

Training Teachers to Bridge the Digital Divide

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Executive Summary

In the United States, many school districts are already aware of the “digital divide”—a phenomenon that manifests as an inequity in technology use and availability, limiting the opportunities available to students who are often already at a disadvantage due to socioeconomic factors. Some districts have taken steps to reduce the digital divide. One-to-one technology initiatives and “Bring Your Own Device” programs are common attempts to remedy the problem. These programs are not always feasible or effective, however. Wherever technology is made available in schools, classroom teachers must be trained in its use. The nature of the training that teachers receive can have a major impact on their effective use of technology to bridge the digital divide. Many of these current training practices have not been particularly successful, however. Therefore, a reformed methodology for technology training for teachers is necessary.

The United States public school system is often idealized as having the power to bridge socioeconomic gaps among students by providing educational equity (Hohlfeld, Ritzhaupt, Barron, & Kemker, 2008). A digital divide still persists in U.S. public schools, however. The digital divide may be an abstract concept, but it has concrete consequences for

today's students. Students who have access to technology and know how to use it for meaningful purposes enjoy advantages over students who do not. For example, students on the “have” side of the divide are already comfortable with using a variety of technologies. This allows them to focus completely on their assignments rather than on learning to use the technology involved. Consequently, these students leave school with a deeper understanding of technology and its uses—making them more likely to find work in a job market that values technological competency. Furthermore, these individuals have greater access to information about social and political issues and greater awareness of opportunities for civic engagement (DiBello, 2005). Students on the “have not” side of the digital divide—often those of low socioeconomic status—may not have access to the Internet or a computer outside of school (Hohlfeld, Ritzhaupt, Barron, & Kemker, 2008). At some schools, this divide is further perpetuated by a lack of modern technology (Hohlfeld et al., 2008). This puts these individuals at a clear disadvantage both in school and in their later lives.

Approaches and Results

Leaders in the field of education have proposed a number of strategies to reduce the digital divide. A school administration's active support of student use of technology is considered to be a key factor (DiBello, 2005; Price, 2014). Teachers are more likely to use technology in their classrooms if they are encouraged to do so by administrators. Teachers will

also be more likely to use available technologies if they are encouraged to foster collaborative relationships with the Information Technology staff. Wherever quality technology is not available in sufficient quantities, teachers can receive instruction on writing grants and identifying possible sources of funding (Price, 2014).

At the heart of reducing the digital divide is the ability of teachers to capitalize on the advantages provided by technology made available to them. If teachers are perceived as capable of improving student performance through the use of technology, the probability of increased funding for technology increases. Extensive training in the purposeful use of technology in the classroom is crucial if teachers are to narrow the digital divide.

Many school districts provide professional development training sessions on various technologies. However, the effectiveness of these training sessions is often limited for a number of reasons. In many cases, the training sessions are inconvenient to attend and the content is perceived as irrelevant to actual teaching practices (Training tech-shy teachers, 2010). Sometimes, school districts commit to the training but do not determine a clear focus for the sessions. The training involved typically assumes a uniform familiarity with the technological content, overlooking the varying needs of teacher participants. To make matters worse, the training session is often a one-time event, and a limited amount of support is available after the session ends (Galanouli, Murphy, & Gardner, 2004). In order for technology training

sessions to sufficiently familiarize teachers with the available technologies, changes in the training methodologies are necessary. Teachers cannot effectively use technology to reduce the digital divide for their students if they do not first fully understand the technology itself.

A successful technology training session entails careful planning and implementation. Broadly speaking, the session must take place at a time convenient for teachers. The session's leader must provide knowledgeable technical support and encourage teacher participants to support one another in their use of technology—both during the session and after its conclusion. The technological equipment that teachers engage with must be up to date and fully functional. As teachers participate in the session, they should feel that the content is relevant to their practices and that it is differentiated to meet their individual needs (Galanouli, Murphy, & Gardner, 2004). An effective session involves in-depth exploration of a limited number of technological concepts rather than a general overview; as one teacher observes, "It's better to just do one thing that makes a real difference to your teaching . . . then you'll go on to do other things as well" (Haydn & Barton, 2007, p. 446). The session leader should also address the participants' attitudes toward educational technologies, as some teachers may not be aware of the digital divide in their schools and the power they have to reduce it through the use of technology in the classroom (Galanouli, Murphy, & Gardner, 2004).

Implications

It is time to transform the way teachers learn about technology. Technology training sessions in the past have been ineffective in too many schools. If teachers are to capitalize on technological opportunities and reduce the digital divide, they need exemplary training. Quality technology training is informed by the best practices outlined previously, including attention to detail in the planning, implementation, and post-training phases. It is critical that teachers leave training sessions confident in their ability to use technology for the benefit of their students. When teachers' dedication is coupled with technological competence, the digital divide cannot help but shrink.

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