

# Learning in the Classroom through Virtual Reality Program

## *“BodySwaps”*

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### **Abstract**

For this project, I was asked to perform a test of four *BodySwaps* modules. *BodySwaps* is an interactive Virtual Reality (VR) learning experience. The topics I chose to evaluate were Communication and Public Speaking and Employability. Through my evaluation process, it was important that I took note of the overall lesson being taught, what worked well and what did not in the module, what improvements could be made in terms of the technical interaction, and any additional features that would be worth adding to improve the overall module. After noting and evaluating these factors, I was to determine how beneficial learning through VR could potentially be within the education setting; more specifically, within the university setting.

### **General Terms**

*BodySwaps*, module, scenario, Virtual Reality (VR)

### **Communication: Active Listening**

During this module, I was instructed to listen to coworkers Dave and Amy's conversation. As the scenario begins, it can be recognized that Dave had just finished meeting with his manager who had provided him with constructive criticism; criticism he

did not seem to be receiving well. Amy didn't pay much attention to what Dave had to say throughout their conversation, and very much invalidated his opinion on the situation. A learning feature that worked well in this lesson was the activity where it asked viewers to identify when Amy wasn't paying attention to Dave talking to her. We had ten chances to identify eight mistakes Amy made such as, lack of eye contact, being on her phone and not being sympathetic towards Dave and how he was feeling.

In these modules, I did not enjoy the background noises and surrounding environment. With the outdoor scenery, there were noises such as birds chirping and sights such as leaves falling that would distract the viewer very easily. If I had the opportunity to improve this module, I would add a save progression button on the left hand side of the screen. I found out the hard way that if you look at the progress in the module and press start instead of pressing the “X” in the right corner then it restarts your progress. Having a save feature would allow for easier user data saves throughout the entirety of the course.

In terms of the technical interaction, I did not enjoy the recorded responses back to Dave. In this body swap the recording was very hard to understand, cutting in and out on the microphone. I also felt like the hand movements were not very smooth and made it very difficult to press buttons and continue the lesson.



*Figure 1. Scene from Active Listening module*

### **Communication: Public Speaking and Presentation Skills**

In this lesson, I was instructed by teachers in the VR world through various public speaking exercises. These exercises carried the purpose of teaching the student how to find their voice while speaking and presenting. This module taught and asked me to perform speaking at different speeds, using different tones and how to handle anxiety when presenting a speech to the public. A scene that I felt was put together well and contributed to my education was one in which the viewer stands at the front of the room in front of an audience of individuals constantly looking at them. This aspect helped to accurately capture the feeling of anxiety while public speaking. It was also interesting to understand that you

were graded on making eye contact. This made the presentation feel very similar to real life and forced me outside of my comfort zone.

To go along with this concept, I felt that this part of the module was graded very harshly. You were asked to make eye contact and use hand gestures. Even though I was very focused in this section and provided many gestures, I still received very low scores in these categories. The headset VR device may need better tracking or be set to have a wider point of view to better assist the user.

An addition I would make would be to add more directions and tips along the way. At times I struggled to understand what was going on in the exercise and at times the modules felt that I was learning them out of order. A technical problem I encountered was that if you took the head set off and sat it down, then proceeded to put it back on, it would ruin your orientation and point of view in the module. At many points I would have to reset the software because I was inside the person's chest visually or wouldn't have control of my character's hands.



*Figure 2. Scene from Public Speaking and Presentation Skills module*

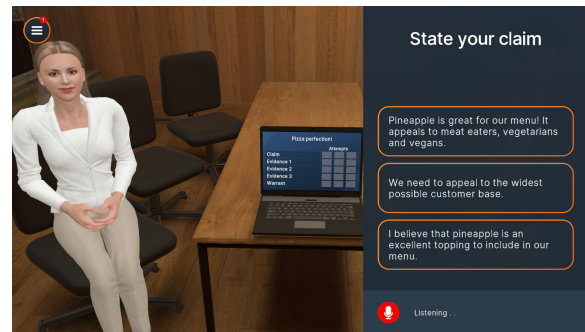
### **Employability: Workplace Communication**

Over the course of this module, we were asked to compete in a competition show with the goal being to get hired for a new job. The program provided many different challenges in communication, planning and learning to speak persuasively. One such challenge was helping break a conflict within a team. A woman and man had an argument about how to plan a trip. After viewing this argument, I was instructed to have a conversation with both of them and find a compromise between the two coworkers. I thought that having a competition aspect in this virtual reality lesson was very enjoyable. It provoked competitiveness within and gave me more motivation to learn and try.

Throughout this module, it felt like some sections were not in the best order and that some skills weren't taught very clearly. An example would be a lack of explanation in how the tone of my voice was being measured and graded. A feature I would choose to remove would be all the cutscenes. For those who don't have the best connection at times, it becomes a struggle to load into some screens, especially since it happens very often.

I felt as though some of the responses you were asked to choose from throughout the section were not written very clearly. It was hard to choose the right answer at times because the options were so vague.

A technical interaction problem I would improve would be to adjust the microphone and key words used when listening to a user's response. At times, the microphone did not pick up my vocal response and would grade me poorly as a result. This adjustment would prevent this from occurring.



*Figure 3. Scene from Workplace Communication module*

### **Employability: Negotiation and Conflict Management**

Through the lesson in this module, I was instructed to negotiate and resolve conflict between two teams. A recommendation given by the instructor was to approach the other team's mindset and thought process. This provided a first person perspective of how the other team feels and thinks about the conflict. From this, we were taught how to produce influence and gain value from a negotiation or conflict.

Furthermore, this lesson taught me how to use the power of persuasion and how to locate sources of influence to pick apart and use in a persuasive argument. I enjoyed the two person narration system throughout the course. The scene was set with one main narrator moving with you throughout the

different exercises of the lesson. An additional interchangeable narrator would appear in different exercises based on what skill or lesson was being taught. I found it to be very helpful to have both a narrator and a teacher in each scene of this module. It helped me to better understand the overall lesson of the module.

I did not enjoy the length of this lesson. This module took longer to complete than any of the other ones I participated in. This made it very difficult to stay engaged in the lesson. One thing I would add would be a feature where you add in your own argument prompt and have the Artificial Intelligence (AI) or computer negotiate and respond to you with an appropriate response. This would make the lesson more individualized and would keep users engaged, especially being that it is a longer module. I experienced trouble trying to adjust the boundaries and point of view of my character. At one point, I had a completely black screen when trying to adjust the camera angle and had to completely restart the software to fix it, in turn my progress up to that point did not save.



*Figure 4. Scene From Negotiation and Conflict Management module*

### **My *BodySwaps* Scenario**

If I was provided the opportunity to create any *BodySwaps* program, I would choose to create scenarios and rooms based on providing educational practice to Nursing and Medical School students. Because I was previously a Nursing student myself, I understand how difficult certain concepts can be to grasp and how much additional time and effort must be put in to be able to succeed in the program. The rooms I would create would be connected with scenarios such as interacting with patients displaying various moods, taking vitals on patients, administering medication to patients, writing reports and inputting data, giving a pass off report to another nurse, simulation of surgery, various simulations of patients reporting problems and requiring diagnoses, and simulation of emergency codes or problems.

These simulations would range in difficulty, testing the most basic concepts to the ones nearly every student struggles with. They would also range in detail, from providing the most information possible to presenting them with an extremely vague scenario. One thing that is commonly reiterated in the medical world is how important it is to know or find the right answer. As it is because you are caring for another human while also carrying their life in your hands.

The scenarios will emulate this belief and provide the student with real consequences which in turn provides the student with the equivalent of real life experiences. Other simulation versions exist for students looking to find jobs in the healthcare field

however, most if not all of these experiences are through a computer screen, keyboard and mouse. Being that these experiences are taking place in a virtual reality, the experiences gained from these types of simulations could provide encounters similar to experiencing a situation hands on.

An example of a scenario that could be presented to a nursing student would be the admittance of a new patient to the unit he/she works on. This would provide the student with practice in more than one area. These areas could be documenting patient information and vitals, administering medication, working with the patient to set up a care plan, performing therapy practices with the patient, communicating with other specializations or professions, discharging patients, and so much more.

The narrative of this scenario would be based upon the actions taken by the student. If they make the right decision, satisfaction will be displayed through the patient. If they make the wrong decision, the patient will experience the consequences of this mistake. In turn the student will have to fix their mistake and work their way back to a satisfactory level.

An example of a scenario that a medical student might encounter would be a general surgical simulation, such as an appendectomy. The student would have two other surgeons in the operating room with them. They could be as much help as the student would require based on the level of difficulty they choose. If the student was encountering an appendectomy for the first

time, the other two surgeons could step by step direct the student through the correct way to complete the procedure. Should the student decide they know the surgery at an expert level, the two surgeons can be there to provide hints or be under the direction of the student themselves.

The narrative would also be based on the actions taken by the student; correct choices provide a form of satisfactory feedback from the patient and/or other surgeons. Failure to complete the right actions would generate negative feedback displayed through surgical complications with the patient. This scenario would provide them with the background skills in areas such as knowing what surgical tools to use and when to use them, how to communicate with others and work together, ways to work through when complications arise, and how to administer life saving measures.

## **Conclusion**

Due to this project with *BodySwaps*, I was able to enhance my learning and take my understanding to higher levels through the use of Virtual Reality simulations.

*BodySwaps* provided me with an experience equivalent to hands-on work and allowed me to learn in an internally new way. I found enjoyment in the recording and swapping roles aspects of the lessons. VR has the potential to benefit the education world greatly. It can change more than just learning but can also be a gateway to training, studying and help students grasp scenarios that may have otherwise not been attainable.

The use of VR can be highly beneficial in any classroom setting, especially a university setting. The implementation of learning through VR would allow students to practice anywhere they want and be fully immersed in their studies. It would also allow for additional practice on concepts that a student might have had trouble grasping during class and would like to work on additionally outside of class. Having the access to a VR source to complete lessons through virtual reality can prevent a student from falling behind while still providing them with the equivalent of real life experience, if they are sick or cannot make it to class.

This would also be beneficial for select social groups such as commuters. If they want to work on a concept that would be better grasped in a classroom but are not on campus, education through VR can assist them in doing so. In conclusion, the benefits of virtual reality through programs such as *BodySwaps* have the potential to positively change education in a very convenient way.

## **Reference**

1. Bodyswaps: VR soft skills training provider. Bodyswaps®. (2023, November 8). <https://bodyswaps.co/>