23)</td>
</tr>
<tr>
<td>24</td>
<td>Pre-service</td>
<td>Being fluent in a language begins with being able to hear and identify the tiniest parts of words. These are phonemes, and to become fluent in a language you need to be able to make sense of phonemes and how to identify them. (P24) I remember learning a bit about phonemic awareness but the workshop really helped to actually understand what it means. (P24) Unlike our classes, the workshop was less about memory and more about application, which was a very good thing. (P24)</td>
</tr>
<tr>
<td>25</td>
<td>Pre-service</td>
<td>I feel like I learned so much about phonemic awareness from my language course that I can be an effective teacher in helping my students develop their skills. I also have a number of books and articles that I can look at for ideas. That course really improved my confidence, I felt ready to teach after that course. (P25) I did like that it [the workshops] went over different components of language and it did have the written version, an oral component, and physical activities that we did. So it covered all of the types of learners. Plus the videos had good activities. It was easy to pay attention and stay focused. (P25)</td>
</tr>
<tr>
<td>26*</td>
<td>In-service</td>
<td>How will I know where they should be in terms of their oral language and how to teach them what they need to know? There will be different skills in the class and I don’t know how I will meet their needs. (P49) Yeah, um, well, personally, I’m not very strong in language, my language skills, so, when I go to teach language with young children, I’m myself not very confident. (P26) You know how they say if you want to be a teacher, you always got to keep learning, right? (P26) Because I know what phonemic awareness is now, I am aware of what I should be teaching the kids in my class. I know how to help them to develop their own phoneme skills. (P26) What I learned about language development has made me more confident about assessing the toddlers’ vocabulary and knowing if they are on track with their learning. (P26)</td>
</tr>
<tr>
<td>27</td>
<td>Pre-service</td>
<td>What is phonemic awareness? (P27)</td>
</tr>
</tbody>
</table>
Pre-service and In-service Quotes by Participant Number

<table>
<thead>
<tr>
<th>Pre-service</th>
<th>In-service</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>I’m not really sure how I would go about identifying what the children’s language skills are and how to help them to improve. I feel confused about where to begin with this. (P28)</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>I feel pretty confident about teaching skills in phonemic awareness because I have practiced lots of games with my children. Having the opportunity to learn about a strategy and then try it out at work has helped me to better understand how the strategies work. (P29)</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Something I have tried is to clap the beats in words and then play a guessing game about the sounds that make up the beats. (P30)</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>No usable data</td>
<td></td>
</tr>
<tr>
<td>32*</td>
<td>I didn't learn anything about phonemic awareness in my language classes. It was never even mentioned. (P32)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I have honestly never heard of phonemic awareness before. I have no idea what it means or how to teach it. (P32)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I wouldn’t even know where to begin. While we talked about phonemic awareness a little, I don’t remember anything specific and I don’t remember any readings or activities about it. I would have no clue what to do with children. (P32)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I was hoping to learn more about how language develops and to leave with some helpful strategies and handouts I could use in the classroom. (P32)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I learned about lots of activities that target specific skills and I have been doing them with my students, almost every day. (P32)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel way more prepared to teach children about listening to and thinking about the sounds in words. (P32)</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>No usable data</td>
<td></td>
</tr>
<tr>
<td>34*</td>
<td>I feel a lot more confident going into, um, an early childhood setting and say, you know I can actually do a literacy program, and not have a problem with it. I can actually take the concepts and apply them in a classroom. (P34)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I plan on keeping my notes and handouts from the workshops and using them in the future when I become a teacher. (P34)</td>
<td></td>
</tr>
<tr>
<td>35*</td>
<td>There are many factors that influence language development like culture, poverty and access to resources. (P35)</td>
<td></td>
</tr>
</tbody>
</table>
|             | I cannot name one specific thing about phonemic awareness. Am I supposed to
<table>
<thead>
<tr>
<th>Pre-service and In-service Quotes by Participant Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
</tr>
<tr>
<td>37</td>
</tr>
<tr>
<td>38</td>
</tr>
<tr>
<td>39</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>41</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>42</td>
</tr>
<tr>
<td>43</td>
</tr>
<tr>
<td>44</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>45</td>
</tr>
<tr>
<td>46</td>
</tr>
<tr>
<td>Participant</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>47</td>
</tr>
<tr>
<td>48</td>
</tr>
<tr>
<td>49</td>
</tr>
<tr>
<td>50</td>
</tr>
<tr>
<td>51</td>
</tr>
<tr>
<td>52</td>
</tr>
</tbody>
</table>
**Pre-service and In-service Quotes by Participant Number**

<table>
<thead>
<tr>
<th>Participant Number</th>
<th>In-service/Pre-service</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
<td>In-service</td>
<td>No usable data</td>
</tr>
</tbody>
</table>

When we made our learning plans, we would have to link them to the curriculum and it helped me to understand what children are learning in terms of letter sounds and names. I feel like I have more ideas about what to do now. (P52)
List of Pre-service and In-service Quotes by Theme

<table>
<thead>
<tr>
<th>Theme</th>
<th>Participants quotes included</th>
</tr>
</thead>
</table>
| Study 1 Theme 1 1:1 | 9 – pre-service  
13 – pre-service  
1 – in-service  
51 – in-service |
| Study 1 Theme 1 1:2 | 10 – pre-service  
11 – pre-service  
14 – in-service  
50 – in-service |
| Study 1 Theme 1 1:3 | 17 – pre-service  
23 – pre-service  
40 – pre-service  
2 – in-service  
32 – in-service  
52 – in-service |
| Study 1 Theme 1 2:1 | 3 – pre-service  
9 – pre-service  
11 – pre-service  
19 – pre-service  
52 – in-service |
| Study 1 Theme 1 2:2 | 7 – in-service  
49 – in-service  
54 – in-service |
| Study 1 Theme 1 2:3 | 40 – pre-service  
2 – in-service  
51 – in-service |
| Study 1 Theme 2 1:1 | 5 – pre-service  
24 – pre-service  
22 – in-service |
| Study 1 Theme 2 1:2 | 12 – pre-service  
14 – pre-service  
30 – in-service  
51 – in-service |
| Study 1 Theme 2 1:3 | 12 – pre-service  
51 – in-service |
| Study 1 Theme 2 2:1 | 14 – pre-service  
35 – pre-service  
16 – in-service  
41 – in-service |
| Study 1 Theme 2 2:2 | 4 – pre-service  
11 – pre-service  
18 – in-service  
49 – in-service  
50 – in-service |
| Study 1 Theme 2 2:3 | 8 – pre-service  
37 – in-service |
| Study 1 Theme 2 3:1 | 27 – pre-service  
35 – pre-service  
15 – in-service  
32 – in-service |
| Study 1 Theme 2 4:1 | 44 – pre-service  
6 – in-service |
## List of Pre-service and In-service Quotes by Theme

<table>
<thead>
<tr>
<th>Theme</th>
<th>Pre-service Quotes</th>
<th>In-service Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:2</td>
<td>21 – in-service</td>
<td></td>
</tr>
<tr>
<td>Study 1 Theme 3 1:1</td>
<td>25 – pre-service</td>
<td>44 – pre-service</td>
</tr>
<tr>
<td>Study 1 Theme 3 1:2</td>
<td>16 – in-service</td>
<td>29 – in-service</td>
</tr>
<tr>
<td>Study 1 Theme 3 1:3</td>
<td>10 – pre-service</td>
<td>6 – in-service</td>
</tr>
<tr>
<td>Study 1 Theme 3 2:1</td>
<td>28 – pre-service</td>
<td>47 – pre-service</td>
</tr>
<tr>
<td>Study 1 Theme 3 2:2</td>
<td>19 – pre-service</td>
<td>49 – in-service</td>
</tr>
<tr>
<td>Study 2 Theme 1 1:1</td>
<td>35 – pre-service</td>
<td>48 – pre-service</td>
</tr>
<tr>
<td>Study 2 Theme 1 1:2</td>
<td>34 – pre-service</td>
<td>51 – in-service</td>
</tr>
<tr>
<td>Study 2 Theme 2 1:1</td>
<td>31 – pre-service</td>
<td>30 – in-service</td>
</tr>
<tr>
<td>Study 2 Theme 2 1:2</td>
<td>22 – in-service</td>
<td></td>
</tr>
<tr>
<td>Study 2 Theme 2 1:3</td>
<td>26 – in-service</td>
<td></td>
</tr>
<tr>
<td>Study 2 Theme 2 1:4</td>
<td>27 – pre-service</td>
<td>20 – in-service</td>
</tr>
<tr>
<td>Study 2 Theme 2 2:2</td>
<td>24 – pre-service</td>
<td>40 – pre-service</td>
</tr>
<tr>
<td>Study 2 Theme 2 2:3</td>
<td>5 – pre-service</td>
<td>41 – pre-service</td>
</tr>
<tr>
<td>Study 2 Theme 2 2:4</td>
<td>12 – pre-service</td>
<td>13 – pre-service</td>
</tr>
<tr>
<td>Study 2 Theme 2 3:1</td>
<td>4 – pre-service</td>
<td>27 – pre-service</td>
</tr>
</tbody>
</table>
### List of Pre-service and In-service Quotes by Theme

| Study 2 Theme 3 1:1 | 11 – pre-service  
|                     | 29 – in-service |
| Study 2 Theme 3 2:1| 14 – pre-service  
|                     | 26 – in-service |
| Study 2 Theme 3 3:1| 17 – pre-service  
|                     | 25 – pre-service  
|                     | 37 – in-service  
|                     | 2 – in-service |
| Study 2 Theme 3 3:2| 17 – pre-service  
|                     | 42 – in-service |
| Study 2 Theme 4 1:1| 17 – pre-service  
|                     | 2 – in-service  
|                     | 32 – in-service |
| Study 2 Theme 4 1:2| 17 – pre-service  
|                     | 2 – in-service |
| Study 2 Theme 4 2:1| 5 – pre-service  
|                     | 14 – pre-service  
|                     | 17 – pre-service  
|                     | 51 – pre-service |
| Study 2 Theme 4 2:2| 2 – in-service  
|                     | 26 – in-service  
|                     | 26 – in-service  
|                     | 32 – in-service  
|                     | 32 – in-service  
|                     | 51 – in-service  
|                     | 51 – in-service |
| Study 2 Theme 4 3:1| 14 – pre-service  
|                     | 2 – in-service |
| Study 2 Theme 4 3:2| 14 – pre-service  
|                     | 34 – pre-service |
Linguistic Knowledge & Experiences Survey

The purpose of this study is to explore Early Childhood Educators’ understanding of, and experiences related to early literacy. We will be grouping your responses with the information provided by many others. We ask that you do not research any of your answers.

There are four sections to this survey and in total, will take approximately 15-20 minutes to complete.

Section 1: General Information

1. Name: ___________________________ Female Male

   Your confidentiality is assured. Only the research assistant will see this survey. Your name and your personal information will be replaced with codes and then removed.

2. Current phone number: ___________________________

3. E-mail address: ___________________________


5. Languages spoken: Only English Other languages spoken: ___________________________

Educational Background/Experience:

6. Please list any completed undergraduate/graduate degrees or diplomas you hold (please include where your degree/diploma was earned and what subject it is).

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

7. Please share your reasons for going into early childhood studies: ___________________________

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
**Current Studies:**

8. **Academic Program, Section:**

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Program</th>
<th>Check One</th>
<th>Indicate year of study:</th>
<th>Indicate Dates Attended:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ryerson</td>
<td>4-year program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ryerson</td>
<td>2-year direct entry program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ryerson</td>
<td>Part-time program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. If you are a Ryerson direct-entry student, which college did you transfer from: ______________________

10. Next year, I hope to be: (choose one)

    - Finishing my ECS program
    - Attending Teacher’s College
    - Attending graduate school
    - Working at a childcare centre/daycare
    - Working at a hospital
    - Working as an ECE at a school
    - Other: ______________________

11. **Amount of time in field placements (practicum) where you were working directly with children:**

    Age/Grade level: ___________ # of weeks: ___________ hours/week: ___________
    Age/Grade level: ___________ # of weeks: ___________ hours/week: ___________
    Age/Grade level: ___________ # of weeks: ___________ hours/week: ___________
    Age/Grade level: ___________ # of weeks: ___________ hours/week: ___________
    Age/Grade level: ___________ # of weeks: ___________ hours/week: ___________
    Age/Grade level: ___________ # of weeks: ___________ hours/week: ___________

    **Related experiences:** _______________________________________________________
    __________________________________________________________
    __________________________________________________________

12. If you are currently employed, please identify your current profession and if it is full- or part-time:

    Kindergarten Teacher
    Preschool Teacher
    ECE in Classroom
    Childcare centre/daycare worker
    Child Life Specialist
    Not employed
    Other: ______________________
    Full-time or Part-time (circle one)

15. **Number of years work experience in an early childhood setting:** ______________________
Early Literacy Education:

16. In total, how many hours did you spend in required literacy related classes in your ECE/ECS training program(s)? *(If unsure, please give your best estimate):__

17. How many required courses did you take in your ECE/ECS program(s) that were focused predominantly on literacy?

Section 2: Linguistic Knowledge Assessment

Adapted from the Linguistic Knowledge Assessment [Fielding-Barnsley & Purdie, 2005], and the Survey of Linguistic Knowledge [Moats, 1994]

The following questions concern knowledge of the English language. These questions are multiple choice, please indicate the correct response by circling the appropriate letter.

1. Which word contains a short vowel sound:
   (a) treat  (b) start  (c) slip  (d) paw  (e) father

2. A pronounceable group of letters containing a vowel is a:
   (a) phoneme  (b) grapheme  (c) syllable  (d) morpheme

3. A dipthong is found in the word:
   (a) coat  (b) boy  (c) battle  (d) sing  (e) been

4. How many phonemes or speech sounds are in the word “fix”?
   (a) one  (b) two  (c) three  (d) four  (e) five

5. How many syllables are in the word “decidedly”?
   (a) one  (b) two  (c) three  (d) four  (e) five

6. Why may students confuse the sounds /b/ and /p/ or /f/ and /v/?
   (a) Students are visually scanning the letters in a way that the letters are misperceived.
   (b) The students’ tongue muscles aren’t developed enough to produce the sounds.
   (c) Speech sounds within each pair are produced in the same place and in the same way but one is voiced and the other is not.
   (d) The speech sounds within each pair are both voiced and produced at the back of the mouth.

7. A schwa sound (non distinct vowel sound) is found in the word:
   (a) cotton  (b) phoneme  (c) stopping  (d) preview  (e) grouping
The next item involves saying a word and then reversing the order of the sounds, for example, if *spoken* backwards, the word “back” would be “cab”.

8. If you say the word, then reverse the order of the sounds “enough” would be:
   (a) fun   (b) phone   (c) funny   (d) honey   (e) gone

9. Select the word that contains the same sound as the underlined letters in the word “weigh”:
   (a) pie   (b) height   (c) raid   (d) friend   (e) whine

10. What letters signal that a *c* is pronounced /s/?
    (a) the *c* is followed by any vowel   (b) the *c* is followed by an *e* or *i*
    (c) the *c* is preceded by an *e* or *i*   (d) the *c* is followed by an *e*, *i* or *y*

    *Thank you for your time spent completing this questionnaire. Your effort is truly appreciated.*
Linguistic Knowledge Assessment
Adapted from the Linguistic Knowledge Assessment [Fielding-Barnsley & Purdie, 2005], and the Survey of Linguistic Knowledge [Moats, 1994]

The following questions concern knowledge of the English language. These questions are multiple choice, please indicate the correct response by circling the appropriate letter.

1. Which word contains a short vowel sound:
   (a) treat (b) start (c) slip (d) paw (e) father

2. A pronounceable group of letters containing a vowel is a:
   (a) phoneme (b) grapheme (c) syllable (d) morpheme

3. A dipthong is found in the word:
   (a) coat (b) boy (c) battle (d) sing (e) been

4. How many phonemes or speech sounds are in the word “fix”?
   (a) one (b) two (c) three (d) four (e) five

5. How many syllables are in the word “decidedly”?
   (a) one (b) two (c) three (d) four (e) five

6. Why may students confuse the sounds /b/ and /p/ or /f/ and /v/?
   (a) Students are visually scanning the letters in a way that the letters are misperceived.
   (b) The students’ tongue muscles aren’t developed enough to produce the sounds.
   (c) Speech sounds within each pair are produced in the same place and in the same way but one is voiced and the other is not.
   (d) The speech sounds within each pair are both voiced and produced at the back of the mouth.

7. A schwa sound (non distinct vowel sound) is found in the word:
   (a) cotton (b) phoneme (c) stopping (d) preview (e) grouping

The next item involves saying a word and then reversing the order of the sounds, for example, if spoken backwards, the word “back” would be “cab”.

8. If you say the word, then reverse the order of the sounds “enough” would be:
   (a) fun (b) phone (c) funny (d) honey (e) gone
9. Select the word that contains the same sound as the underlined letters in the word “weigh”:

(a) pie    (b) height    (c) raid    (d) friend    (e) whine

10. What letters signal that a c is pronounced /s/?

(a) the c is followed by any vowel    (b) the c is followed by an e or i

(c) the c is preceded by an e or i    (d) the c is followed by an e, i or y

*Thank you for your time spent completing this questionnaire. Your effort is truly appreciated.*
Early Literacy Assessment

The following questions concern knowledge of Phonemic Awareness and Oral Language Development. These questions are multiple choice, please indicate the correct response by circling the appropriate letter.

Questions about Phonemic Awareness:
(Items taken from the Survey of Teacher Phonemic Awareness, Knowledge & Skills; Cheesman et al., 2009)

1) A phoneme is:
   (a) the smallest part of written language
   (b) the smallest part of spoken language
   (c) a word part that contains a vowel sound
   (d) I'm not sure

2) Phonemic awareness is:
   (a) the same thing as phonics
   (b) understanding the relationship between letters and the sounds they represent
   (c) the ability to identify and work with the individual sounds in spoken words
   (d) I'm not sure

3) Effective phonemic awareness instruction teaches children to:
   (a) convert letters or letter combinations into sounds
   (b) notice, think about, and work with sounds in spoken language
   (c) discriminate one letter from the other letters in the alphabet
   (d) I'm not sure

4) What type of activity focuses specifically on phonemic awareness skills?
   (a) Color the pictures that begin with the letter b
   (b) Count the syllables in the word hotdog
   (c) Count the sounds in the word cake
   (d) I'm not sure

5) Which of the following tasks would be the most difficult for young children to perform?
   (a) What is the first sound in sled?
   (b) What is the first sound in shed?
   (c) The tasks are the same.
   (d) I'm not sure
6) Which activity explicitly links spelling with phonemic awareness?
   (a) Make as many words as you can using only the letters p, a, s, l
   (b) Say a word, then name the letters out loud; write the word
   (c) Say a word, then tap out the sounds in the word; write the letters for these sounds
   (d) I'm not sure

7) An example of explicit phonemic awareness instruction is:
   (a) teaching letter-sound correspondence
   (b) choosing the word in a set of four words that has the "odd" sound
   (c) reading words in the same word family, e.g., at, sat, mat, cat
   (d) I'm not sure

8) Can the words shoe, do, flew, and you be used to illustrate oral rhyming?
   (a) yes
   (b) no
   (c) only you, do, and shoe, but not flew
   (d) I'm not sure

9) An example of matching words with the same final sound is:
   (a) please-buzz
   (b) house-hose
   (c) off-of
   (d) I'm not sure

10) An example of grouping words with a common vowel sound is:
    (a) kin, fist, kind
    (b) paid, made, weigh
    (c) soon, blood, touch
    (d) I'm not sure

11) You are helping students break a word into its separate sounds. How many sounds are in the word “cube”?
    (a) two
    (b) three
    (c) four
    (d) I’m not sure

12) How many sounds are in the word grape?
    (a) three
    (b) four
    (c) five
    (d) I’m not sure
13) How many sounds are in the word fish?
(a) two
(b) three
(c) four
(d) I’m not sure

14) If you said the word faxed without the sound /k/, you would say:
(e) fad
(f) fast
(g) facts
(h) I’m not sure

15) How many syllables are in the word crocodile?
(a) two
(b) three
(c) four
(d) I’m not sure

Questions about Oral Language Development:
(Items taken from the Teachers’ Knowledge of Oral Language Development (TKOLD); Prestwich, 2012)

1) A child’s receptive vocabulary refers to:
   (a) The words a child can say
   (b) The words a child can both say and understand
   (c) The words a child can understand
   (d) I’m not sure

2) Expressive language refers to:
   (a) The words a child can say
   (b) A child’s use of language to communicate
   (c) The words a child can understand
   (d) I’m not sure

3) Syntax refers to:
   (a) A system of rules for putting words together in phrases and sentences
   (b) An aspect of language that focuses on the way on which language is used differently in different settings
   (c) Variations of a language that develop within a specific population or geographic region
   (d) I’m not sure
4) During book reading activities, the most effective types of questions for building oral language skills include (Caspe, 2009; Dickinson & Tabors, 2001; Ezell, Justice & Parsons, 2000; Pullen & Justice, 2003):

(a) Discussions about the words, pictures, and events in the story
(b) Opportunities for children to join in with the reading of the text
(c) Analytical conversations and talk about vocabulary
(d) I’m not sure

5) During book reading activities, teachers of young children should deal with new and unfamiliar vocabulary by (Christ & Wang, 2010; National Institute for Literacy, 2010):

(a) Stopping and asking children what they think the word means
(b) Continue to read and telling students the definition of the word later
(c) Embedding definitions during the reading of the text
(d) I’m not sure

6) Shared reading has a significant effect on children’s (Pullen & Justice, 2003; National Centre for Family Literacy, 2008):

(a) Alphabet knowledge
(b) Phonemic awareness and reading readiness
(c) Oral language and print knowledge
(d) I’m not sure

7) In order to support oral language development during free play, teachers of young children should (Dickinson & Tabors, 2001):

(a) Spend time engaged in very short conversations with many children
(b) Engage children in extended conversations that are intellectually challenging
(c) Ensure that there are ample amounts of time for free play throughout the day
(d) I’m not sure

8) Throughout the day, teachers of young children can model how our language works by (Dickinson & Tabors, 2001; National Institute for Literacy, 2010; Paulson & Moats, 2010; Pullen & Justice, 2003):

(a) Engaging in parallel talk or the type of talk that narrates and describes what the child is doing at that moment
(b) Doing the majority of the talking when conversing with children
(c) Speaking in simple sentences that are easily understood
(d) I’m not sure
9) During a conversation, a child points to a toy and says, “A car.” The best way to respond in order to stimulate oral language development is (National Institute for Literacy, 2010; Paulson & Moats, 2010):

(a) “Yes, a car.”
(b) “This is a car.”
(c) “You are playing with a big, blue car.”
(d) I’m not sure

10) An effective strategy for teaching new words is to (Christ & Wang, 2010; Dickinson & Tabors, 2001):

(a) Provide a single definition and example in order to avoid complicating the explanation
(b) Ask the children to explain what they think the word means
(c) Use demonstrations and/or pictures, provide multiple definitions and examples, and connect new words to concepts that children already know
(d) I’m not sure

11) The predominant way that children acquire vocabulary is by (Christ & Wang, 2010; Hart & Risley, 1995):

(a) Having words explicitly taught to them
(b) Hearing new words used in their environment, including in conversations, television, and storybooks read aloud to them
(c) Asking adults to explain what words mean
(d) I’m not sure

12) Singing and music help support early language development by helping children to:

(a) Develop better hearing
(b) Develop a sense of rhythm
(c) Become familiar with sound and language patterns
(d) I’m not sure

13) Which strategy is most beneficial for helping English Language Learners (or Dual Language Learners) to develop oral language competencies in English:

(a) Discourage the use of their native language
(b) Show children the written version of a word as you say it
(c) Actively involve parents and families in the early learning program and setting
(d) I’m not sure
14) At what age do typically developing children possess a vocabulary of 150-300 words?
(a) 12 months
(b) 18 months
(c) 36 months
(d) I’m not sure

15) At what age do typically developing children begin to use one or more words (or word fragments) to communicate meaning?
(a) 0-3 months
(b) 12 months or older
(c) 6 months
(d) I’m not sure
Self-Efficacy for Early Literacy Instruction Scale (Adapted from Tschannen-Moran & Johnson, 2011)

Please respond to each of the questions by considering your current ability, to do each of the following as you are qualified now. Please circle the corresponding number.

Please use the following scale to respond to these questions:

1  2  3  4  5  6  7  8  9
Not at all  Very Little  Some Influence  Quite a bit  A Great Deal

1) To what extent can you meet the needs of students who are struggling in developing oral language?

2) To what extent can you use a variety of informal and formal assessments to evaluate oral language competencies?

3) To what extent can you teach young children strategies for learning new vocabulary?

4) To what extent can you provide specific, targeted feedback to students’ as they are learning to say new words?

5) To what extent can you use informal conversation to help young children to develop oral language?

6) To what extent can you teach young children strategies for decoding words?
7) How much can you do to meet the needs of struggling readers?

8) To what extent can you model effective reading strategies?

9) To what extent could you implement effective reading strategies in your classroom?

10) To what extent can you help your students monitor their own use of early reading strategies?

11) To what extent can you help your students figure out unknown words when they are reading?

12) To what extent can you recommend/select a variety of quality children’s literature for your students?

13) To what extent can you choose developmentally appropriate reading materials for children?

14) How much can you motivate students who show low interest in beginning reading?

15) How much can you do to meet the needs of struggling writers?
16) To what extent can you teach young children early writing strategies?

1 2 3 4 5 6 7 8 9

17) To what extent can you use students’ early writing to teach grammar and spelling strategies?

1 2 3 4 5 6 7 8 9

18) To what extent can you model effective printing strategies?

1 2 3 4 5 6 7 8 9

19) To what extent can you adjust teaching strategies based on ongoing informal assessments for your students?

1 2 3 4 5 6 7 8 9

20) To what extent can you integrate the components of language arts?

1 2 3 4 5 6 7 8 9

21) To what extent can you explicitly teach children about segmenting words into phonemes?

1 2 3 4 5 6 7 8 9

22) To what extent can you explicitly teach children about blending phonemes together to form words?

1 2 3 4 5 6 7 8 9

23) To what extent can you assess a child’s developing phonemic awareness?

1 2 3 4 5 6 7 8 9

24) To what extent can you meet the needs of students who are struggling in developing phonemic awareness?

1 2 3 4 5 6 7 8 9
25) To what extent can you plan and implement phonemic awareness instruction for a Kindergarten program?
Knowledge and Self-Efficacy Self-Reflection

The purpose of this study is to explore Early Childhood Educators’ understanding of, and experiences related to early literacy.

Sources of Knowledge:
1. Please consider where you gained the knowledge you have about phonemic awareness and oral language (for example, university/college program, experiences in an early years setting, professional development, independent research, etc.). Please discuss what you feel are the primary sources from which you gained your knowledge about phonemic awareness and oral language.
Knowledge Questions:

1. Please tell me what you know about phonemic awareness and phonemic awareness development. Try to discuss specific things you know or strategies you have learned/used.

2. Please tell me what you know about oral language and oral language development. Try to discuss specific things you know or strategies you have learned/used.
Self-Efficacy Questions:

1. Please tell me about your feelings about teaching *phonemic awareness* to young children. Do you feel prepared teach skills to support phonemic awareness development? Do you feel confident about your ability to teach these skills/support children’s learning and development?

2. Please tell me about your feelings about teaching *oral language* to young children. Do you feel prepared teach skills to support oral language development? Do you feel confident about your ability to teach these skills/support children’s learning and development?
Correlations among the phonemic awareness and oral language knowledge and self-efficacy measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>ELA-PA</th>
<th>ELA-OL</th>
<th>SES-PA</th>
<th>SES-OL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA-PA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELA-OL</td>
<td>.515*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES-PA</td>
<td>.153</td>
<td>.223</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES-OL</td>
<td>.189</td>
<td>.140</td>
<td>.620*</td>
<td></td>
</tr>
</tbody>
</table>

*p < .005
Subject Line: We want more of your feedback!

Body: Dear ECE (student/professional), we want to thank you for your important contributions to this project. Through sharing your experiences and insights you have helped us to gain a better understanding of what ECEs know and feel about early literacy, and how a targeted professional development workshop impacts knowledge and feelings.

At this time, we would like to invite you to participate in a twenty-minute follow-up interview. In this interview, you will be asked to reflect on your experiences participating in the workshop and how it has impacted your professional knowledge and feelings about effectively teaching young children how to develop competencies in early language, reading and writing.

Interviews will take place at the University of Toronto and scheduling is flexible so you will have the opportunity to select your preferred interview date/time.

To participate in this interview or to learn more about it, please contact the project investigator, Julia Forgie, at julia.forgie@utoronto.ca.

Thanks for your contributions to this important project.
Phonemic Awareness Workshop Curriculum

Includes:
• Powerpoint slides and notes from workshop
• Workshop activities
Welcome!

• **Thank you** for participating in this important research/professional development opportunity!

• Please open your envelope, and begin completing the items in the **Pre-Workshop** section:
  - Consent letter (you keep the info, I take the signed page)
  - Survey (double-sided)
  - Self-efficacy scale (double-sided)
  - Literacy assessment (double-sided)

• As you complete these documents, please put them back into your envelope (and try to keep everything together)

• Help yourself to some snacks!
Welcome everyone. Today’s workshop focuses on early literacy instruction – particularly phonemic awareness which is a critical skill for students to develop. When students enter kindergarten they will vary in many reading-related skills such as their knowledge of print concepts (e.g., how to hold a book, understanding the concept of a word), their knowledge of letters (can they name the letters or print any?), their recognition of common environmental print (such as a McDonald’s sign), and their oral language skills (e.g., speaking vocabulary).

In addition to each of these important skills, children will also vary in their level of phonemic awareness which is an oral language skill. This workshop will provide you with some background knowledge on this skill, identify various ways to effectively teach and assess it.
Reading comprehension is the ultimate goal, but children need all of these sub-skills in order to get to that point.

The blue side of the pyramid represents skills related to oral language. The green side represents print-related skills. If any of the building blocks are missing or weak, children will often struggle to achieve the ultimate goal of reading comprehension.

Literacy development occurs within the context of the classroom environment. These characteristics of the classroom environment are especially important:

- Use of evidence-based methods
- Student engagement
- Emotional support
- Classroom organization and time management

The frame represents the environment in which literacy development takes place. When children are engaged and experience literacy learning through evidence-based methods in an emotionally supportive and well-organized classroom, it is easier for them to make gains.

Today we will focus on phonemic awareness and its role in learning to read and write.
Symbols are arbitrary until we give them meaning. Knowing the sounds that correspond to the letters in a word facilitates word identification. Children need to learn how to map oral language onto print. For example, a child who knows that the English letter combination sh says “sh” will be more able to decode words like shine and show which contain that letter combination.

Children need to develop an awareness that words are comprised of sounds. Today we are going to talk about phonological and phonemic awareness. These skills are early literacy skills that are important to learning to read because part of reading words involves making connections between print and oral language (sounds).
Symbols are arbitrary until we give them meaning. Knowing the sounds that correspond to the letters in a word facilitates word identification. Children need to learn how to map oral language onto print. For example, a child who knows that the English letter combination sh says “sh” will be more able to decode words like shine and show which contain that letter combination.

Children need to develop an awareness that words are comprised of sounds. Today we are going to talk about phonological and phonemic awareness. These skills are early literacy skills that are important to learning to read because part of reading words involves making connections between print and oral language (sounds).
Critical Questions to Think About

- What is phonemic awareness?
- Why is it important for your students?
- How can you build phonemic awareness in Kindergarten and First Grade?

These are the critical questions that we will address in this workshop. As we go over them, please look over the critical questions on handouts and jot down what you think, and what kinds of questions you might have about these topics.
Critical Questions

How can you tell if your students’ phonemic awareness is on track for their grade?

Why are children with weak phonemic awareness at risk for reading difficulties?
In summary, it is important to remember that part of learning to read involves the ability to “decode” the written text. The knowledge that there is a connection between letters and sounds is often referred to as the alphabetic principle. In practice, we can easily adapt a phonemic awareness activity to include letters. This moves it from being a pure phonemic awareness activity to one that involves phonics.

Children who have developed phonemic awareness are able to use this knowledge to read unfamiliar words by identifying the sounds each letter or letter combination makes and then blending these to form the word. Although not all words in English are regular (e.g., were), many can be “sounded out”.

Children with reading difficulties frequently exhibit weaknesses in phonemic awareness. Weaknesses in phonemic awareness are thought to constrain the development of word level reading skills because children who are unaware that words are comprised of individual sounds find it difficult to make the connection between written language (letters) and oral language (letter sounds).
Phonological awareness has been defined as the understanding that language is made up of sounds. Children must focus on the sounds of words and syllables in oral language rather than on their meanings.

An important part of phonological awareness is the ability to identify and manipulate parts of oral language. Phonological awareness includes several skills which children develop from pre-kindergarten to first grade. That is, phonological awareness occurs across a continuum and children at different stages in their development can exhibit different degrees of phonological awareness.

(Armbruster, Lehr, & Osborn, 2003)
Children can demonstrate their phonological awareness by:

1) Showing awareness at the word level by combining two words to make a new word
   E.g., If I combine bath and room, what word would I get? **Bathroom**

2) Identifying and generating oral rhymes
   E.g., Which words rhyme: **cat  hat  hut**

3) Identifying and working with syllables is spoke words
   E.g., How many syllables in the word banana? **3 syllables**

4) Identifying sounds in words
   E.g., What do you notice about this sentence? **Silly Sammy stepped on a snake.**
In order to understand spoken language children need to focus on words as meaningful units. However, to learn how to read they need to become aware of the sounds in words. This can pose a challenge for some children who tend to focus on the meanings of words rather than their sounds.

In this example, a teacher is asking her students to come up with words that rhyme with the word cat. The ability to identify and generate rhymes is an important part of phonological awareness. The first child says “kitty” based on her response we can assume that she is not paying attention to the sounds in the word cat but rather is making an association based on the word’s meaning. It is therefore important for teachers to help children to focus on the sounds in oral language so that they can do things like rhyme as a stepping stone to developing reading skills.
Introduce video

We are going to watch a video clip of a phonological awareness lesson. While you watch the video, jot down one thing you saw that you would like to try, and questions you may have. (Click on the image to link to the video)
Recipe for Literacy

This time, pay attention to:
• How the lesson is introduced
• How the teacher keeps students engaged
• How she teaches the concept of rhyming

(click on the image to link to the video)

Show the video a second time, asking teacher candidates to pay attention to the points listed above.

Optional extra video: https://sites.google.com/site/literacyvideos/Clip-List/silly-songs-to-build-phonemic-awareness
Have teacher candidates turn to a partner and discuss the above questions.

- Why do you think the teacher used props?
- What kinds of things might you do to add to this or extend it?
What is the difference between phonological awareness and phonemic awareness?

Phonological and phonemic awareness are not interchangeable.
Phonological awareness is a broader category which includes the ability to identify and manipulate parts of oral language such as words, syllables, and phonemes as well as the awareness of rhyming and alliteration.

Phonemic awareness is a specific type of phonological awareness – and deals only with identifying and manipulating phonemes which are the smallest part of spoken language. (Armbruster, Lehr, & Osborn, 2003; Put Reading First)
This chart demonstrates the sequence of phonological awareness activities, starting with the most basic and ending with the most complex.

We can see here that the ability to rhyme and the ability to detect syllables in words is an easier skill than metalinguistic skills that require children to focus on the individual sounds in words. When children are focusing on the sounds WITHIN words, they are now demonstrating phonemic awareness.

Teachers can use these guidelines to create an “instructional roadmap”—activities are not randomly selected—there is a deliberate sequence (see Phillips, Clancy-Mencetti, & Lonigan, 2008).

As a classroom teacher, you must consider the order in which you will teach various phonological awareness skills, and ensure that your lessons have many opportunities for children to actively respond and receive feedback. Teachers can continue to review skills throughout the year and explicitly make connections between what they have taught and real reading and real writing.

The following definitions and examples are provided in the audio recordings:

**Syllable:** Syllables are parts of a word that contain one vowel sound. Children can practice identifying the number of syllables in words. For example, the word teacher contains two syllables: teach-er.

**Rhyming:** Rhyming words sound the same starting from the first vowel and any consonants that follow it. Children can practice identifying and generating words that sound the same at the middle and the end. For example, stopping and hopping rhyme, but stopping and stamping do not.

**Phoneme Identification:** Phoneme identification means hearing and saying individual phonemes. For example, duck and sock both have the same sound at the end.

**Blending:** Blending involves combining sounds to make words. For example, when you put the sounds f-a-s-t together, you get the word fast.

**Segmenting:** Segmenting words means breaking them into individual sounds. For example, the word fish has three sounds, /f/ /i/ /sh/.
Phonemic awareness is a specific type of phonological awareness and requires children to identify and manipulate individual sounds in spoken words. In order to learn to read children must understand that words are made up of sounds or phonemes. To identify individual phonemes, children must shift their attention from whole word meanings to individual sounds in words. (Adams, Foorman, Lundberg, & Beeler, 1998; Armbruster, Lehr, & Osborn, 2003; Murray, 1999)
Phonemes are the smallest meaningful parts of spoken words. For example if you change the first phoneme of cat from /c/ to /r/ the word and its meaning change.
Phoneme Challenge

- Jot down the number of phonemes in:

(The instructor should name the pictures to avoid confusion): bat, paint, cow, fish, ring, bear
bat = 3 phonemes (/b/ /a/ /t/)
paint = 4 phonemes (/p/ /â/ /n/ /t/)
cow = 2 phonemes (/c/ /ow/)
fish = 3 phonemes (/f/ /i/ /sh/)
ring = 3 phonemes (/r/ /i/ /ng/)
bear = 3 phonemes (/b/ /e/ /r/)

Brief class discussion:
- What did you notice while you were doing this activity?
- Which words were the most difficult?

You may have found this activity to be quite challenging. Adult readers tend to think of the number of letters in a word (orthography) rather than the number of sounds. We forget that some of the sounds we hear in words are represented by more than one letter. For example, the sound /th/ as in “that” is represented by the letters t and h.

The /ow/ phoneme may be especially challenging for your students. If they have questions about this sound, you could explain that it is a diphthong. This means that
Three interesting facts about phonemes:

- There are 41 phonemes in the English language.
- Many vowel sounds in English are represented by more than one letter.
  - Long “e” sound can be represented in several ways:
    - ea (bead)
    - ee (see)
    - e (Pete)

In-class activity:

With your elbow partner come up with a word in which one sound or phoneme is represented by more than one letter.
The ability to identify and work with the sounds in words is a crucial skill necessary for reading development and is the basis of phonemic awareness.

Using the word fish, here are some examples of phonemic awareness. Identifying activities are the simplest. For example:

1) The ability to identify phonemes (the last sound in “fish” is /sh/)

2) The ability to break up a word into its individual sounds and count the number of phonemes.
When children practice blending sounds orally they are building an important skill that will help them to decode words later on. When they come to a new or unfamiliar word, they can sound it out letter by letter and then blend these sounds back together to read the word fluidly.

Similarly, when they practice breaking words up into their individual sounds, this provides the foundation for spelling unknown words. When they can break words into sounds, they can sound out words letter by letter which will help them to figure out how to spell the word.

Blending and segmenting are both necessary for reading and writing. They complement one another and can be taught together.
Phonological and Phonemic Awareness can be taught through a few minutes of fun activities every day.

These activities should focus on:

- **Hearing and saying individual sounds in words.** For example, the teacher might ask all of the students who have a /t/ sound in their name to stand up. Other examples of activities include having children say the first, last, and middle sounds in words, or thinking of words that have the same first or last sounds as a target word.

- **Blending sounds together to make words.** For example, the teacher could say the individual sounds of a word and model blending them together into a word. They could then ask students to identify the word they get when they put the sounds together.

- **Breaking words down into individual sounds.** For example, the teacher can say a word and model breaking it into individual sounds. They could then ask students to try saying the sounds of another word one at a time (e.g., fast - /f/-/a/-/s/-/t/).
This figure shows a general order for instruction that will help to support the development of phonemic awareness.

Start by modeling and explaining a concept. It is especially helpful when the teacher verbalizes his or her thought process for the students.

Next, the students can move on to guided practice where they practice the skill that the teacher modeled.

Feedback takes place during guided practice, with the teacher reinforcing students who are performing the skill correctly, and provides additional support and modeling for students who are struggling.

Once students have grasped the skill being taught, the sequence begins again as the teacher teaches a new skill that builds on the previous one.
It may be difficult for some children to complete these tasks without some sort of concrete representation of the sounds. Thus, one way to scaffold these tasks is to provide visuals and actions to help children keep track of the different sounds in words. This can be done even before children have learned letter-sound associations.

Providing visual representations of the sounds helps to make the oral activities more concrete. It also provides a memory aid for children. This can be a useful foundation for the transition to letter-sound associations, which will be discussed later in the slideshow.

Click on the picture to go to a video of the recipe for literacy “Pound and Sound,” which shows a teacher using visual representation to support a phonemic awareness activity.
(Start with the first box, talk about the example, and then show the video and have students complete the activities.

It is helpful to start with simple activities and gradually increase the complexity of the tasks.

Teachers can begin with simple activities like asking children to count the number of syllables in words and to find rhyming words. This is an important foundation for understanding that words are made up of sounds.

Next, children can move on to activities involving hearing and saying individual phonemes, a slightly more complex task.

Children can show variable performance depending on the level of difficulty of the task. Ultimately we want all children to be able to do the more complex tasks.
Next, children can move on to activities involving hearing and saying individual phonemes, a slightly more complex task.

Video (Click on the "Hearing and saying individual phonemes" box to go to link): Writing silly tongue twisters
Children can show variable performance depending on the level of difficulty of the task. Ultimately we want all children to be able to do the more complex tasks.

The video shown here is an example of segmenting or breaking word into individual sounds and then blending them back together.
Phonemic awareness should be assessed with an understanding that this awareness typically develops along a continuum spanning Kindergarten and first grade. Interpretation of student performance should take into account the complexity of the task and the nature of instruction that has been received. For example, if the classroom instruction has focused on blending and segmenting individual phonemes and the student is unable to do these activities, he or she may require additional support in order to learn these skills.

As a teacher it is your responsibility to know how each of your students is doing. Although each jurisdiction will have its own standards or expectations for kindergarten and first grade students, it is up to you as a teacher to assess your students in order to make sure that they are acquiring important pre-reading skills such as phonological awareness. Without these skills students will struggle to learn to read in later grades. Phonemic awareness should be assessed with an understanding that this awareness typically develops along a continuum spanning kindergarten and first grade.

What should you do?
Conduct brief individual assessments of your students’ rhyming, blending, segmenting, and phoneme identification skills 3 or 4 times during the school year.
Assessment Over Time

- Consider whether children show growth in phonemic awareness
- Repeated assessments to track progress
- Use assessment tools that:
  - Provide an objective assessment
    - a score indicating level of performance at a given time
  - Inform your instruction

Monitoring children’s performance over time can be useful for all students but, is especially important for those who are struggling to learn essential skills. It is important to identify children who are making little growth in phonemic awareness. This enables teachers to determine which students are struggling, adjust the instruction accordingly, and then find out whether the adjustment worked. It is important that children develop these skills before first grade because phonemic awareness is an important foundation of reading development.

It is important to use assessment tools that are objective as well as your own informal observations of the children’s performance. Objective assessments are tasks that are free from subjective judgments of performance. These tools should inform your instruction by telling you what the child’s strengths and needs are.

Assessing your students’ phonemic awareness frequently over time will help you answer questions such as are my students improving?; will they meet year end goals?; Are they benefiting from the instruction?; Are modifications needed (for students who are struggling or for students who have already mastered the skill)?
There is a reciprocal relationship between phonemic awareness and spell in that phonemic awareness supports inventive spelling and children’s spelling can give teachers insight into their phonemic awareness. For example, ??? As well, studies have shown that training or improving children’s phonemic awareness results in more advanced inventive spelling (e.g., Hecht & Close, 2002)

Show Rebecca printing and her sounding out a word.
Most children in a typical class will develop phonemic awareness skills with little effort through a few minutes of daily, fun activities in kindergarten.

However, about 1 or 2 students per class will struggle with developing phonemic awareness. Because phonemic awareness provides the foundation for reading and writing, these children are at risk for later reading and writing difficulties.

For this reason, it is essential that teachers provide high quality instruction in phonemic awareness. As they teach, it is equally important to monitor students’ progress to see which students are having difficulty. Children who have trouble breaking words into syllables, hearing individual sounds in words, breaking words into individual sounds, or blending letter sounds together to make words even after teaching should be given extra support: Extra instruction and practice may be necessary to help ensure they have the foundational skills necessary to be successful readers and writers. Similarly, a teacher may find that all of his or her students grasp a particular concept, such as rhyming. In this case, they can move on to more complex phonemic awareness activities like blending and segmenting.
In summary, it is important to remember that part of learning to read involves the ability to "decode" the written text. The knowledge that there is a connection between letters and sounds is often referred to as the alphabetic principle. In practice, we can easily adapt a phonemic awareness activity to include letters. This moves it from being a pure phonemic awareness activity to one that involves phonics.

Children who have developed phonemic awareness are able to use this knowledge to read unfamiliar words by identifying the sounds each letter or letter combination makes and then blending these to form the word. Although not all words in English are regular (e.g., were), many can be "sounded out".

Children with reading difficulties frequently exhibit weaknesses in phonemic awareness. Weaknesses in phonemic awareness are thought to constrain the development of word level reading skills because children who are unaware that words are comprised of individual sounds find it difficult to make the connection between written language (letters) and oral language (letter sounds).

In-class activity: Give pairs or small groups two words (phonemic awareness and phonological awareness), 2 definitions, and 3 brief descriptions of activities. Have
**Definitions:**

*Phonological awareness:* The ability to identify and manipulate parts of oral language such as words, syllables, and phonemes as well as the awareness of rhyming and alliteration.

*Phonemic awareness:* The ability to identify and manipulate individual sounds in words.

*Note:* Phonological awareness is the board category and is represented by the larger circle. Phonemic awareness is a specific type of phonological awareness and is represented by the smaller circle within the larger one.

**Ideal instructional sequence of activities in order of increasing complexity:**

*Phonological awareness activities:*

1. The teacher reads *The Very Hungry Caterpillar* aloud to his students and instructs them to make a thumbs-up sign every time they hear the word “hungry”.
2. The teacher leads the students in taking turns clapping out the number of syllables in their names.
3. Students take a picture card from a pile and think of a word that rhymes.

*Note:* The Hungry Caterpillar activity is first in the sequence because it is the least demanding. The activity is lead by the teacher and requires students to focus a whole word and provides multiple opportunities to practice. The clapping syllable activity is next in the sequence because it is more complex than the previous one. Although, the teacher provides scaffolding.

---

**In-Class Activity:**

**Activity #5 - Matching & Sorting**

In groups:

- Identify the definitions of phonological and phonemic awareness
- Sort the phonological and phonemic awareness activities
- Sequence the activities to represent the ideal order in which to introduce them to students
This video highlights the move from phonological awareness to phonics

Have a discussion with teacher candidates about how a teacher would use this activity

(i.e., as a regular review to go over skills already mastered and consolidate skills recently taught).
It is important to remind students that phonemic awareness is considered necessary but not sufficient for reading, writing, and spelling development.

Phonemic awareness activities should be part of a balanced literacy program that includes the development of these other key foundational skills.
Questions

• Are there any questions?
• THANK YOU for participating!!!!
Videos from this Presentation

• All the videos from today’s workshop can be found with FREE access at:

www.litdiet.org

The Balanced Literacy Diet Website
Early Literacy Workshop – Part 2

- I hope you enjoyed today’s workshop!
- 2nd workshop
  - Saturday, April 6th – you are invited!
  - Same time, same place – same format
Post-Workshop

- Please complete the post-workshop questionnaires, and please put them back into your envelope.
- Afterwards, please return your envelope to us and pick-up your certificate of completion and your Indigo/Chapters $10 gift card.
- We will return your handout and notes to you following completion of this study.
ACTIVITY #1 – Playing with Syllables

1) With your partner please discuss the following:

   a) Share an experience about syllable play with your partner that you may have observed in a classroom or other setting (e.g., daycare). What were the children asked to do and how did they respond?

   b) If you were designing a brief activity to support awareness of syllables in words, what kinds of factors would you consider?
ACTIVITY #2 – Rhyming Words

1) Please discuss the following with your partner:

   a) How could you use picture books to support children’s awareness of rhyme?

   b) What other activities could you use to support children’s understanding of rhyming?
ACTIVITY #3 – Sound Swap

Goal:
To orally manipulate (delete or substitute) phonemes in words to create new words

Materials:
Sound Swap Script (attached)

Instructions:
1. Player one reads the script telling player two which phonemes to manipulate (e.g., “Say dog. Now change the /d/ to /f/.”)
2. Player two follows the instructions and produces the new word (e.g., “fog”).
3. Player one provides feedback (e.g., “Very good!” or “That’s not quite right, if you change the /d/ to /f/, dog becomes fog”).
4. Player one and two alternate roles.
ACTIVITY #3 – Sound Swap (continued)

Sound Swap Script

Deletion
1. Say feet. Now say it without the /f/
2. Say leg. Now say it without the /l/
3. Say bowl. Now say it without the /l/
4. Say shelf. Now say it without the /f/

Initial Substitution
1. Say can. Now change the /c/ to /m/
2. Say hit. Now change the /h/ to /f/
3. Say bee. Now change the /b/ to /m/
4. Say sack. Now change the /s/ to /b/

Final Substitution
1. Say top. Now change the /p/ to /s/
2. Say rope. Now change the /p/ to /t/
3. Say pig. Now change the /g/ to /n/
4. Say bus. Now change the /s/ to /g/

Medial Substitution
1. Say peel. Now change the /ee/ to /oo/
2. Say map. Now change the /a/ to /o/
3. Say pot. Now change the /o/ to /e/
4. Say fat. Now change the /a/ to /i/

ALTernate roles with partner
ACTIVITY #3 – Sound Swap (continued)

Answer Key

Deletion
1. feet -> eat
2. leg -> egg
3. bowl -> bow
4. shelf -> shell

Initial Substitution
1. can -> man
2. hit -> fit
3. bee -> me
4. sack -> back

Final Substitution
1. top -> toss
2. rope -> wrote
3. pig -> pin
4. bus -> bug

Medial Substitution
1. peel -> pool
2. map -> mop
3. pot -> pet
4. fat -> fit
ACTIVITY #4 – Say It and Move It

Goal:
To segment words into individual phonemes.

Materials:
Counters (10 per pair)
Elkonin Box with picture cards
  Cheese, frog, axe, baby, spoon, fish

Instructions:
1. Place the picture cards in a pile, face up.

2. Player one takes the top card, names the picture and segments the sounds orally (e.g., “fish, /f/ /i/ /sh/”)

3. Player two says the sounds of the word, moving a chip into the box as he or she says each one, then says the whole word quickly.

4. Player one and two alternate roles until all pictures have been completed.
ACTIVITY #4 – Say It and Move It (continued)

Answer Key

Cheese
/ch/ - /ee/ - /z/

Frog
/f/ - /r/ - /o/ - /g/

Axe
/a/ - /xe/

Baby
/b/ - /a/ - /b/ - /y/

Spoon
/s/ - /p/ - /oo/ - /n/
ACTIVITY #5 – Matching & Sequencing Activity

Materials:
Definitions (attached)
Activity descriptions with corresponding numbers (attached)
Fill-in the blanks diagram (attached)

Instructions:
1. The circles on the diagram represent phonological awareness and phonemic awareness
   a. Decide which circle represents each of these components of early reading instruction and jot the appropriate label above each circle.
   b. Then jot beside the label the letter corresponding to the definition that matches the label.

2. Label and sort the activity cards:
   a. Jot down the numbers that correspond to the various activities in the appropriate circle corresponding to the early literacy component that the activity represents (e.g., phonemic awareness).
   b. Determine the ideal sequence for introducing these activities to students. With your group discuss the order in which these activities should be taught and why.
ACTIVITY #5 – Matching & Sequencing Activity (continued)

Definitions:

A. The ability to identify and manipulate the individual sounds in words.
B. The ability to identify and manipulate parts of oral language such as words, syllables, and phonemes as well as the awareness of rhyming and alliteration

Sample Activities:

1. The teacher reads *The Very Hungry Caterpillar* to his students and instructs them to give a thumbs-up every time they hear the word “hungry.”
2. Students play a board game that involves moving around a board and landing on different pictures. When they land on a picture, they have to say the final sound of the pictured word.
3. The teacher leads the students in taking turns clapping out the syllables in their names.
4. The teacher leads the students in singing a silly version of *Row, Row, Row your Boat* in which they replace the first sound in the word “merrily” (derrily, kerrily, etc.).
5. Students are given pictures of objects that have been cut into pieces. The number of pieces corresponds to the number of sounds in the word (e.g., “book” = 3 pieces). They take turns saying the sounds that go with each piece and then saying the word.
6. Students take a picture card from a pile and think of a word that rhymes.
ACTIVITY #5 – Matching & Sequencing Activity

Answer Key

Phonological Awareness:
The ability to identify and manipulate parts of oral language such as words, syllables, and phonemes as well as the awareness of rhyming and alliteration.

Sequence for phonological awareness activities:
1. The teacher reads *The Very Hungry Caterpillar* to his students and instructs them to give a thumbs-up every time they hear the word “hungry.”
2. The teacher leads the students in taking turns clapping out the syllables in their names.
3. Students take a picture card from a pile and think of a word that rhymes.

Phonemic Awareness:
The ability to identify and manipulate individual sounds into words.

Sequence for Phonemic Awareness Activities:
1. The teacher leads the students in singing a silly version of *Row, Row, Row your Boat* in which they replace the first sound in the word “merrily” (derrily, kerrily, etc.).
2. Students play a board game that involves moving around a board and landing on different pictures. When they land on a picture, they have to say the final sound of the pictured word.
3. Students are given pictures of objects that have been cut into pieces. The number of pieces corresponds to the number of sounds in the word. For example, the word “book” would be cut into three pieces. They take turns saying the sounds that go with each piece and then saying the whole word.
Oral Language Workshop Curriculum

Includes:
- Powerpoint slides and notes from workshop
- Workshop activities
Welcome!

• Thank you for participating in this important research/professional development opportunity!
• Please open your envelope, and begin completing the items in the Pre-Workshop section:
  – Consent letter (you keep the info, I take the signed page)
  – Survey (double-sided)
  – Self-efficacy scale (double-sided)
  – Literacy assessment (double-sided)
• As you complete these documents, please put them back into your envelope (and try to keep everything together)
• Help yourself to some snacks!
Welcome everyone. Today’s workshop focuses on early literacy instruction – particularly oral language development which is critical for students to develop. When students enter preschool they will vary in many oral-language related competencies such as their knowledge of words (e.g., vocabulary), their ability to listen to themselves and others (developing listening skills), their ability to accurately pronounce phonemes (do they have the sounds to form the words?), and their level of metalinguistic understanding (their ability to think about words and language).

This workshop will provide you with some background knowledge on oral language development, and identify various ways to effectively teach and assess it.
Reading comprehension is the ultimate goal, but children need all of these sub-skills in order to get to that point.

The blue side of the pyramid represents skills related to oral language. The green side represents print-related skills.
If any of the building blocks are missing or weak, children will often struggle to achieve the ultimate goal of reading comprehension.

Literacy development occurs within the context of the classroom environment. These characteristics of the classroom environment are especially important:
- Use of evidence-based methods
- Student engagement
- Emotional support
- Classroom organization and time management
The frame represents the environment in which literacy development takes place. When children are engaged and experience literacy learning through evidence-based methods in an emotionally supportive and well-organized classroom, it is easier for them to make gains.

Today we will focus on the blue side of the pyramid, oral language development and its various components.
These are the critical questions that we will address in this workshop. As we go over them, please look over the critical questions on your handouts and jot down what you think, and what kinds of questions you might have about these topics.
Critical Questions

How can you tell if your students’ oral language skills are on track for their grade?

Why do some children show delays in their oral language development?
In summary, it is important to remember that oral language is the foundation for all reading related skills. Without a foundational understanding of how to use language, children cannot make the progression to pairing oral language with written text, which is essential for reading and writing.
Discussion

What factors can influence children’s vocabulary and language development?

Take out Activity #1 “Influencing Factors” and complete with a partner.

Please take out activity #1 and consider how the following affects vocabulary and language development:
• Breadth and depth of life experiences
• Ability to hear and speak
• Interaction with language developed individuals (mainly adults)
The Canadian Speech-Language-Hearing Association defines language as “...A code made up of rules that include what words mean, how to make words, how to put them together, and what word combinations are best in what situations. Speech is the oral form of language.
Listening – interpreting word sounds and making sense of them
Speaking – blending word sounds (or phonemes) together to form words that carry meaning
Language can be subdivided into two categories. **Receptive language**, refers to the words children know and understand when they hear them. It is also sometimes called listening vocabulary. The second is called **expressive language**, which refers to the words children can use correctly when speaking. It is also sometimes referred to as speaking vocabulary.

Children’s receptive language exceeds their expressive language, and this continues to be true even in adulthood. For example, when reading do you ever come across a word that you can understand but would not use yourself in a sentence? For example, you might be able to read and understand words like hubris and ubiquitous, but you might not use them yourself when speaking or writing. This is also seen in the earliest stages of language development, when parents notice that infants can follow instructions but cannot yet speak. Just being exposed to vocabulary does not guarantee that children (or adults!) can use the words in speaking. This is why thorough teaching of vocabulary and student engagement is important in vocabulary instruction. These points will be discussed further later on in the presentation.

(Honig, 2007)
Both receptive vocabulary and expressive vocabulary are important to literacy development. Receptive, or listening vocabulary, supports children’s understanding of what they read, while expressive, or speaking, vocabulary, supports their ability to express themselves in writing.
Oral language is a broad term that encompasses all aspects of spoken language. At the most basic level are the sounds of language. This includes phonological and phonemic awareness, or the ability to hear and manipulate the sounds of oral language.

The structure of language is also important. Children must learn the grammar of their language, as well as broader organization like sentence order. **Syntax refers to the system of rules for putting words together in phrases and sentences.**

Children also need to be able to draw meaning from oral language. This includes knowledge of vocabulary, or individual word meanings. However, it also includes oral comprehension of sentences and speech.

Finally, oral language includes understanding of language use. This includes conventions, such as manners and commonly used phrases like idioms, as well as context factors such as using more formal language in certain situations and casual language in others.

One of the focuses of today’s workshop is vocabulary, one very important aspect of oral language that plays a key role in supporting reading and writing development.
Oral Language is developmental in nature, beginning at birth and increasing significantly up the years.
Oral language is a foundational skill to later successes in reading and writing. In the beginning stages of reading development, oral language plays a critical role, setting the foundation for making the subsequent connection between oral language and written language (print).

### Early Stages of Reading Development

**Chall (1983, 1996)**

- **Stage 2: Ages 7-8**
  - Develops fluency
  - Recognizes patterns of words
  - Checks for meaning and sense
  - Knows a sight word

- **Stage 1: Ages 6-7**
  - Aware of sound-letter relationship
  - Maps speech to print and sounds out words
  - Attempts to break code of print
  - Uses decoding to figure out words

- **Stage 0: Birth to Age 6**
  - Grows in control of oral language
  - Relies heavily on pictures in text
  - Pretend reads
  - Hears sounds in words; recognizes rhyme

---

*Note: The table and diagram above are not transcribed as they are visually presented in the document.*
This activity is designed to activate prior knowledge. Teacher candidates should be encouraged to guess if they are not sure. The goal of this discussion is to encourage them to think about:

- What words children know when they enter school
- What it means to “know” a word (e.g., Is it understanding what the word means? Is it being able to use the word when speaking? Being able to read a word?)

Before children begin to read and write they acquire knowledge of words. When they enter school at pre-kindergarten, they understand many words and they know many of them well enough to use in everyday speaking. Please jot down an estimate of how many words you think children know when they enter pre-kindergarten.

Survey the teacher candidates, asking how many people’s estimates fell within each range listed above. The purpose of this survey is to demonstrate that there is a lot of variability in teacher candidates’ estimates.

It is estimated that at kindergarten entry, children have around 2400 root words in their vocabularies. Root words are the meaningful part of the word that remains once all prefixes and suffixes have been removed. For example, the root word of action, activity, and react are “act”.
In infancy, babies are experimenting with sounds through *crying*, babbling, gurgling, cooing. Infants learn to communicate specific needs by producing different cries. Nonverbal communication is pervasive.

Oral language grows a great deal between 1-2 years. Children begin to form one word utterances – and utters many sounds with adult intonation as if speaking in sentences. Children begin to show awareness of syntax in their telegraphic speech, using conjunctive words such as “Daddy home” meaning “Daddy is coming home soon.” Language grows tremendously once children begin to combine words.

From age 2-3 is probably the most dramatic in terms of language development. A child’s oral vocabulary grows from 300 words to 1000. Receptive vocabulary is 2000-3000.

Age 3-4, a child’s vocabulary and knowledge of sentence structure grows dramatically. Begin to use plurals and show an awareness of tense (sometimes inaccurately) “I knocked over the fishbowl and it broked and all the fishes are swimming on the floor.”

Five- and six-year olds sound very much like adults in their speech. Many still show some difficulty pronouncing some more challenging sounds, like *l, r and sh* and the

---

### Language is Developmental

<table>
<thead>
<tr>
<th>Birth – Age 1</th>
<th>Experimenting with sounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 1 – Age 2</td>
<td>One-word utterances</td>
</tr>
<tr>
<td></td>
<td>Shows intonation is speech</td>
</tr>
</tbody>
</table>

Take out **Activity #2** “Language is Developmental” and complete with a partner.

Vocabulary expands to approximately 2500 words
- Awareness of multiple word meanings
So…what can we do to help foster oral language development?

How can we foster Oral Language Development?

- What actions can teachers and ECEs take to foster language development?
http://sites.google.com/site/literacyvideos/Clip-List/same-different

In this video kindergarten students select two objects from a box and discuss the similarities and differences between the objects. This activity promotes students’ oral language development because they are encouraged to talk to peers using appropriate language for the context. As well, the use of objects that the students can touch and examine serves as a prompt recalling accurate vocabulary. It is primarily for children from prekindergarten to 2nd grade. This activity is particularly useful because students can work in pairs or small groups. As a result, it provides an opportunity for each student to speak. If done every day with a new goal each time, it will ensure that all students have opportunities to develop their speaking and listening vocabulary.

You’re going to see a video in which kindergarten students are engaged in an activity intended to develop their vocabulary. While watching this video, jot down your thoughts in relation to these three questions. The children in this video are kindergarten English Language Learners.
Following the video, have teacher candidates discuss these three questions with a partner for 2-3 minutes.

**Goal:** This activity promotes students’ oral language development because they are encouraged to talk to peers using appropriate vocabulary for the context.

**Promoting Listening and Speaking Vocabularies:**
This activity is particularly useful because students can work in pairs or small groups. As a result, it provides an opportunity for each student to speak and have opportunities to develop their speaking and listening vocabularies.

**Adaptations:**
Teachers can vary what they put in the box to teach target vocabulary concepts (e.g., vehicles and non-vehicles). It can also be used to refine students’ vocabulary (e.g., nuances of color – all of the things in the box are blue, but different shades and tones). In this way, the activity can be used to teach many different concepts.
Having a large vocabulary is essential for growth in literacy. Vocabulary instruction is important because the number of words as well as which words children have in their vocabulary will affect their oral comprehension, word identification, reading comprehension, and writing and composition skills across subject areas.
This graph shows the growth in vocabulary from Kindergarten to 6th Grade. However, these are only averages, and there can be very large differences between children in the same grade with the highest and the lowest vocabulary knowledge. In Grade 2, this gap can be up to 4000 words! This is because children have different language experiences at home both before beginning school and throughout elementary school.

(Biemiller & Slonim, 2001)
At home, children may learn vocabulary by reading and being read to from illustrated books and chapter books, speaking with adults, or watching television. However, some children may not have opportunities to learn from all of these sources. For example, they may not have parents or other adult models who speak English, or may not have books or television in the home. Some children may not be exposed to any of these sources of new vocabulary. These different environments mean that children do not all arrive at school with the same word knowledge.

In addition, not all sources of vocabulary are equal. Children’s literature contains much richer and more diverse vocabulary than television and adult speech. This means that children who read or are read to at home will be exposed to many more new vocabulary words than those who only watch television and interact with adults.

In the 1\textsuperscript{st}, 2\textsuperscript{nd}, and 3\textsuperscript{rd} grades, children can understand and say more words than they can read. However, around the 4\textsuperscript{th} grade a shift occurs. From this point on children’s reading ability actually exceeds their speaking and listening vocabulary. That is, they can read words that they are not necessarily able to understand or use in speaking.

In order to identify a word in print, young children need to have the word in their vocabulary. When they come to a word, they look at the letters and sound out the word (CLICK). When the word is in their vocabulary, it helps them in two ways. First, they can understand the word because they know its meaning (CLICK). However, vocabulary also acts like a “self check” against which children can compare the word they have sounded out. If they recognize the word from speech, they can read it and understand it (CLICK).
However, sometimes children come to a word that they can sound out easily but that is not in their vocabulary (CLICK). For example, many children could sound out the word “lad” but wouldn’t have anything to compare it with in their oral vocabulary. Because of this, they may not know if they have read the word correctly (CLICK), and even if they have read it correctly they won’t be able to understand it.
Children learn most new vocabulary indirectly by having conversations with adults, being read to, and reading on their own. However, some words also need to be taught directly. These include words that represent complex concepts, things that aren’t part of children’s everyday life, and new words that are part of a text used in class.

(Armbruster, Lehr, & Osborn, 2001)
Indirect Teaching
Although children learn most words indirectly (just by being exposed to them), there is a lot teachers can do to promote this learning.

It is important for teachers to create contexts for all students to use language. Hearing language alone is not enough: Students must be engaged and using language themselves if they are to master the use of new words.
Teachers can also support indirect vocabulary learning by reading to students at all grade levels. Reading picture books with rich language to students of all ages is especially powerful. Talking with the students about the text before, during, and after reading is especially helpful. Teachers can use this time to analytically discuss new vocabulary and concepts presented in the text and to connect the words and concepts to things students already know.

Finally, teachers should encourage students to read on their own and with their parents at home. This is preferable to having silent reading time in class as struggling readers or children with limited vocabulary will not be able to benefit from silent reading as much as their peers, and as a result this only widens the gap between the weakest readers and the strongest readers in a class. (Armbruster, Lehr, & Osborn, 2001)
Direct Teaching

Direct teaching of vocabulary involves teaching individual words and their meanings. Teaching specific words helps students to master their meanings and to use them correctly when speaking and writing. Effective direct teaching of word meanings includes:

- Giving a student friendly definition and using the word in context. To be most effective, teachers should avoid just giving a definition or just using the word in context. The combination of an easy to understand definition with an example of how the word can be used is especially helpful to increase students’ understanding.
- Repeated exposure to the word in different contexts over time. Seeing, hearing, and working with words in different contexts promotes vocabulary learning.
- Opportunities for students to use the word in different contexts. As is the case with incidental learning, students need to be engaged and have opportunities to use the new words themselves in order to learn to use them correctly and deepen their understanding of word meanings.

(Armbruster, Lehr, & Osborn, 2001; Beck, McKeown, & Kucan, 2002; Graves, 2008)
What are the 3 levels?
Vocabulary is made up of 3 tiers, or levels. The first level consists of basic words that rarely need to be taught explicitly in school. The second level consists of high frequency worlds that are used in various contexts. The third tier contains words that are relatively infrequent and whose use is limited to specific domains.

Which words should you teach?
Like Goldilocks who was searching for the perfect bowl of porridge, some vocabulary words (level 1) are too easy and thus do not need to be taught explicitly, others are too hard (level 3 infrequent context specific words), while others are just right (level 2 high frequency rich words). (REF)

Level 2 words are the most useful to teach. Because of their high frequency they play a large role in an individual’s repertoire. Knowledge of level 2 words greatly impacts how well someone can cope with oral and written language.

When deciding which words to teach your students it is important to keep in mind that although you want to introduce them to new and rich vocabulary words, those words should also be useful in multiple contexts and occur frequently in oral language.
This activity will allow teacher candidates to apply the information in the previous slides on vocabulary instruction.

First, have them look through the books in their groups and decide which words they would teach and why. Be sure to take every opportunity to engage in analytical talk about the vocabulary.
This video shows a teacher using visual cues to help children learn new vocabulary through direct instruction. As well, this video shows an activity that encourages the development and use of descriptive language as children use their senses to identify mystery objects.
Pose these questions to the whole group.

**Discussion**

- What is the goal of this activity?
- How could you assess whether children had learned the target words?
Teaching Word Learning Strategies

Teaching effective strategies for discovering the meanings of new words is important because it wouldn’t be possible for to teach the meanings of all of the words children will encounter. Some of the most effective word-learning strategies to teach include:

- Using dictionaries and other reference materials to find word meanings
- Using context and picture clues to help figure out the meaning of an unknown word
- Using knowledge about word parts to figure out the meaning of a word

(Armbruster, Lehr, & Osborn, 2001)

These strategies can be taught by modeling them for students, providing opportunities for them apply the strategies, and giving them feedback and support as they learn to use the strategies independently. Being able to use these word-learning strategies effectively will help to support children’s indirect learning of vocabulary.
What Not To Do When Teaching New Words

• Just give a definition
• Just use the word in context
• Ask students to use a word before giving them a context
• Have students copy definitions from a dictionary
• Have students memorize definitions and quiz them

When teaching new word meanings, teachers should avoid:

• Just giving a definition.
• Just using the word in context.
• Asking students to use a word before you give them a context for it
• Having students copy definitions from a dictionary
• Having students memorize definitions of words and quizzing them
(Graves, 2008)

A class discussion of why these aren’t effective ways of teaching vocabulary follows on the next slide, along with an explanation.
What Not To Do When Teaching New Words

- Just give a definition
- Just use the word in context
- Ask students to use a word before giving them a context
- Have students copy definitions from a dictionary
- Have students memorize definitions and quiz them

Why do you think these methods aren't effective ways to build vocabulary?

Explanation:
When teaching new word meanings, teachers should avoid using the methods listed above. In general, this limited instruction doesn’t lead children to master word meanings and be able to use words flexibly (using them correctly in multiple contexts).

• **Just giving a definition.** Don’t assume you’ve taught a new word when you’ve just told students what the word means. In order to ensure that children learn a word meaning they need to be exposed to the word multiple times and in multiple contexts. It is especially helpful if teachers vary the definition slightly each time they present it. This helps to deepen children’s understanding of the word meaning. It is also important that children have authentic opportunities to use the words themselves so they can become part of their expressive vocabulary.

• **Just using the word in context.** Often children cannot grasp the meaning of a word from its context alone, or may make incorrect inferences about its meaning based on the context in which you have used it.

• **Overwhelming students with too many new words.** Students can only take in so much new information at a time, so teaching large numbers of
Assessment of vocabulary is difficult but very important. As a teacher, this information will be valuable to you to inform your instruction. These are some ways that you can check in with your students to see what they know before, during, and after you teach new vocabulary.

- Ask students to demonstrate their knowledge of specific words in different ways
- Saying what a word means
- Identifying a picture or an object ("What is this?")
- Choosing a picture that represents a word
- Demonstrating or acting out a word, phrase, or idea

(Beck, McKeown, & Kucan, 2002)
In this video the teacher uses actions to support children’s learning of new vocabulary words. An activity like this could also be used for assessment to determine whether students understood the meanings of new words.

http://www.youtube.com/watch?v=IV_bsjYT64
The goal of this discussion is to have teacher candidates think about assessment and observation in vocabulary lessons, and what cues to look for to indicate children’s level of understanding. Have students discuss the above question following the video.

Discussion Notes:
Although some students may give incorrect answers or do the wrong action, other students’ misunderstandings may not be as obvious. In particular, teachers should look for students who:
- Do not raise their hand or volunteer answers
- Look at the actions other students are doing and copy those
- Confuse the meanings of words you have taught

It is good practice to vary the groupings in order to allow all students opportunities to respond and to allow you to monitor their progress more easily.
In Class Activity

There was once a _______ rabbit, and in the _______ he was really _______. He was fat and _______ as a rabbit should be; his _______ was _______ brown and white, he had real _______ and his ears were _______ with pink _______. On _______ morning, when he sat _______ in the top of the Boy’s _______, with a _______ of _______.

Take out Activity #4 “Passage Comprehension” and complete with a partner.

At least two hours the Boy _______ him, and then Aunts and Uncles came to _______, and there was a great _______ of _______ paper and _______ of _______.

And in the _______ of looking at all the new _______ the _______ Rabbit was _______.

(Have students read the passage to themselves).

Margery Williams, *The Velveteen Rabbit*

Or How Toys Become Real

There was once a (velveteen) rabbit, and in the (beginning) he was really splendid. He was fat and bunchy as a rabbit should be; his (coat) was (spotted) brown and white, he had real (thread) whiskers, and his ears were (lined) with pink sateen. On Christmas morning, when he sat wedged in the top of the Boy’s stocking, with a sprig of (holly) between his (paws), the effect was charming.

There were other things in the stocking, nuts and oranges and a toy engine, and chocolate (almonds) and a clockwork mouse, but the Rabbit was (quite) the best of all. For at least two hours the Boy (loved) him, and then Aunts and Uncles came to (dinner), and there was a great rustling of (tissue) paper and unwrapping of parcels, and in the excitement of looking at all the new presents the Velveteen Rabbit was (forgotten).
This activity demonstrates:

1) Vocabulary is important for reading comprehension. Without an adequate vocabulary, comprehension will be impaired.
2) Children might not know the meanings of some words without being taught them explicitly.
Teachers can also support students in learning target words by:

- Highlighting the relationships between words (This is especially helpful for older students. For example, two words might share the same root word, prefix, or suffix)
- Connecting the word to what students already know provides helpful scaffolding for students to learn new word meanings
- Parallel talk – narrate what you are doing to help children pick-up new vocabulary informally. Also, model the metalinguistic process of connecting to new words
- Have students keep a personal vocabulary notebook to track words they are learning (students can log words and their meanings in a notebook they can refer back to)
- Teachers can also encourage students to make inferences about word meanings based on what they already know.
- It may also be helpful to encourage students to use the word outside of class or to notice others using the word outside of class (For example, students could keep a personal vocabulary notebook, writing down how they used the word at home over the weekend, or how they heard others using the word, and could share with the class at a designated time.)
In this activity, you will be reading aloud a passage and making specific connections to help children to understand how to connect to language in different ways. This kind of activity also helps children to think about thinking about language.

Fostering Metalinguistic Thinking

• Get children to think about language and words
  – Schema development

  Take out Activity #5 “Making Connections” and complete with a partner.
Informal assessment on a regular basis can tell you a lot about students’ oral language development.

(Beck, McKeown, & Kucan, 2002; Biemiller, 2004)
Many strategies for supporting oral language development for all children, will also be appropriate for English Language Learners. However, it is important to empower young children learning a new language by acknowledging and embracing native languages in a child’s learning development. As well, enlisting the support of families will allow children to continue in their language development in the home setting as well.
Example of an activity that both fosters oral language and encourages the use of native language
Opportunities for fostering language development are naturally embedded in children’s free play. During periods of free-play, take the time to listen and respond to children. Engage in meaningful and extended conversation wherever possible.

As well, music provides rich opportunities to explore patterns in oral language. Children are exposed to rhyme, repetition and alliteration through singing common children’s songs.
Explain how this activity provides the children with the vocabulary and communication strategies necessary to run a successful “pizza parlour” during a time of free play.
Questions

- Are there any questions?
- THANK YOU for participating!!!!
Videos from this Presentation

• All the videos from today’s workshop can be found with FREE access at:

www.litdiet.org

The Balanced Literacy Diet Website
Early Literacy Workshop – Part 2

• I hope you enjoyed today’s workshop!
• 2\textsuperscript{nd} workshop
  – Sunday, April 7\textsuperscript{th} – you are invited!
  – Same place – same format
  – Interested students will be contacted via email
Post-Workshop

• Please complete the post-workshop questionnaires
• Afterwards, please pick-up your certificate of completion and your Indigo/Chapters $10 gift card
ACTIVITY #1 – Influencing Factors

1) With your partner please discuss the following:

   a) What impact might a child’s life experiences have on their language and vocabulary development? Can you think about a specific example that you have observed?

   b) What impact may exposure and interaction with language-developed adults, have on a child’s oral language and vocabulary development? Can you think of a specific example that you have observed?
ACTIVITY #2 – Language is Developmental

Match the developmental language milestones with the correct age (when you would begin to these behaviours).

Ages:

<table>
<thead>
<tr>
<th>Ages</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Months</td>
<td>12 Months (1 year)</td>
</tr>
<tr>
<td>18 Months (1.5 years)</td>
<td>Two years</td>
</tr>
<tr>
<td>Three ½ years (3.5 years)</td>
<td>Five years</td>
</tr>
</tbody>
</table>

Language Milestones:

<table>
<thead>
<tr>
<th>Ages</th>
<th>Language Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Months</td>
<td>Children begin to show awareness of syntax in their telegraphic speech, using conjunctive words such as “Daddy home” meaning “Daddy is coming home soon.”</td>
</tr>
<tr>
<td>12 Months (1 year)</td>
<td>A child’s expressive vocabulary will be approximately 300 words. Their receptive vocabulary will be approximately 2000 words.</td>
</tr>
<tr>
<td>18 Months (1.5 years)</td>
<td>Children begin to form single-word utterances and utter many sounds with adult intonation as if speaking in sentences.</td>
</tr>
<tr>
<td>Two years</td>
<td>Crying is most commonly used to communicate. Specific needs are communicated through different kinds of cries.</td>
</tr>
<tr>
<td>Three ½ years (3.5 years)</td>
<td>A child’s vocabulary and knowledge of sentence structure is developing. Children begin to use plurals and show an awareness of tense (sometimes inaccurately) “I knocked over the fishbowl and it broked and all the fishes are swimming on the floor.”</td>
</tr>
<tr>
<td>Five years</td>
<td>Children begin to sound very much like adults in their speech. They begin to carry more awareness that words can carry multiple meanings.</td>
</tr>
</tbody>
</table>
1) Reading to your partner, please read through the first several pages of your book. Choose 3 vocabulary words that you would want to teach.

   a) For each word, write a student-friendly definition

b) For each word, write an example using the word in another context
ACTIVITY #3 – Vocabulary Hunt

Word #1:

___________________________

Definition:

___________________________

Used in another context:

___________________________

Word #2:

___________________________

Definition:

___________________________

Used in another context:

___________________________

Word #3:

___________________________

Definition:

___________________________

Used in another context:

___________________________
ACTIVITY #4 – Passage Comprehension

Read the following passage:

There was once a _______ rabbit, and in the _______ he was really _______. He was fat and _______ as a rabbit should be; his _______ was _______ brown and white, he had real ____________, and his ears were _______ with pink _______. On _______ morning, when he sat _______ in the top of the Boy’s _______, with a _______ of ____________ his _______, the _______ was _______.

There were other things in the _______, nuts and oranges and a toy _______, and chocolate _______ and a _______ mouse, but the Rabbit was _______ the best of all. For at least two hours the Boy _______ him, and then Aunts and Uncles came to _______, and there was a great _______ of _______ paper and _______ of _______, and in the _______ of looking at all the new _______ the _______ Rabbit was _______.

1. Based on what you just read, what is this passage about?

2. What does this activity demonstrate?
There was once a (velveteen) rabbit, and in the (beginning) he was really splendid. He was fat and bunched as a rabbit should be; his (coat) was (spotted) brown and white, he had real (thread) whiskers, and his ears were (lined) with pink sateen.

On Christmas morning, when he sat wedged in the top of the Boy’s stocking, with a sprig of (holly) between his (paws), the effect was charming.

There were other things in the stocking, nuts and oranges and a toy engine, and chocolate (almonds) and a clockwork mouse, but the Rabbit was (quite) the best of all. For at least two hours the Boy (loved) him, and then Aunts and Uncles came to (dinner), and there was a great rustling of (tissue) paper and unwrapping of parcels, and in the excitement of looking at all the new presents the Velveteen Rabbit was (forgotten).
ACTIVITY #5 – Making Connections

1) Reading to your partner, please read aloud the first few pages of the book. As you read-aloud, please stop at a few words and make connections to these words as follows. Then switch roles.

   a) Make one connection to another text. (ex. “This part reminds me of another book I read about fish...)

   b) Make one connection to something you have experiences personally. (ex. This part reminds me of the time I went fishing with my dad and...)

   c) Make one connection to the world as a whole. (Ex. This part makes me think about how big the ocean really is. There must be thousands of fish, living there...)
Early Literacy Workshop - Reflection Questionnaire

The purpose of this study is to explore Early Childhood Educators’ understanding of, and experiences related to early literacy. After having completed the workshop, we are curious about your personal reflections. Please answer the questions as candidly as possible with as much detail as possible. We will be grouping your responses with the information provided by many others.

Reflection Questions:

1. What was the main reason that you participated in the PD workshop?

2. How do you feel about participating in the workshop?

3. Tell me about your overall experience completing the workshop. (What did you like best, what did you not like)?
4. Do you feel differently about teaching young children, now having completed the workshop – explain?

5. Please rank the workshop components in the order of least important to most important to you, based on how they benefitted your knowledge and understanding – please explain your thinking.

   PowerPoint Slides____  Readings____  Video demonstrations____
   Questions to Consider____  Classroom Applications____  Other ________________

6. Tell me about something that you learned, or something that had an impact on you from the workshop?
7. How do you expect what you have learned to translate into your work with children?

8. Has your confidence changed about instructing and supporting young children in phonemic awareness/oral language? If so, how?

9. What was important about the workshop? What could be improved?

10. In your opinion, what are the most important aspects of the workshop?
Early Literacy Perceptions Interview

The purpose of this study is to explore Early Childhood Educators’ understanding of, and experiences related to early literacy. We will be grouping your responses with the information provided by many others. We will be audio recording your responses but will not include any identifying information.

Participant #: _________________________

Workshop: __________________________

Program Evaluation Questions:

1. What was the main reason that you participated in the PD workshop?

2. How do you feel about participating in the workshop?

3. Tell me about your overall experience completing the workshop. (What did you like best, what did you not like)?

4. Do you feel differently about teaching young children (in phonemic awareness or oral language development), now having completed the workshop – explain?
5. Please rank the workshop components in the order of least important to most important to you, based on how they benefitted your knowledge and understanding – please explain your thinking

   PowerPoint Slides ___  Readings ___  Video demonstrations ___
   Questions to Consider ___  Classroom Applications ___  Virtual Tour ___

6. Tell me about something that you learned, or something that had an impact on you from the workshop?

7. Do you think you have changed your understanding of how to instruct and support young children in phonemic awareness/oral language development? If so, how?

8. How has or how do you expect what you have learned to translate into your work with children?

9. Has your confidence changed about instructing and supporting your children in phonemic awareness/oral language development? If so, how?
10. What was important about the workshop? What could be improved?

11. Now knowing what to expect from the workshop, would you do it over again?

12. In your opinion, what are the most important aspects of the workshop?

13. As a result of what you have learned from the workshop, have your instructional practices changed or do you plan on changing them?