

EVALUATING DAIRY FARMING INTERESTS OF K-12 STUDENTS UTILIZING VIRTUAL REALITY AS AN EDUCATIONAL TOOL

BOULDER COUNTY & MORGAN COUNTY

PROJECT INTRODUCTION

Agriculture-focused education in K-12 curriculum is in dearth, directly impacting a student's interest in agricultural pursuits.¹ This impact can especially be seen within livestock agriculture, contributing to the decreased workforce as younger individuals increasingly gravitate towards alternative urban activities and employment opportunities.^{2,3} Therefore, it is an emerging issue in agriculture that needs special attention. There is a need for targeted interventions to instill a renewed interest in livestock agriculture among the younger generation.^{3,4,5}

To address this challenge, our project aimed to harness the potential of virtual reality (VR) technology as an innovative teaching tool within the K-12 curriculum. As the education system delves into the vast possibilities offered by the virtual realm, this study sought to evaluate the feasibility, applicability, and appeal of an interactive VR farming game for K-12 students.

INTERNSHIP GOALS

1. To gain valuable experience in networking and collaborating with extension agents and build strong connections that could benefit both current and future projects.
2. To ensure robust participation, enabling us to gather sufficient data for evaluating whether VR technology can effectively increase students' interest in pursuing agricultural careers.

HOW DOES THIS APPLY TO YOUR EDUCATION

As a veterinary student, I sought to use this opportunity to deepen my understanding of the agricultural sector. My goal was to identify areas in need of improvement and explore how targeted efforts can enhance the well-being of the agricultural community. By increasing interest in livestock agriculture, we can contribute to food security and improve the lives and well-being of animals. This experience directly supports my education by broadening my knowledge and preparing me to contribute meaningfully to both veterinary medicine and agriculture.

WHAT YOU DID

- Participated in developing a VR training program with a VR development team through CSU's College of Veterinary Medicine & Biomedical Sciences (CVMBS), Department of Clinical Sciences.
- To assess the tool's effectiveness, a questionnaire was developed and administered to participants before and after the completion of the game via Qualtrics. Options were provided to participants to choose to complete the survey in either English or Spanish.
- Worked closely with extension agents, Robin Halley of Morgan County and Lyndsay Gonzalez of Boulder County, to facilitate student participation in the VR program at county fairs and 4H programs, where they completed surveys before and after their participation.

Figure 1. Image of VR training game



Figure 2. Students participating in the VR training game



WHAT YOU LEARNED

I learned about how to adapt to challenges during this project. Although the avian influenza prevented us from utilizing the VR technology to assess its effectiveness in training dairy farmworkers, I was determined to ensure the project remained meaningful. Leveraging our connections with extension agents, I sought out alternative approaches, ultimately exploring a multi-faceted strategy that used VR technology to engage students.

Moreover, I had the privilege of collaborating with wonderful professionals who were instrumental in making this project possible. Their guidance not only helped me develop independence but also taught me effective ways to engage children of various ages, ensuring they were both captivated and actively participating.

NEXT STEPS

The next step involves finalizing the data collected during this summer internship. We also aim to strengthen and build on the connections established during this experience as these relationships will be crucial in expanding the scope of our work and exploring new opportunities for collaboration. Additionally, once the avian influenza is mitigated and conditions stabilize, we plan to resume our original objective of assessing the effectiveness of the VR training game as a tool for training dairy farmworkers.

LITERATURE CITED

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