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Project 1: Special Education in K-12 Virtual Schools

Online learning can be synchronous, in real-time, or asynchronous. An example of asynchronous coursework is posting in a discussion board forum. Unlike individual online classes, virtual schools are “fully online educational environments that educate students in all grades, beginning in kindergarten and continuing through to high school and beyond” (Coy, 2014, p. 110). Virtual schools are becoming increasingly present in the K-12 educational landscape. It is estimated that there are about two million enrolled students with special education needs (Coy, 2004, p. 110). Similar to its “brick-and-mortar” counterpart, virtual schools must take into account the diverse needs of its student population. There is a growing amount of research pertaining to assess how students with learning disabilities perform in virtual schools.

In synchronous environments – where feedback is more immediate – evidence of student learning can be difficult to attain (Coy, Marino, & Serianni, 2014, p. 73). Furthermore, e-learning teachers are not always aware of their individualized students’ needs. The Universal Design for Learning (UDL) Framework can be a particularly useful tool. It was not intended specifically for special education, but for all learners (“CAST: Center for Applied Special Technology,” 2014). Instruction should include multiple means of representation, expression, and engagement (“CAST: Center for Applied Special Technology,” 2014; Coy, Marino, & Serianni, 2014, pp. 69-17). Teachers can utilize resources on the Center for Applied Special Technology (CAST) website to ensure that all students needs are met (Coy, Marino, & Serianni, 2014).

Accessibility can be viewed as a civil right. Legally, e-learning providers must meet specific obligations to ensure that virtual schooling is accessible to an entire student population. In 1988, the Rehabilitation Act was amended to include Section 508; technology purchased with federal dollars must be accessible to all (Hashey & Stahl, 2014). Other laws followed, including the Americans with Disabilities Act (ADA). The Center for Online Learning and Students with Disabilities (COLSD) is a helpful resource targeting e-learning providers (Hashey & Stahl, 2014). The Voluntary Product Accessibility Template (VPAT) is a federal guide to ensure that students of all needs are able to access online learning. As the name implies, it is voluntary. Similar to the UDL Framework, VPAT provides an assessment rubric to ensure that information reaches students (Hashey & Stahl, 2014). For example, adding interactivity and multimedia to a class can reach students with visual or auditory deficits.

It is often the instructor who personalizes virtual learning – not software or the learning management system (LMS). Hashey and Stahl presented a case study of a fifth grade science LMS, taught by “Mrs. Pierce.” She was aware of the VPAT rubric. She also reviewed free resources on the site, WebAIM (Web Accessibility in Mind), as well as the UDL Framework (Hashey & Stahl, 2014, p. 76). Using WebAIM tools meant that the computer could read open-ended questions to students of need. Enabling accessibility tools had no affect on meeting Common Core State Standards, either. The study recommendations were to continue to empower the teacher (Hashey & Stahl, 2014, p. 78).

Communication was the most reported barrier to learning for the K-12 online special education population (Johnston, Greer, & Smith, 2014, p. 6). In another study,

the UDL Framework was applied to virtual schools, not just single courses. The research, sponsored by the COSLD, studied three students: one with autism, one with Down's syndrome, and one unspecified ("other") (Johnston, Greer, & Smith, 2014, p. 6). Each participant's instructor and administrator took part in the study. Surveys, interviews, and conversations were aggregated. Due to the nature of computer-based learning, students felt isolated from their peers (Johnston, Greer, & Smith, 2014). The findings suggested that increased intercommunication between student and instructor was needed. Stifling social skills hampered the ability for a community of practice to emerge among students (Johnston, Greer, & Smith, 2014).

In an online setting, work is self-paced. Furthermore, students do not feel like they are competing with peers for their teacher's attention (Allday & Allday, 2012). Research was conducted in virtual public high schools, following both special and general education students. There were four questions that guided the study, each pertaining to the "pace" of teacher-student interactions. The data was then correlated against other factors, including the student's final course grades. The study indicated that both population groups completed courses at the same pace and had similar teacher-student interactions (Allday & Allday, 2012). There was also no significant difference in final grades (Allday & Allday, 2012).

Attrition in K-12 virtual schools can be high. A model, known as the 5 Cs (Connect, Climate, Control, Curriculum, Care), can be used to assess why students drop out of high school (Repetto, Cavanaugh, Wayer, & Liu, 2010, p. 93). Researchers transposed the 5 Cs model to study special education students in virtual high schools. Findings indicated it takes more than an instructor to help special education students

succeed online. A team must be in place, including the teacher, as well as a support staff of aides and other advisors (Repetto, Cavanaugh, Wayer, & Liu, 2010). The report recommended that virtual high schools apply the 5 Cs in the same way that a traditional school would. The research recommended, “varying assignments, groupings and modes of learning in courses; connecting content to real world and skills students need once they leave school; using mentors and individual contact with students; and offering professional development to ensure teachers use effective teaching strategies in courses” (Repetto, Cavanaugh, Wayer, & Liu, 2010, p. 101).

Online learning can be static and hard to follow. This is especially true if a course lacks multimedia elements. K-12 students may not have the capacity to sit and endure long, recorded lectures. This can be further exacerbated when a K-12 student’s Individualized Education Plan (IEP) includes communication skill issues (Coy, 2014, p. 110). The teacher is typically the person responsible to plan and execute the method of instructional delivery. Therefore, they should take advantage of the many tools that can make e-learning feel more personalized. For example, a teacher can use Web 2.0 tools, like recorded slideshows and recorded voice messages (Coy, 2014). Many computers are equipped with web cameras, further personalizing the experience (Coy, 2014). Class trips and other face-to-face meeting can also be arranged to provide socialization opportunities. Meeting peers can reduce feeling of isolation (Coy, 2014). Finally, parental support is needed to ensure that the student’s learning center (LC) is organized. The LC extends to the folders on a student’s computer, stored passwords, and the room where e-learning is delivered (Coy, 2014).

Research is showing that the ability for students with learning disabilities to succeed in e-learning is dependent on the same variables as face-to-face settings. The special education population in a virtual school seeks peer connections, interactivity from teachers, and a multimedia strategy. An online instructor may not be cognizant of their student's individualized needs. Therefore, steps must be taken to ensure that all learners can succeed. Using a variety of frameworks and web tools can enable special education students to succeed at the same pace as their general education peers. Providing accessibility ultimately often falls on the teacher.

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