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EDLD 5315

Outline Assignment

I. What is the topic of your action research?

The topic of my action research is the effectiveness of Virtual Reality (VR) Immersive Learning Pods in enhancing student engagement, learning outcomes, and teaching strategies within K-12 blended learning environments. Specifically, this study will focus on FBISD and will explore how immersive VR technology can impact the learning experience. I will investigate how students engage with this innovative tool and how it contributes to improved learning outcomes, with a particular focus on both the challenges and benefits teachers encounter when implementing this technology in the classroom. This research aims to determine whether VR can support active, personalized learning and how it can reshape traditional teaching methods.

II. What is the purpose of your study

The purpose of this study is to evaluate the effects of VR Immersive Learning Pods on student engagement, learning outcomes, and teaching effectiveness. The research will examine whether the introduction of VR technology in the classroom leads to

improved student participation, better learning achievements, and enhanced teaching practices. Additionally, the study will seek to understand how teachers adapt their instructional methods to accommodate this new technology, as well as the challenges they face in integrating VR into their existing curriculum. By exploring both the benefits and challenges, this study will provide valuable insights into the potential of VR to transform educational environments and practices.

III. What is your research question?

The main research question guiding this study is: How does the integration of VR Immersive Learning Pods in a K-12 blended learning environment impact student engagement, learning outcomes, and the effectiveness of teaching? This question will help uncover the overall effectiveness of VR as an educational tool. Additionally, sub-questions will explore students' perceptions of VR as a learning tool compared to traditional methods, teachers' experiences and the integration of VR into their teaching strategies, and measurable outcomes such as academic performance and participation rates before and after the implementation of VR.

IV. What is your research design (Qualitative, Quantitative, or Mixed Methods)

a. Why did you choose this design

The research design chosen for this study is a mixed-methods approach. This design is selected because it allows for the collection of both qualitative and quantitative data, providing a comprehensive view of the impact of VR Immersive Learning Pods. The qualitative data will capture detailed insights into students' and teachers' experiences, opinions, and perceptions, while the quantitative data will allow for the measurement of learning outcomes, student participation, and engagement levels. By using both approaches, the research can offer a nuanced understanding of how VR affects both students and teachers, as well as the measurable effects on learning.

A mixed-methods approach is ideal for this action research because it provides a balanced view of both the subjective and objective aspects of the impact of VR on learning. The qualitative data collected through interviews, focus groups, and observations will give voice to the personal experiences of students and teachers, shedding light on how VR influences their learning and teaching practices. This is essential for understanding the challenges, successes, and potential improvements that could be made when using VR in the classroom. The quantitative data, such as test scores and engagement metrics, will offer measurable evidence of VR's effectiveness in improving academic performance and increasing student participation. This combination of qualitative and quantitative data will allow for a more comprehensive analysis of VR's impact on both students and teachers.

V. What data will you collect?

For qualitative data, I will collect information through teacher interviews, student focus groups, and classroom observations. Teacher interviews will allow me to gather their perceptions of how VR integrates into their teaching and the challenges and benefits they observe in using VR. Student focus groups will help assess how students perceive VR as a learning tool, focusing on engagement and motivation. Additionally, I will observe classroom dynamics and student behavior during VR-based lessons, recording how students interact with the technology and with each other. For quantitative data, I will collect pre- and post-assessment scores to measure changes in student learning outcomes. I will also track engagement metrics, such as the amount of time spent using VR technology and student participation rates. Surveys for both students and teachers will further help gauge perceptions of the VR learning pods' effectiveness, and attendance and participation records will be analyzed to track changes in student involvement.

VI. What types of measurement will you use?

I will measure the effectiveness of VR Immersive Learning Pods through several methods. First, I will administer surveys and questionnaires to both students and teachers to gather perceptions on the technology's impact on engagement, motivation, and learning outcomes. These surveys will use Likert scales to measure the extent to

which participants agree or disagree with statements about their experiences. Second, I will compare pre- and post-test scores to assess any improvements in academic performance after the introduction of VR. Third, focus groups and interviews will allow for a deeper understanding of the subjective experiences of both students and teachers. Through these conversations, I will explore how VR has affected their learning and teaching strategies. Finally, I will conduct classroom observations to directly measure changes in student behavior, such as increased participation or interest during VR-based lessons. This combination of qualitative and quantitative measurements will provide a holistic assessment of the effectiveness of VR in education.

VII. What is the focus of your lit review?

The literature review will focus on several key areas related to the integration of immersive technologies, particularly Virtual Reality, into K-12 education. I will examine research on how VR has been implemented in educational settings, focusing on its impact on student engagement and learning outcomes. Additionally, the review will explore studies on how VR can enhance teaching practices, including its ability to support personalized learning, foster creativity, and improve student motivation. I will also include research on the challenges of integrating new technologies into schools, such as resource constraints, teacher training, and the potential barriers to adoption. Finally, the review will provide insights into best practices for using VR in the classroom, drawing from case studies of schools or districts that have successfully

implemented immersive learning technologies. This literature will help inform the study's methodology and contextualize the findings within the broader trends and challenges in educational technology.

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