

AR/VR Inspires Career Paths for Middle and High School Students

Augmented and virtual reality make it easy for students to discover and explore hundreds of possible careers

The Challenge

Most students have limited ideas about the careers they will be able to pursue upon graduation. In Stanislaus County, California, the local board of education wanted to build a cost-effective, physical location where middle and high school students could be exposed to a variety of careers and the skills associated with those career pathways.



“My favorite thing from today was seeing how things work,” said Claudia, a student in Stanislaus County, California, who spent the day working on several projects using augmented and virtual reality (AR/VR) as well as programming a drone.

Exploring Career Pathways with AR and VR

At the CIC, students are able to practice medical procedures on human or animal models to learn about health and veterinary careers. They explore game design in Unity and practice programming robots and drones. Augmenting those tools is a multitude of VR and AR equipment, including 3D printers, an Anatomage table allowing students to simulate dissections, and the Oculus headset VR system.

Students also use [zSpace](#) laptops, which provide an interactive, immersive learning experience. Using a combination of VR, AR and 3D visualization, zSpace allows students to explore complex concepts and ideas in a way that is much easier to understand than when featured in a book or a two-dimensional screen.

VR and AR have been shown to boost academic performance.

[Research](#) shows students using zSpace achieve gains averaging 16-percent improvement (pre-/post-test) in elementary, middle, and high school courses. Using AR and VR also [improves skills essential for the 21st-century workforce](#), such as critical thinking, persistence, resilience and grit.

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The Solution

The newly launched Career Innovation Center (CIC) houses a variety of hands-on and virtual tools, including zSpace, for students to explore careers, ranging from game development to health sciences.



The increase in performance and skills is part of the appeal of VR, but Sanjay Bhan, CTE coordinator at the CIC, also sees firsthand how technology helps motivation and excitement blossom.

“The CIC really just allows kids to explore diverse career opportunities and get them thinking about what they're interested in and what they might be passionate about, that they didn't know about previously,” said Sanjay Bhan, CTE coordinator at the CIC. “Our hope is to continue to expose them to new things.”

Curriculum and Certifications

zSpace was the first AR/VR partner of the National Occupational Competency Testing Institute (NOCTI), and today offers [pathways](#) that can help students earn up to 33 industry credentials. The comprehensive content coupled with the collaborative lessons were just a few of the reasons the CIC chose zSpace as one of its AR/VR partners.

zSpace offers several different immersive learning devices, including the most recently released [Inspire](#), which allows users to see and manipulate three-dimensional content without a head mounted display (HMD).

The students at the CIC learn with an easy-to-use, [all-in-one VR/AR laptop](#) that includes a pair of lightweight eyewear and a stylus. They use the device to explore health science, manufacturing, agriculture and robotics, as well as create their own models in a 3D makerspace. With the stylus, learners can virtually pick up, manipulate, zoom in, zoom out, and dissect content. For example, learners can dissect everything from plants, animals and car engines to simulate an HVAC system - all experiences that would be impossible to recreate in a classroom.

Leaders in the next generation of work

By using AR and VR in their learning environment, students are gaining much more than specific subject knowledge. AR and VR are expected to be a major part of the work environment itself.



Virtual surgeries, remote design visualization in manufacturing and immersive gaming experiences are just some of the examples that are already happening in today's workforce today. AR and VR are used in companies like Delta, Tesla and IKEA. By learning with VR and AR, students are preparing themselves for what technology will look like when they go to look for jobs.

“This is a great opportunity for all Stanislaus County students to experience the Career Inspiration Center and see what the future holds for them,” said Bhun.