





BRINGING THE FUTURE TO HIGHER EDUCATION WITH **INNOVATIVE TECHNOLOGY**

by David Vinson, PhD

Ernest Cline's *Ready Player One* (also adapted into a 2018 film by Steven Spielberg) is set in the year 2045, and it joins a long list of stories that depict a future overrun by ecological disaster and economic disparity. Cline's creative strength, however, is not his social commentary. Rather, what sets *Ready Player One* apart is how Cline uses familiar tropes of dystopian fiction to tell a wildly engaging adventure story, one that takes place in a virtual utopia called the OASIS. This endlessly open virtual "reality" serves as refuge for its millions of players, providing escapist fun as distraction from the inequities of the real world.

Wade Watts—the story’s teenage protagonist—has devoted his life to unlocking the puzzles hidden within the digital landscape of the OASIS, and at the heart of the story is Wade’s race against other devoted players to unlock the most obscure and difficult puzzles. The first to locate three hidden keys will inherit the immense fortune of the deceased creator, in addition to control of the entire OASIS.

For students, higher education offers no grand prize akin to immediate fortune or global power—although great memories, new lifelong friends, and access to knowledge and training that prepares them for a competitive job market aren’t too shabby, either. In fact, private universities and colleges around the country are even using innovative technologies one would recognize in Ready Player One. Virtual reality (VR), for instance, can now be used to transform how we think about teaching, learning, and interacting with one another on and off campus.

The Challenges and Rich Potential of Virtual Reality in the Classroom

VR is a three-dimensional, multisensory, and interactive computer-mediated simulation. For the user, the experience is not unlike inhabiting and acting within an external environment. Of course, tapping into the potential of VR as an educational tool poses multiple challenges. For programmers and developers, the task of creating a virtual, usable world is daunting, and doing so demands considerable skill and dedication. For educators and students alike, the feasibility of using VR in the classroom remains somewhat of a mystery, a work-in-progress in terms of maximizing the technology’s potential. Moreover, in a practical sense, not only would a classroom need access to VR technology, but the room itself would need space designated for “play zones” where the equipment could be used safely. Educators and students would need training for how to use the equipment, and educators would need

to plan learning outcomes in conjunction with IT specialists, programmers, and developers to make new virtual experiences pedagogically productive.

Innovation is neither easy nor straightforward, but collaboration between educators and people in industry is entirely doable—and the more collaborative we are, the clearer the path will become for using VR technology to fulfill university course outcomes. The possibilities are exciting and endless from a pedagogical perspective, and the enthusiasm that courses designed with VR technology in mind would generate among the student body is easily imagined. One can also imagine the efficacy of classroom-based VR as a recruitment tool for potential students, the majority of whom are already accustomed to using technology for learning purposes and who would leap at the opportunity to become more familiar with VR technology.

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VR as a Recruitment Tool for Gen Z Students

Today’s traditional college-age learners are members of Generation Z, or Gen Z. As Gen Z students mature, so will their expectations for learning experiences that provide them with a skill set essential to thriving in the future job market. Extended reality (XR), immersive technologies encompassing VR as well as augmented reality (AR), holds promise as a learning tool to satisfy Gen Z—and beyond—on their own terms. Moreover, given Gen Z’s documented affinity for gaming as well as their desire for acquiring problem-solving and practical skills, VR provides a confluence of experiential learning and engagement.

Current market demand for immersive learning in K-12 can illuminate the expectations of future learners bound for higher education. While only 5% of K-12 teachers surveyed in 2016 by Project Tomorrow used augmented reality or VR tools, Futuresource Consulting predicted in 2018 that 15% of U.S. schools would have a VR kit by 2021. Private

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universities and colleges must take such data seriously to keep up with the evolving expectations of Gen Z students. Moreover, research already illustrates that VR in the classroom can be used to spark students' interest both before and after concepts are introduced. A recent study by Parong and Mayer ("Learning Science in Immersive Virtual Reality") shows that 81% of students who used VR in the classroom felt more motivated to understand the material treated in VR, were more interested in the material, and found the lesson more engaging overall than traditional, lecture-based methods.

Enhancing Learning Spaces with Innovative Technology

VR technology is just one way of using innovative technology to transform how students learn and collaborate. We know that students value aesthetics and comfort in learning spaces, but they also value access to innovative learning spaces that meet their evolving needs. The essential ingredient to such spaces is variety—that is, providing students with options not even they have necessarily considered. Consider the possibilities, for instance, of learning spaces equipped with unique software and moveable furniture, two features that empower students to collaborate and learn as they see fit. Similarly, ideal learning spaces should offer ample seating, wall-mounted displays for group work, large interactive touchscreen technologies, web cameras and microphones for web conferencing, multiple outlets and charging stations, as well as laptop checkout stations that contain software otherwise unavailable to students. The broader objective is to create zones of learning where students can work independently, in small or large groups, and where they can share their work to dedicated monitors or even project onto a single large monitor.

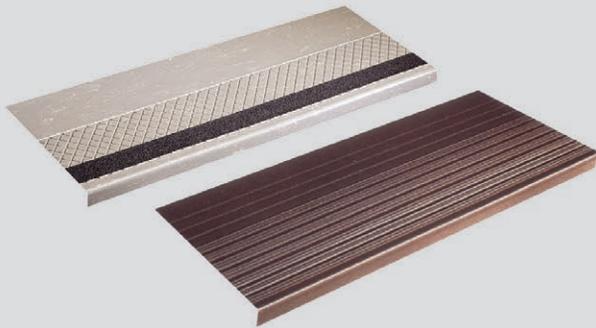
Innovative software technologies provide further ways of enhancing learning spaces. A few exciting examples include browser-based video conferencing, a shared whiteboard space that allows users to exchange and annotate content in real time, multi-camera support for capturing different angles in large gatherings, converting voice to text with real time transcription, saving and recording work on cloud servers, and sharing, mirroring, and casting devices or applications wirelessly.

Innovative Technologies and the Importance of Place

As private universities and colleges continue to adjust to the ongoing impact of the pandemic, there is a growing emphasis on the importance of place for students, faculty, and staff, all of whom are reacclimating to campus life. Enhancing this sense of place by investing in innovative technologies can transform the campus experience for everyone, and continual planning and assessment of innovative technologies are integral to improving learning outcomes as well as increasing constituent

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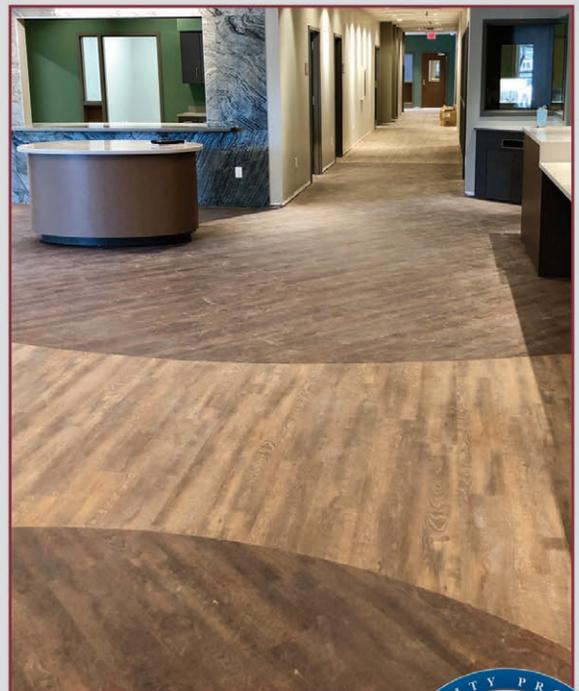
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A key lesson, too, is that innovative technology brings talented people from disparate fields together, educators and students alike. If used to its potential, innovative technology encourages creativity, risk-taking, and collaboration. The effect is to generate further innovation, and this culture of innovation is precisely the goal in private institutions of higher education. After all, higher education is, at its core, a space where knowledge both proliferates and is made, day after day.



ABOUT THE AUTHOR: Dr. David Vinson has a PhD in English with specializations in transatlantic literature and cultural studies. He is a committed scholar, teacher, and dad. If you ever meet David, avoid the subject of soccer. His fandom borders on the truly obnoxious.

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