ENCYCLOPEDIA on Early Childhood Development

Teaching Early Literacy with E-books: Emerging Practices

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Introduction

For students of all ages, the e-book is a compelling alternative to the print book. E-book readership among children and youth has nearly doubled since 2010[1]; students report that they now read more on screen than on paper).[2] Parents, too, are increasingly interested in having their child read e-books.[1]

Likewise, e-book reading is fast becoming the grist of academics and publishers who seek to understand what screen reading does for the mind and heart (motivation). It is equally transformative for teachers who are increasingly expected to integrate e-books into instruction, engage students in digital reading, and enable them to actively participate in a multimedia world. This presents a new layer of complexities in an already challenging job.

Subject

The role of e-books in the teaching of reading is emerging. The e-book with its growing number of affordances introduces not only new possibilities into the reading experience (e.g., highlighted text), but also a new level of accessibility anytime, anywhere. An entire e-book collection can be

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archived on a small, mobile device that literally houses a pocket size library. Instructional guidance for effective teaching with e-books, however, is scant, leaving teachers to trial and error efforts at incorporating e-books into their routine practice. As a result, the e-book can easily become edutainment in an already packed instructional day.

Problems

E-books are an exciting technology, but they are also problematic. For the reader, they afford more verbal and non-verbal information for integration to aid print and meaning processing, but they also introduce distractions that can trivialize reading as a cognitive act.[3,4,5] Multimedia theory[6] argues that when incongruent with the story line, enticing auditory and visual inputs can split attention from reading and focus it elsewhere—on motoric or exploratory play behaviours, for example, that lead to a cursory reading of text.

For the teacher, the e-book promises an exciting curriculum resource that can enliven literacy instruction. E-books are engaging and motivating for students to read. They can be stored on a single device, and made accessible at school and home. They can be an integral part of a comprehensive online reading program complete with learning activities and dashboards. But they can be risky in an age of accountability when teachers must demonstrate that their reading instruction helps all students to achieve rigorous literacy standards. Teachers need to learn to teach reading with new technologies, which can be a steep learning curve for some with time spent learning how to use technology at the expense of integrating it into instruction.

Research Context

Research that informs early literacy teaching with e-books is in its infancy, hence largely descriptive. Studies explore teacher knowledge and beliefs about technology, digital practices, implementation in classrooms, and how print vs. digital reading instruction influences early literacy skills. Overarching theories and models of the digital teaching of reading, however, are lacking. Leading scholars propose going beyond a technology-integration model, in which digital tools substitute or augment print-based tools, to redefining the language arts curriculum for a mobile age in which digital tools mediate learning across contexts, in and out of school.[7,8,9]

Key Research Questions

What do teachers need to know and be able to do to instruct with e-books?

What e-book practices are promising in teaching early literacy?

What are issues of implementation in early childhood classrooms?

Recent Research Results

The International Society for Technology in Education (ISTE) Standards for Teachers define the new knowledge and skills educators need to teach, work and learn in the digital age (http://www.iste.org/standards/iste-standards/standards-for-teachers). Teachers, for example, are expected to demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations (Standard 3.a). Studies show, however, that meeting these expectations is still beyond the reach of many teachers.[10,11] Researchers point to several obstacles: teacher understanding of how digital tools actually work; new instructional practices for technology integration; teacher confidence, vision and beliefs; and time to learn and plan for teaching with digital tools.[12] Harris & Hofer,[13] for example, identified instructional activity types that help teachers plan with technology in mind, but such studies are rare.

Scientific research on e-book instructional approaches and techniques is thin. Synthesizing current scholarly thought, experts recommend core strategies of modeling, choosing appropriate e-books, locating e-books in the learning environment to facilitate social interaction, and encouraging verbal interactions around screen content.[14] A few quasi-experimental studies describe routines with e-books found to be supportive of early literacy skills.[15,16] Descriptive accounts highlight techniques specific to teaching reading with digital books. Schugar, Smith & Schugar,[17] for example, identify several considerations, such as teaching students how to transfer print reading skills to e-reading tasks. Others describe frameworks and procedures to capitalize on digital features (e.g. teaching letter-name phonics) in teaching early literacy skills.[18]

Few studies have examined the real-time implementation of e-book teaching in classrooms. Field studies augmented by practitioner action research projects report persistent technical difficulties, i.e., sufficiently robust internet access, device access and management, functionality of the digital environment and logistics, such as classroom routines.[19,20,21]

Research Gaps

Considerable research is needed to design and test professional development that increases teachers' technological-pedagogical-content knowledge[22] to meet expectations for digital reading

teaching. Increasingly personalized professional development approaches are recommended (e.g., blended learning in which digital delivery of content is combined with traditional instruction) to provide teachers what they need, when they need it, where they are able to access it.[23]

A solid foundation of 'proof of concept' studies that identify and test promising reading practices with e-books is critical. Controlled studies that examine the effects of instructional techniques (e.g., print-referencing techniques that draw children's attention to print) are urgently needed to build an evidentiary base for practice as applied in the e-book environment. Relatedly, rigorous qualitative studies can provide insights as to perceptions of efficient and effective instructional techniques.

Implementation research is also needed to assess the adoption and adaptation of e-books into the language arts curriculum.[24] Pragmatic trials with comparison sites can shed light on the effectiveness of implementation strategies and lay the groundwork for guidance that improves implementation of effective e-book teaching practices across settings.

Conclusions

The pedagogy of the e-book is evolving, its signature features as yet undefined and untested for fit in real classrooms. The transition of best practice from print to screen is ripe for research. How does the shared book approach work, for example, in a digital environment with a 1:1 device deployment? What is trustworthy guidance? New, innovative techniques are also wide open to investigation that pushes e-book teaching forward in a digital world. Can e-books, for instance, blur the boundaries between home and school in ways that accelerate literacy learning? What are potential e-book interventions that prevent early reading difficulties?

Implications for Parents, Services and Policy

Since the body of research on e-book pedagogy is small, evidence-based recommendations for parents, service providers and policy makers are limited, aside from be cautious. In the absence of sufficient science, we turn to professional wisdom, which suggests applying best practices with print books to e-books.[25]

As with print books, teaching with e-books should be interactive where teacher and students have active roles in responding to text. Re-reading e-books is encouraged so that some become

“old favorites” that students return to again and again to browse/read on their own. Relatedly, teachers should establish consistent routines for easy access to e-books on devices.

Instruction should focus children’s attention on printed words as well as relevant word meanings; word work should occur across several readings, especially during and after reading segments. To actively engage young readers, teachers/narrators should read fluently and model appropriate intonation and rhythm. E-book reading should be enjoyable and playful.

Teachers should carefully select e-books that meet quality design guidelines from empirical research.[26] They should plan for connecting core e-books for reading to related e-books and apps that extend teacher-led instruction to student-centered studios, hubs and play areas where students have opportunities to dig into ideas--to explore, rethink, rehearse and revise their thinking and skills.[27] And they should be ever mindful of good teaching.

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