# Short Research Papers

# Practicalities of Virtual Learning Environments

Alan Simpson

*Miyazaki International College*

The author joined a training course to learn how virtual learning environments could be used to learn English for Specific Purposes. A virtual bank was created and undergraduate students used an avatar to test the tasks. They gave feedback on the environment, the tasks, and the learning opportunities. The outcomes were that it would be good for student motivation, but the challenges include getting students online and building curriculum goals into the virtual tasks.

In virtual learning environments (VLEs) students obtain instant feedback about whether they can do the task, and can learn language skills incidentally while they are focusing on completing a task (Cinganotto, 2019). Werbach and Hunter (2015) categorized the elements of games and tasks as being: (1) the dynamics, (2) the mechanics, and (3) the specific components. The dynamics construct student motivation through emotion, narrative, constraint, and progression, whereas the mechanics are driven by creating challenges, cooperation and competition, while the specific components include avatars, badges, levels, points, and teams.

The number of scientific works published annually on education and gamification has been increasing every year (Thomas et al., 2018). Lin and Lan (2015) studied trends in language learning in virtual reality environments from 2004 to 2013 in computer assisted language learning journals. They found that the most popular topics were interactive communication, behaviors, beliefs, and task-based instruction. Foreign language teachers think that virtual reality technology can motivate students' interest in language learning through their immersion in listening and speaking contexts (Peixoto et al., 2019). Furthermore,

there are various uses of technology, such as wikis, online applications, corpora, and blogs to assist learning English for Specific Purposes (ESP) (Dashtestani & Stojkovic, 2016).

Therefore, the author joined a course on immersive learning environments to learn about their potential for students' language learning development, especially ESP, such as in the customer service industry. The course is called Games Used IN Engaging Virtual Environments for Real-time language Education (GUINEVERE), which is a European Union Erasmus project by the University of Lancaster, Italian University Line, Istanbul University, Let's Talk Online, and 3DLES (http://guinevereproject.eu). The five-week course was for teachers to learn and investigate the kinds of tasks that could be created for language learners in virtual worlds (Free online teacher training courses, 2019). The author's research question was, "What are the process and challenges for a teacher to learn and then use GUINEVERE in their teaching contexts?" GUINEVERE uses the open source platform OpenSimulator (http://opensimulator.org/wiki/Main_Page) to create and simulate virtual environments. This is similar to Second Life (https://secondlife.com/) except that GUINEVERE does not have commercial aims.

## Methodology

The five module course was conducted over five weeks, with five live one-hour sessions and approximately 15–20 hours of reading and self-exploration. This included: (1) the principles of gaining access to OpenSimulator, becoming familiar with the environments, and studying the basics of game design theory; (2) role playing collaborative tasks and simple object building; (3) designing and developing more complex objects; (4) creating short programs or scripts for objects to perform a certain function; (5) developing a game or environment to enable students to learn and practice using language by completing various tasks. At each stage, digital reading materials were provided to deepen knowledge and understanding of building and designing simulation games.

The author's aim for the five-week course was to build a virtual Japanese bank for learners of English who work at a local bank. The three primary

tasks were trying to simulate opening an account, withdrawing money, and then transferring it. The build took approximately eight hours, and after this development, five university students (S1-S5) were asked to complete the tasks on separate occasions. There was one Taiwanese male and four Japanese females, all with CEFR B1 level English. The task performance was recorded using Screencast-o-matic (https://screencast-o-matic.com/). They were then asked three interview questions: (1) "What did you think about the VLE?" (2) "How were the tasks?" and (3) "What did you think about using this kind of platform for language learning?"

## Results

### Training Course

In the first module, the author gained access to GUINEVERE by using a viewing platform called Firestorm (https://www.firestormviewer.org/). The name GUINEVERE was developed because there is a castle and many tasks ask questions about the Knights of the Round Table (Green, 2008). The first task upon entering GUINEVERE was to learn how to make the avatar walk, run, fly, read tasks, click on objects to make something appear, change the appearance of the avatar, and interact with chatbots (objects which look like avatars but could only respond to basic typed questions). In the second module, the teacher-trainees visited another virtual learning environment within GUINEVERE called Movie Island, where they had to complete a series of 'complaining at a hotel' gap fill tasks.

The final three modules were based on learning how to build objects and attach or embed various items. The simplest build object was a cube, which could be changed into two-dimensional squares or walls by adjusting the dimensions. A picture image could then be attached. Similarly, a program generator website called Script Me (http://www.3greeneggs.com/autoscript/) was used to create programs for objects so that when an avatar clicked on them or walked nearby it could: (1) make objects appear; (2) give something to an avatar, such as a notecard; (3) display phrases in the textbox chat; (4) play a sound; (5) prompt an avatar to load a URL in a web browser. Furthermore, audio recordings could

be created and modified using GarageBand for Macs (https://www.apple.com/ mac/garageband/), and then attached to an object, too.

## Course Outcome

The virtual bank consisted of walls, a counter, tables, chairs, plants, lights (sourced from various furniture boxes supplied by the trainers), ATMs, and bank tellers, who were not avatars nor chatbots, just simply objects in the realistic shape of avatars, and with audio files attached (Figure 1). To open a bank account, the person operating the avatar clicked on the bank teller and a notecard popped up with instructions to fill in a bank form, simulated with the survey program Google Form (Figure 2). To withdraw money, they had to go to the ATM which linked to a Quizlet vocabulary matching activity (Quizlet enables students to learn vocabulary with digital flashcards, games and tests). After that, the students listened to the teacher reading a customer/staff interaction and filled in the gaps in an HTML5 Package (H5P) website cloze passage (H5P allows people to create, share and reuse interactive HTML5 content). To transfer money, the avatar had to click on another bank teller, then a photo of an official bank money transfer form popped up along with a dialogue written on a notecard for two students to role play together.

The student interviews revealed that S1 thought that "the virtual world will make people more motivated," and S2 said that it was "good quality and motivating." S3 thought that the tasks were good because they were linked.



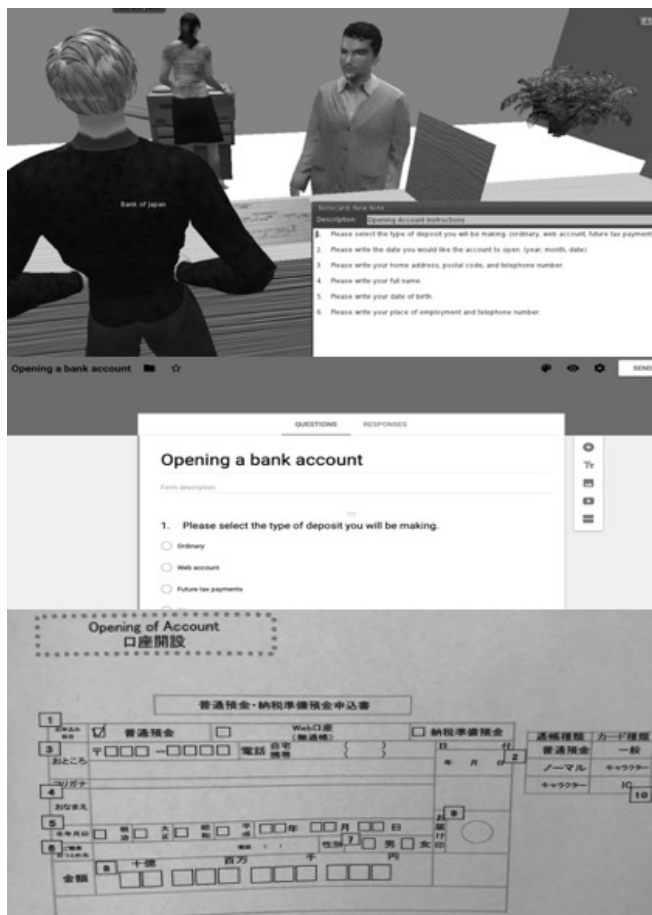*Figure 1.* An example of what the virtual bank looks like.

*Figure 2.* A example of the bank form students were required to fill in with the instruction about how to do this.

However, it was "difficult to move" the avatar, and she wanted more space and less furniture. S4 wanted more avatars, more functionality to turn on the mic and role play, and to be able to connect to the teacher online. S4 also asked about other contexts, such as a hotel reception, and he asked whether an iPhone could be used. All students wanted more tasks, with some competition, too. The students commented that the learning opportunities were good for vocabulary learning, but S3 wanted Quizlet writing for spelling practice. Furthermore, S3 suggested that if the learners were low level, it would be difficult, so clearer task instructions would be better.

## Discussion

Initial results suggest that the VLE was motivational for the students, and using more avatars would increase the number of students interacting as virtual bank tellers and customers. This would create a more authentic dialogue exchange via computer microphones. However, the challenge of getting a class of 20-30 students to use this application is that it requires computers with a minimum of 1.5-GHz processors, 1GB of memory, and avatar accounts to be set-up. This may also constrain the student's request to use iPhones. In January 2019, Linden Labs, the proprietor of Second Life, was still developing a mobile app (Pey, 2019) for users to be able to use this platform with their mobile phones. Another possible solution would be to make guest avatar accounts for groups of five or so students to operate one avatar, and collaborate on how to complete tasks together.

It would now be possible for the author (or any teacher trainer who went through a similar training course) to be able to create other virtual environments, such as hotels, restaurants, or company meeting rooms. The main challenge is how to give clear rewards, points, clues, or instructions, as suggested by Werbach and Hunter's (2015) specific components of the task, and then to gamify the progression through a sequence of tasks to build a curriculum. Students were eager to do additional self-study and follow-up activities, so building extrinsic motivators like badges, or points, to give access or knowledge to get to the next stage, would be ideal. There is also potential for students to be involved in the building and quest making process and increasing the amount of self-controlled learning, which could be tailored for the course curriculum goals.

## References

Cinganotto, L. (2019, May 12). *Guinevere teacher led course: Week 1* [Webinar].

Dashtestani, R., & Stojkovic, N. (2016). The use of technology in English for Specific Purposes (ESP) instruction: A literature review. *Journal of Teaching English for Specific and Academic Purposes*, *3*(3), 435–456.

Free online teacher training courses. (2019, October 2019) [Project description]. http://guinevereproject.eu/free-online-teacher-training-courses

Green, R. L. (2008). *King Arthur and his knights of the round table*. Penguin.

Lin, T. J., Lan, Y. J. (2015). Language Learning in Virtual Reality Environments: Past, Present, and Future. *Journal of Educational Technology & Society, 18*(4), 486–97. www.jstor.org/stable/jeductechsoci.18.4.486

Peixoto, B., Pinto, D., Krassmann, A., Melo, M., Cabral, L., & Bessa, M. (2019). Using virtual reality tools for teaching foreign languages. In Á. Rocha, H. Adeli, L. P. Reis, & S. Costanzo (Eds.), *New knowledge in information systems and technologies* (pp. 581–588). doi.org/10.1007/978-3-030-16187-3_56

Pey, I. (2019, January 10) Linden Lab confirm Second Life iOS client in the making [Web log post]. https://modemworld.me/2019/01/10/linden-lab-confirm-second-life-ios-client-in-the-making/

Thomas, M., Cinganotto, L., & Philp, H. (2018). Digital game-based language learning in 3D immersive environments: The GUINEVERE Project. *Innovation in Language Learning International Conference Proceedings, 11*. https://conference.pixel-online.net/ICT4LL/files/ict4ll/ed0011/FP/3740-ICL3451-FP-ICT4LL11.pdf

Werbach, K., Hunter, D. (2015). *The gamification toolkit - dynamics, mechanics, and components for the win.* Wharton Digital Press. https://wsp.wharton.upenn.edu/book/gamification-toolkit/

## Author bio

*Alan Simpson is an assistant professor at Miyazaki International College, and the JALT Business Communication SIG Coordinator. He has an interest in developing materials for English for business purposes, including pragmatic functions, politeness, small talk, turn taking, and power strategies used in business English as a lingua franca contexts. <alanmarksimpson@gmail.com>*