

Preschool Teachers' Beliefs about the Teaching and Learning of Language and Literacy: Implications for Education and Practice

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Abstract

Given the limited research on preschool teachers' beliefs about teaching language and literacy in the preschool years, as well as on their conceptual understanding of children's language and literacy development, this study examined the beliefs of 79 preschool teachers who had at least a 2-year diploma in early childhood education. All were working with 3- or 4-year old children in an urban centre. The Preschool Teacher Literacy Beliefs Questionnaire (TBQ) (Hindman & Wasik, 2008) was used to collect data on preschool teachers' beliefs. Findings demonstrated much uncertainty in best practice beliefs among the teachers as measured by descriptive statistics for four language and literacy areas. Of the four subscales, preschool teachers' beliefs about oral language were found to be slightly more in line with research-based best practice while their code-related beliefs were found to be least in line in comparison to the other subscales. Teaching experience related to preschool teachers' beliefs in that those with less teaching experience had beliefs more in line with research-based best practices. Specific recommendations are suggested for education preparation programs for preschool teachers and for professional development based on the findings.

Keywords: preschool teachers; early childhood educators; beliefs; literacy; language; practice

Introduction

Over the years, there have been statements produced based on research findings that advocate best practices in language and literacy for the preschool years (typically ages 3-4). Perhaps, one of the more popular documents was a joint collaboration between the International Reading Association (IRA) and the National Association for the Education of Young Children (NAEYC) in 1998 on young children learning to read and to write. Through teaching strategies and a variety of experiences for young children, best practices are advocated. These include: the development of children's knowledge of the alphabetic principle, sharing stories and engaging children in talk about stories that are shared, supporting children's knowledge of the sounds of language, and a focus on inventive spelling.

Notwithstanding the greater focus on literacy in the early years, and the increased research conducted on this topic, some research suggests that preschool teachers have uncertain views about how children should learn language and literacy in the preschool years, and how it can be taught. In support of this claim, Lynch (2009) in a small study with preschool teachers found that there was interest on behalf of preschool teachers in learning about literacy research, but much uncertainty in their beliefs of how they should foster literacy in the preschool years. This was consistent with some of the findings of McLachlan, Carvalho, de Lautour, and Kumar (2006) with New Zealand preschool teachers who demonstrated ambiguity in their knowledge of scaffolding language and literacy with children. Further, *Hindman and Wasik (2008) found much variability in aspects of preschool teachers' language and literacy beliefs about best literacy practices in the early years, specifically their writing and code-related beliefs.* Based on the assumption that preschool teachers may vary in their language and literacy beliefs about research-based practices, the purpose of this study was to examine the beliefs of preschool teachers about how and what children should be taught about

language and literacy, and to help clarify which areas of these beliefs align or do not align with research-based best practices. *Furthermore, the purpose was to compare the results of a pilot study conducted with U.S. preschool teachers to findings in a Canadian context in order to gain an understanding of the more wide spread issues related to preschool teachers' language and literacy beliefs.*

Preschool Teachers' Literacy Beliefs

Consistent with Hindman and Wasik's (2008) definition of beliefs, the use of beliefs in this study employs the one used by Evans, Fox, Cremaso, and McKinnon (2004) as the "knowledge or ideas accepted by an individual as true or as probable" (p. 131). Some researchers, such as Fuligni, Howes, Lara-Cinisomo, and Karoly (2009), focused on a wide scope of beliefs about the preschool years. While focusing on preschool teachers' beliefs about working with young children in general is important, less has traditionally been known about preschool teachers' beliefs about specific content areas, such as literacy development (Lee & Ginsburg, 2007). When preschool teachers' literacy beliefs have been studied, there has been diversity in their beliefs in relation to research-based practice (e.g., Hindman & Wasik, 2008; Powell, Diamond, Bojczyk, & Gerde 2008).

There are various reasons proposed for why preschool teachers may not be knowledgeable of a wide base of research oriented best practices in language and literacy. Limitations in the educational program content for early educators, as well as the lack of effective professional development opportunities have been proposed (Mraz, Algozzine, & Kissel, 2009; Roskos, Rosemary, & Varner, 2006). Perhaps preschool teachers are more accustomed to thinking about child development in general terms rather than the specific content areas (Golbeck, 2001; Lee & Ginsburg, 2007) due to the nature of some of their educational programs. Further, the variability that researchers have found in preschool teachers' literacy beliefs maybe partly due to challenges that some preschool teachers perceive in fostering emergent literacy within a holistic curriculum, such as in New Zealand (McLachlan & Arrow, 2010), or ways to increase children's literacy while adhering to developmentally appropriate practice for children in North American (Copple & Bredekamp, 2009). Both of these perspectives on learning acknowledge and support areas of literacy engagement in the early years in various degrees.

The concern for some literacy researchers is that young children may be capable of learning more in many early childhood programs than they currently are learning (Bowman, Donovan, & Burns, 2001; Whitehurst & Massetti, 2004). Because teachers' beliefs can relate to their practice (Foote, Smith, & Ellis, 2004), teachers' beliefs are an area of research interest. Consistent with past research, the purpose of this study is not to advocate for beliefs or practices not in line with developmentally appropriate practices for young children, but on the contrary, to examine what others have found in the research to be a significant bases for children's later literacy learning in order to promote more effective beliefs about practice among preschool teachers.

Although there is a variety of ways for how emergent literacy can be supported, and preschool teachers' beliefs about literacy development is a broad concept, the focus on preschool teachers' beliefs in this study pertains to teachers' specific beliefs about how language and literacy should be taught at the preschool level and how children can develop this knowledge. Language and literacy areas focused on in past research with young children are incorporated into the survey used with preschool teachers in this study. Specifically, those areas found in the research to have implications for children's later literacy learning, such as oral language, phonological sensitivity, and letter knowledge are included (Powell et al., 2008), and there are similarities between the survey items used in this study and the content presented in the joint position statement by IRA and NAEYC (1998). Gaining information on early educators' beliefs about literacy practices is a critical

component to knowing how to expand children's literacy experiences in early childhood settings given connections between preschool teacher actions in an early childhood context and their beliefs and knowledge (Foote et al., 2004; La Paro et al., 2009).

Characteristics Associated with Preschool Teachers' Beliefs

Two commonly researched characteristics that have shown to relate to early educators' beliefs and practices are teachers' educational background and their teaching experience, and their role in relation to preschool teachers beliefs will be reviewed. Some preschool teachers have participated in an early childhood education (ECE) diploma or certificate program (typically a 2-year college program in Canada) while others have obtained one university degree or several. There are mixed findings on the role of educational background in relation to early childhood teacher beliefs and practices, and child outcomes. For example, some research has found that the level of education does not consistently relate to preschool teachers' practice or to children's academic gains (Early et al., 2006, 2007), nor may it predict program quality (Zaslow & Martinez-Beck; 2006). Furthermore, La Paro et al. (2009) found that in comparison to other variables, educational experience was not as strong a predictor of classroom quality. Contrasting this research indicating a weak or non-existent relationship between education level and practice, other research suggests that increased levels of teacher qualifications are linked to more sophisticated beliefs systems in teachers and/or higher quality classrooms for learning (e.g., Barnett, 2003; Berthelsen & Brownlee, 2007; Bowman et al., 2001). Espinosa (2002) states that childhood teachers who are more highly qualified can provide more individualized and responsive learning opportunities for children (p. 3).

When teaching experience has been examined in relation to preschool teachers' beliefs, more experience seems to relate positively to different aspects of preschool teachers' literacy beliefs. For example, Hindman and Wasik (2008) found that teaching experience related to preschool teachers' beliefs about children's oral language and vocabulary development, one of the subscales of the instrument used in their research. In another study, Burgess, Lundgren, Lloyd, and Pianta (2001) found that teaching experience related to story- and word-related literacy beliefs. Both of these studies suggest that teachers have beliefs more in line with best practices after longer periods of working in classrooms. Other research further demonstrates a positive link between increased teaching experience and classroom quality (LoCasale-Crouch et al., 2007).

Purpose

In order to support preschool teachers' beliefs and practice, gaining further knowledge of preschool teachers' beliefs about both how and what young children should learn about language and literacy is needed (Berthelsen & Brownlee, 2007; Hindman & Wasik, 2008). Recommendations based on this research can be used to inform preschool teacher education programs in addition to language and literacy professional development. The following three questions were addressed:

1. Is alignment with research-based best practice more evident in specific content areas of preschool teachers' language and literacy beliefs than in others (i.e., code-related knowledge, oral language and vocabulary, book reading, and writing)? If so, which areas are more in line with research-based best practice? Which areas are less in line with research-based best practice?
2. Are there differences in preschool teachers' language and literacy beliefs based on group characteristics, that is, their educational background and their teaching experience? If so, what are these differences?
3. How do the findings of this Canadian study compare to those found by Hindman and Wasik's (2008) pilot study of U.S. preschool teachers?

Method

Participants and Data Collection

A random sample of early childhood centres was conducted from a website listing the licensed early childhood centres (regulated by the municipality) in one urban area in Canada. Using the table of random numbers, 200 of approximately 900 centres were selected and contacted by phone until 150 early childhood centre coordinators agreed that a questionnaire could be mailed to a preschool teacher at that centre. It was required that the early childhood educator was working with 3- or 4-year old (preschool age) children and have at least a diploma in ECE, typically a two-year program in the Canadian context. There were 150 questionnaires mailed with a small honorarium for a bookstore. It was estimated that it would take preschool teachers approximately 15-20 minutes to complete the questionnaire. There were 45 items on the questionnaire, however the 30 that were taken from The Preschool Teacher Literacy Beliefs Questionnaire (TBQ) (Hindman & Wasik, 2008; Seefeldt, 2004) are the focus for this research because of the instrument's standardization and its inclusion of specific language and literacy clusters of teachers' beliefs. Other items on the instrument were developed by the first author and these reflect general literacy beliefs, such as those pertaining to parental involvement. Teachers were instructed to respond to each statement using a 5-point Likert scale from strongly agree to strongly disagree (scored 5 to 1), with 'N' meaning neither agree nor disagree. Preschool teachers were also instructed to complete the questionnaire to the best of their knowledge and to focus on 3- and 4-year-old children in their responses. At the beginning of the questionnaire there was an area for gathering descriptive data (i.e., education, years working in preschool). There were 79 returned questionnaires used in the analysis. Based on the postal address, preschools were located in a range of socio-economic areas of the urban centre, however centres from lower- and middle-class areas of the urban centre dominated the sample.

Descriptive data on participants

Participants were asked to report on their academic background (for e.g., a 2-year diploma) and their teaching experience. Education level was divided into two groups for analysis: group 1 contained those preschool teachers with a typical 2-year diploma in ECE (no degree in this area) and group 2 contained preschool teachers with a university degree in either ECE or education, or a much longer ECE program (e.g., a 4-year program). The majority of preschool teachers had a two-year diploma only (52), while those who reported having a degree or attending an extended ECE program were 17.

Educational Level	Number of Teachers
Group 1	52
Group 2	17

Table 1: Grouping of Preschool Teachers Based on Their Educational Level

There were 77 preschool teachers that reported overall on their years working in preschool. Years teaching were divided into the following 5 groups: less than or equal to 5 years (group 1), 6-10 years (group 2), 11-15 years (group 3), 16-20 years (group 4), and 21+ years (group 5). There were 22 teachers who reported having 5 years or less teaching experience, 23 with 6-10 years, 9 with 11-15 years, 10 with 16-20 years, and 13 with 21 or more years. Just over half of the preschool teachers in this study had been working in early education for 10 years or less (see Table 2).

Teaching Experience	Number of Teachers
Group 1	22
Group 2	23
Group 3	9
Group 4	10
Group 5	13

Table 2: Grouping of Preschool Teachers Based on Their Teaching Experience

Data source

The TBQ examines preschool teachers' beliefs about language and literacy and it was designed to capture similarities between research results and preschool teachers' beliefs about what and how young children should learn about early literacy (Hindman & Wasik, 2008). "The TBQ was designed to go beyond the simple dichotomy of appropriate vs. inappropriate instruction to capture congruence between recent research findings and practicing teachers' ideas about what and how preschoolers should learn about early literacy" (p. 483). There are items that include conceptual and procedural knowledge about early language and literacy. Conceptual knowledge refers to the rationale behind procedures or activities and procedural knowledge refers to what to do in the classroom (Hindman & Wasik, 2008; Mishra & Koehler, 2006).

According to Hindman and Wasik (2008), the TBQ examines teachers' beliefs about four aspects of children's early language and literacy learning: code-related knowledge (9 items), oral language and vocabulary (9 items), book reading (5 items), and writing (6 items). The code-related subscale focuses on phonological awareness and alphabetic letters, such as how teachers might support children's knowledge of the ending sounds of words, and the importance of letter naming for reading development. The oral language/vocabulary subscale focuses on vocabulary learning and how teachers can expose children to new words, particularly through a focus on children's own language use. The book reading subscale centres on how book reading can support later independent reading as well as the strategies used in book reading to promote learning, such as child interactions. The items on the writing subscale focus on how children learn to write as well as emergent writing activities. The following are one example for each subscale asking teachers about what they believe children should know and be taught: code related ("Need plenty of drill and practice to learn the sounds of letters") (reverse scored); oral language and vocabulary ("Learn language by talking about their ideas and expressing their feelings"); book reading ("Should not ask questions or talk about stories when teachers read to them") (reverse scored); and writing ("Should

not write until teachers show them how to form each letter”) (reverse scored). One item on the TBQ (#22) is not included in the subscales but is included in the total score.

Results reported by Hindman and Wasik (2008) of their pilot of the TBQ indicated that it had four internally consistent subscales. Higher scores indicate that preschool teachers have beliefs most in line with research-based best practice, reflecting critical aspects of early literacy teaching and learning. Lower scores indicate “less effective drill-and-practice classroom activities, and/or little affirmation of the value of early literacy skills for later reading” (p. 483). Some items on the measure are reverse scored. Hindman and Wasik (2008) reported an overall alpha reliability for the measure at .87, which is a good alpha value (George & Mallery, 2003).

There were low reliabilities for two of the four subscales in the current study (code-related knowledge and book reading). In order to improve the reliability of the two subscales for data analysis, a factor analysis was performed on the responses for each subscale. Based on the findings of the factor analysis, three items (#3, #6, and #9) were omitted from the first subscale of code-related knowledge, and one item (#17) was omitted from the third subscale, book reading. These two revised subscales were the ones used in the *t*-test, ANOVA, and simple linear regression analysis for this study. The following were the reliabilities for each of the subscales following the factor analysis: code-related knowledge (.51), oral language and vocabulary (.60), book reading (.55), and writing (.61). The following are Hindman and Wasik’s reliabilities for each subscale: code-related knowledge (.67), oral language and vocabulary (.72), book reading (.73), and writing (.60). Preschool teachers in the current study were living in one large city, however they were working in a diverse range of preschools unlike the preschool teachers in Hindman and Wasik’s (2008) study, who were all part of the Head Start program. The sample was also larger for the current study than for Hindman and Wasik’s (79 versus 28).

Hindman and Wasik (2008) reported correlations between the subscales between .3 and .6, demonstrating independent but interconnected constructs (p. 484). Correlations between oral language and vocabulary, book reading, and writing subscales in the current study ranged from .66 to .79, $p < .001$), however the code-related subscale did not correlate with the other three subscales.

Data Analysis

Data analysis involved descriptive statistics for the total scores, subscales, and individual items on the TBQ. This included the minimum and maximum scores along with the mean and standard deviations. Through the use of *t*-tests, ANOVA, and simple linear regression, it also involved examining whether or not differences exist in the scores on the TBQ in relation to educational level and teaching experience. The one-way ANOVAs and independent samples *t*-test answered the following question: Are the mean values of each subscales (or the total score) significantly different for the different groups of educational background? The simple linear regressions answered the question: Is there a significant linear relationship between a particular subscale (or the total score) and the numbers of years of teaching experience? And, if so, what is the effect size of this relationship (i.e., the coefficient of the number of years teaching)? Cronbach’s alpha was used to calculate reliability. Based on the responses on the TBQ used in this study (all 30 items), it approached .80 (30 items, $\alpha = .79$) and was similarly reliable to Hindman and Wasik’s results.

Findings

The following are the findings to the three research questions:

1. Is alignment with research-based best practice more evident in specific content areas of preschool teachers' language and literacy beliefs than in others (i.e., code-related knowledge, oral language and vocabulary, book reading, and writing)? If so, which areas are more in line with research-based best practice? Which areas are less in line with research-based best practice?

The findings suggest that preschool teachers in general have uncertainty in areas of their language and literacy beliefs. More informatively, results of the examination of individual items on the subscales indicate that some areas of preschool teachers' beliefs are more strongly aligned with best practice research than are others, and these will be later presented. Table 3 contains the mean and standard deviation for the total score of preschool teachers' beliefs as well as for each of the subscales. The mean of the total score for teachers in the current study was 106.93 ($SD = 13.39$) for the 30 items. A maximum score on the instrument is 150 points, which clearly indicates some uncertainty among teachers for both how and what preschool children should learn about language and literacy in relation to best practice research (see Table 3).

Subscale	Current study		Hindman & Wasik	
	<i>M (SD)</i>	Observed Range	<i>M (SD)</i>	Observed Range
Code-related	3.50 (0.52)	1.17-4.67	3.61 (.49)	2.89-4.56
Oral language and vocabulary	3.74 (0.58)	2.33-4.78	4.25 (.45)	3.22-5.00
Book reading	3.70 (0.86)	1.50-5.00	4.27 (.53)	3.00-5.00
Writing	3.53 (0.77)	2.00-5.00	3.98 (.58)	2.83-4.83
Total score	106.93 (13.39)	79-130	118.32 (12.48)	93-137

Table 3: Descriptive Statistics for the Subscales and Total Score of the TBQ

Note. Items 3, 6, and 9 were removed from the calculated scores for Subscale 1 and item 17 was removed from Subscale 3.

For the subscales, the means and standard deviations were very similar to each other but more uncertainty was found for the code-related ($M = 3.50$, $SD = .52$) and writing subscales ($M = 3.53$, $SD = .77$) because these scores were closer to 3 than the other two subscales. Scores at 4 or above for means of items on the subscales indicate that teachers agree with research-based best practice (Hindman & Wasik, 2008, p. 484). The other two subscales still demonstrated some uncertainty in preschool teachers' beliefs (book reading, $M = 3.70$, $SD = .86$; oral language and vocabulary, $M = 3.74$, $SD = .58$) or a weak degree of agreement. To summarize, neither of the means of the four subscales in this study were at four or above, which would be needed to demonstrate that preschool teachers' beliefs were strongly aligned with research-based best practice.

When individual items of the subscales were examined (see Table 4), specific areas of focus emerged as part of belief uncertainty for best practice in language and literacy. For the code-related subscale where preschool teachers scored the lowest, preschool teachers' beliefs denoted uncertainty in how to develop children's code-related knowledge. For example, preschool teachers were uncertain of whether or not children should learn the alphabetic letters and sounds through a

more direct focus (i.e., skill- and drill-type practices), considered a less developmentally appropriate method of teaching children about letters and their sounds in preschool (e.g., item #3) ($M = 3.00$, $SD = 1.19$). Some preschool teachers also seemed to place value on preschool children circling pictures on worksheets to help them learn about word ending sounds (item #9) ($M = 2.78$, $SD = 1.07$), which also lacks agreement with research-based practices for building children's code related knowledge in the early years. In addition, preschool teachers lacked firm beliefs of code-related knowledge given the diversity of responses to the statement that children need to be taught the names of each letter so that they will become good readers (item #23) ($M = 3.32$, $SD = .122$). Many studies support the association between letter naming and reading development. There was only one of the nine items in the code-related subscale with a mean score above 4, indicating that teachers agreed with best practice, and this involved children playing with words, such as making up rhymes, to hear word ending sounds (item #24) ($M = 4.13$, $SD = 0.82$).

The mean of the writing subscale scores ($M = 3.53$, $SD = .77$) was similar to the code-related one. Uncertainty in teachers' beliefs reflected individual items that included conceptual knowledge about writing, such as the belief that children learn to read before they learn how to write (item #21) ($M = 3.09$, $SD = 1.24$), as well as procedural beliefs, such as that children should not write before teachers show them how to form each letter (item #1) ($M = 3.24$, $SD = 1.74$). Both of these items negate current research findings, yet teachers had variability in their beliefs. Teachers were also uncertain that children learn to write by watching them write (item #18) ($M = 3.33$, $SD = 1.05$), a recommended practice to support the development of young children's writing. Preschool teachers were more aligned with best-practice beliefs in their view that teaching children letter names as children write their names is a good practice (item #25) ($M = 4.38$, $SD = .65$).

For the other two subscale areas, that is, book reading, and oral language and vocabulary, means were slightly higher for these subscales but were still under a mean of 4 indicating that preschool teachers' beliefs were not strongly aligned with best practice research or that preschool teachers had a slight degree of agreement. For the book reading area, many preschool teachers seemed uncertain that reading many stories to children will help them become good readers (item #16) ($M = 3.08$, $SD = 1.48$). As well, there was uncertainty or variability in teachers' belief about children's role in engaging in stories, such as by asking questions or talking about the story when teachers' read (item #26) ($M = 3.37$, $SD = 1.73$). Overall, preschool teachers did have beliefs that strongly aligned with research-based practice when they believed that children looking at books help them learn how to read (item #12) ($M = 4.61$, $SD = .54$), and that children learn new words when teachers define them when reading to children (item #17) ($M = 4.00$, $SD = .86$).

Preschool teachers scored highest on the oral language and vocabulary subscale, just slightly higher than that of the book reading subscale. However, from examining the nine items that composed this subscale, it was apparent that the two items that focused on the role of children learning many words to support their reading development, item #28 ($M = 3.08$, $SD = 1.05$) and item #5 ($M = 3.17$, $SD = 1.07$), was the area of greatest belief uncertainty among teachers within this topic area. Preschool teachers were more aligned with best practice research in their beliefs about fostering children's oral language development and its support of their vocabulary knowledge. For example, preschool teachers believed that children learn language by talking about their ideas (item #10) ($M = 4.73$, $SD = .50$) as well as had strong beliefs in the link between children's vocabulary development and children's talk and engagement in everyday activities (e.g., item #19) ($M = 4.53$, $SD = .60$)(see Table 4).

Items	N	Minimum	Maximum	<i>M</i>	<i>SD</i>
Q1	79	1	5	3.24	1.74
Q2	78	1	5	3.87	1.14
Q3	79	1	5	3.00	1.19
Q4	79	1	5	3.75	1.26
Q5	78	1	5	3.17	1.07
Q6	79	1	5	3.49	1.39
Q7	79	1	5	3.25	1.71
Q8	79	1	5	3.65	1.12
Q9	76	1	5	2.78	1.07
Q10	78	3	5	4.73	0.50
Q11	78	1	5	2.74	1.22
Q12	79	3	5	4.61	0.54
Q13	79	1	5	3.51	1.80
Q14	79	1	5	3.72	0.91
Q15	79	1	5	3.25	0.87
Q16	78	1	5	3.08	1.48
Q17	79	1	5	4.00	0.86
Q18	79	1	5	3.33	1.05
Q19	79	2	5	4.53	0.60
Q20	79	1	5	3.38	1.96
Q21	79	1	5	3.09	1.24
Q22	79	1	5	2.96	1.16
Q23	78	1	5	3.32	1.08
Q24	79	1	5	4.13	0.82
Q25	79	3	5	4.38	0.65
Q26	79	1	5	3.37	1.73
Q27	79	1	5	3.34	1.12
Q28	78	1	5	3.08	1.05
Q29	78	1	5	3.82	0.77
Q30	79	1	5	4.14	0.89

Table 4: Descriptive Statistics for Individual Items on the TBQ

2. Are there differences in preschool teachers' language and literacy beliefs based on group characteristics; that is, their educational background and their teaching experience? If so, what are these differences?

There were a small number of preschool teachers with a degree in early childhood or an extended diploma (4-year program) ($M = 109.24$, $SD = 12.55$) compared to those with a standard 2-year ECE diploma ($M = 106.17$, $SD = 13.69$). However, given the mixed findings on the role of education in relation to early educators' beliefs, this characteristic was included in the analysis.

Based on the results of this study, there was no significant difference in preschool teachers' language and literacy beliefs based on the education level examined in this research, $F(1, 67) = .67$, $p = .42$. Educational background was a binary variable, rather than a scale/continuous variable, so a one-way ANOVA was more appropriate than using correlation (see Table 5).

Subscale	Educational Background	N	M	SD
Code-related	2-year ECE only	59	3.51	.57
	B.A. or B.Ed or Extended Diploma	17	3.45	.30
Oral language and vocabulary	2-year ECE only	56	3.69	.57
	B.A. or B.Ed or Extended Diploma	19	3.91	.59
Book reading	2-year ECE only	59	3.64	.90
	B.A. or B.Ed or Extended Diploma	19	3.87	.75
Writing	2-year ECE only	60	3.50	.81
	B.A. or B.Ed or Extended Diploma	19	3.62	.66
Total score	2-year ECE only	52	106.17	13.69
	B.A. or B.Ed or Extended Diploma	17	109.24	12.55

Table 5: Descriptive Statistics of the Subscales and Total Score of the TBQ Based on Educational Background

Note. Items 3, 6, and 9 were removed from the calculated scores for Subscale 1 and item 17 was removed from Subscale 3.

Overall, teaching experience made a difference in preschool teachers' beliefs. The following is the result of a simple linear regression based on the entire questionnaire: $r(66) = .24$, $p = .05$. This suggests that the more teaching experience that preschool teachers had, the less their beliefs were in line with best practice. Or, the less teaching experience that preschool teachers had, the more their beliefs were in line with best practice. When the individual subscales were examined, one of the four subscales in particular was associated with teaching experience: oral language and vocabulary development, $r(72) = -.28$, $p < .05$. The book reading subscale seemed to approach significance, $r(75) = -.21$, $p = .07$. Teaching experience was measured in the number of years of teaching (not ranges or groups of years teaching), and the simple linear regressions (subscale means versus the number of years teaching), in addition to giving the correlation, give the regression coefficient for the number of years of teaching. This coefficient is the effect of the number of years of teaching on the subscale (see Table 6).

Subscale	<i>r</i> (or β)	<i>df</i>	<i>p</i>
Code-related	.02	73	.86
Oral language and vocabulary	.28	72	.02
Book reading	.21	75	.07
Writing	.08	76	.49
Total score	.24	66	.05

Table 6: Simple Linear Regression of Subscales on the TBQ Versus Years Teaching Experience
Note. Items 3, 6, and 9 were removed from the calculated scores for Subscale 1 and item 17 was removed from Subscale 3.

3. How do the findings of this Canadian study compare to those found by Hindman and Wasik's (2008) pilot study of U.S. preschool teachers?

The mean of the total score for the TBQ in this study ($M = 106.93$, $SD = 13.39$) was found to be significantly lower than that of Hindman and Wasik's (2008) findings ($M = 118.32$, $SD = 12.48$), $t(95) = 3.87$, $p < .001$, $d = 0.79$ meaning that preschool teachers' overall beliefs in this study were less in line with best practice research than were teachers' beliefs in Hindman and Wasik's study. In comparison to Hindman and Wasik's research with U.S. preschool teachers, all subscale scores were lower even with the two revised subscales in the current study (4 items with means near 3 were omitted). There were significant differences between the two studies for three subscale areas: oral language and vocabulary, $t(98) = 4.18$, $p < .0001$, $d = .84$; book reading, $t(101) = 3.28$, $p < .01$, $d = .65$; and writing, $t(102) = 2.81$, $p < .01$, $d = .56$ (see Table 3). Preschool teachers in Hindman and Wasik's study demonstrated more in line best-practice beliefs in each of these areas. Similar to Hindman and Wasik's findings, the code-related subcategory had the lowest mean score. There was a weak degree of agreement with best practice among teachers in Hindman and Wasik's study about code-related knowledge ($M = 3.61$, $SD = 0.49$), and the preschool teachers in the current study also had a weak degree of agreement or uncertainty in code-related knowledge and practices ($M = 3.50$, $SD = 0.52$). There was no significant difference between the code-related subscale scores for these two studies, $t(102) = .97$, $p > .05$.

When the responses to some individual items of both studies were reviewed, there were similarities and differences between the findings. For the code-related area, there was similar variability or uncertainty in teachers' beliefs that children should be taught to hear the sounds in the environment before they are taught to focus on the sounds in words (item #15). Preschool teachers in both studies did similarly agree with best practice in that children should engage in rhymes and games to hear ending sounds in words (item #24). For the writing area, a concern in both studies was some teachers' belief that children learn to read before they learn to write (item #21) and the lack of certainty in their beliefs that children learn to write by watching teachers' write (item #18). Preschool teachers in the current study were more variable in their responses to book reading best practices than in Hindman and Wasik's teacher findings, but overall teachers in both studies agreed with best practice in beliefs about the importance of children looking at books

to support their reading (item #12), and that children can learn new words that teachers focus on when reading to children (item #17). There was also consistency between Hindman and Wasik's study and the current one for items on the oral language and vocabulary subscale. Specifically, preschool teachers in both studies had much variation in their beliefs about the developmental importance of learning many words for reading success (items #5 and #28), an area supported in early literacy research.

Discussion

Preschool Teachers' Beliefs about Literacy

The following contains a review of preschool teachers' beliefs from less alignment with research-based language and literacy practices and concepts to more aligned beliefs among the focus areas.

Code-related beliefs

The results of the questionnaire demonstrate that preschool teachers have variability in their code-related beliefs, and therefore, their beliefs were not always aligned with research-based concepts and practices in early language and literacy development. There were two areas where preschool teachers' beliefs were more in need of alignment with best practice: alphabetic knowledge and skills-based learning. Both areas are focused on below.

Preschool teachers did not strongly believe that children should be taught letter names in order to support their reading development. It is well established that children's later reading development is associated with children's early phonological development, vocabulary knowledge, and letter knowledge (Lonigan, Burgess, & Anthony, 2000; Schwanenflugel et al., 2010), and hence, alphabetic knowledge is an important area to foster in the preschool years. It may be the case that some preschool teachers believe that there is a conflict in teaching letter names with ascribing to developmentally appropriate practice for young children. Nevertheless, IRA and NAEYC (1998) did endorse preschool teachers talking about alphabetic letters and their sounds with young children. The findings might also be linked to what it means to teach in the early years (Dickinson, Freiberg, & Barnes, 2011). Teaching alphabetic letters does not need to involve skill- and drill-type practices and this may be how, perhaps, some teachers in this study viewed or interpreted the teaching and learning of alphabetic letters in the early years.

In contrast to some preschool teachers who believed that teaching the letter names was not important for children's reading development, some other teachers subscribed to more skill-and-drill types of instruction in the early years. Their code-related beliefs demonstrated value of this type of instruction for learning the sounds of the letters, and they believed worksheets should be used to develop children's phonemic awareness in preschool. Consequently, some preschool teachers scored lower in the code-related subscale area because of these beliefs. Children can acquire letter knowledge in many ways, and although research highlights the importance of this knowledge, research-based findings do not suggest that skill-and-drill practices or isolated practices are the best way for children to gain this knowledge in the preschool years. As an example of better practice, preschool teachers can integrate learning about phonological awareness through rhymes and games (Cunningham & Cunningham, 2003), including searching in a box for objects whose names begin with the same consonant-vowel sequence as their own names (Aram, 2006). Preschool teachers did believe that children's creation of rhymes through word play could support knowledge of ending sounds of words, which aligns with best practice. Low scores on the code-related subscale were likely attributable to two different teacher belief systems; one of not strongly valuing some phonological and alphabetic literacy areas in the preschool years, and the other of

supporting the engagement in literacy practices that are less aligned with developmentally appropriate practice in the preschool years. There is a clear need to have code-related beliefs addressed in professional programs with preschool teachers, including both of these areas that demonstrated a lack of strong alignment with best practice.

Writing development

Overall, preschool teachers had uncertain beliefs about writing development in the early years. There were a couple of areas where belief uncertainty commands attention given the focus of research supporting best practice in writing. For example, children learn from adults modeling writing (Schickedanz & Casbergue, 2004) yet some preschool teachers did not have strong beliefs in the importance of teacher modeling for supporting children's writing. There is also an established consensus that children should write before being taught how to write each letter (Cabell, Tortorelli, & Gerde, 2013). Perhaps some preschool teacher's definition of writing did not include drawing or scribbling, a well-known and important stage of children's emergent writing (Clay, 1975; MacKenzie, 2011). Preschool teachers were also uncertain or varied in their beliefs of whether children write before they read, demonstrating limited beliefs about conceptual aspects of writing development. These findings indicate the need for an increased focus on the conceptual and procedural aspects of writing in professional development and educational programs. Conceptual knowledge will provide teachers more flexibility in addressing children's misunderstandings in practice (Hindman & Wasik, 2008; Mishra & Koehler, 2006), including that involving early writing development.

Book reading

When professional education programs for early childhood educators are limited in scope, it was predicted that there would be a greater focus on storybook reading in those programs than some other language and literacy areas because of the historical emphasis on it to promote children's oral and reading development. The means for the book reading subscale, in addition to the oral language and vocabulary subscale, were slightly higher than the other subscales, yet demonstrated a weak degree of alignment with best practices. Precisely, the following items showed most teacher belief uncertainty: the role of shared story frequency for children's reading development, and the role of child interaction in book sharing. Children's exposure to and the opportunity to hear many stories read to them benefits their reading development and has been well-cited in the research (e.g., Whitehurst et al., 1994). Furthermore, Wasik and Bond (2001) highlighted the importance of teachers' and children's interactions in storybook reading for promoting children's language and literacy skills in the preschool years, as have many others (e.g., Pentimonti, Justice, & Piasta, 2013). The findings suggest that when shared reading is focused on in education programs for preschool teachers, the importance of book interactions for supporting children's reading become more clearly delineated. In contrast to this uncertainty in beliefs, preschool teachers were more aligned with best practice in their beliefs that looking at books helps children learn how to read, an area that can support children's motivation to want to read (Neuman & Roskos, 1997).

Oral language and vocabulary

Although preschool teachers scored highest on the subscale of oral language and vocabulary and had some aligned best-practice beliefs, in similarity to the other subscale areas, a demonstration of limited research-based best practice beliefs were found among items composing the subscale. One area in particular is delineated. Preschool teachers were aware of the importance of talking with children to support children's word knowledge, but were less certain in their beliefs that children should learn many words, including word meanings, in order to support their reading development.

It is known that there are strong connections between language interaction, vocabulary, and reading development and the knowledge of words are important for learning to read (Dickinson & Neuman, 2006; Neuman & Dwyer, 2009). Informing teachers about the importance of developing children's vocabulary knowledge for reading is advocated based on these findings. Preschool teachers in this study seemed to believe that children can learn new words in the context of shared reading (Ezell & Justice, 2005) and this meaningful based practice could be an opportunity for preschool teachers to further interact with children on developing vocabulary, as would other opportunities, such as at meal-time. In addition, the continuation of and use of visuals such as photographs that demonstrate new vocabulary in relation to reading (Pollard-Durodola et al. 2011/2012) can provide a meaningful opportunity to further develop children's vocabulary.

The following is a summary of some of the less aligned best-practice teacher beliefs based on the findings from the TBQ. First, preschool teachers had uncertain beliefs about the importance of developing children's alphabetic knowledge for children's later reading achievement. Some teachers also believed that more drill-skill types of practices were appropriate during this time period. Teacher modeling the writing process was not seen as strongly contributing to children's literacy development. Further, there were limited views of the significance of children's role in interactions in book reading. Lastly, preschool teachers had much variability in their beliefs that children need to learn many words to support their reading development. Although there were one or several items on the TBQ that focused on the above areas, the findings suggest areas of focus for preschool teacher professional development.

A comparison to Hindman and Wasik's (2008) findings

Preschool teachers in the current study tended to have less research-based best practices overall than the preschool teachers studied by Hindman and Wasik (2008). However, there were areas in both studies that demonstrated variability in preschool teachers' beliefs and thus similarities existed across studies when evaluating teachers' responses to individual items. Preschool teachers' code-related and writing beliefs were areas of most concern in both studies. Examples of similarities between the study findings include preschool teachers' uncertain beliefs that children need to learn many words to become good readers, as well as that children can learn to write by watching teachers' write. Based on the consistent findings across these studies, teachers' lack of strong alignment with best practice research in these areas and others may suggest more wide spread weaknesses in preschool teachers' language and literacy beliefs.

Hindman and Wasik (2008) did not divide individual items on the TBQ based on whether they represent conceptual or procedural knowledge. However, they do claim that teachers were lacking in both areas in their discussion, particularly for code-related, language, and writing items. From examining individual items on the questionnaire for the current study, it revealed that teachers had relatively low mean scores for both types of knowledge on some subscales, such as writing development, similarly indicating a need for both areas to be incorporated in future preschool teacher education programs and in professional development.

The proposed reasons are suggested for why significant differences were found between Hindman and Wasik's (2008) TBQ findings and the finding from the TBQ in this study. A larger sample of preschool teachers was included in this study than in Hindman and Wasik's, and in addition, preschool teachers were not all working in the same type of program (i.e., Head Start). Many of the teachers in Hindman and Wasik's study also had bachelor degrees, unlike the preschool teachers in the current study, and some previous research on teacher educational level (e.g., Barnett, 2003)

might provide reasons for the less best practice beliefs of preschool teachers in this study in comparison to Hindman and Wasik's. Finally, preschool teachers in the current study were working with 3- or 4-year old children, and although it is reported that the TBQ was administered to Head Start teachers, the age of children they worked with is not specified. Beliefs about practice may be effected by the age of young children with whom teachers are working (Berthelsen & Brownlee, 2007). Further research using this instrument with another, relatively larger, group of teachers working in a wide range of preschool settings may further support the reliability of using this instrument.

Group Characteristics

The findings of this study indicate that education level did not make a difference in preschool teachers' beliefs about language and literacy development. However, these findings should be interpreted with caution because there were a limited number of preschool teachers with a university degree in ECE or with an extended ECE program. The results indicating no association were, however, similar to Hindman and Wasik (2008) TBQ findings, which included three categories to examine education level (BA, BA or higher, MA or higher). Prior research on the role of education in relation to beliefs and practice show mixed results (Early et al., 2007; Kelley & Camilli, 2007; La Paro et al., 2009). Specifically, it seems, the literature is unclear about the level of qualification *necessary* for the effective teaching of preschool children (Fuligni et al., 2009, p. 509).

Teaching experience was associated with preschool teacher's literacy beliefs. Preschool teachers with less years teaching had beliefs more in line with best practice, or those with more experience had beliefs less in line with best practice. Based on one of the study findings by McCarty, Abbott-Shim, and Lambert (2001), they suggest that those with more teaching experience may have more 'traditional views' of early learning, which may support the finding of the current study. This research implies a greater necessity to provide support for the beliefs and knowledge of preschool teachers who are working for a longer period of time. The subscale showing a strong association with teaching experience was oral language and vocabulary. Perhaps curriculum-focused ECE education programs are able to concentrate on oral language and vocabulary in their programs, including the incorporation of best-practice research in recent years. In contrast to this study finding, Hindman and Wasik (2008) found that preschool teachers with more experience in the field of education had higher scores on the oral language and vocabulary subscale only. Possibly, those teachers had further opportunities to gain knowledge about best practices in oral language development throughout their teaching careers, such as through professional development, than those in the current study.

Limitations

One of the strengths in using a questionnaire is the wide range of participants from which data can be collected. Undoubtedly, there are limitations in using a questionnaire, such as the greater room for misinterpretation of statements in comparison to other types of data collection, for example, interviews (Oppenheim, 1992). There may be room for misinterpretation on some of the items of the TBQ as pointed out both in this study and by Hindman and Wasik (2008). One example Hindman and Wasik share is the item "children learn to write by watching teachers write" (item #18). They suggest that it could be revised to children "learn to write, in part, by watching teachers' write" for clarity. Another item on the TBQ states that children need to be taught the names of 'each' letter so that they become good readers. Although letter knowledge is critical for reading success, and IRA and NAEYC (1998) encourages preschool teachers to talk about the letter names and sounds, an established goal in their document is for preschoolers to identify

'some' of the letters and sounds. While recognizing that there are differences between what is taught and having wider goals for children's literacy learning, perhaps this item on the TBQ could still be elucidated. Further use of the questionnaire, such as its incorporation in an interview format, may support clarification of some of the TBQ items.

The code-related subscale in this study had low reliability and it did not correlate with the other subscales. It would be worth exploring ways to account for the different beliefs systems that inform this subscale. A closer examination of items on this subscale, in addition to preschool teacher interviews about code-related beliefs, may prove beneficial for future research and for modifications to the questionnaire design.

There are factors identified in the research literature that could effect teacher beliefs and therefore were explored in this study, such as educational level. However, there were a limited number of teachers allocated to specific groups, and therefore the findings may vary for a larger sample of teachers with diverse educational levels. The findings are based on teachers with mostly a 2-year diploma in ECE and are located in one city, which should be considered in attempts to generalize the results.

Conclusion

This study focused on the language and literacy beliefs of preschool teachers, particularly their beliefs about how and what young children should learn about language and literacy. The TBQ was used to gather data on preschool teachers' beliefs and it is based on different strands of children's early language and literacy learning. It is recognized that these strands do not develop in isolation and that children's overall experiences with meaningful activities support development in each of these areas (Neuman & Roskos, 2005). The alignment of preschool teachers' beliefs with best practice in this study was dependent on areas within the content subscales as well as their teaching experience, as it was for U.S. preschool teachers in Hindman and Wasik's study. There were some differences in findings between the two studies, with preschool teachers in the current study demonstrating less aligned best-practice aligned beliefs than found in Hindman and Wasik's study. However, a similarity of both studies was that preschool teachers had most uncertain or less aligned research-based beliefs in the code-related area. Less-aligned best practice beliefs can be a concern when beliefs relate to practice, and it may be that alphabetic knowledge and phonological awareness is not addressed adequately in 2-year ECE programs. Alignment with best practice was more closely associated with the oral language and vocabulary area, although there was still teacher belief variability within this subscale. Preschool teachers with more teaching experience had beliefs less in line with best practice in the current study and this suggests a need to provide adequate professional development to those teachers working in the education field for a longer period of time.

Preschool teachers should be supported in the areas of procedural and conceptual knowledge in language and literacy development, as similarly recommended Hindman and Wasik (2008), and both should be addressed in ECE programs. Improvement of practice-based course work in language and literacy practice is advocated, as well as building preschool teachers' conceptual knowledge of language and literacy to support their teaching practice (Wood & Bennett, 2000). Course level and program level (combination of courses) alignment with best practice, as promoted by Roskos, Rosemary, and Varner (2006), is also recommended. Although there are limitations on what can be offered in 2-year ECE programs, early language and literacy research-

based findings could be more effectively shared with preschool teachers given the implications of early language and literacy development for children's later learning.

Professional programs for preschool teachers should examine the beliefs that adults hold of children's learning when they enter such programs (Berthelsen & Brownlee, 2007). In order to support teacher change, questionnaires or interviews with teachers are critical given that new learning can support change in practice when integrated with existing teacher beliefs (Kagan, 1992). This research provides insight for those who educate preschool teachers in language and literacy in 2-year certification programs as well as has implications for those who conduct professional development with preschool teachers. Although there is still a need to understand how belief change can be most effectively supported in professional programs (Berthelsen & Brownlee, 2007), this research provides detailed knowledge on a diverse group of preschool teachers' language and literacy beliefs, about how and what young children should learn about language and literacy; a first step in supporting change in preschool teacher beliefs. It also provides insight on the use of a research instrument to assess the complexity of preschool teachers' content area beliefs in language and literacy, which can support possible modifications and future use of the TBQ.

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