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Improving Preschoolers' Language and Literacy Skills through Web-Mediated Professional Development

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Abstract

MyTeachingPartner (MTP) is a web-mediated approach that provides ongoing support for teachers to improve the quality of their interactions with children. This study examined the effects of MTP on the preschool language and literacy development of children who are at risk for later academic difficulties. Results of this randomized controlled trial indicated that for English-only classrooms, teachers receiving a high level of support had students who made greater gains in language and literacy skills than teachers who only received access to a curricular supplement. Three implications are drawn from these findings: (1) on-going, video-based consultation holds promise not only for altering teacher-child interactions, but also improving children's learning, (2) technology allows teachers to receive intensive, effective support from a distance, and (3) there is still much to be learned about how professional development can support effective teaching of language and literacy skills to children whose home language is not English.

Keywords

Language/Speech; Literacy

Young children's early language and emergent literacy skills serve as critical precursors to their later reading ability (National Early Literacy Panel, 2008; Storch & Whitehurst, 2002). Thus, understanding ways that early childhood teachers can foster these important foundational skills is of utmost importance during the preschool years. The kinds of teacher-child interactions that promote preschool language and literacy skills include explicit instructional activities coupled with warm, rich conversations in classrooms that are not overly regimented. Unfortunately, this combination of rich interaction is not the norm, and the general quality of classroom interactions designed to foster language and literacy skills is characteristically low, especially for children who are considered at risk for later academic difficulties (LoCasale-Crouch et al., 2007; Justice, Mashburn, Hamre, & Pianta, 2008).

Professional development must be designed to improve the quality of teacher-child interactions and consequently impact children's language and literacy skills. Simply providing teachers with access to a high-quality language and literacy curriculum, while important, does not automatically translate into improved child outcomes, especially if teachers are uncertain how to effectively implement the curriculum (Dickinson, Freiberg, & Barnes, 2011). Teachers benefit greatly from training and ongoing supports focused on the quality of their interactions with children (e.g., Landry, Anthony, Swank, & Monseque-Bailey, 2009; Powell, Diamond, Burchinal, & Koehler, 2010). However, providing this kind

of professional development is especially difficult when trying to reach large numbers of diverse teachers working in a variety of settings.

My Teaching Partner

MyTeachingPartner (MTP) is a web-based approach to professional development that has been shown to improve the quality of teacher-child interactions of a diverse early childhood education workforce (Pianta, Mashburn, Downer, Hamre, & Justice, 2008). Along with a curricular supplement featuring high quality lesson plans for language and literacy activities (MTP-Language & Literacy; Justice, Pullen, Hall, & Pianta, 2003), this approach draws upon the validated Classroom Assessment Scoring System (CLASS) framework (Pianta, La Paro, & Hamre, 2008), which has reliably predicted gains in children's language and literacy skills (Mashburn et al., 2008). Teachers are trained in ways to embed support for children's language and literacy development within sensitive, instructionally rich interactions throughout the school day.

Guiding principles

MTP is organized around three principles for promoting teachers' capacity to skillfully use interactions with children to facilitate learning:

- 1. Observation**—Teachers view and analyze over 200 video-based exemplars of effective interactions with children in an on-line library.
- 2. Skills training**—Teachers receive training in responding to children's cues through identifying in/appropriate interactions. Skill targets include those that predict later decoding and reading comprehension: phonological awareness, alphabet knowledge, print awareness, vocabulary/linguistic concepts, narrative, and social communication/pragmatics.
- 3. Consultation**—Teachers are provided with web-mediated consultation in which they reflect on their own videotaped interactions and receive ongoing, individualized feedback from a consultant throughout an academic year.

Review of Study Findings

A previous study reported that participation in MTP resulted in higher quality teacher-child interactions, with teachers receiving the highest level of support demonstrating the most improvement (Pianta et al., 2008). As an extension, this study presents findings from the same randomized controlled trial, examining the effects of MTP on preschool children's gains in language and literacy skills over the course of a preschool year. Due to a linguistically diverse sample of children, another research aim was to examine whether intervention effects were conditioned on the English-language composition of classrooms.

Participants and Intervention Procedures

One hundred sixty-one teachers in 42 districts within a single mid-Atlantic state participated in the study. These teachers received two consecutive years of the MTP professional development program. All districts featured state-funded preschool programs that targeted enrollment for children who were deemed at risk for later academic difficulties due to criteria such as poverty and limited English proficiency. Although the primary language of instruction was English in all classrooms, 47% of classrooms reported having students who additionally spoke Spanish or another language. Classrooms were divided into two linguistic groups: (a) those in which children spoke English only, and (b) those in which children spoke an additional language (i.e., primarily Spanish).

Four children were randomly selected from each classroom to receive direct assessments of language and literacy skills, and the resulting usable sample size was 1338 children across two sequential cohorts. Phonological awareness (i.e., blending, elision), print awareness, and receptive vocabulary were directly tested and combined into a single language/literacy construct.

Intervention conditions—Teachers, clustered by district, were randomly assigned to one of three conditions:

1. Control: Teachers received access to both the print and online formats of the curricular supplement MTP-Language & Literacy (Justice et al., 2003).

2. Low support: In addition to the curricular supplement, teachers received access to the MTP website which included the online video library featuring demonstrations of high quality interactions in the context of language and literacy activities. They were also presented with teaching challenges that encouraged reflection on video clips of other teachers' classroom interactions. Finally, they received print copies of a curriculum designed to promote children's social and emotional development.

3. High support: Along with the supports received by other conditions, teachers also participated in ongoing, bi-weekly cycles of individual consultation. A consultant viewed classroom video footage and posted several short clips from the footage on the secure MTP website with prompts encouraging teacher analysis and reflection. The consultant and teacher met via videoconference to discuss the clip along with future goals.

Key Research Finding

High level of support most effective in improving children's skills in English only classrooms—All children, regardless of intervention condition or linguistic group, showed considerable improvement in language and literacy skills from fall to spring. When examining all classrooms collectively, there was no significant overall intervention effect. However, there was a treatment effect for classrooms in which children spoke English only. Controlling for the effects of children nested within classrooms/districts as well as fall achievement, the results demonstrated that the High Support group outperformed the Control group. The difference between the Low Support and Control groups was not significant. Thus, teachers who received a combination of web-based supports, to include observation, skills training, and consultation, had students who made greater fall-to-spring gains in language and literacy skills than teachers who received only access to the curricular supplement. The effect of the intervention was small, but it is important to note that this was likely a conservative estimate of effects, given the lack of a true business-as-usual control group.

Implications for Practice

These findings have several practical implications for the implementation of professional development programs for early childhood education teachers.

Ongoing Practice-Oriented Individualized Consultation

Many professional development approaches aimed at improving preschool teacher practice have demonstrated limited success in moving children's early skills forward, particularly the oral language skills of children who are deemed at risk (e.g., Cabell et al., in press; Dickinson et al., 2011). Therefore, even the small effect of MTP on children's skills reported in the present study is meaningful. One clear implication of this work is that an intensive

level of support that includes a layer of coaching appears to be necessary to change teacher practices to a sufficient degree to systematically improve preschoolers' language and literacy skills.

Simply providing teachers with curricula or resources is insufficient. Indeed, even highly qualified teachers differ in the ways that they implement a given curriculum (Hamre et al., 2008). Teachers require intensive, individualized consultation to enable them to take advantage of these materials. The consultation process of MTP uniquely provides cohesive ongoing, practice-oriented support. A warm, positive, and collaborative relationship is built between consultants and teachers, with the goal of empowering teachers to take ownership of their learning. In each two-week cycle, a teacher has the opportunity to analyze her own practices and receive targeted feedback from her consultant on specific classroom interactions with validated links to child outcomes. This self-reflection process adds a level of richness to simple observation and feedback from a mentor (see also Powell & Diamond, 2011).

Unique to the MTP approach is the content of the professional development offered. In addition to curricula and resources, teachers receive ongoing support targeting their interactions with children in emotional, organizational, and instructional domains. The CLASS is used as a formative assessment tool that guides teacher reflection as well as consultant feedback. This professional development content strengthens practices related to children's academic and social success.

The Promise of Web-Mediated Professional Development

It is important to understand the balance between approaches that work and what is actually feasible and sustainable in early childhood settings. Intensive face-to-face consultation, coupled with regular in-person classroom observations, is likely costly and unrealistic for programs serving our nation's most needy children whose teachers require the highest levels of support. Teachers may not have local access to a highly trained and qualified consultant; this is a critical consideration given the centrality of the consultant-teacher relationship. But how can this intensive support be effectively delivered in a way that is reasonable for large numbers of teachers in diverse settings? The MTP approach features a web-mediated delivery mechanism that has the potential to meet the needs of a large, diverse workforce. Rather than visiting teachers in person, consultants can observe teacher videos, use computer software that helps edit the video into targeted clips, and share video footage with teachers via a secured website. Teaching practice can be discussed through phone or video conferencing without compromising the teacher-consultant relationship (Downer, Kraft-Sayre, & Pianta, 2009).

Supporting the Learning Needs of Linguistically Diverse Children

A third important implication of this work is that there is a pressing need to better understand how to effectively support the language and literacy learning of linguistically diverse children. MTP was originally developed to support English as the language of instruction. While all the classrooms in this study provided instruction to children in English, there were a significant number of teachers who reported having children in class who spoke another language, primarily Spanish. The present findings indicate that the intervention was less successful in moving this population's language and literacy skills forward.

Children in classrooms in which Spanish or other languages were spoken entered the preschool year with lower language abilities across all conditions. Consistent with the present findings, prior studies have reported that whole class intervention tends to benefit

the skills of children entering the year with relatively higher levels of language skill (Cabell et al., in press; Justice et al., 2010). It is reasonable to assume that children with better language skills will be able to take greater advantage of learning opportunities presented to them in the classroom. For example, it is easier for teachers to engage in rich conversations with children who initiate conversational topics and can sustain extended dialogue. As a result, children with better English language skills likely have more opportunities to practice their language skills and to elicit advanced linguistic models from teachers relying on English-only instruction.

There have been ongoing philosophical and pedagogical debates within the field of bilingual education regarding the most appropriate and effective classroom environments for dual language learners (Garcia, 2005). For example, recommended instructional approaches have ranged from total English immersion, with or without ancillary support services, to one of many different approaches or models that provide some form of instructional activities in the child's home language (Collins & Ribiero, 2004; Genesee, 1999; Vaughn, Linan-Thompson Pollard-Durodola, Mathes, & Cardenas Hagan, 2006). With bilingual approaches gaining empirical support (Garcia & Jensen, 2009), the bottom-line is that, for many learners, there may be a mismatch between instruction delivered only in English and children's learning needs. Consequently, efforts like MTP to improve the delivery of instruction through enriched teacher-child interactions may be limited in their effects on child outcomes when the instructional content and basic elements of delivery (e.g., mono-lingual teachers) are misaligned with certain fundamental learning needs of children whose home language is not English.

Conclusion

This study reported findings from a randomized controlled trial of the MyTeachingPartner approach to professional development and its effects on the language and literacy skills of at-risk preschoolers. Participation in the most supportive level of MTP accelerated children's skills within classroom in which English was the only language spoken. To effectively move children's skills forward, we must focus on ways to enhance the quality of teacher-child instructional interactions by providing teachers with ongoing, individualized consultation. This is an imperative if we are to truly shift the learning trajectories of our nation's children who are most at risk for later academic difficulties.

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