The Role of Learning Technology for P-12 Students with Special Needs

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Abstract

In a world where students are daily exposed to technology, schools are purchasing technology to use in school. Teachers believe that technology is a beneficial tool to use in the class but are often reluctant to due to a lack of training on how to use the technology. It is important that teachers receive the opportunity to be trained on new technology. Technology is a beneficial tool to use with special needs students. Research supports teachers’ beliefs that learning disabled students need very explicit, sometimes one-on-one instruction to meet their educational goals. Many technology exists to support teachers as they work with learning disabled students. Technology can be used to help the students receive more personal intervention strategies. When integrating technology, it is important to consider how the technology will help students meet their goals. Technology can promote collaboration between teacher and student and allow the teacher to serve in more of a guide-on-the-side role.

Keywords: technology, tool, learning disability,
Schools often receive attention in the news for the technology that they are providing to their students. Kindergarten students are bringing home iPads, or high school students are carrying Chromebooks to every class. In a world full of people using technology for entertainment, teachers are working to teach their students how “take control of their learning” (Corduff, Szapkiw, and Wendt, 2016, p. 33) by using technology to reach the end goal. Students with learning disabilities, a “disorder…in understanding or using spoken or written language” (Adebsi, Liman, & Longpoe, 2015, p. 14) often have to add additional steps to reach their end goal. Technology plays an important part in helping learning disabled students in today’s classroom.

Literature Review

Corduff, Szapkiw, and Wendt (2016) recognize a lack of research in how special education teachers perceive and use technology in their classroom. Their study included creating a survey for teachers and completing classroom observations to determine how teachers perceived technology, why teachers were or were not using technology in their classroom, and how teachers viewed technology’s role in the classroom. Survey results indicated that although each teacher indicated technology to be positive in today’s education, each teacher’s perception of a piece of technology greatly affected if the technology would or would not be used in the classroom. Teachers who did not understand how to use the technology were less likely to use it. Teachers view technology as a tool and use their students’ needs to determine what technology will be used. Corduff, Szapkiw, and Wendt used the results of the survey and observations to make recommendation for future professional development and technology for teachers.
Bruhn, Vogelgesane, Schabilion, Waller, and Fernando (2015) developed an iPad app for a team of teachers to use with two learning disabled students in their classroom. One struggled to stay on task and remain in his seat, while the other students called out and often dominated classroom conversation. The app allowed the students to rate their ability to stay on task, complete their work, and their collaboration with others after each small group activity in their reading block, while their teachers simultaneously rated them and provided feedback for them to apply in the next reading group. Both students made academic and behavioral progress while using the app during the study.

Because research suggests that learning disabled students best benefit from very explicit instruction, Ok, Wook, and Pedtrotty's study studied the effects of using an iPad to increase students’ multiplication facts fluency. The students daily completed timed multiplication fact tests. Three days a week, the students worked through an intervention and independent practice on the iPad. The interventions showed the students different strategies to solving multiplication facts. At the end of the study, each participant increased the number of multiplication facts they could solve in two minutes.

Discussion

Relationships among Instructional Design, Technology, and Learning

The 21st century student is to be “technologically literate in order to be successful in a global society” (Corduff, Szapkiw, & Wendt, 2016, p. 26). This objective applies to all students. All students are to be striving towards this technological literacy. Many teachers consider technology to be a “tool” (Corduff, Szapkiw, & Wendt, 2016, p. 32). This tool can be used to
help students with learning disabilities academically. Students with special needs, learning disabilities as an example, need visual, audio, and kinesthetic support. Many technological tools, such as the iPad, can provide this support (Corduff, Szapkiw, & Wendt, 2016, p. 32). Some teachers believe that technology can used to support special education students in ways that more common teaching methods are unable to (Corduff, Szapkiw, & Wendt, 2016, p. 32).

**Technology Integration and the Changing Role of Teachers and Students**

Technology integration must be done with careful thought. When integrating assistive technology, it is important to remember that, “assistive technology can only enhance basic skills, not replace them” (Adebsi, Liman, & Longpoe, 2015, p. 15). When determining what technology to use, Seok, DaCosta, and Bryant (2016) found that teachers evaluate assistive technology in three ways—it’s reliability, simplicity of use, and benefits to the student (p. 23). The way teachers perceive technology influences how teachers use technology (Corduff, Szapkiw, & Wendt, 2016, p.27). Teachers of students with learning disabilities are often very cautious in evaluating the usefulness of technology because these students have individual goals they are working towards in addition to general education goals. Because students are exposed to technology outside of school, they may use technology with a higher level of comfort than their teacher. The teacher and student can switch roles when new technology is introduced or work as a team to learn the technology together (Corduff, Szapkiw, & Wendt, 2017, p. 32). The use of technology can encourage collaboration between student and teacher. Many teachers complain that not enough professional development or training is offered to teach them how to use technology. Many teachers are self-teaching themselves and then providing support to their coworkers (Corduff, Szapkiw, & Wendt, 2015, p. 30). Often students with learning disabilities struggle both academically and behaviorally and look for ways to build a positive relationship
with their teacher (Bruhn, Vogelgesang, Schabilion, Waller, & Fernando, 2015, p. 138). Students with disabilities learn best from explicit instruction (Ok, Wook, & Pedrotty, 2016). Explicit instruction does not need to be provided by a teacher. A group of fifth graders struggling to master multiplication facts participated in a study where iPad apps provided intervention. At the end of the study, these students had increased the number of multiplication problems they could solve correctly in a time-limit. In this study, the teacher served more as a guide, and the students completed the intervention independently. This intervention method allowed the students to remain in their classroom with their peers and complete the intervention at a convenient time of day (Ok, Wook, & Pedrotty, 2016).

Conclusion

Technology can be a beneficial tool to use with learning disabled students. By keeping in mind “the students’ needs, preferences, and learning objectives,” teachers often find a technological tool to support their instruction for their students (Corduff, Szapkiw, & Wendt, 2016, p. 32). Moving forward, schools need to recognize the need for teachers to have the time to be trained with new technology to discover how technology can help their students. Because research proves technology can be a beneficial tool and because students are interested in technology, schools should do everything possible to provide opportunities for teachers to provide the tool for learning disabled students to use to meet their goals.
References


