

Ms. Luisa Santos, Board Member

**SUBJECT: INTEGRATING VIRTUAL REALITY AND AUGMENTED REALITY  
IN OUR CLASSROOMS**

**COMMITTEE: ACADEMICS, INNOVATION, EVALUATION & TECHNOLOGY**

**LINK TO STRATEGIC  
PLAN: RELEVANT, RIGOROUS, & INNOVATIVE ACADEMICS**

At the School Board Meeting of October 20, 2021, the School Board unanimously approved School Board Agenda Item H-8 (Revised), *Addressing the Digital Divide through the Equitable Digital Experience Framework*. The *Equitable Digital Experience Framework* has four pillars:

1. **Reliable Internet Connectivity:** Students and staff must have access to fast and reliable wireless internet connection throughout the community and at school.
2. **Capable Devices and Technology:** Devices and technology must be able to handle the modern student and workforce workload.
3. **Digital Literacy:** A curriculum embedded throughout grades K- 12 that prepares students, teachers, and families to actively interact with and ultimately create digital texts, tools, and spaces to facilitate 21<sup>st</sup> century learning.
4. **Establishing Technology Career Pathways:** Accessible industry partnerships, career focused curriculum, and workplace opportunities with the tech industry in our county.

As a national leader in education, Miami-Dade County Public Schools (M-DCPS) is always looking for new ways to enhance the teaching and learning experience for its students through the relevant use of technology to develop digital literacy. Areas of innovation that have been gaining traction in recent years are the use of augmented reality (AR) and virtual reality (VR). As a result, these technological advances are changing the face of education.

VR is a technology that creates a simulated environment that can be explored by users through a headset or other device. One of the most significant advantages to using VR in the classroom is the ability to increase student engagement. By immersing students in 3D environments, allowing them to interact with simulations, and visualizing abstract concepts, VR provides a more compelling and interactive experience than traditional teaching methods, keeping them focused and motivated to learn. Additionally, VR has been found to improve retention rates, making learning more memorable and impactful. VR can also enhance understanding of complex concepts, broaden students' horizons with access to new resources and experiences, and offer a safe environment for students to practice skills that would be difficult or dangerous in real life.

AR is a technology that overlays digital content onto the real world, often through the use of a mobile device or smart glasses. It has the unique advantage of bringing abstract concepts to life and providing students with a more tangible understanding of them. By overlaying digital objects onto the real world, AR creates a blended reality that can be used to create interactive models that students can manipulate in real-time. This allows students to see the impact of different variables on the model and can aid in their comprehension of complex ideas. AR also provides access to resources that would otherwise be unavailable or difficult to obtain, such as virtual field trips.

Many teachers at M-DCPS have found innovative ways to use these technologies and strive to give their students 21st century learning experiences. We have biology teachers conducting virtual dissections through the use of AR in classrooms giving students the ability to re-do any virtual mistake made, other teachers have used VR headsets to explore a 3D model of the solar system to gain a better understanding of the spatial relationships between the planets, CAP advisors have taken students on virtual college tours as they begin to plan for their post-secondary plans, and we have seen teachers take students on virtual field trips to museums around the world. These teachers are breaking down barriers to allow students to visit spaces and have experiences that would be difficult to provide otherwise.

By embracing these technologies as a school district, M-DCPS can continue to provide its students with a cutting-edge education that prepares them for success in the 21st century. Finding the ways to use VR and AR in the classroom help us equip our students with the skills, knowledge, and experience needed to thrive in a technology-driven world.

This item has been reviewed and approved by the General Counsel's Office as to form and legal sufficiency.

**ACTION PROPOSED BY  
MS. LUISA SANTOS:**

**That The School Board of Miami-Dade County, Florida, reaffirm its commitment to addressing the digital divide and implementing the "Equitable Digital Experience Framework" with a focus on digital literacy by directing the Superintendent to explore the feasibility of implementing virtual reality and augmented reality throughout Miami-Dade County Public Schools classrooms. This includes but is not limited to:**

- a. Conducting research regarding the appropriate the technology for the classrooms and its viability in our current curriculum;
- b. Evaluating the infrastructure in place to determine its capability to support implementation;
- c. Evaluating the viability of training appropriate staff to ensure the success of these technological advances in our students' learning.
- d. Providing a Report concerning these findings to the Board at the June 14, 2023, Academics, Innovation, Evaluation & Technology Committee Meeting.