
‘My Most Tricky Pickle!’ Balancing Reading Instruction in Play-Based Kindergarten: Educator Self-Efficacy Beliefs and Pedagogical Content Knowledge Needs

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Abstract

Many kindergarten educators grapple with how best to teach reading in play-based kindergarten classrooms. The purpose of this mixed-methods study was to ascertain the instructional strengths and needs of kindergarten educators as they teach reading in play-based programs. Fifteen kindergarten teachers participated in an online questionnaire and focus group conversations that explored their concepts of self-efficacy and professional content knowledge to gain an understanding of the tensions these educators expressed, and to compare and confirm these with existing literature. Educators felt quite confident that they were effectively weaving foundational reading skills with learning opportunities into authentic experiences throughout the day. They indicated that balancing competing priorities within their programs was a challenge, and that supporting multilinguals and deepening their understanding of how to effectively build oral language and phonological awareness in their students were areas where they wanted to build their professional content knowledge.

Introduction

Over the past decade, since the introduction of play-based programming in Ontario kindergartens, educators have expressed their ongoing challenges teaching young children to read (Pyle et al., 2018). These challenges are now amplified by the impact of the global pandemic, because of lengthy school closures, teaching within hybrid and online environments, as well as COVID-19-related protocols which have impacted face-to-face classroom learning environments and pedagogy. Initial evidence shows that young students are between six and eight months behind in

reading as a result of interrupted pandemic learning, and those who were already deemed to be at risk are up to a full year behind (Alphonso, 2020; Bennett, 2022; Kuhfeld & Lewis, 2022; Ontario Human Rights Commission [OHRC], 2022). At present, estimates of students' reading development are predicting diminished levels of progress comparative to historical data (Alphonso, 2020; Amplify, 2022; Kuhfeld & Lewis, 2022; Solari, 2022). The concern for what literacy learning gaps might be present for students lays the groundwork for consideration of the areas where early-learning educators require support for their literacy pedagogies.

Play-based kindergarten programs

Play-based kindergarten programs, such as the current Ontario Kindergarten Program, suggest that educators ground their instructional practices and the pedagogy used in their classroom to a “child-centred, developmentally appropriate, integrated program of learning” (1.1, OME, 2016) that embodies learning through play. The value of play in learning for young children has been recognized for many years (e.g., Clinton, 2013; Peterson, 2022; Roskos & Christie, 2007; Skene et al., 2022; Vygotsky, 1978). It is through play that children make sense of their world, and play and academic learning are linked (Clinton, 2013). However, there have been distant (e.g., Gananathan, 2011) and more recent expressed challenges teaching young children to read in play-based learning kindergarten, such as balancing direct instruction with more child-directed open-ended play opportunities, and uncertainty about how to leverage play for literacy learning (Forgie et al., 2022; OHRC, 2022; Pyle et al., 2018).

There are three types of play that have been shown to promote literacy development in young children (e.g., Portier et al., 2019). Child-directed, or free play encourages children to choose what they want to play, which materials they will use, and who they will play with. Educators observe, but tend not to be involved (Pyle & Danniels, 2016). Free play has been noted to support the building of such unconstrained language skills as oral language, narrative storytelling, retelling of stories, etc. (Hadley & Newman, 2022; Sawyer & DeZutter, 2007; Smith, 2007; Wohlend, 2022). Teacher-directed or structured play (e.g., Newberry et al., 2015) focuses on academic skill development with the educator deciding which activities children participate in and for what purpose. Structured play through games and playful activities such as singing rhyming songs or chants may support the learning of foundational skills (Allee-Herdon et al., 2022; Pyle et al., 2018). Guided or collaboratively-designed play has educators take an active role and involvement in guiding or coaching children without interrupting the play event (Pyle & Danniels, 2016). Guided play seems to provide unique opportunities for building both unconstrained language skills (e.g., oral language, vocabulary) as well as more constrained skills (e.g., phonemic awareness, early writing skills) (Pyle & Danniels, 2016; Skene et al., 2022). Play, through its different forms, encourages oral language use, builds vocabulary, promotes early reading and writing behaviours, and introduces text and other literacy-related resources into the classroom environment (e.g., Peterson, 2017; Peterson & Friedrich, 2022). In particular, play is important for reading development and for a broader understanding of what it means to be literate through the construct of multiliteracies (e.g., Roskos & Christie, 2007; Wohlwend, 2011). This paper will describe the tensions that kindergarten educators experience as they support students' development in discreet beginning-reading skills, while immersed in play-based learning environments.

Teaching beginning reading

Over the past three decades, a number of literacy researchers have identified key precursor skills for reading achievement. These skills have been documented in policy documents (Hawken, 2008; NELP, 2009; OME, 2022, 2023) to guide instructional practice, and include such items as alphabet knowledge (Adams, 1990; Ehri, 2022), phonological awareness (Piasta & Hudson, 2022), rapid automatic naming of letters (McWeeny et al., 2022), writing letters and the child's name (NELP, 2009; Schickendanz, 2018), concepts of print (Clay, 1991), oral language (Seidenberg, 2017), and visual processing (Clay, 1991). These skills are a part of kindergarten educators' PCK and they need to observe student progress in each of these areas, and to have a well-developed set of instructional strategies to draw on, in order to teach these skills.

Teaching beginning reading in a play-based kindergarten program has unique challenges, given the tensions around schoolification and literacy goals (Forgie et al., 2022; Heydon et al., 2015; Timmons, 2018). Schoolification refers to preschool and kindergarten programs that prepare children for school culture and focuses on the development of academic skills, instead of a place that advocates for developmentally-appropriate practice (Clausen, 2015). By contrast, literacy goals (Gananathan, 2011) include the expectation that most children should be reading by the end of kindergarten, and are regularly assessed to gauge how each student is progressing toward this goal (e.g., Fountas & Pinnell, n.d.). Pyle et al. (2018) indicate that teachers are struggling with the play-based curriculum, and how to embed literacy opportunities into play in the context of 'schoolification' and 'literacy goals.' There is scant research that provides ways for kindergarten educators to build their professional knowledge for teaching reading in play-based programs, despite research on the potential of literacy-learning opportunities for early learners.

'I know what to do and how to do it'

The notion of teacher PCK, developed by Shulman (1987), is defined as "the intersection of knowledge of the subject with knowledge of teaching and learning" (Niess, 2005, p. 510). Pedagogical content knowledge is integral as teacher PCK is closely linked to instructional competence (Clark et al., 2017; Moats, 2014; 2020), and can generally be described as a kind of content knowledge which requires both an understanding of the content, as well as an understanding of how to transform that knowledge in a way that students understand (Shulman, 1987). For example, kindergarten educators need to know how letters and sounds work, how to navigate print direction, how to use background knowledge to support beginning reading, how to blend and segment words, along with how to effectively teach these skills and concepts to young children (Cabell et al., 2023; Hawken, 2008; Ontario Ministry of Education, 2022).

A number of studies indicate that teachers and early childhood educators (ECEs) lack adequate PCK in specific areas, such as phonological awareness and phonics knowledge (Clark et al., 2017; Martinussen et al., 2015; Scarparolo & Hammond, 2018). Forgie (2019) found that ECEs working in Ontario kindergarten classrooms were lacking in both self-efficacy and professional knowledge. Other studies (Martinussen et al., 2015; Piasta et al., 2019; Scarparolo & Hammond, 2018) regarding early-reading instruction focus on PCK of phonological awareness, phonemic awareness and other code-focused knowledge. Pedagogical content knowledge for meaning-focused elements, such as language comprehension, building vocabulary, and oral language development seems to be lacking in the literature. An exception is Prestwich (2012), who focused on developing an instrument for measuring the PCK of ECEs for oral language development.

Clearly, there is a need for research that focuses on educator teams, as they work with young children in the area of early reading.

'I believe I can do it!'

Associated with teachers' PCK are the concepts of self-and-collective efficacy, exemplified in the statement, 'I believe I can do it!' Hattie (2012) has noted that teacher self-efficacy and collective efficacy beliefs have a large effect on student learning and achievement. The concepts of self-and-collective efficacy beliefs grew from social cognitive theory as first described by Bandura (1997, 2000). It describes how people's self-beliefs relate to their behaviour, cognition, and motivation (Bandura, 1989). His construct of self-efficacy, or "the belief in one's capabilities to organize and execute the sources of action required to manage prospective situations" (Bandura, 1986, p. 21), is one way to understand motivation and accomplishment (Bandura, 1997). When applied to educational contexts, self-efficacy provides a lens through which to understand educator behaviours and beliefs.

Teacher self-efficacy is defined as the belief in one's ability to guide students to success (Bandura, 1978), and that they can 'perform the necessary activities to influence student learning' (Donohoo, 2017). Teachers with high self-efficacy tend to believe that they can do what is needed to improve student achievement, while teachers with low self-efficacy believe that other factors are more impactful than the actions of the educator (Hattie, 2012). Of particular interest in this study is the work of Tschannen-Moran and Johnson (2011) who have measured the relationship of self-efficacy beliefs to literacy teaching. They noted that teachers' mastery experiences (Bandura, 1997), and learning, alongside a mentor contributed to significant gains in a teacher's degree of self-efficacy for literacy instruction.

Collective teacher efficacy (CTE) is the belief of a group of teachers that they have the skills and knowledge to improve student learning (Donohoo, 2017). Hattie (2012), through meta-analyses of a variety of educational studies, has ranked the effect size of 252 factors and influences on student learning. Collective teacher efficacy is the greatest factor impacting student achievement (Hattie, 2012), with an effect size of $d=1.57$. Knowing that teacher self-efficacy and CTE beliefs improve student learning, opportunities to build on them through professional learning is integral to increased student achievement. In the province of Ontario, where ECEs work collaboratively with kindergarten teachers, CTE is integral, especially given that one recent study (Forgie et al., 2022) found that ECEs are just moderately confident in their ability to provide meaningful instruction for oral language development and phonemic awareness. Given that the present study was set in the context of kindergarten classrooms taught by a team of educators (OCTs and RECEs), it was important to consider both constructs of teacher self-efficacy and CTE with the potential effect of professional learning on PCK and self-efficacy.

Purpose

This study sought to explore educators' experiences as they grappled with beginning reading instruction in play-based kindergarten programs by understanding their self-efficacy beliefs and aspects (as well as needs) related to their professional knowledge for teaching reading. The research questions that framed this study were as follows:

- What are kindergarten educators' self-efficacy beliefs related to how they integrate beginning reading instruction into their play-based learning programs? What do they see as their strengths in their PCK for teaching beginning reading?
- What do kindergarten educators identify as challenges as they teach reading in their play-based learning classrooms?
- What PCK do educators identify as areas for their own learning and refinement?

Method

A mixed-methods approach (Creswell, 2014) was used in this study to facilitate the collection of both quantitative and qualitative data. Mixed-methods research provides opportunities to explore complex issues within a single study (DeCuir-Gunby & Shutz, 2018). Quantitative data was gathered via a questionnaire that included items related to teachers' self-efficacy, as well as early literacy instructional knowledge and practices. Qualitative data, including demographic information about the participants, along with self-report items regarding their self-efficacy beliefs about teaching reading, were gathered in the online questionnaire. This questionnaire also gathered open responses, where educators described their strengths and professional needs. Focus-group discussions brought together educators with different experiences, educational backgrounds, and roles. Accordingly, additional qualitative data was collected in focus group discussions, where participants contextualized and expanded on their responses in the questionnaire.

Together, these approaches afforded the researchers the space to explore the perspectives of the educators as they organically described them in the context of socially-constructed language and socio-cultural theory (Vygotsky, 1978). Defining and unpacking how each participant used particular language and instructional terms provided opportunities to construct common understandings. This was compelling for the two authors, who are both literacy teacher educators and researchers, with previous experience as literacy coaches and professional learning facilitators. This study gained clearance from the university's research ethics board, prior to conducting the research.

Participants

This study took place in Ontario, Canada, where public kindergarten classrooms are staffed by a team of educators consisting of one designated early-childhood educator (ECE), and one certified teacher as per *Full Day Early Learning Statute Law Amendment Act 264.1* (Government of Ontario, 2010). Educator participants, including 14 certified teachers and one registered ECE, were recruited through personal email contact and snowball sampling (Frey, 2018). Inclusion criteria were that these educators were certified, and were currently working in their respective roles. All 15 of the female, Caucasian participants completed the online questionnaire. Of the 15 respondents, eight certified teachers expressed interest and participated in one of the two online focus groups. Demographic data from the questionnaire indicated that 87% (13 of 15) of the respondents had been working in kindergarten for more than one year and 46% (7 of 15) had more than five years of experience in kindergarten.

Data collection and analyses

Triangulation of data was achieved in a few ways. Using a mixed-methods approach, by design, requires data collection from both quantitative and qualitative data sources, which offers methodological triangulation. This study gathered quantitative data through an online questionnaire, and qualitative data through open response items in the questionnaire and through focus-group discussions.

Data triangulation was achieved through the gathering of questionnaire responses and focus-group discussions at different points of time (May and June, 2020), during school closures due to the COVID-19 pandemic. Investigator triangulation was achieved, as both researchers analysed the data independently, and then compared their analyses. Responses in the questionnaire were also compared with focus-group discussion responses.

The online, researcher-devised questionnaire (NB: available on request) was administered first, and it included 14 questions thematically informed by existing instruments, such as the *Teachers' Sense of Efficacy for Literacy Instruction* [TSELI] (Tschannen-Moran & Johnson, 2011) and *Enabling Conditions for Collective Efficacy Scale* (Donohoo, et al., 2020). Examples of items based on the TSELI include: How confident do you feel about your ability to meet the literacy learning needs of your students? What do you feel are your strengths as you think about the language and literacy learning opportunities you provide for students in your classroom?

Other questions were based on relevant policy documents that identify key foundational literacy skills (Hawken, 2008; National Early Literacy Panel, 2009) and the *Ontario Kindergarten Program* (Ontario Ministry of Education, 2016). Examples of items based on these documents include: What is one way that you include literacy learning throughout the day? How familiar are you with the stages in the process of learning to read and write? Below, you will see a list of language and literacy-related expectations from the Ontario Kindergarten Program. Are there some that you find challenging to address in your classroom?

Demographic information was gathered (i.e., classroom role, years of experience, types of professional learning) along with questions to measure self-efficacy of teaching reading on a Likert scale ('1' represented 'not at all confident' and '5' represented 'very confident') and perceptions of professional knowledge related to the stages of reading development on a Likert scale ('1' represented 'not at all familiar' and '5' represented 'very familiar'). Open-response questions then asked educators to identify their classroom practices, beliefs about their strengths in teaching reading, how they included reading opportunities in their classroom environment, and their biggest challenges in meeting the needs of the students in teaching beginning reading. Additional open-response questions asked educators to identify the most important language behaviours kindergarten students needed to learn, along with the areas where they wanted to build their PCK. Questionnaire items were assessed for face validity through inter-rater testing with experienced educators and literacy researchers.

Given the small sample size (n=15), data was not statistically, but descriptively, analyzed. Demographic data and items associated with self-efficacy were described on a nominal scale. Items where educators self-reported their experiences were measured as ordinal variables and categorized by frequency. Open-response question analysis involved line-by-line coding, followed by documentation of emerging themes and sub-themes (Creswell, 2014). The initial coding was completed by one researcher (first author) and then cross-checked by the second researcher (second author). Themes were identified for the questionnaire data separately, and then analysed in relation to the focus group data.

One-hour focus-group discussions took place virtually with eight of the teachers (two groups of four). One researcher (first author) facilitated the focus group conversation and the second researcher (second author) observed and took field notes. The discussions explored the findings by offering educators the opportunity to share their experiences and beliefs with each other related to teaching reading in a play-based learning classroom, how different types of play support reading learning, challenges faced and successes achieved, and the impact of COVID-19 restrictions on learning. Each focus-group session was video recorded with transcriptions created and then member checked. The researchers individually and inductively coded (Charmaz, 2014) using seventeen different colours to represent the dominant ideas and concepts. They each clustered the colours into 8-10 codes (Saldana, 2016), and then came together to discuss their process. Through moderation, the researchers agreed on delineating nine codes that would be hierarchically sub-divided into three broad themes, with three respective sub-themes. These themes emerged in response to the posed research questions (Auerbach & Silverstein, 2003; Trede & Higgs, 2009).

Findings

The three sections in the findings offer descriptions of what the kindergarten educators perceived as strengths in the way that they teach reading and language, what they experience as challenges teaching reading in their play-based learning classrooms, and their own professional learning needs. Quantitative results and representative quotes from the participants are presented to illustrate each of these three thematically clustered findings: the promise of play-based learning and reading instruction, the 'pickle' of balancing approaches, and professional learning in pedagogical content knowledge. Next, these themes are presented along with their elaborations.

The promise of play-based learning and reading instruction

In response to the first research question, kindergarten educators perceived that their play-based learning programs provide opportunities for weaving foundational reading skills into authentic experiences in the classroom. Most of them indicated that they felt confident (67%), or very confident (10%) in their ability to meet the literacy learning needs of their students. None of the educators indicated that they did not feel confident at all. This signals that the majority of respondents possessed a degree of self-efficacy in their instructional acumen. Educators mentioned how they felt successful in the way that they designed their classroom learning environments, and how they provided positive learning experiences that facilitated oral-language development and beginning reading and writing instruction. They observed that students were engaged in learning through play, and had many opportunities to read and write for a variety of purposes that reflect how literacy is used in everyday life. Holistically, these practices of teaching reading and providing language learning opportunities might be positively evaluated as they align with research-based approaches (e.g., Peterson, 2017).

Pedagogical content knowledge confidence

Many of the educators had a strong sense of elements of PCK related to early reading instruction, which they perceived made their student interactions effective. Specifically, data indicated that 11 out of the 15 (73%) educators felt 'confident' or 'very confident' in their ability to meet the literacy learning needs of their students. This suggests that the majority of educators held self-efficacious

beliefs about their PCK. They identified an understanding of oral language development, phonological awareness, and beginning reading skills that all contribute to and support student literacy development (e.g., Moats, 2014). “I understand how reading develops and how to build and strengthen student skills” (Teacher A, focus group, June 2020). Another teacher commented, “I was able to work on those very specific things that children were showing through their reading readiness that they needed for their next steps to begin reading” (Teacher D, focus group, June 2020). Interestingly, even though these educators confidently identified that they had knowledge in these key areas for reading development, they also expressed a desire to learn more.

Weaving reading opportunities into play

Educators highlighted that “being able to use the students’ interests to guide them into using books and writing” (Teacher E, focus group, June 2020) allowed them to bring explicit instruction into the play-based program. The simple conceptualization held by some of the educators was that, “Literacy [is] part of everything that you are doing” (Teacher C, focus group, June 2020). Educators mentioned that they felt successful in the way they designed their classroom learning environments to engender both literacy and play activities. They regarded the learning experiences that they provided as a foundation for abundant oral communication, and early reading and writing instruction.

Engaging and empowering readers

The educators embedded foundational skill instruction in holistic ways as children read and wrote their own messages, “It’s a powerful thing to say, ‘Look! You are a reader!’ ” (Teacher B, focus group, June 2020). They observed that students were engaged in learning through play and had many opportunities to read and write for a variety of purposes that reflect how reading is used in everyday life. “Authentic tasks that [the] child will remember, such as that experience outdoors. They will be motivated to write about it.” (Teacher A, focus group, June 2020). These authentic learning opportunities provided many opportunities for educators to model and demonstrate reading with their students.

The ‘pickle’ of balancing approaches

Even given the confidence of these educators to teach reading in their play-based learning classrooms, they also identified challenges. One significant challenge that kindergarten educators identified as they were teaching reading in their play-based learning classrooms was “balancing it all” (Teacher G, focus group, June 2020). The quest for a balance was related to the dedicated instructional time in the early-learning classroom, the competing demands of stakeholders, and the varied needs of these young learners - this was the ‘pickle’ or challenge, of balancing approaches.

Balancing classroom time

Educators expressed that finding time for explicit beginning reading instruction and honouring a play-based program design was a challenge, “Time is my most tricky pickle” (Teacher A, focus group, June 2020). The conundrum or tricky situation that many of the educators found themselves in was the amount of time that was consumed for many worthwhile classroom activities. One teacher stated, “We didn’t get to small groups because we were involved in a new inquiry, helping them set up a new drama centre, taking observation notes for something amazing that is happening” (Teacher B, focus group, June 2020). They felt that academic priorities pulled them away from

inquiry and student-centred, co-constructed learning. This tension between the two programmatic priorities was palpable, and it is curious that the educators saw these priorities as binaries and not complements.

Balancing stakeholder expectations

The educator participants felt pressure from administrators and their school district to have children reading by the end of their kindergarten program (i.e., prior to Grade 1). “There is an expectation in my board [district] to have students reading leveled text by the end of year 2 [Senior Kindergarten]. My school, team, parents, and I can get caught up in the messaging that reading skills are the most important.” (Teacher I, questionnaire, May 2020). Some participants felt that parents/guardians pushed their child to read, and that this created anxiety about learning to read in children. “I think they may be rushing skills or they’re making it not so fun, so that like when they get to school sometimes you see they’re really reluctant.” (Teacher A, focus group, June 2020). They felt pressured by these expectations regarding academic achievement, and a desire to help stakeholders understand how literacy learning is much broader than whether a child can decode a leveled text.

Balancing students’ needs

The majority of these educators (67%) expressed that they had many students with different needs. Educators mentioned that the sheer number of children in their classrooms, sometimes as many as 30, made it challenging to ensure that each child was receiving the type of instruction that they wanted to provide. One educator commented, “It is finding opportunities for small group instruction and one-on-one instruction that can be a struggle, sometimes just based on the number of children in the room and the high number of needs.” (Teacher H, focus group, June 2020). Educators identified a number of areas in literacy learning they wanted to address with their students (e.g., oral language, phonological awareness, etc.). Some educators (53%) also expressed difficulty in knowing how to encourage a love of reading with students who avoided code-based activities. “You’ve got those that are very reluctant in the whole reading and writing, and it seems like you know you enter the group and you get the three or four excited, but that one just kind of wanders off across the room like, ‘No, I’m not interested anymore,’ so [I] felt I was chasing those last couple [of children] to try to really get them to read and write anything” (Teacher F, focus group, June 2020).

Professional learning in pedagogical content knowledge

The third research question sought to find the additional PCK that educators identify for their own continued professional learning. They expressed a desire to learn ways to support students in their classrooms in ways that particularly foster phonological awareness and oral language development. As well, these educators were eager for enhanced PCK related to working with students who are multi-lingual.

Supporting learners who are multi-lingual

Working with learners who are multi-lingual was indicated in the questionnaire responses as the most frequently identified area for professional learning, with 67% of educators indicating this response. Educators perceived that they did not have the resources or understanding of approaches that best meet the needs of the immigrant students in their classrooms, and also their families. “I’m

not sure if this applies, but I was thinking about the ESL and how we say [that] we don't have the ESL support in kindergarten" (Teacher M, focus group, June 2020). Another commented, "Why did they [school district consultants] never help us in kindergarten?" (Teacher C, focus group, June 2020). They wondered if there were ways of engaging these families to understand how school is different in their newly adopted country. One educator shared, "These children are coming with very limited oral language skills, but many of the children coming into our classrooms, even those who come from English-speaking homes, have limited vocabulary" (Teacher N, focus group, June 2020). This educator expressed a desire to learn more, based on the dominant policy stance (OME, 2016) and current literature (Goldenberg, 2020) that promote immersion for multi-linguals in the classroom environment as being the best start for these young learners.

Phonological awareness

Educators commented during the focus-group conversations, and 30% of the participants also indicated on the questionnaire, that although they were aware of the importance of phonological awareness and were capitalizing on teachable moments as they occurred, they did not feel that they were well-equipped to explicitly or systematically address this skill through instruction. Some of the tension was due to lack of clarity regarding whether teacher-directed whole group or small group instruction was appropriate within the program model.

I find [that] I'm trying to justify a lot of my approach and thinking about the value of small group over whole group, or not trying to make the argument that I don't want to teach a letter a week, or like just different things that I'm spending time having to kind of justify in my role. (Teacher C, focus group, June 2020).

This confirms findings in other current research (e.g., Pyle et al., 2018), indicating that educators are feeling the tensions between the expectations around academic skill achievement and a more developmental approach to learning to read.

Oral Language development

Educators commented that, "Free play is one of the most natural ways for the children to develop their oral-language skills and for (educators) to sort of sit back and be quiet observers and notice and track that development" (Teacher D, focus group, June, 2020). They seemed to regard oral-language development as something that they could encourage by setting up the classroom in a way that promoted conversation. The idea that it was the educator's job to be a quiet observer while children talked in free play stands out as a gap in PCK regarding oral-language development, and that it was equated as synonymous with phonological awareness, again highlighting a potential gap in PCK. A focus on ways educators can engage in discussions with children during free play, model, respond, challenge and extend both vocabulary and other expressive language skills would support the building of PCK in this area for these educators.

Discussion

Teaching reading in a play-based kindergarten program is, indeed, a 'tricky pickle.' Working with a large number of diverse children, who enter the classroom with varying skills and knowledge, requires that educators possess a deep understanding of beginning reading development and a myriad of ways to instruct the skills young children need (Clay, 2016; Ehri, 2022; Moats, 2020).

Meeting each child where they are at, building from their strengths (Clay, 2001), and knowing how to support them in their learning, can be complex in the midst of an emergent early-learning program that seeks to follow students' interests, and provide opportunities for them to co-construct their learning (OME, 2016; Pyle et al., 2018). The findings from the current study suggest the need for researchers to engage in more applied research related to reading instruction in play-based kindergarten programs that builds an understanding of educators' experiences, self-efficacy beliefs and desire for professional knowledge for teaching reading. Teacher self-efficacy and collective teacher efficacy contribute to educators' beliefs about their effectiveness (e.g., Bandura, 1997; Tschannen-Moran & Johnson, 2011), and their beliefs that they can positively or negatively impact student learning and achievement (Hattie, 2012; Tschannen-Moran & Johnson, 2011). This is an important consideration in classroom contexts, like in the province of Ontario, where there are a team of educators (i.e., ECE and teacher) working collectively. School boards are encouraged to offer educators opportunities to intentionally learn alongside colleagues in natural classroom settings with the conditions that build both TSE and CTE, through mastery and observational experiences (Bandura, 1997). This is especially timely, given the current discussion about the reading difficulties that some early learners have and impact of balanced-literacy instructional methods (Cummins, 2022).

Educators reflected on their own strengths, knowledge and beliefs about their ability to meet their students' needs, and ascribed to the mantra that, 'I believe I can do it!' Specifically, they believed that they seized embedded opportunities for authentic reading within their classrooms and they capitalized on teachable moments. They were able to use these authentic experiences during play to instruct each student in a way that met their individual needs in the moment. These types of responsive lessons allowed educators to address reading-skill development, and this illustrates a degree of PCK evident in these educators. Pedagogical content knowledge is integral to instructional competence (Clark et al., 2017; Moats, 2020), and educators in this study demonstrated that they were able to guide and coach students, transforming their content knowledge (Shulman, 1987) about foundational skills (e.g., print concepts, phonemic awareness, applying decoding strategies) during authentic reading and writing tasks. The presence of PCK is relevant in this current study, and these findings resonate with Pyle and Danniels (2016), and others who described the possibilities and benefits for developing academic skills through guided play.

As educators considered their challenges with teaching reading, in their play-based classrooms, they expressed that finding time for explicit instruction for all students was effortful. This highlighted a tension, in their minds, among programming priorities. Similar to the findings of Pyle et al. (2018), they struggled with how to incorporate teacher-directed reading lessons within the student-centred, co-constructed program. A second challenge expressed by educators was the strain from the expectations of different stakeholders. The school district and some parents had expectations that students would leave kindergarten reading. The local kindergarten curriculum documents (OME, 2016) encourage educators to honour students' individual development, and some educators interpret this to mean that they should not 'push' students to read. Adding to this strain was the educators' prior professional learning experiences related to the foundations of literacy instruction and understanding literacy development (e.g., Clay, 2001; Duke & Mesmer, 2018; Fountas & Pinnell, n.d.). A final challenge raised was related to overly large class size and a diverse student cohort, which contributed to their feelings that they could not adequately meet each student's need to learn to read. These challenges confirm those found in earlier research (e.g., Alexandra et al., 2018) and similar tensions between 'schoolification' and

developmentally appropriate pedagogy (Gananathan, 2011; Timmons, 2018). Provincial offices of education, school boards and professional learning facilitators are encouraged to provide guidance and support to classroom educators to streamline expectations.

Even though educators felt quite successful in their own skills to teach beginning reading and their ability to provide students with authentic opportunities for learning to read, they were eager to deepen their PCK related to working with students who are multi-lingual. Goldenberg (2020) provides literature background that acknowledges the gaps these educators share. Opportunities for building knowledge for teaching multilinguals in teacher education programs would provide educators with the tools to better support these young learners.

Second, educators expressed a desire to refine the ways they were fostering phonological awareness and oral language development for their students. These findings align with previous literature (e.g., Pyle & Danniels, 2016), and suggest that kindergarten educators would benefit from opportunities to refine their PCK for teaching reading, especially in the areas of phonological awareness and ways to support oral-language development. Moats (2014) and Cunningham et al. (2004) identified that some teachers are lacking PCK for phonological awareness and oral language development. This is an interesting call to action for professional-learning facilitators and educational researchers to explore in a future study: early-literacy educators' persistent perception of insufficient knowledge of phonological awareness and oral language. Ironically, these constructs are juxtaposed at opposing ends of the recommended instructional needs within the science of reading debate (Cummins, 2022; Hanford, 2019; Messenger, 2022; OHRC, 2022).

Clearly, professional learning opportunities need to be provided to educators with dedicated time to grapple with ways to bring explicit reading instruction into the play-based program in complementary ways. Educators might engage in this type of professional learning. Professional learning opportunities that seek to build CTE and PCK are grounded in the understanding that when educators contribute to the design and direction of their own learning, the learning tends to have more impact (Donohoo, 2017; Hattie, 2012; Shulman, 1987). Collaboratively planned professional-learning sessions (Anderson & Shattuck, 2012; Donohoo, 2017), along with opportunities to try new learning techniques in the classroom, and return to reflect and refine their new skills and knowledge will lead to greater student achievement in early reading (Cunningham et al., 2004). At present, this professional learning could not be more timely for educators to definitively negotiate the role of play (Peterson, 2017; Portier et al., 2019) in early reading instruction (e.g., Adams, 1990; Clay, 1991; Ontario Ministry of Education, 2022), thereby refining their own PCK (Shulman, 1987). The result will be enhanced teacher self-efficacy (Tschannen-Maren & Johnson, 2011) and CTE (Donohoo, 2017; Hattie, 2012).

Readers are reminded that there are limitations to this study. First, the sample size was modest, which provides caution for those considering the transferability of the findings. Second, there is a lack of participant-role diversity within the sample, even though kindergarten educator teams (i.e., certified teacher and registered ECE) were invited to participate. Only one participant in the questionnaire was an ECE, and then only certified teachers opted to participate in the focus-group discussions. This elicits a query into why ECEs are reluctant to engage in this research. Future iterations of this study should ensure that the unique perspectives of ECEs and other professionals (e.g., educational assistants) are represented.

Another methodological limitation relates to the questionnaire itself. This study utilized a researcher-designed questionnaire that was informed by policy documents and, to some extent, existing measures of self-efficacy and PCK. While face validity was assessed by experienced educators and fellow researchers, in the future, it would be beneficial to use a questionnaire that

has already established reliability and validity. It might be beneficial to measure self-efficacy by utilizing the *Teachers' Sense of Efficacy for Literacy Instruction* [TSELI] (Tschannen-Moran & Johnson, 2011), or the *Teacher Beliefs – Literacy Instruction in the 21st Century* (TBLI21c) scale (Ciampa & Gallagher, 2021). As well, a measure such as the *Literacy Instruction Knowledge Scales* (Reutzel et al., 2007) would provide a deeper understanding of the pedagogical content knowledge of the participants.

This study has provided context and explored kindergarten educators' experiences, self-identified strengths and challenges to teach reading within a play-based program, and their goals for continued growth in PCK. Yet, a number of considerations remain for future research. With a larger sample of educators, are these findings representative of other kindergarten educators in this province, nation, or other international jurisdictions? Despite the limited sample, is what has been learned still transferable to other educational contexts? In particular, how might the educators' identified areas for professional learning be addressed by facilitators in proactive ways in other school districts? Providing kindergarten educators with opportunities to address their self-identified learning needs might not only allow them to figure out ways to address the 'tricky pickle' of teaching reading in a play-based program, but it might also provide recommendations for the wider early-learning community.

Author Bio

Yvonne Messenger is a Lecturer in the Department of Educational Studies, at Brock University. Yvonne comes to this role after 30 years of experience in public education in both Ontario and Nova Scotia. She has demonstrated success as a kindergarten teacher, reading interventionist, and literacy coach. Yvonne supported senior leadership, administrators, and both new and experienced teachers in her role as an instructional program leader with a large Ontario school board, with curricular and instructional support for literacy and math, from kindergarten to Grade 8. She was also responsible for setting direction in kindergarten, early literacy, and early reading intervention programming. Yvonne's research is focused on supporting kindergarten educators as they seek to refine their instructional practices for teaching reading and writing in play-based kindergarten programs. Yvonne has mentored experienced and pre-service teachers as a supervisor at the Brock Learning Lab and an AQ instructor, and through informal mentorship opportunities with educators across the province.

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