

THE POTENTIAL IMPACT OF VIRTUAL REALITY AND AUGMENTED REALITY IN THE TEACHING-LEARNING PROCESS: ADVANTAGE AND CHALLENGES

by:

Gisselle Ann R. Alonzo

Administrative Aide III, SDO Bataan

In the age of social media, technology has helped improve the quality of education in various ways. It helped improve engagement, accommodate different learning styles, and encourage easy communication and collaboration between students and teachers. A few countries are taking technology in education a step further by investing in Virtual Reality (VR) and Augmented Reality (AR) and integrating it into classrooms in order to revolutionize student learning experiences. VR is a computer-generated virtual simulation that enables users to enter a virtual environment. On the other hand, AR brings computer-generated visuals into the real world.

In the Philippines, the technology is still in its early stages of adoption. This has the potential to change the current education system because of opportunities for experiential learning and improved quality of education as it is both interactive and immersive. Throughout the years, the Department of Education has made significant progress in infrastructure, curriculum development, and teachers. However, the Philippines continues to face issues due to insufficient funding, unequal access to education, and antiquated teaching techniques and curriculum.

According to the Programme for International Students Assessment or PISA, the Philippines scored lowest in reading and second lowest in mathematics and science among the 79 participating countries. This is one of the challenges faced by the education system in the country. Therefore, the high cost of investing in this new technology in classrooms would be challenging. It might only be available to some schools or private institutions if implemented. In addition, this also requires specialized training and

knowledge that educates teachers on how to design lessons that include technology while also considering the curriculum. The existing broad and comprehensive curriculum will also undergo a rigorous review process and approval as it requires a definite strategic plan and a step-by-step process. All of these are the challenges the Department of Education will face in implementing AR and VR in the curriculum.

However, using VR and AR technology offers various benefits, especially in improving engagement and interaction among students. According to Boyles, B. (2017) and Freina, L., & Ott, M. (2015, April), students can develop a love for learning and will be more motivated and willing to learn as it requires them to discover and interact with subjects or concepts but in a controlled and safe environment. It can help students learn and interact with historical events, scientific processes, and practical skills inside a digital simulation. As a result, improving their retention and understanding of various subjects, higher attendance, and improved grades. It can also potentially transform traditional education methods and improve instructiveness among students as well as educators. To ensure this, there must be an interactive collaboration between technology providers and educators in order to ensure that the technology is perfectly aligned with the goals, curriculum, and learning outcome objectives of the Department of Education. Interaction between educators, institutions, and providers is important for information on emerging new technologies and feedback. Training and development of teachers is also important as they need to be knowledgeable on how to integrate it into the current curriculum and assess the technology's effectiveness.

Overall, the education sector should carefully evaluate the challenges and benefits of implementing Augmented Reality and Virtual Reality in schools. By considering these, educational institutions in the Philippines can take full advantage of their potential to provide an enhanced learning experience for students as it can potentially transform the future of education in the country. By overcoming the challenges and adopting best practices, the integration of this technology can enhance student learning and teaching

experiences, improve overall education quality and enhance students' digital literacy. It is important for the Philippines' educational institutions and policymakers to consider the benefits of VR and AR technology in education and take steps toward successful execution.

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