

Transformational Learning Results and Student Recruiting from Virtual Reality Interventions: The Relevance, Opportunities, and Influences of Research Informing Pedagogy

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The presentation's **relevance** is our research's **influence** on teaching and the symbiotic connection to TAMU's Strategic Plan. Enriching "transformational education and student's success" (TAMU, 2020, p. 3) is the first of six priorities in TAMU's current Strategic Plan 2020–2025. Industry 4.0 technologies include artificial intelligence, machine learning, robotics, IoT (internet of things), virtual reality (VR), big data/analytics, and cloud infrastructure. 5G networks have influenced the proliferation of Industry 4.0 technologies' **opportunities**, use, and roles in day-to-day predictions of future outcomes.

The increased technologies adoption by consumers and the increasing number of companies developing VR hardware and software have made the innovation more accessible and **relevant** than ever before. The **relevancy** of VR is the digital technology's innovative and accessible attributes placing the technology at the forefront of future agricultural sciences dissemination. Gen Z students are digital natives to VR technology and will be better prepared to learn with the technologies than previous generations entering post-secondary education. Instructors should consider VR technologies for potential transformational learning **opportunities** to **influence** positive learning outcomes.

The **presentation's objectives** were; a) share VR transformational intervention experiences with high school youth that have visited our college, b) discuss the VR technologies used to educate and recruit high school youth to our academic programs, c) communicate results outlining transformational learning increases from contextualized content taught through two separate VR headsets and our labs Anatomage Table, and d) provide examples where our research informs revised or supplemental teaching pedagogy to improve student outcomes and attract students to Aggieland.

The **target audience** for our presentation were faculty members with a teaching appointment, graduate students who desire to teach at the post-secondary level as a faculty member, and staff working with external groups seeking strategies to improve stakeholder engagement and learning outcomes.

VR can be an **opportunistic** and **influential** asset for student outcomes due to knowledge transfer on societal issues such as global food security, immigration, consequences from reduced water and other climate issues, nutrition, and the unintended effects of war. VR allows people from all backgrounds to have immersive experiences at their leisure. Student learning outcomes, in VR environments, are simultaneously **relevant** contextually, **opportunity** driven, and the Industry 4.0 technology can be **influential**, based on our studies, in improving transformative learning. The featured **innovative techniques** will include demonstrations with a cardboard

headset, Oculus headset, and the Anatomage Table of contextual examples including sustainable food production, community development, and climate impacts to outline VR **best practice** use.

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