Effective Primary Teachers’ Views and Uses of Technology to Teach Literacy

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Abstract: This qualitative study used semi-structured interviews and classroom observations to investigate the relationship between effective primary teachers’ views and uses of technology when teaching emergent literacy. Administrators identified 4 kindergarten-grade 2 teachers who used technology and were effective, based on the model developed by Pressley et al. (2001). Semi-structured interviews and 5 classroom observations of each teacher indicated their technology use closely matched their philosophies of how children learn, providing another important facet of effective technology teaching.

Keywords: Case studies, classroom teaching/practice, integration of ICT, literacy, research, early childhood education, reading acquisition

1. Introduction

Labbo et al. (2003) cautioned that “technology should add substantively to your literacy curriculum and not be used merely for its own sake” (p. 301). Roblyer (2003) further suggested that, whenever possible, technology should be threaded throughout multiple language-arts skills (reading, writing, speaking, and listening) and should “assist students in achieving established proficiency standards” (p. 238). This study examined whether effective primary teachers follow this advice and how well their use of technology correlates with their philosophies of how children learn.

This qualitative study examined how 4 effective kindergarten-through-grade-2 teachers used technology. Administrators selected the teachers based on their use of technology and a model of effective teaching developed by Pressley, et al. (2001): (a) instructional balance, (b) instructional density (active participation), (c) scaffolding, (d) encouragement of self-regulation, (e) integration of reading and writing, (f) high expectations, and (g) good classroom management. Other criteria were: classrooms filled with children’s books, explicit teaching of letter-sound
relationships and the writing process, and highly motivating environments (Pressley, et al., 2001).

2. Procedures

The multiple case study (Denzin & Lincoln, 2003) involved semi-structured interviews and 5 classroom observations of each of 4 effective primary teachers. The 4 teachers taught in two different private schools. Both schools had administrators and teachers who supported a child-centered, constructivist philosophy.

The 4 participants were experienced teachers (6-25+ years) with Master’s degrees. All 4 teachers used inquiry-based curricula and flexible scheduling. Furthermore, they valued computers and other aspects of technology both as “instructional delivery systems” (Morrison & Lowther, 2002, p. 4) and as necessary knowledge for their students’ future success.

Interviews and field notes from the 20 classroom observations were analyzed using constant comparative analysis (Patton, 2002) in which categories and themes emerged from the data. Finally, findings were validated with the participants to allow changes (Stake, 2003).

3. Findings

Kim, a multi-grade grade 1-2 teacher, is illustrative of the relationship between the 4 teachers’ views and their uses of technology.

Kim believes her role as a teacher is to provide opportunities to learn in a social environment where students feel safe and accepted. She believes students become more connected to their purposeful learning when they are responsible for what is learned.

When Kim was asked about the role of technology in her classroom, she responded by saying:

“It is important for children because it is in their life. It must be a communication tool. At this level we use computers to help us with writing and publishing. Visual learning is so important. The computer helps us with research projects. Maps and pictures are right there to explore. Math, geometry – we can manipulate shapes to be symmetrical. If I didn’t use technology, I would not, not, not reach some children.”

Kim uses traditional methods to introduce children to sound-letter relationships. She believes computer programs can offer assistance to further master skills; however, the responsibility of teaching skills should remain with the teacher. She uses books on tape to increase fluency and auditory comprehension and the SMARTBoard™ allows the entire class opportunities to read together, search for information, edit text, and share projects.
Kim believes the best way to teach emergent writers is with paper and pencil because children can become frustrated when concentration is lost while hunting and pecking keys. Young children do better if they already have a complete edited draft in hand before going to the computer. “If they are using the spell check all the time, a lot would be lost. I wouldn’t know where they are developmentally.” When asked about typing skills, Kim responded:

“They can work on that as they get older. Right now they work much faster with a paper and pencil and are able to touch, erase, draw arrows, and move things around easily. We just stick to what works for them – they are still little guys.”

Kim also believes e-mail can offer children the ability to communicate with others quickly, regardless of where they live, and computer programs can be selected to help children learn in multiple subject areas.

Kim uses technology to support literacy across the curriculum, as shown in this example from an inquiry-based botany project. First, she asked small groups of children to develop questions they wanted answered about a plant. Next, individual children took notes during a learning trip and from books, magazines, and pre-selected Web sites. Children then color-coded their notes by themes. When the groups met again, Kim helped the children integrate their individual notes into group outlines. Once their notes were approved, all but one group went to the computer to create KeyNote™ presentations: The remaining group chose to make a diorama.

4. Conclusion

Kim provides an example of how the 4 effective teachers’ technology use aligned with their pedagogical perspectives. Like the other teachers in the study, Kim had clearly defined perspectives on how young children develop, and therefore should be taught. Kim’s social constructivist learning theory was evident in her uses of technology as it was in all her teaching, and she encouraged her students to learn from each other in a safe, nurturing environment that promoted their cognitive, physical, social, and emotional health (Piaget, 1950). This perspective was the core of each teacher’s decision to include, or exclude, the use of technology to support emergent literacy and far outweighed other considerations.

Additionally, all of the participants in this study used a balanced approach to teaching reading paired with books suitably leveled to their students. Each of the teachers in this study integrated phonemic and phonetic instruction through active reading and writing, and created their own literature-based curriculum based on the needs of their students. Technology (e.g., read-alouds, talking books, project sharing, and information gathering) supported the system already in place and was not used “for its own sake” (Labbo, et al., 2003, p. 301). Technology was also threaded through multiple language arts skills as recommended by Roblyer (2003). This study provides an additional aspect of effective teaching with technology — clear pedagogical perspectives that match instruction — and a
model of excellence for other teachers, administrators and teacher educators to consider.

References