Chapter 3

Technology to Enhance Learning for All Students:
Accessibility Issues and Internet Access for Low SES

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ABSTRACT

Technology is at the forefront of today's workforce. Comparatively, K-12 schools are incorporating technology into K-12 classrooms and instructional teaching methods and strategies. Research has indicted that students who come from low socioeconomic backgrounds may not only have similar access to technology as those from more affluent backgrounds, but students from low socioeconomic backgrounds also use technology for reasons that are different and commonly not academic reasons. This chapter will provide background information on current issues related to the use of technology among students of insight into issues and challenges related to integrating technology into K-12 classrooms, the role of funding in economically poorer school districts, and key instructional strategies for using technology and new and emerging technology in the K-12 classroom. This chapter will conclude with providing recommendations for ensuring access and success for all students.

BACKGROUND OF THE CHAPTER

Technology is at the forefront of today's workforce and economy. Many jobs and careers require proficiency in technology, including the use and integration of technology in varying sectors. To prepare for this workforce need, K-12 schools are incorporating technology into the classrooms and into instructional teaching methods and strategies. Many K-12 districts are moving beyond using technology as a tool for only managing documents, keeping records, and documenting student academic grades.

Educators and school leaders are incorporating technology into classrooms as a teaching strategy for delivery of information. Students are using technology to demonstrate knowledge of skills and to locate information related to subjects being taught in the classroom. Many of the students who are learning to use technology in K-12 classrooms may come from lower socioeconomic backgrounds. These students are often using instructional technology only in the classroom. Research has indicted that students who come from low socioeconomic backgrounds may not only have similar access to technology as those from more affluent backgrounds. Students from low socioeconomic backgrounds have been reported to use technology for reasons that are commonly not academic. The productivity of technology use and the access to the internet is lower for students with low-income levels. Even with these inequitable situations between students of different socioeconomic statuses, the expectation for students to use technology within the K-12 classroom is the same for all students. Teachers and school leaders are situated to bridge the digital divide for all students. To effectively expose students to technology, teachers are being required to effectively incorporate technology into their classrooms. This incorporation of technology in the classroom is done without regard to a student's socioeconomic status, access to technology, and the quality of technology access outside of the classroom. Techers are expected to ensure that all students are able to utilize technology effectively. In short, ensuring that all students from varying backgrounds, socioeconomic status and rural and urban communities have equitable access to technology is essential for learning. Providing teachers with professional development and preservice opportunities are noted as ways to prepare teachers for integrating technology into K-12 classrooms. Additionally, providing teachers with strategies and support in integrating technology into the classroom will assist the teacher in responding to the academic and social needs of all students, regardless of their economic situations. The purpose of this chapter is to highlight the needs of students and teachers in K-12 classrooms as it relates to the access and use of technology. Integrating technology into K-12 classrooms is beneficial for students from varying socioeconomic backgrounds. Teachers who incorporate and encourage technology use and exploration to students are preparing their students for success as they continue in school as well as for relevant career options. Integrating technology into K-12 classrooms is also beneficial to the economic workforce, as employers will have to focus less on training employees in positions where technology use is required. They can instead expect employees to effortlessly use technology to add value to the company. This chapter will provide a background context to this chapter; information on current issues related to the use of technology among students; insight into issues and challenges related to integrating technology into K-12 classrooms; the role of funding in economically poorer school districts; key instructional strategies for using technology and new and emerging technology in the K-12 classroom; and the role of technology in Science, Technology, Engineering and Mathematics (STEM).

This chapter will conclude with providing overall benefits and recommendations for ensuring access and success for all students. Ensuring that all students are technologically prepared is of utmost importance.

CURRENT ISSUES RELATED TO THE USE OF TECHNOLOGY AMONG STUDENTS OF DIFFERENT SOCIO-ECONOMIC STATUSES IN K-12 CLASSROOMS

Today's students have grown up in a world of technology and what some refer to as the digital age. Because of this, it is common belief that today's students are digital natives (Prensky, 2001). This however, is not true and students varying in their understanding, access, and usage of technology and access to

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