

**(Virtual) Stage Fright: Lessons Learned from Integrating Virtual Reality into a Public Speaking Course**

Dr. Taylor K. Ruth  
University of Nebraska-Lincoln  
P.O. Box 830947  
Lincoln, NE 68583-0947  
402-472-2807  
taylor.ruth@unl.edu

Kasey Harmon  
University of Nebraska-Lincoln  
P.O. Box 830947  
Lincoln, NE 68583-0947  
402-472-2807  
kharmon3@huskers.unl.edu

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The majority of the public experience some type of anxiety with public speaking and lack the opportunity to practice these skills in safe and constructive environments (Beidel & Turner, 2007; Leary & Kowalski, 1995). Yet public speaking has been identified as a key skill college of agriculture students need to possess before entering the work environment (Easterly et al., 2017). A novel and innovative approach to help students refine their public speaking skills is through virtual reality (VR; Takac et al., 2019). VR provides immersive experiences for users, and while the technology has commonly been used for games, it can also be used for educational purposes and training (Takac et al., 2019). One of the potential advantages to using VR to practice presentations is that VR programs can provide feedback while students practice without the added anxiety of practicing in front of a peer or mentor, which could help build their confidence with public speaking.

### **How it Works**

There are multiple applications on the market focused on simulating environments for presentations, including VIRTUALSPEECH (2022). This application provides full training courses to allow users to practice speeches in a variety of environments and receive real-time feedback while using a VR headset, like the Meta Quest 2. The VR scenarios include a job interview, charity dinner, lecture hall, business meeting, and a conference presentation – users can also upload copies of their slides into the scenarios. There is also training related to eye contact, working through distractions, and impromptu speaking. The VIRTUALSPEECH software will provide users feedback on their eye contact during the presentation, use of filler words, pace, volume, and listenability.

### **Results to Date**

VIRTUALSPEECH was integrated into a public speaking class of 35 students in the College of Agricultural Sciences and Natural Resources at the University of Nebraska-Lincoln (UNL) in spring of 2022. The course instructor had one Meta Quest 2 VR headset to use for the class and a subscription for VIRTUALSPEECH. The VR program was first introduced during the class lab meetings (12 students per lab), and about 3 students from each lab participated in an impromptu speaking training using the VR headset. The visuals from the headset were streamed onto the class televisions to ensure all students could see what was happening in the virtual environment. After introducing and demonstrating the use of the VR software, students were invited to schedule a 15-minute one-on-one practice session using VR for extra credit on their two final presentations. These practice sessions were scheduled outside of normal class time.

### **Challenges & Advantages**

Some challenges were experienced when initially setting up the VR headset with VIRTUALSPEECH. The main issue initially stemmed from trying to stream the VR content to the classroom monitors. Without streaming, students in the audience would not be able to see what was happening and it would be difficult to give students directions without being able to see the screen. The Meta Quest 2 can stream to a Chrome browser, but there must be a secure internet connection. Due to some of the security settings for UNL's Wi-Fi, we had to meet with IT to connect to the internet. Additionally, a Facebook account is needed to use the Meta Quest 2, and the same Facebook account needs to be logged into the web browser for streaming. While this is typically not an issue, it became cumbersome when the teaching assistant leading the labs

needed the instructor’s Facebook login information to stream from the Meta Quest 2. Once this was correctly set-up, the device was able to stream without issue. Another challenge though was this is a “solo” activity, so it was challenging to find a way to offer it to students for practice when only one could use it at a time.

One of the biggest advantages to VIRTUALSPEECH is that it offered objective feedback for qualities like the listenability of speeches. Students received immediate feedback related to their speaking pace and eye contact to help improve their presentations.

**Student Response**

Despite demoing the VR program in class and offering two extra credit opportunities, only four of the 34 registered students participated in the VR activity outside of class. This was somewhat surprising given the initial positive reactions from students, so we asked for feedback at the end of the semester from students about why they did not participate. Their responses can be found in Table 1. For those who selected “Other,” time was the biggest concern in their open-response answers. One student wrote “I just had an extremely busy semester, so any free time was spent doing homework or taking care of myself so extra credit just wasn't quite enough of an incentive to give up that time.” Those who did participate in the practice appeared to enjoy the activity stating how cool it was to be in a virtual environment. Most elected to go through the eye-contact training and were able to identify which side of the room they tended to favor while presenting.

Table 1. *Why did you not participate in the VR practice this semester?*

Reason	%	<i>n</i>
Other	36.4	12
I did not need the extra credit	27.3	9
I did not want to take extra time coming to campus	27.3	9
It did not interest me	6.1	2
The extra credit was not a high enough incentive	3.0	1
I did not understand the purpose	0.0	0

**Advice to Others**

While using VR to practice presentations can be an engaging activity, instructors should consider if they have the time and technology capabilities needed to implement this in their classes before investing in this type of program. Students appeared to understand the role of the VR practice and many expressed interest during class, but they did not feel like it was worth their time to practice with it *outside* of normal class times. For those interested in using this type of program in their class, they should consider finding ways to integrate the program into normal class meeting times to increase participation without adding stress to students. While VR can be streamed to the class TV’s, instructors should consider ways to still engage the audience through reflections or feedback if not engaging in one-on-one practice sessions. Instructors should also give themselves plenty of time to setup their VR system and practice using the program prior to the semester to ensure they are comfortable leading the VR class activities.

**Costs/Resources Needed**

Beyond typical classroom technology, a VR headset, like the Meta Quest 2 (\$299), and the VIRTUALSPEECH program (\$250/year) is needed.

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