

2012 PRAC Assessment Grant Summary of Progress

“Assessing Student Interviewing Competencies Through Second Life”

Submitted by

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Introduction

The PRAC grant provided funds to create a “standardized client” in the form of a “chatbot avatar” in the virtual environment of “Second Life.” The power of the virtual environment, in this case Second Life, lies in its immersive quality and the resulting “being there” feeling for students. The details and natural look of the simulated environment and the avatars that interact in the environment further enhance the experience. For this project, students entered Second Life as avatars they had selected and often, modified to their choosing. These avatars were 3-D representations of themselves that they were to manipulate or “drive.” The students were then asked to interact with the chatbot created for this project.

Each student “interviewed” the chatbot using their own avatars, while communicating through text. The purpose of the interview process with the chatbot was to assess aspects of student interviewing competencies. In reality, a standardized client is an impossibility because of the natural variation in client contexts and narratives. The value of an artificial, standardized client in a virtual environment lies in the ability to program the chatbot avatar to a desired age, gender, situation, and much

more. For this pilot project, the chatbot was programmed to play the role of a client for a foundation level social work practice course.

Development of the Chatbot

The creation of a chatbot required three basic elements:

- 1) A bot (an avatar not driven or manipulated by a person)
- 2) A script, or programming, for the bot
- 3) A place to situate the chatbot

First, the investigators of this pilot study hired programmers to build a Second Life avatar/chatbot with the scripted client responses we would create. The programmers located a suitable bot/avatar with the appearance of a middle aged woman with dark hair.

Second, we needed a script for the bot. The investigators did not know how to program, and we learned from the programmers what the possibilities and limitations of such programming/"scripting" were in Second Life. We had to work within the parameters that the programmers gave us, as well as our funding limits, and we created a script to be programmed into the chatbot that we named "Jenny."

The script we gave the programmers worked like a decision tree, such that students could choose response options, using text, to statements made by the chatbot "client." The chatbot's words would appear via a "HUD" (heads up display) on the student's Second Life viewer. The dialog began in this way: Jenny: "I really need help. I don't know where to start." The situation programmed into the chatbot has the client Jenny presenting several problems. Her husband lost his job and they have lost

their house as a result of a lawsuit from a traffic accident. Her husband has moved north to find work and Jenny is staying with and caring for her mother-in-law, who has Alzheimer's disease.

The student could respond by selecting one of two options: 1) I can see that something is really troubling you. We can start anywhere; or 2) I'm glad you are here. But first we need to get some background information from you.

The first response is more helpful than the second response. The first response includes a reflection of feeling that demonstrates empathy. The second response, in contrast, omits any empathy and simply goes straight for data collection. When the student had selected an option, the dialog would move on to another statement by Jenny, to which the student could offer a helpful, or alternatively, a less helpful response. From the very first response, there was a "more helpful" and a "less-than-helpful" response choice. Rarely throughout the scenario was there a "terrible" response option, thus making the whole task more challenging. The student's responses were the result of choices they made to be empathetic or to demand information; to follow hints of alcohol abuse (that were red herring-type detours) or to focus on more relevant aspects of the unfolding client narrative. The simulation allowed the student, at several points, to go back and improve responses that may have offended or at least irritated the client. If the student choices were too negative, Jenny might tell them that she was "out of here" and the student had no recourse but to return and start over from the beginning.

The third element we needed was a place, a location, for the chatbot. A suitable visual environment had already been created, which was a “clinic” situated above the Valdosta State University Second Life Island. The clinic, designed by Dr. Tandy as an interviewing laboratory, was a large, attractive building (landscaped and with furnishings and decor) made up of a long hallway with several rooms that included a simulated hospital room, jail cell, home room with kitchen and living room, and several individual and group counseling offices. At our direction, the programmers placed the programmed chatbot Jenny in a chair in an alcove of the clinic. They also placed beside the chair a box containing the HUD and note card with information about the chatbot and how to use it. In the alcove was another chair in which the student’s avatar could sit (see Appendix A for screenshot of the alcove and Appendix B for note card).

Once the chatbot was in place, we tested it and several times had to ask the programmers to do some de-bugging. But after some further testing, we decided it was time to try it out with students.

Orienting Students to Second Life and the Chatbot

Before testing the chatbot with students, we had to ensure that they had been oriented to Second Life. This pilot project was done with students already oriented to and actively using The Valdosta State University Second Life clinic for their practice interviews in a social work interviewing course. They had not extensively used Second Life outside of the clinic, but they knew their way around the clinic quite well.

However, they needed orientation and instruction about the chatbot. One of the investigators, Dr. Tandy, made a video tutorial with Dr. Tandy’s avatar “Eve Maven”

giving instructions for using the chatbot. The tutorial ends with the directive for students to submit the assignment in the way their instructor has told them to submit it, thus leaving open the possibility for using the video as a tutorial for other assignments based on the chatbot. The tutorial includes a view of the clinic, the alcove and the chatbot, and how a student might sit and conduct the interview with "Jenny."

This is the link to the video in YouTube: <http://youtu.be/jydukbzloss>

Trial Assessment/Assignment

A technical limitation for this pilot project was that it was not possible to record student interaction with the chatbot. This was unanticipated, but it was learned that to record student interactions would have been beyond the financial scope of this particular project and grant. The assigned activity was for Dr. Tandy's foundation level social work interviewing course in the MSW program at Valdosta State University. The course was hybrid/blended. All students (20) in the course were given the following directions:

1. "View the video tutorial (described above).
2. Enter Second Life with the avatar you use for your other role-play practice interviews for the course.
3. Go to the clinic and to the alcove where the chatbot is located.
4. Following the instructions in the tutorial, interact with/"interview" Jenny.
5. Take time to do the interview sequence from start to finish several times. Make different choices, some that you deem more helpful and some that you deem less helpful or even very unhelpful."

Students were directed, after the Second Life interview was completed, to "Write a reflective report of 2-4 pages. Points will be earned for following directions and for thoughtful, well-written responses.

1. Describe your experience, your feelings and what you learned doing these interviews using different choices for responses. How did Jenny's responses differ as you varied your choices for your own statements and responses? And what did you learn from that?
2. What was your experience of navigating through this interview of "Jenny" in Second Life? Did you have any particular difficulties with instructions about interacting with Jenny?"

Within a month, the students met in a monthly face to face class where a discussion (quasi focus group) was held about the assignment.

Results & What We Learned

For this very early trial of the prototype chatbot, no quantitative data was collected. On their "reflective papers," students reported that they found it intriguing to experience how their interviewing errors affected the client Jenny. Several remarked, "She just got up and left!" Almost all of the students reported that they thought interviewing Jenny was a valuable learning experience. They could clearly see the effect of each of their response choices on the client's own responses, which indicated her feelings and behavior. After experiencing the chatbot express feelings of irritation or hurt at their responses, students reported that they went back repeatedly through the interview process to see the various resulting responses, practicing until they "got it

right.” They further reported that they enjoyed the experience and found it engaging and “fun” to be able to see the results of misplaced responses and not risk such errors with a real client or even in a role play with a student, where they are trying to “do it right.”

In terms of navigating Second Life, students had few difficulties, it seemed, because they had been using Second Life and the clinic already and were quite familiar with it. Even if they had not been familiar with Second Life, however, a very minimal orientation would have been necessary for them to learn how to simply walk their avatar into the alcove, sit, and work the HUD correctly.

In the face to face class discussion, it was apparent that students enjoyed this experience with Jenny the chatbot, and enjoyed talking about it in class. As an activity for class, it was different, revealing, and “not as serious as some interviewing.” They again talked about how interesting it was to see how they could create a successful interview, or cause a failure, by their responses. They seemed to feel some control over the process.

At the beginning of this pilot project, we had anticipated being able to collect “real time” data in terms of automatic recordings. Given the funding parameters, and given the limits of Second Life itself, it turned out to not be possible to obtain complete transcripts or automatic recordings of interactions between students and chatbot. Nevertheless, it was apparent that students benefited from their experience interviewing the chatbot avatar Jenny. They could make mistakes and try again without hurting a real person. They could see that seemingly small changes in their

responses resulted in large effects in terms of the outcome of the interview. It may have been advantageous to not have complete transcripts or automatic recordings. It gave students the freedom to make mistakes with no negative consequences. They could have free rein to experiment and see the results.

They also talked about having this sort of experience in Second Life, where they perceive interaction to be engaging, feeling like "I'm really there." Their enjoyment in doing this activity in Second Life may have been enhanced by their having already been familiar with the environment and how to interact within it.

What's Next

This project used a prototype standardized client and was modest in its scope. We anticipate further development could occur with further sophistication of the chatbot in terms of quantity and elaborate design of the communication that is possible in the programming/scripting. It may also be possible to program a more elaborate chatbot such that the student responses can be captured as the chatbot responds.

Further application of such an interactive chatbot may be in other social work courses using chatbots programmed with scenarios/situations involving child welfare, gerontology, and more.

Appendix A



Dr. Tandy's avatar Eve Maven in alcove of clinic with the chatbot Jenny seated in the chair.

Appendix B

Chatbot Notecard

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Social Work Interviewing Project

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Welcome to the client dialog simulation. To begin, open your Objects folder contained in your Inventory (briefcase icon). Select the "Dialog HUD - CT2011" object and Wear it. Doing so will attach the HUD to your screen. Now you are ready to interact with the bot client, seated in the chair.

The blue section of the HUD represents dialog from the bot client. Your interaction choices are found in the white areas below, each choice preceded by a red dot. As you choose session replies, the dialog will change based upon your answers.

The compass area at the top of the HUD is not applicable for this pilot simulation. The i, or Information button, will collapse the HUD for a greater viewing area.