

# How VR and AR take CTE programs to the next level

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To read full article on web, visit: <https://www.eschoolnews.com/2019/06/21/vr-ar-cte-programs/>

**With the advent of new resources, CTE programs are helping prepare students for future careers and success**



## eSCHOOL NEWS

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Studies consistently reveal the importance of career and technical education (CTE) programs as a method to reduce dropout rates and to keep students focused on high school graduation. Across Pasco County Schools, where we educate 75,000 students, the vision for our CTE program is to provide broad exposure to CTE experiential learning opportunities while equipping students to be life-long learners.

To accomplish that goal, it is critical that we enable our CTE students to embrace advanced technologies that will be commonplace in the jobs and careers of the future. As the workforce demands that even entry-level employees have the skills and training needed to take on new challenges, our perspective is that by creating opportunities for students to engage with and learn from advanced technologies in the classroom, it will put students on an immediate career path following graduation.

### Interactive CTE programs with VR and AR

This year, our CTE department integrated augmented reality (AR) and virtual reality (VR) laptops from zSpace into our Health Sciences career cluster and Agriculture / Veterinary Assisting Program curriculum.

AR/VR has the unique ability to deliver immersive learning that places our students in an interactive learning environment, either physically or virtually, to replicate possible scenarios or to teach particular skills or techniques. The simulations, role play, and virtual learning environments are changing education and enhancing learning.

When initially introduced into the classroom, our students were fascinated about what they were experiencing when their glasses were on. For the first time, they had the freedom to interact with content previously not possible, such as a virtual human cadaver. One student said, "It's like the textbook just came alive!" It was incredible to see the students' interest, motivation, and engagement explode simply through the introduction of

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new interactive learning experiences.

From an educator perspective, our CTE teachers were immediately able to connect their lesson plans with the opportunities delivered by VR/AR, bringing their lessons to life. Enhancing their teaching with interactive experiences made learning clearer and more memorable for students.

Starting a career path – in high school

One of the greatest benefits of AR and VR as part of our CTE programming is that through the learning programs, students can earn industry certifications that put them on an immediate career path upon graduation.

For example, our students are using VR to enhance and practice repeated nursing skills like patient transportation and preparing for industry certifications. The VR capabilities enable students to explore both human and animal body systems in interactive, real-world scenarios that aren't possible with models or dummies — bodies are manipulated and moved, explored, and dissected in ways that will prepare students to work with real people and patients as they progress in their medical and veterinary careers.

At the conclusion of this school year, a record number of students will graduate from high school with the certified nursing assistant certification, thanks to the VR learning opportunities provided by zSpace. Results from industry certification exams are on the rise: the Pasco High School Certified Health Science Program had above an 80 percent pass rate on its Certified Nursing Assisting exam. Scores have also increased for the veterinary tech exams.

One of the reasons we feel the introduction of this new technology was so successful is due to teacher and student collaboration. As we look to grow the program in the new academic year, these individuals will be able to acquire and transfer the knowledge and skills required to operate specialized hardware/software for a particular field, helping future students in the program succeed.

