

## We're Virtually There: Providing Health Sciences Education and Wellness Through Virtual Reality Experiences

Title Slide :

Hello! I'm Gail Kouame and I'm happy to present this paper for the MLA 2022 Annual Meeting. This paper will describe two virtual reality projects undertaken by the Greenblatt Library at Augusta University in Augusta, Georgia.

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The first project is one that my two co-authors, Jenn Davis and Lachelle Smith, initiated. Jenn is the Data and Scholarship Librarian and Lachelle is the Allied Health Sciences Librarian. They wanted to figure out a way to introduce concepts surrounding data literacy and data management in a more engaging way. The primary objective of this project is to instruct graduate students in the health sciences disciplines how to ethically manage data.

The university's graduate programs are increasingly requesting instruction in data management to better prepare their students for conducting responsible research in their current programs of study as well as in their future professional careers; however, there is a gap in the graduate school curriculum to address data management in a systematic way. Librarians were providing standalone workshops that address the data life cycle in conjunction with the research life cycle. The library also has curated online research guides for data management, and the Scholarship and Data librarian consults on a point-of-need basis. While these workshops and services are certainly an informative starting point, given the growing emphasis on data management by funding agencies and publishers, there is a serious need for innovative evidence-based instruction on the best practices and standard procedures of responsible data management as part of the overall graduate school curriculum.

Jenn was inspired to find a way to gamify the information and decided to develop a virtual reality escape room. As a pilot, Jenn and Lachelle collaborated with the Department of Physical Therapy to develop data literacy modules for their graduate students. This escape room game is an innovative component to engage students in a non-traditional way beyond the classroom setting. Research shows that game-based learning can increase student learning by incorporating elements of game mechanics with established learning theories.

What you are seeing on this slide is a screen shot from the VR escape room that students navigate to explore various required or expected aspects of responsible data management.

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The second project is a collaboration between the Greenblatt Library and the Medical College of Georgia, as well as the Augusta University School of Computer and Cyber Sciences and the Computer and Game Design and Development program at Kennesaw State University. Faculty members from the Medical College approached me to inquire about the possibility of designating a space in the library as a virtual reality room. They had been developing some virtual reality experiences to integrate into the curriculum for undergraduate medical students. These experiences are geared primarily to build

empathy surrounding patients with vision impairments such as macular degeneration and diabetic retinopathy, or physical limitations resulting from Parkinson's Disease or a stroke.

There are only a couple virtual reality set-ups available to the medical students for a limited period of time. Having a virtual reality space in the library provides a centralized location that is open extended hours with the equipment more readily available for use. The existing curriculum-related experiences are uploaded to the computers in the virtual reality space now called the Virtual Dimensions Studio. In addition, we agreed to include wellness and relaxation modules available to offset stress and burn-out commonly experienced by health sciences students, practitioners, and faculty.

The objectives of this project are to:

- 1) Host a shared virtual reality space at a health sciences library for use by students, faculty and staff.
- 2) Increase access to new and existing virtual reality learning experiences to facilitate highly experiential education in the health sciences.

And to

- 3) Promote wellness and relaxation through the use of immersive virtual reality experiences.

The Virtual Dimensions Studio is available to all members of the Augusta University campus communities. It is an extension of our current Creative Technology Lab makerspace area and the Access Services department provides day-to-day management.

What you are seeing on this slide is a screen shot from the visual deficit simulation.

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Both of these projects share some commonalities. To start, they were both funded through competitive awards from the Network of the National Library of Medicine. They also both use the same type of virtual reality equipment, allowing for interoperability. They also both involve collaboration with faculty and students from our School of Computer and Cyber Sciences. Students have the opportunity to do a capstone project and building out these virtual reality experiences is one of their choices for a project.

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As with any new endeavor, we learned a lot along the way!

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First and foremost: Things will take longer than you think!

Getting funded projects up and running requires initial approval as well as setting up the financial structure through the Office of Sponsored Programs, and this does not happen overnight.

Once the funding structure is in place, and you're ready to order equipment, there can be further delays. In both our cases there were things going on internally at other administrative departments at the university that held up our equipment orders.

Additionally, getting the software uploaded and equipment ready is another time-consuming aspect, especially when dealing with students who have multiple obligations and deadlines.

In the case of the space in the library, it took months before it opened! Small issues, like needing to install a doorknob that locks, and needing to get the room painted, etc., caused delays due to the need to order parts and get on the docket with the Facilities department.

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Other time-consuming aspects of getting the Virtual Dimensions Studio launched were the need to get the equipment installed with the software and modules uploaded. Next staff needed at least basic training on how to use the equipment so they could be prepared to assist users and troubleshoot as needed. We'll talk some more about this in a couple minutes, but it's also important to have policies and procedures in place. First-time users will also require an orientation to the space, equipment, and the policies and safety information.

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While all of this may sound overwhelming, it is worth it in the end! The escape room has been well-received by students and the Virtual Dimensions Studio is getting at least three groups of users per week signing up and using it.

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As both these projects move forward, there plans for the future. The library plans to continue to collaborate with the Augusta University Computer Science faculty and students as well as the program at Kennesaw State University to continue to develop new modules. They will continue to promote and market the VR services. There will be an open house later this year. Jenn and Lachelle would like to conduct a study on gaming and learning based on their experience with their project. Eventually it is hoped that the virtual reality equipment can be made available for check-out. There is a second system that is not in the Virtual Dimensions Studio.

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If you are considering implementing a virtual reality space in your library, there are some things to consider, such as determining whether there is an appropriate space available. In the case at Greenblatt Library, we appropriated one of our larger study rooms on the first floor near the Information Desk where it could be monitored. The size of the room is about as small as you would want to go. It's important to determine who will have oversight and make sure they have buy-in. Think about the policies you want to set for the use of the space. Lastly, how will users be able to access the equipment and the space. At the Greenblatt Library we put barcodes on the VR controllers and users check them out at the Information Desk. They sign up to use the space with a web-based form linked from the library's home page as well as from a LibGuide about the space. Access Services staff unlock the room for them and the door remains locked at all times.

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Thank you for your time and attention! We are happy to answer any questions you might have.