

Technology in Education

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There are a variety of uses for technology in education, and numerous studies have been conducted on its usefulness. Researchers have discovered that teacher attitudes have a major role in the effectiveness of technology in schools. Using technology in schools can positively influence the school and community environments. Students are more engaged, and their achievement increases when technology is used appropriately. In order to be successful in today's society, students need a solid base of technological skills and exposure.

Today, technology is used in schools for introducing topics, reinforcing skills, tutoring, collaboration, presentation, communicating, administrative purposes, recording grades, printing publications, and more (Nelson, Palonsky, & McCarthy, 2010). Halverson and Smith (2010) recounted how technology has changed education and how some things remained constant. Beginning in the 1990s, schools began investing in computers and technology at a much higher rate than before (Halverson & Smith, 2010). However, technology did not have much of an impact on changing education in the 1990's (Halverson & Smith, 2010). The use of technology began to change in the 2000's with "high-stakes accountability" (Halverson & Smith, 2010). Not only did these changes impact teaching and learning, but also communication and administrative practices (Halverson & Smith, 2010). Technology has led to increased data from students on a regular basis to track progress toward meeting benchmarks as well as track their progress throughout their school careers (Halverson & Smith, 2010). Nelson, Palonsky, and McCarthy (2010) stated that students today need to develop "technological knowledge, skills, and attitudes" in order to become successful members of society. Students are more engaged in learning when technology is involved, and technology can aid in learning being more tailored to specific learners' needs (Nelson, Palonsky, & McCarthy, 2010). Technology is also an effective

way to utilize distance education, especially in rural schools (Halverson & Smith, 2010) and is also an effective writing tool, even with young students (Van Leeuwen & Gabriel, 2007).

Holden and Rada (2011) discovered that how confident a teacher is using technology plays a role in how effectively it is used in the classroom. The more confident a teacher is, the more he or she uses technology in the classroom (Holden & Rada, 2011). Howley, Wood, and Hough (2011) conducted a study of third grade teachers in schools in Ohio to determine how their views of technology affected their use of technology. The data showed that teachers in rural areas were more open to technology and had better attitudes toward using it (Howley, Wood, & Hough, 2011). They also found that the more the teacher is open to using technology, the more it is used effectively in the classroom (Howley, Wood, & Hough, 2011). In addition to these findings, researchers also learned that when quality professional development is given to teachers, their attitudes toward the technology are better, and they are able to use the technology more efficiently and effectively (Holden & Rada, 2011).

In the last decade, we have seen an increase in distance learning and new opportunities in the way students learn (Halverson & Smith, 2010). In their study, Hannum, Irvin, Banks, and Farmer (2009) examined a sample of 417 rural schools throughout the United States that used distance education. They were interested in the effectiveness of the programs and in the success rate of the students enrolled in them (Hannum, Irvin, Banks, & Famer, 2009). Rural schools face a number of obstacles. Some of them adversely affect the variety of courses they are able to offer students (Hannum, Irvin, Banks, & Farmer, 2009). Hannum, Irvin, Banks and Farmer (2009) explored the use of distance education in rural schools and found that they are widely successful in bringing higher level courses to students at rural schools. While there are barriers to offering these courses, the positive outcomes far outweigh the barriers (Hannum, Irvin, Banks

& Famer, 2009). The majority of the districts studied had used distance education at some point, with most of them currently using it (Hannum, Irvin, Banks, & Famer, 2009). The vast majority of the schools' administrators were also satisfied with distance education at their schools (Hannum, Irvin, Banks & Farmer, 2009). The researchers found that students enrolled in these courses were well prepared in academic background, study skills, and computer skills (Hannum, Irvin, Banks, & Famer, 2009).

Another study conducted by Schafft, Alter, and Bridger (2006) focused on a school system that made a commitment to using technology in their schools as well as providing technology to their community. The school district currently has a 1:1 ratio of computers to students along with high speed wireless internet (Schafft, Alter, & Bridger, 2006). The district has consistently been awarded for its innovation using technology, and its students meet or exceed No Child Left Behind every year (Schafft, Alter, & Bridger, 2006). The district has also created a low-cost high speed internet option for community members, and many of them take advantage of it (Schafft, Alter, & Bridger, 2006). The proceeds from this service are put back into a foundation that funds more technology for the schools (Schafft, Alter, & Bridger, 2006). This technology has united the community and the school district, has positively impacted community development, and brought new life to the community (Schafft, Alter, & Bridger, 2006).

Students today need a strong technological foundation from a young age in order to be successful in society (Nelson, Palonsky, & McCarthy, 2010). To be most effective, technology should be properly integrated into content areas. Teachers should have a positive attitude towards using the technology and appropriate professional development leads to its success (Holden & Rada, 2011). Technology is an excellent addition to our educational system when used correctly.

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