Lessons Learned from a Blended Professional Development Pilot Program Designed to Integrate Literacy and Technology into Primary Classroom Instruction

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**Abstract:** The FIE Technology Partners Project (FTPP) is a collaborative practitioner/researcher initiative designed to gain knowledge about how blended professional learning sessions can be delivered and consequently impact classroom literacy instruction. The FTPP professional learning model uses a blended approach consisting of face-to-face and online sessions to address three main topics: literacy content, research-based instructional strategies, and the use of technology. Data were collected over 11 weeks as FTPP was implemented with prekindergarten and kindergarten teachers. Teacher feedback and observational data provide promising evidence that blended professional learning addressing the integration of technology and literacy positively impacts teaching and learning.

**Introduction**

Effective teachers are the number one factor contributing to increased student achievement, especially those in at-risk settings, where children are more likely to find themselves in classrooms staffed by underprepared, inexperienced, and ill-qualified teachers (Bowman et al., 2000; Darling-Hammond, 2006). Strengthening teachers’ competence is closely linked to improved child outcomes. Regular and targeted professional development can increase early childhood educators’ knowledge about effective practices and expand their knowledge and skills. Unfortunately, existing professional development approaches are seldom flexible enough to accommodate the differing continuing education requirements, release time, and teacher performance expectations found across diverse settings including private for-profit and not-for-profit childcare programs, family childcare homes, public and private schools, and Head Start programs. Ramey and Ramey (2004) suggest that one of the most likely reasons that some early childhood programs fail to close the achievement gap between advantaged and disadvantaged children is that the programs have not provided the training needed to ensure that the classroom environment for language and literacy development is of high-quality. In fact, DuFour and Marzano (2015) identified intensive professional development as the key policy area for implementing changes in pedagogy.

Over the last twenty years, technology has reorganized how we live, how we communicate, and how we learn. Teachers and children of the digital age must learn both digital and emergent literacy skills. Digital literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate information that requires thinking skills and technical skills (American Library Association Digital Literacy Taskforce, 2011). While effective teaching can occur without the integration of technology, the digital age student is a consumer and a producer using technology. Therefore, it is important to provide teachers with the technology skills and knowledge needed to support digitally literate children and become digitally literate themselves.
FTPP Professional Learning Model and Theory of Action

The FIE Technology Partners Project (FTPP) is a collaborative practitioner/researcher initiative designed to gain knowledge about how blended professional learning sessions can be delivered and consequently impact classroom literacy instruction. The FTPP professional learning model uses a blended approach consisting of face-to-face and online sessions to address three main topics: literacy content, research-based instructional strategies, and the use of technology. Researchers used an iterative design process to create the FTPP sessions and help early childhood educators effectively use technology and instructional strategies as part of their literacy instruction.

The theory of action for the FIE Framework for Teaching and Learning states that if we are to increase literacy achievement for all students then we must improve teacher practice. If we are to improve teacher practice then we must identify and test research-informed instructional strategies and disseminate findings to others. The FTPP pilot was implemented as a first step towards realizing this theory of action utilizing a blended professional development model.

FTPP Pilot

The FTPP pilot consisted of three face-to-face sessions and 11 online sessions delivered over 11 weeks, March-May 2015. This pilot focused on emergent writing as the literacy content area, four research-based instructional strategies, and the integration of iPads into emergent writing instruction.

Purposes

The purposes of the FTPP Pilot were to

- Document the effectiveness of a blended professional learning package targeting four research-based instructional strategies and embedded tablet technology to (a) change teachers’ emergent writing instructional practices and (b) increase teachers’ digital literacy.
- Explore the impact of the changes in teacher practice on children’s writing development.
- Use results to identify (a) effective professional development elements using a blended delivery mechanism that strengthens early writing instruction and young children’s writing development and (b) areas for further development and/or refinement.

Participants

The participants were 20 early childhood teachers, five kindergarten teachers and 15 prekindergarten teachers. Of the 20, Fifteen teachers were based in public school settings and five participants were prekindergarten teachers based in private schools or childcare centers.

Content

The content of the FTPP professional learning pilot sessions focused on three topics: emergent writing, four research-based instructional strategies, and using iPads during emergent writing instruction.

Emergent Writing

Writing, unlike speaking, is not naturally acquired by children, so providing instruction in writing and authentic opportunities for children to write throughout the day is critical to children’s literacy development. Unfortunately, many early childhood teachers focus on handwriting as opposed to emergent writing during their literacy instruction. The FTPP sessions emphasized the importance of providing writing instruction for young children. FIE researchers created an emergent writing guide that describes the developmental stages of
emergent writing, a 3-step daily writing routine, writing activities that can be implemented at each stage, and links to other literacy activities that can enhance children’s emergent writing development.

Research-based Instructional Strategies

Effective instruction is teaching that maximizes student learning. In order to maximize student learning, teachers must scaffold their students using instructional strategies that support students as they become independent strategic learners. Four research-based instructional strategies teachers use to maximize student learning were included in the 3-step daily writing routine described in the emergent writing guide. These instructional strategies are modeling, thinking aloud, stating the instructional purpose for the lesson, and providing high-quality feedback.

**Modeling** happens when teachers demonstrate what they want students to do or think about during a lesson. This gives the students a visual representation or a “model” of what teachers are expecting from students by the end of the lesson. **Thinking aloud** is done when the teacher’s actions and thoughts are made visible to students through an oral description. This process of making a person’s thinking public by describing things as they are doing them is generally used when modeling for students. When that is done, students receive the information through multiple modalities, specifically visual and auditory, which makes the information more accessible to varying types of learners. **Stating the instructional purpose** of the lesson ensures that students know what it is they are supposed to have learned by the end of the lesson. The instructional purpose must be stated explicitly and in child-friendly language, so students understand what they are learning in the lesson. **Providing high-quality feedback** through instructional conversations addresses the student’s current state (learning or performance) as it relates to learning goals. High-quality feedback is specific and can be given through scaffolding, feedback loops, asking for explanations, providing information, and encouraging and reinforcing.

**iPads**

Teachers were provided with an iPad for use in their classrooms during the project. Researchers identified three instructional applications aligned with emergent writing and introduced them to the teachers during online and face-to-face sessions. Through hands-on experiences in their classrooms, teachers practiced using the iPad during small-group instruction, center work, whole-group instruction, and individualized instruction.

**Delivery Method**

FTPP was delivered through a blended model consisting of face-to-face and online sessions. The three face-to-face sessions provided opportunities to interact with the participants, solve technical issues involving the iPads or Blackboard, build a sense of community among the participants by allowing time to share successes and challenges, and receive feedback from participants on the aspects of FTPP that were going well and their suggestions for improvements. The 11 online sessions provided declarative knowledge on emergent writing and specific iPad applications, while also providing model lessons through short video clips of researchers teaching emergent writing lessons in prekindergarten and kindergarten classrooms. The videos gave participants a model for how to implement emergent writing lessons following the 3-step daily writing routine. Some video lessons incorporated the use of iPads to demonstrate how iPad applications could be used during emergent writing instruction. The specific information presented in the online sessions focused on describing eight stages along a developmental continuum of emergent writing, explaining how iPads could be used during small-group writing instruction, and implementing the 3-step daily writing routine. All online sessions were organized into five sections: Start Here, Read/Present, Watch, Do/Practice, and Reflect as shown in Figure 1.
Research Questions and Data Collection

Three research questions were addressed during the pilot study.

1. How did teachers’ emergent writing instruction change as a result of completing FTPP?
2. Did teachers’ iPad self-efficacy and use for emergent writing instruction increase over the course of the FTPP?
3. How did teachers’ participation in FTPP impact children’s writing development?

Data were collected in four ways.

- Researchers observed teachers using the FTPP 3-Step Daily Writing Routine Observation Rubric. The observations focused on the learning contexts, instructional strategies, children’s engagement, and classroom writing environment.
- Teachers completed feedback forms on the content, presentation, and ease of use of the online sessions.
- Teachers collected and submitted children's writing samples over the 11 weeks. The writing samples were used by researchers and teachers to assess children’s emergent writing progress along the developmental continuum.
- Teachers completed a 45-item online survey at the beginning of the project and again at the end of the project. The survey items asked teachers to report on the learning contexts of iPad use in their classrooms and the perceived benefits of iPad affordances.

Discussion of Findings

Findings from this project provide promising evidence that blended professional development models addressing the integration of technology into emergent literacy instruction are likely to positively impact teaching and learning. Specifically, the findings are related to the research questions outlined previously.

*How did teachers’ emergent writing instruction change as a result of completing FTPP?*

Findings indicate that teachers implemented the 3-step daily writing routine after participating in FTPP. The use of whole-group lessons with four explicit strategies increased, as did their use of small-group instruction. Results furthermore indicate that teachers were highly proficient using the strategies, giving simple directions, and providing specific feedback at the end of the project. Initial observations showed that teachers did not provide opportunities for children to share their writing, but they did show modest increases of such opportunities over time.

*Did teachers’ iPad self-efficacy and use for writing instruction increase over the course of FTPP?*
Teachers’ self-efficacy in the use of iPads during emergent writing instruction, on average, increased during FTPP implementation. Survey results also indicate that teachers increased their weekly use of iPads across multiple classroom contexts.

How did teachers’ participation in FTPP impact children’s writing development?
Significant writing progress was not expected due to the short duration and timing of the field test, and that assumption was found to be true for most of the children over the 11 weeks. However, some children did make progress in their writing, which provides promising evidence for the potential for impact in children’s writing development as a result of teacher participation in FTPP, especially if program implementation increases in duration and begins earlier in the school year.

Challenges and Successes

Researchers identified many successes and challenges throughout this FTPP pilot.

Challenges:
- Creating video clips for online sessions was time and labor intensive (i.e., scheduling the videotaping sessions in classrooms, implementing the lessons and videotaping in the classrooms, editing the videos, and uploading the video clips to Blackboard).
- Meeting the needs of teachers who have limited knowledge and experience with online classes.

Successes:
- Teachers’ writing instruction evolved from a primary focus on handwriting to providing opportunities for children to produce more complex, authentic writing.
- Teachers integrated technology (iPads) into writing instruction.
- Teachers reported that video demonstrations of instructional strategies used in real classrooms were valuable and helpful.
- Teachers increased their use of research-based instructional strategies during writing instruction.

Teacher Feedback

Teachers completed weekly feedback forms during the reflection portion of each online professional learning session. Teachers also completed a feedback form at the end of the project to share their ideas for how FTPP could be improved. Teacher feedback provided a wealth of information for researchers to consider when making revisions to improve FTPP for its next iteration.

An analysis of teacher responses yielded the following findings:

The most valuable part of FTPP that impacted instruction
- Providing opportunities for children to share what they have learned
- Importance of modeling during instruction

The most helpful/useful part of FTPP
- Viewing videos of lesson implementation in classroom settings
- Information presented in multiple formats and modalities

Instructional changes as a result of participation in FTPP
- Incorporating a writing routine and stating an instructional purpose
- Using a developmental continuum to guide writing instruction

Pros and Cons of the blended professional learning model
- Pros
Enjoyed the combination of face-to-face and online sessions
- Many opportunities for exchanging ideas

- Cons
  - Keeping track of due dates for online sessions
  - Not being able to access videos while at school due to slow internet connections

Implications

The findings from the FTPP pilot have implications for future development of blended professional learning.

- Teacher feedback indicated that watching the videos of emergent writing lesson implementation, which also included modeling the instructional strategies, was a valuable aspect of the online sessions. Video clips could be added to online professional learning modules to give teachers ideas of how the concepts and knowledge they are learning could be implemented during instruction.

- Observation results indicated that teachers did not provide many opportunities for children to share during writing time. Although modest increases in these sharing opportunities were seen, more attention could be focused on the importance of sharing and how to provide sharing opportunities in future sessions.

- Survey results indicated that teachers were more confident in their abilities to use iPads and used them in more varying contexts at the end of the project. These findings suggest that when teachers are given guided opportunities to practice using technology tools during professional learning, their confidence increases and their willingness to try to implement what they are learning increases. More opportunities for teachers to practice while they are learning should be included in professional learning experiences.

- Survey data showed that teachers reported high levels of student engagement when iPads were used in the classroom. This finding suggests that the use of technology tools such as iPads may be an engaging way for children to practice skills and create projects.

In conclusion, our results call for the development of innovative blended professional learning interventions that positively impact classroom instructional practices and children’s learning.

References


