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Early childhood professionals attending in-depth literacy training have been shown to gain knowledge and change classroom practices. These early childhood professionals play an important role in children's literacy development. In this multi-state study, the effectiveness and usability of the Literacy in the Early Childhood Classroom training curriculum was evaluated using a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis. Eleven early childhood trainers participated in a train-the-trainer program and taught the literacy series to 238 early childhood professionals in four states. Participants attending the training series demonstrated significant knowledge gains on concepts related to oral language, phonological awareness, reading and vocabulary, and emergent writing. Trainers provided insights on successes of the literacy training series and what could be changed to improve the implementation and delivery of the series. Strengths of the training series included ease of implementing the training and strong supporting materials such as videos and children's books. Weaknesses of the series included program length and the need for concept clarity among some trainers. Opportunities included streamlining the training content and providing trainers with additional support prior to training implementation. Potential threats include the need to align the training curriculum to match different states' standards and childcare training policies.

Keywords: literacy, early childhood, preschool, SWOT analysis, professional learning

Introduction

Building a strong language and literacy foundation supports children's future school success (Pace, Alper, Burchinal, Golinkoff, & Hirsh-Pasek, 2019). Language skills developed in early childhood lay the groundwork for later reading and other academic skills (Dickinson, 2011). Children with stronger oral vocabularies at age 2 had better reading and math skills at the beginning of kindergarten (Morgan, Farkas, Hillemeier, Hammer, & Maczuga, 2015). Similarly,

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children's reading scores in third grade are positively correlated with high school graduation rates (Hernandez & Annie, 2011). Although learning to read and write with proficiency is a long process, the foundation of literacy development begins with vocabulary development in early childhood (Fernald, Marchman, & Weisleder, 2013; Hindman, Wasik, & Snell, 2016).

There is a relationship between children's development of oral language skills and their development of reading comprehension skills (Lervåg, Hulme, & Melby-Lervåg, 2018). During a child's early years, having books in the home, reading with children frequently, and visiting the library regularly are all associated with higher language scores, letter writing, and spontaneous writing skills (Lonigan, 2006; Puranik, Phillips, Lonigan, & Gibson, 2018). Infants who are exposed to daily rich language have stronger language processing skills and vocabulary as early as age 18 to 24 months (Fernald et al., 2013; Weisleder & Fernald, 2013).

Early Learning Experiences that Contribute to Literacy Development

Numerous researchers have found that specific emergent literacy skills in early childhood, such as vocabulary development, word meaning, and narrative storytelling, contribute to later literacy development (Jalongo & Sobolak, 2011; Wellman et al., 2011). Researchers have grouped the skills necessary for young children to become successful readers into two categories (Vukelich, 2015). The first category, *code-related skills*, are skills used to "decode" written language by connecting print with oral language. Effective, developmentally appropriate teaching strategies in areas such as phonological awareness, print knowledge, and emergent writing can strengthen young children's code-related skills and provide the foundation for later reading. Unfortunately, many early childhood professionals do not understand how to help young children develop code-related skills and these skills are not included in some early childhood curricula (Dickinson, 2011; Phillips, Clancy-Menchetti, & Lonigan, 2008).

The second category, *meaning-related skills*, enables children to understand and create meaning from written language through vocabulary development. Evidence-based strategies to support young children's vocabulary development include engaging children in word play, repeating new words within meaningful contexts, and encouraging emergent writing (Bingham, Quinn, & Gerde, 2017; Jalongo & Sobolak, 2011; Puranik, Lonigan, & Kim, 2011). Education researchers recommend that these types of strategies be embedded in young children's learning experiences throughout the day (Dinnebeil & McInerney, 2011).

Early childhood professionals play important roles in children's literacy development. Intentional teaching practices such as careful curriculum planning, responsive instruction, and teaching pre-reading skills can help young children develop the code-related and meaning-related skills needed for reading and writing (Burchinal et al., 2008; Koutsoftas, Dubasik, & Moss DiDonato, 2017).

One of the most important strategies for supporting emergent literacy and increasing young children's interest in books is regular shared reading using dialogic reading techniques. Dialogic reading is a social form of reading aloud that builds literacy skills by encouraging children's active involvement in the story, asking questions, and reinforcing and expanding on children's responses (Lacour, McDonald, Tissington, & Thomason, 2017; Pollard-Durodola et al., 2011). In addition to using dialogic reading strategies, early childhood professionals can support emergent literacy by exposing children to rich and complex vocabulary, teaching concepts about print, and providing opportunities for emergent writing using invented spelling, which is defined as children's spontaneous attempts to spell unknown words independently (Sénéchal, Ouellette, Pagan, & Lever, 2012). Teachers can also expose children to rhyme, use rich language throughout the day, and support the development of dual-language learners' home language (Bierman et al., 2008; Bingham et al., 2017; Ying, Justice, Kaderavek, & McGinty, 2012).

The Need for Teacher Professional Learning Related to Early Literacy

Effective early childhood professionals use their conceptual knowledge of early literacy development to create healthy, supportive, and challenging learning environments for young children (National Association for the Education of Young Children, 2009). Even though early literacy research provides a clear picture of the most effective tools and strategies to support literacy development in early childhood, the quality of literacy-related instruction varies across different early childhood programs (Dickinson, 2011; Guo, Piasta, Justice, & Kaderavek, 2010). To provide developmentally appropriate literacy education, early childhood professionals need professional learning experiences that teach them effective ways to promote emergent literacy skills in young children and researchers have found that the most effective professional learning opportunities for early childhood teachers include characteristics such as multi-session training and opportunities for participants to share experiences, apply knowledge and practice skills (Bowman, Donovan, & Burns, 2001; National Early Literacy Panel, 2008). Teachers' progress in implementing literacy concepts can further be supported by mentoring or coaching (Beecher, Abbott, Petersen, & Greenwood, 2017; Downer et al., 2011; Gillentine, 2006; Landry, Swank, Anthony, & Assel, 2011; Neuman & Wright, 2010; Wasik & Hindman, 2011). In-depth professional learning focused on literacy can be effective in changing classroom practices and improving young children's literacy skills (Fukkink & Lont, 2007). In one study, Head Start teachers who received ongoing professional learning experiences focused on instructional strategies to improve young children's vocabulary, alphabet knowledge, and phonological sensitivity created higher-quality classroom environments to support literacy development. Additionally, children in those classrooms showed greater improvements in both phonological and vocabulary skills (Wasik & Hindman, 2011).

Purpose of the Study

The purpose of this study was to evaluate the effectiveness and usability of the *Literacy in the Early Childhood Classroom* training curriculum (Byington & Kim, 2015) in multiple states. Trainers evaluated specific components of the training series such as content, activities, timing, concept clarity, and ease of use that were related to implementing the training program. A SWOT (strengths, weaknesses, opportunities, and threats) analysis was used as a tool for formative evaluation to identify processes that made the program successful and processes that needed to be modified or eliminated to improve the program. The SWOT analysis enabled organization of the information into useful categories.

A SWOT analysis uses information from key informants to answer questions about the strengths, weaknesses, opportunities, and threats of a program. It is a widely-used technique in many professions, including management, non-profit organizations, and child care, and has been shown to be effective in identifying key successes and areas where improvement is needed (Helms & Nixon, 2010; Ortega-Altamirano, Rodríguez-Oliveros, González-Unzaga, & Reyes-Morales, 2018; Ratekin & Bess, 2003). Strengths are the positive aspects of the program under evaluation. Weaknesses are the areas in which the program could improve. Opportunities are ways that the program could be enhanced in the future. Threats are issues of concern that are external to the program but have the potential to affect that program (Helms & Nixon, 2010).

The goal of the SWOT analysis in the current project was to determine aspects of the literacy training program that were effective in preparing early childhood professionals to teach emergent literacy skills to young children, to identify program weaknesses, and to inform program improvement. A secondary purpose of the study was to provide a summative evaluation of training participants' knowledge gain related to language and literacy concepts in order to determine whether the program outcomes were achieved.

Methods

Participants

Trainer participants. The lead author recruited the Cooperative Extension (*Extension*) educators who served as trainers for early childhood professionals to participate in the study in two ways: (a) by distributing information and interest forms on the study at a National Extension Association of Family and Consumer Sciences meeting and (b) by reaching out to Extension Program Leaders in several states about possible participation. The eleven trainers, Extension faculty working in participating states (Georgia, Kansas, Iowa, and Michigan), were recruited to teach the *Literacy in the Early Childhood Classroom* training series to early childhood professionals in their home state.

All trainers ($n = 11$) had a bachelor's degree or higher. Six of the trainers had a master's or doctoral degree. All trainers were female and employees of Extension systems in their state. Ten of the eleven trainers were Caucasian; one was African American. About one-third of the trainers had less than five years of early childhood training experience, another one-third had between 6 and 15 years of experience, and the rest had more than 16 years of experience.

Early childhood professionals. Early childhood professionals were recruited by the Extension trainers using a variety of methods common to their individual states, including individual email contact, print flyers, phone contact with program directors, and advertisement through childcare resource and referral agency training calendars. The early childhood professionals ($n = 238$) attending the training series led by the trainers had worked in childcare from less than 1 year to more than 16 years (Table 1). Different numbers of early childhood professionals participated in each state. Forty-one percent (41%) of the early childhood professionals attending were from Georgia, 36% from Michigan, 16% from Kansas, and 7% from Iowa. The education level of participants varied from some high school to a master's degree or higher (Table 1).

Table 1. Demographic Characteristics of Early Childhood Professionals Attending Training Series

Demographic Characteristic	Percent of Participants
<u>Years Working in Child Care ($n = 228$)</u>	
Less than 1 year	11%
1 to 5 years	17%
6 to 10 years	19%
11 to 15 years	16%
More than 16 years	37%
<u>Education Level ($n = 231$)</u>	
Some High School	2%
High School Graduate or GED	23%
Some College	30%
Associate Degree	14%
Bachelor's Degree	25%
Master's Degree or Higher	6%

Participant attendance. Early childhood professionals attended between one and four sessions of the training series. About one-third (30%) of the participants attended all four sessions. Table 2 shows the breakdown of the number of sessions participants attended.

Table 2. Participant Attendance at Four-Session Training Series

Number of Sessions Attended	Number of Participants	Percentage of Participants
1	69	29%
2	70	29%
3	28	12%
4	71	30%

Literacy in the Early Childhood Classroom Curriculum and Training Sessions

The *Literacy in the Early Childhood Classroom* training curriculum was developed by Byington and Kim (2015) as a component of the professional development program for early childhood professionals who were participating in Nevada's Striving Readers Comprehensive Literacy Program, a federally funded program. Early childhood professionals participating in the Striving Readers Comprehensive Literacy Program received language and literacy training and coaching designed to improve the literacy instructional practices in their classrooms.

The *Literacy in the Early Childhood Classroom* training curriculum was peer-reviewed and included four 3-hour training (T) sessions on the following topics: (T1) Oral language and extended conversations, (T2) Phonological awareness and alphabet knowledge, (T3) Reading, books for learning, and vocabulary, and (T4) Emergent writing and environmental print. The training underwent several revisions, and the curriculum went through a formal peer-review process by five reviewers outside Nevada and was published in 2015.

Procedures

Before teaching the *Literacy in the Early Childhood Classroom* curriculum, trainers participated in an initial informational webinar and received a Trainer's Kit that included the printed curriculum, Training CD (PowerPoint, videos, and handouts), twelve children's books and training activity materials. The curriculum was provided in both an online format and print format. The curriculum included training outlines, lists of materials needed, complete PowerPoint scripts, all handouts, and supplemental materials. The trainer kits included the majority of materials needed to teach the training series. Trainers scheduled and taught the 4-session training series to groups of early childhood professionals in their respective communities. Trainers selected a schedule of sessions that best met the needs of their participants. Some trainers taught weekly sessions, while others taught sessions every other week or once a month. Throughout the project, the curriculum authors were available through email or phone conversations to answer any questions and address trainers' concerns.

After teaching each training session, trainers completed an online trainer feedback form and collected and mailed the participants' pre- and post-surveys to the lead author. At the end of the intervention, the lead author arranged a mutually convenient time to conduct a phone interview with each trainer. Phone interviews lasted between 20 and 40 minutes, depending on the amount of feedback given by the trainer.

Measures

Online trainer feedback forms. Trainers evaluated each individual training session by completing an online trainer feedback form. Trainers used a 5-point Likert-type scale to rate each training session on specific items. The items and associated Likert-type scales included:

- Ease of Use: Easy to Use (5) to Difficult to Use (1)
- Handouts: Relevant and Useful (5) to Not Relevant and Useful (1)
- Videos: Enhanced Concepts (5) to Did Not Enhance Concepts (1)
- Activities: Enhanced Concepts (5) to Did Not Enhance Concepts (1)
- Children's Books: High Quality, Engaging (5) to Not High Quality, Engaging
- Adequacy of Training Session Length: Adequate (5) to Not Adequate (1)
- Understandability of Content: Understandable (5) to Not Understandable (1)
- Concept Clarity: Clear (5) to Unclear (1)

Trainers also listed on the feedback form any activities that were modified during the training session and indicated how well activities were received by participants. Each trainer completed four online training feedback forms, one per session.

The online trainer feedback forms were developed by the authors and reviewed by professional peers to help determine face and content validity. Once the forms were completed by all of the trainers, the mean scores were calculated for each Likert-type scale item. A set of criteria was used to determine whether the quantitative results were strengths or weaknesses. Composite mean scores that were 4.0 or higher were considered strengths, and mean scores below 4.0 were considered weaknesses of the training program.

Trainer post-series follow-up phone interviews. Each trainer also participated in a post-series follow-up phone interview with one of the authors, in which the trainer answered 11 questions about her experience implementing the training. The phone interview questions were developed by the authors and reviewed by professional peers to determine that they were appropriate for the purposes of the study. The trainers were asked to describe their overall experiences with the training program and to discuss specific components of the program, such as the initial webinar, trainer's kit, and training activities. Trainers shared successes and challenges. They also provided recommendations on how to improve the training series in the future. The primary goal

of the phone interviews was to identify specific strengths, weaknesses, opportunities, and threats related to implementing the program.

Early childhood professionals' pre- and post-session surveys. Trainers asked early childhood professionals to complete pre- and post-session surveys at each of the four training sessions. Each session's survey included ten knowledge questions related to the language and literacy concepts taught during that session. The same questions were asked on both the pre- and post-session surveys. The session survey questions were developed by the authors and reviewed by professional peers for appropriateness for this study.

Data Analysis

Analysis of trainer online feedback form data. The responses of the trainers to the online feedback form were analyzed using descriptive statistics, including percentages of responses to each level of the Likert-type scaled items and the mean scores for all responses to each item for each training session.

Analysis of knowledge questions. The participating early childhood professionals' knowledge pre- and post-surveys were analyzed using paired-sample *t*-tests to compare pre- and post-evaluation knowledge scores. The a priori level of significance for pre-to-post knowledge differences was set at $p < .05$.

Content analysis of trainer interview data. Content analysis was used to categorize the trainer phone interview data in order to summarize and classify themes across trainers. Trainer interviews were transcribed, and the transcripts (without identifiers) were given to the three principal researchers. The researchers reviewed each question independently and identified the main themes and supporting quotes. Once these independent reviews were completed, the researchers discussed the themes they identified to reach consensus about the main themes. Specific quotes from the interviews were selected to support each of the themes identified. The three researchers then worked together to organize themes into the four categories of SWOT analysis.

Results

Early Childhood Professional Participants' Knowledge Change

The early childhood professionals attending the *Literacy in the Early Childhood Classroom* training series in each state completed pre- and post-surveys measuring their knowledge of specific literacy concepts at the beginning and end of each session. Only matched pairs (i.e., surveys from participants who completed both a pre- and a post-survey) from each session were included in the analysis.

Participants demonstrated statistically significant increases in knowledge at the end of each session. Table 3 shows the results of the knowledge pre- and post-session questions analyses for each training session.

Table 3. *t*-test Analyses of Early Childhood Professionals' Scores on Session Pre- and Post-Knowledge Question Surveys

Training Session	<i>n</i>	Pre-Session Mean (Standard Deviation)	Post-Session Mean (Standard Deviation)	<i>p</i> value
T1: Oral Language	139	5.32 (1.78)	6.85 (1.43)	<.001*
T2: Phonological Awareness	140	5.96 (1.84)	6.99 (1.85)	<.001*
T3: Reading and Vocabulary	154	6.36 (1.66)	8.21 (1.38)	<.001*
T4: Emergent Writing	135	7.12 (2.10)	8.07 (1.55)	<.001*

*A priori significance level $p < .05$

Strengths, Weaknesses, Opportunities, and Threats Related to the *Literacy in the Early Childhood Classroom* Curriculum and Training Program Identified by Trainers

Trainers provided in-depth feedback on the training series through online trainer feedback forms and post-session phone interviews. The following is a summary of the trainers' feedback from the trainer feedback forms and phone interviews, organized using the conceptual framework of a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis.

Strengths of the Training Series

Trainers identified the following strengths of the training program during the phone interviews.

Webinar. The majority of the trainers (9 of 11) stated that the initial webinar was helpful because the information given was a basis for planning the training sessions. One trainer explained, "It was beneficial to go through all of the materials and write down how each item related to the lessons." Trainers stated that the webinar helped to prepare them for their role in the training and research project and gave them an overview of the materials included in the trainer's kit.

Trainer's kit. Trainers indicated that the materials in the trainer's kit were sufficient and ready to use. They liked that many of the items were laminated and printed in color. They specifically mentioned the children's books, videos, handouts, and hands-on activities included in the kit as useful tools. During the phone interview, one trainer stated, "It was very helpful that the materials were packaged by training [session]." Trainers mentioned that the kit included some examples of unique literacy ideas and that the training curriculum was clearly scripted.

Ease of use. Trainers rated the ease of use of each training session on the online trainer feedback forms using a Likert-type rating scale from *Easy to Use* (5) to *Difficult to Use* (1). Table 4 summarizes the trainers' ratings for ease of use for each session. As all of the mean scores for this item were higher than 4.0 and positive feedback on this item was given by the trainers during the phone interviews, ease of use was considered a strength for all four sessions. During the phone interview, one trainer stated, "All of the material and information flowed smoothly because it was so well organized."

Table 4. Trainers' Ratings of Ease of Use of the Literacy in the Early Childhood Classroom Curriculum's Individual Training Sessions' Curricula

Training Session	Easy to Use.....to Use					Mean
	5	4	3	2	1	
T1: Oral Language	36%	45%	18%	0%	0%	4.18
T2: Phonological Awareness	30%	70%	0%	0%	0%	4.30
T3: Reading and Vocabulary	45%	55%	0%	0%	0%	4.45
T4: Emergent Writing	40%	60%	0%	0%	0%	4.40

Sufficient support from authors. Trainers were asked during the phone interview whether they had received sufficient support from the curriculum authors to implement the training series. Most trainers stated that they had received sufficient support and did not need to ask for additional support. Trainers also stated that they received quick answers to any questions or concerns.

Supporting materials. Trainers rated the supporting materials using the online trainer feedback forms for each training session (including handouts, videos, training activities, and children's books) on their relevance to the content and whether they enhanced the training concepts. Table 5 summarizes the mean ratings for each of these items. The four training sessions are listed as T1, T2, T3, and T4. As all of the mean scores for these items were higher than 4.0 and positive feedback on these items was given during the phone interviews, these items were considered strengths. Comments from trainers during the phone interviews about the support materials included, "The handouts hit important points," "The videos were excellent examples that demonstrated the true meaning of how to do the activities," "The hands-on activities ensured the participants would go home and use the ideas," and "The books were amazing; some were new to participants, and some were unfamiliar."

Table 5. Trainers' Mean Ratings of the Literacy in the Early Childhood Classroom Curriculum's Supporting Materials (n = 11)

SUPPORTING MATERIALS		LIKERT-TYPE SCALE USED (1-5)				
Handouts	Relevant and Useful.....	Not Relevant and Useful				
Training Session	5	4	3	2	1	Mean
T1: Oral Language	82%	9%	9%	0%	0%	4.73
T2: Phonological Awareness	50%	40%	10%	0%	0%	4.40
T3: Reading and Vocabulary	70%	20%	10%	0%	0%	4.18
T4: Emergent Writing	50%	40%	10%	0%	0%	4.40

Videos	Enhanced Content.....	Did Not Enhance Content				
Training Session	5	4	3	2	1	Mean
T1: Oral Language	82%	18%	0%	0%	0%	4.82
T2: Phonological Awareness	50%	50%	0%	0%	0%	4.50
T3: Reading and Vocabulary	64%	36%	0%	0%	0%	4.64
T4: Emergent Writing	40%	50%	0%	0%	0%	4.30

Activities	Enhanced Concepts.....	Did Not Enhance Concepts				
Training Session	5	4	3	2	1	Mean
T1: Oral Language	73%	27%	0%	0%	0%	4.73
T2: Phonological Awareness	60%	30%	10%	0%	0%	4.20
T3: Reading and Vocabulary	73%	27%	0%	0%	0%	4.73
T4: Emergent Writing	40%	50%	10%	0%	0%	4.10

Children's Books	High Quality, Engaging.....	Not High Quality, Engaging				
Training Session	5	4	3	2	1	Mean
T1: Oral Language	100%	0%	0%	0%	0%	5.00
T2: Phonological Awareness	80%	10%	10%	0%	0%	4.70
T3: Reading and Vocabulary	91%	9%	0%	0%	0%	4.91
T4: Emergent Writing	80%	20%	0%	0%	0%	4.80

Training session organization. During the phone interviews, trainers also identified the training organization and layout as a strength of the training. As one trainer stated, “I was really impressed by the information. It was engaging and adapted to all types of learners.”

Trainer perspective about participants’ response to the training. Overall, during the phone interviews, trainers described the training, from the trainers’ perspectives, as a positive experience for the early childhood professionals who participated and stated that attendees stayed very engaged during the training. One trainer explained, “Participants seemed to respond very positively when they came back at the next session. They talked about what they had implemented in their classes.”

Trainers also mentioned that participants especially loved the activities and hands-on components of the training. According to one trainer, “I had them share the next time we met, and I could tell they were connecting with the information.”

Weaknesses of the Training Series

Trainers identified the following weaknesses of the training program.

Trainers’ informational webinar. During the phone interviews, several trainers shared suggestions for improving the initial webinar to introduce trainers to the curriculum. The main theme was to have several shorter webinars instead of one webinar at the beginning of the project. Trainers stated that a lot of information was covered in a one-hour webinar, and it might have been better to have shorter webinars, each covering content on each of the four sessions.

Program length. Trainers shared three major challenges related to program length as suggestions for how the program could be improved: (1) difficulty of recruiting participants for a 12-hour series, (2) challenges of covering material in a 3-hour session, and (3) effectiveness of 2-hour vs. 3-hour training sessions. Some trainers shared that offering a 12-hour training series made it harder to recruit participants because early childhood professionals also had to meet other training requirements in their state. This factor could have also influenced the number of participants who only attended one to three sessions of the training. The challenge of recruiting participants for a 12-hour training series was especially true in states that only require early childhood professionals to attend 10 hours of training per year.

Trainers rated the length of each training session using the online training feedback forms on a rating scale from *Adequate* (5) to *Not Adequate* (1). Table 6 summarizes the trainers’ impressions of how adequate the length was for each session. Since all of the mean scores for this item were lower than 4.0, this item was considered a weakness of the training program. The trainers disagreed on whether the length was adequate. During the phone interview, several of the trainers stated that three hours for each training session was not adequate to teach all of the training content.

Table 6. Trainers' Ratings of Adequacy of the Literacy in the Early Childhood Classroom Program's Training Sessions Lengths

Training Session	Adequate.....Adequate					Not
	5	4	3	2	1	Mean
T1: Oral Language	27%	18%	18%	9%	27%	3.09
T2: Phonological Awareness	20%	20%	30%	20%	10%	3.20
T3: Reading and Vocabulary	27%	45%	9%	9%	9%	3.73
T4: Emergent Writing	30%	40%	20%	10%	0%	3.90

Training content. Based on the comments in the phone interviews, the majority of trainers agreed that less content and more discussion time would have improved the training sessions. Several trainers stated that there was too much information in each training session and that it was difficult to teach all of the content in three hours. The trainers who identified this weakness stated that they wanted less content and more time for discussion within each session. One trainer stated, "It would probably have been good to have more time for discussion as the participants wanted to talk more about things they found interesting, but we needed to keep going to get through everything." Some trainers struggled to determine what content to cut out of the training due to time constraints.

Trainers rated the content of each training session using the online trainer feedback form on a rating scale from *Understandable* (5) to *Not Understandable* (1). Table 7 summarizes the level of understandability of each session. Based on the mean scores from the online trainer feedback forms, it would be assumed that Understandability of Content would have been a strength, however, based on the feedback during the phone interviews, this item is listed under weaknesses.

Table 7. Trainers' Ratings of Understandability of the Literacy in the Early Childhood Classroom Curriculum's Content

Training Session	Understandable.....Understandable					Not
	5	4	3	2	1	Mean
T1: Oral Language	45%	55%	0%	0%	0%	4.45
T2: Phonological Awareness	50%	40%	10%	0%	0%	4.40
T3: Reading and Vocabulary	82%	18%	0%	0%	0%	4.82
T4: Emergent Writing	60%	40%	0%	0%	0%	4.60

During the phone interview, one trainer stated, “The participants had trouble understanding some of the concepts.” Another trainer said, “Less slides and less content would have been better.” It appeared that the content in some of the sessions was more understandable than in others.

Difficulty of concepts. Some, but not all, of the trainers stated during the phone interviews that some of the concepts shared in the training were too difficult for participants to understand. One trainer stated, “The level of the concepts seemed too high for some of the participants with less education. Some of the terminology was harder for them to understand.” In contrast, a trainer stated, “Participants were mesmerized by the training and the opportunity; they wanted to learn, they were engaged.” Another trainer said, “The level of concepts was fine. Everyone understood them, and they made good sense.” The level of concepts seemed to be both a strength and weakness, depending on the trainer and the specific participants attending the training series.

Concept clarity. Trainers rated the concept clarity of each training session using the online trainer feedback form on a rating scale from *Clear* (5) to *Unclear* (1). See Table 8 for a summary of participants’ ratings of concept clarity. The mean scores from the online trainer feedback forms indicated concept clarity as a strength. However, based on the phone interview with the trainers, more clarity was needed for some content in the oral language, phonological awareness, reading and vocabulary training sessions.

Table 8. Trainers’ Rating of the Literacy in the Early Childhood Classroom Curriculum’s Concept Clarity

Training Session	Clear.....Unclear					Mean
	5	4	3	2	1	
T1: Oral Language	64%	27%	9%	0%	0%	4.54
T2: Phonological Awareness	40%	60%	0%	0%	0%	4.40
T3: Reading and Vocabulary	36%	55%	9%	0%	0%	4.27
T4: Emergent Writing	40%	60%	0%	0%	0%	4.40

Opportunities for the Training Series

The trainers identified the following opportunities to enhance the *Literacy in the Early Childhood Classroom* curriculum and training series.

Trainers’ informational webinar. During the phone interviews, trainers suggested that it is important for all of the project trainers to have received the trainer’s kits and curriculum before the initial webinar. (Because several trainers committed to join the project shortly before the webinar, there was not enough time to mail the trainer’s kit to all trainers before the webinar.) There was also a suggestion by a trainer that it would have been helpful if the webinar had

provided ideas on how activities from the training series could be modified for different audiences. For example, how could the activities be modified for participants with higher and lower levels of understanding of the concepts presented?

Length of sessions. Trainers had differing opinions on the length of sessions during the phone interviews. One trainer said, “I was going to recommend 2-hour sessions, but after the discussion with some of the participants, I determined 3 hours was fine because the training kept their attention.” Another trainer said, “I liked 3-hour sessions because it let us dig in.” There are some potential opportunities for meeting the needs of trainers and participants by offering different training options. Some trainers suggested taking each 3-hour session and breaking it into two 2-hour sessions or having an option to pick and choose the activities for either a 2-hour or 3-hour session. There is also the opportunity to streamline the content by reducing the number of slides in each session and providing trainers with strategies on how to adjust concepts taught based on the learner’s level of understanding.

Accessing funding. One of the opportunities suggested by a trainer during the phone interview was related to accessing funding to purchase children’s books and make-and-take activities for the participants. Several trainers indicated it would have been helpful to have funding to buy some of the children’s books featured in the program for the participants. One trainer stated, “It would be great to connect with a funding source to purchase children’s books to give to the participants. They were good books to share.” One trainer shared that she had received \$1,500 in outside funding to purchase children’s books for participants. Another trainer gave the participants books she had obtained from hosting a Scholastic book fair.

Addressing trainer concerns. There are additional opportunities to address some of the concerns that trainers shared about the training during the phone interviews. One trainer stated that before she taught the training sessions, she was hesitant about some of the material that was less familiar and afraid the participants wouldn’t understand certain concepts. This trainer also stated, “The training went over fine, and the second time I taught, it went much better after I had practiced and said aloud the concepts.” Another trainer stated feeling overwhelmed at the beginning of the project. The concerns shared by trainers are opportunities to identify additional ways to ensure that trainers have adequate background and comfort with the material before they start teaching the program.

Threats to the Training Series

Participants did not note any external or internal threats to the training series. Potential threats identified by the authors will be discussed in the discussion section.

Discussion

This study identified Strength, Weakness, Opportunities, and Threats of the multi-state *Literacy in the Early Childhood Classroom* training series. Table 9 outlines the Strengths, Weaknesses, Opportunities, and Threats identified by the study. The purpose of the SWOT analysis was to examine the successes, challenges, internal opportunities, and external threats to implementing the *Literacy in the Early Childhood Classroom* training program in multiple states in its current format. The insights from the SWOT analysis indicated what aspects of the training series worked best for the trainers and what could be changed to improve the effectiveness of implementation and delivery of the training program. The study also evaluated the impact of the curriculum and training series on gains in the knowledge scores of participants (pre and post) on four language and literacy topics.

Table 9. Summary of the Literacy in the Early Childhood Classroom Program's Strengths, Weaknesses, Opportunities, and Threats

Strengths	Weaknesses
<ul style="list-style-type: none"> -Initial webinar -Trainer's kit, organized by session -Ease of use -Sufficient support from authors -Supporting materials including handouts, videos, training activities, and children's books -Training session organization -Positive response from participants 	<ul style="list-style-type: none"> -Only one initial informational webinar -Program length (too long) -Too much training content -Needed more time for discussion -Some concepts difficult to understand -Too many PowerPoint slides -Needed more clarity on some concepts
Opportunities	Threats
<ul style="list-style-type: none"> -More webinars on how activities could be modified -Streamline content -Reduce PowerPoint slides -Provide trainers with more teaching strategies -Access funding to purchase children's books -Identify additional ways to support trainers, such as in-depth communication prior to implementation 	<ul style="list-style-type: none"> -No threats were identified by trainers <p>Potential threats identified by authors</p> <ul style="list-style-type: none"> -Aligning the training curriculum to match different states' standards and childcare training policies -Funding -Time and effort commitment to implement series

This study revealed that *Literacy in the Early Childhood Classroom* program had many strengths. Specific strengths identified from the online trainer feedback forms included ease of use and supporting materials. During the post interviews, most of the trainers stated that the trainer's informational webinar and organization of the training series were strengths. Consistent with previous research (Downer et al., 2011; Wasik & Hindman, 2011), this multi-state training series helped the trainers of early childhood professionals in this study use targeted instructional strategies to support early literacy skills and provide the training sessions participants with opportunities to share experiences and practice skills during training sessions. In addition, the

training program provided, what the trainers felt, were high-quality books related to early language and literacy topics and shared activities that could be implemented in early childhood classrooms. This is important because children's experiences with books and other written materials are related to print knowledge and dialogic reading experiences can foster early literacy development (Lonigan, Allan, & Lerner, 2011).

A few weaknesses were identified by trainer participants in this study. These included that there was only one trainer's informational webinar, each training session may have been too long, too much information was shared in each session, and some concepts in the oral language, phonological awareness, and reading and vocabulary sessions were perceived by trainers to be difficult for some early childhood professionals to understand, especially if the participant had less formal education or experience in early childhood. Previous research suggests that the training series could still be effective if shortened from 12 hours to 10 hours. According to one earlier study, a 10-hour total time, low-intensity series of professional development training (five two-hour training sessions), focused only on literacy, significantly improved the literacy practices and knowledge of early childhood professionals (Gerde, Duke, Moses, Spybrook, & Shedd, 2014).

This study also identified several suggestions for improving the program. The opportunities identified in this study clarified the importance of pre-planning and in-depth communication with trainers prior to their teaching the training sessions. The trainers in this study indicated the need to receive the trainer's kits and curriculum before the initial webinar and to have several shorter webinars for each of the four sessions. Working with trainers to customize the training series to the requirements of their specific state, without compromising the quality of content taught, was also something that the trainers indicated would improve the program. States have different requirements for professional learning hours, so it is important to consider state regulations when planning how to implement the training series (PreschoolTeacher.org, 2018).

Accessing funding is another way identified by the trainers to promote the *Literacy in the Early Childhood Classroom* program and provide early childhood professionals with books featured in the program for use in their classrooms. Local or state funding that supports early learning initiatives may be a source of financial support to defray the cost of children's books. Trainers could also investigate in-kind donations from bookstores or including the cost of books in a participant fee for the training.

Although the trainers did not identify any specific threats, the authors identified some potential threats to expanding the program to additional states exist. Possible threats include aligning the training curriculum to match different states' standards and childcare training policies. States also vary in the number of hours of training early childhood professionals are required to complete each year. Asking early childhood professionals to commit to attending 12 hours of training in a state that only requires 10 hours of training per year would require persuasive

marketing from the trainer. The need to receive funding and give time and effort commitment to implementing the series are also potential threats.

Based on participants' ratings of their knowledge, participants learned important concepts about early literacy at each training session. This finding is consistent with an earlier meta-analysis, which found that specialized training improves the competencies of early childhood professionals, including their attitudes, knowledge, and skills (Fukkink & Lont, 2007).

Limitations

The study has several limitations that should be noted. The training series was only replicated in four states, and the sample size was moderate. Trainers volunteered to participate in the study, and how the trainers delivered the training content was not assessed. Because the focus of the study was on formative feedback on the training series, this study did not include a control group. Early childhood professionals' frequencies of implementation of literacy instructional practices were self-reported so they may not accurately reflect actual practices.

In this study, the researcher provided some of the possible items in the trainers' online survey and the trainer interviews instead of only using generic questions, such as "What are the strengths of the program?" This may have resulted in items being included in each of the SWOT categories that might not have shown up if the participants had not been prompted by those items. The lack of interaction among the trainers by using the online feedback form may have resulted in some ideas not being included in the SWOT analysis or ideas not being fully developed.

Another potential limitation of this study was that the researchers assigned the items to SWOT categories rather than the participating trainers. This may have resulted in items being assigned or prioritized differently than if they had been discussed and assigned by the trainers.

More research is also needed to learn how specific teacher characteristics, including education and classroom experience, is related to their levels of knowledge about literacy development. This type of information could inform how curricula could be modified to address specific subpopulations of early childhood professionals' needs to enhance their knowledge gains.

Lastly, although this formative evaluation provides important information about implementing the program in multiple states, additional studies are needed that are structured in ways to address these limitations.

Implications

The trainers participating in this study were asked if they planned to teach the *Literacy in the Early Childhood* training program again. All of the trainers responded in the affirmative. As one trainer said, "I think you hit the mark with this training and the importance of the literacy

areas covered. I was excited to participate. The materials were good, and overall, it was a very positive experience.” Therefore, the *Literacy in the Early Childhood Classroom* training series will continue to be taught in the states included in the study as well as additional states. The curriculum authors will make revisions to the webinar and training program based on the weaknesses and opportunities identified in the current SWOT analysis.

Conclusions

The *Literacy in the Early Childhood Classroom* training series had a positive impact on both trainers and early childhood professionals who attended the training series. Overall, trainers indicated that the training series was easy to use, and participants responded positively to the interactive training format. Trainers planned to continue using the training sessions and supporting materials after the research project ended.

There are also opportunities to improve the training series in the future by addressing the length of the training (both the overall length of the series, as well as the length of the individual sessions), providing greater clarity about some of the training content, and ensuring that all trainers have the background and confidence to teach the material prior to implementation. With these minor updates, the *Literacy in the Early Childhood Classroom* training series will continue to be used in preparing early childhood professionals to teach emergent literacy skills to young children.

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