

Chapter 11

Stealth Assessments in Minecraft: A Framework to Assess SRL Skills Taught to Students With Disabilities

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ABSTRACT

Students with Autism and related disabilities are becoming increasingly disengaged necessitating a dynamic shift in the measure of learning outcomes. Opportunities for authentic learning that support students for work in the 21st Century are often scant. Furthermore, teaching complex competencies (e.g. communication, collaboration, and problem-solving) for 21st-century requires the utilization of virtual mediums blended with academics to support success in today's work and life. Video games provide a natural conduit to learn, practice and refine complex skills. These skills are often a barrier to seeking and sustaining employment for those with disabilities. This article will present a sample of situated learning paired with an authentic assessment in the context of Minecraft used to teach complex competencies using Minecraft as the intervention delivered during Virtual Academy New and Exciting Transitions, a summer program, for individuals with autism and related disabilities

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INTRODUCTION

Globally, more than 2.5 billion people play video games; moreover, 38% of gamers are aged between 18-34 years, and individuals under 18 make up 21% of gamers who game on a daily basis (Clement, 2021). Furthermore, according to the Entertainment Software Association (2001), more than 72% of people across the United States play digital video games. Despite the prevalence of video game use, they remain underused in the K-12 learning environment as a vehicle to support authentic learning assessments. The deficit in authentic learning assessments can be seen specifically when working with SWD as learning opportunities are missed during the assessment process. Importantly, SWD are also actively engaged in gaming; yet, these games are not readily used to support them (Valencia et al., 2019). Unfortunately, many individuals hold the belief that video games should only be used as rewards when video games can be used to differentiate instruction and assessment by having players start at their achievable challenge level and provide feedback and reward for progress towards the set goal (Willis, 2011). Through research, it has been identified that video games can increase student participation, engagement, support social and emotional learning, (Gallup & Serianni, 2017), and motivate students to take risks, and moreover, utilize creative and innovative tools for authentic assessments (Nguyn, 2021).

Gaming principles hold the potential to enhance instruction and assessment that can benefit SWD through pedagogical development. Some popular games include Minecraft EDU, Game of Life, March Mammal Madness, Serious Games, Werewolf, and National Geographic Challenge. Especially, in the wake of the global pandemic games have supported connectivity and motivation for students, (Gallup et al., 2021). In decades past, games (e.g., board games, student-developed, and teacher-developed) have been used in the classroom to support student learning, outcomes, and skill development (e.g., turn-taking, vocabulary, mathematics, and strategy development) (Zirawaga, Olyusana, & Maduku, 2017). Hence, games have been used for decades to teach, explore complex competencies, learn social skills, and teamwork. Today with many technological advancements, games have shifted into virtual platforms and these video games hold the potential to further simulate real-world settings and can be used as assessment tools. Many of these video games are accessed on student 1:1 devices frequently used in the classroom today. Therefore, it is critical to understand how assessments can be effectively used in video games to support authentic learning.

Authentic Learning and Assessments

Authentic learning and assessment become increasingly important for SWD, especially, those with Autism (ASD) as they remain chronically underrepresented in many post-high school jobs, university classes, technical and analytical careers, and independent living (Scott et al., 2019). Those with ASD often possess the skills necessary to be effective with critical and analytical thinking; however, struggle with communication, collaboration, and working with others (Nicolaidis al., 2019). Typical classroom assessments and instruction often do not allow for repeated practice, individual application, and naturalistic opportunities to practice the skills where real-time feedback is given during the assessment process (Valencia et al., 2019). This particular challenge with assessments can augment social interaction challenges due to limited opportunity to interact with peers. Opportunity to interact with peers becomes critical as students with ASD often have limited friendship interactions (Locke, Ishijima, Kasari, & London, 2010) and little to no community involvement (Bellini & Akullian, 2007; Cihak, 2004). These socialization factors contribute to a lower rate of participation by young adults with ASD in postsecondary transi-

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