# A Virtual World to Promote Experiential Learning through Role-play in Distance Education

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**Abstract.** Distance education still has challenges that put it in a disadvantage regarding the traditional face-to-face mode of instruction, including the lack of professional practices. This exploratory research conducted with 24 students presents the initial findings regarding the use of a Virtual World to promote Experiential Learning through role-playing. Feedback was gathered regarding the difficulties of using a new platform, but satisfaction with the experience.

**Keywords:** Virtual Worlds, Experiential Learning, Distance Education.

## 1    Introduction and Method

In order to help with common limitations faced by distance education students, as the main textual web virtual learning environment and the lack of professional practices, we present the design of a Virtual World (VW) using OpenSimulator, which is a free user-friendly open source platform.

The VW was created towards the Financial Mathematics discipline, following a role-playing approach. It has a narrative that revolves around the context of a fictitious accounting firm. The student receives the role of a first-day trainee and is challenged with quizzes in order to be admitted by the firm, passing through five sectors. The Kolb's Experiential Learning [1] was the pedagogical model chosen to guide the VW development, with stages designed as follows.

• **Concrete experience:** students are inserted in a practical situation related to their future professional life (post-training), which contextualizes the knowledge.

• **Reflective observation:** as they experience it, students make observations about the simulated work routine and interpret the situations.

• **Abstract conceptualization:** students are faced with challenges, being asked to apply the theoretical knowledge acquired to continue the activity.

• **Active experimentation:** at the end, students receive a different role within the simulation, being asked to respond to a slightly more complex exercise.

At each sector, the avatar who represents the "chief" explains a little about the working routine and asks the student to sit in a chair to begin a quiz composed of three multiple-choice questions, developed using heads up display (Figure 1-Left). In the end, the messages pronounced by the "chief" indicate the next room where the student should go, and so on, in a concatenation of events.

The simulation culminates with the student reaching the goal of obtaining the internship, arriving in a room where several "employees" (NPCs) are already actively "working", with a workstation reserved for the student (Figure 1-Right).

**Fig. 1.** Heads up display quiz  (Left) and student seated in the workstation (Right).

The sample consisted of 24 students with a mean age of 34 years (M=34, SD=9.2), being 22 (~61%) female, from the Technical Course in Administration, whom after the activity responded an online form with questions regarding their perceptions.

## 2      Results and Conclusion

Five main aspects emerged in students general perceptions, addressing the pros and cons of implementing a technology different from what they are accustomed to.

**Satisfaction.** They defined the VW as constructive and productive, very different from platforms they already tested, and that it seemed that they were being personally interviewed in the company.

**Learning benefits.** They said it was very interesting for learning, mentioning the possibility of reviewing the content, and that it thus is good for practicing knowledge.

**Novelty factor.** They mentioned the lack of ability with the VW navigation, but that after understanding the proposal it was accessible.

**Design improvements**. They reported some confusion with the textual narrative, suggesting a dialogue bubble to facilitate it. They also mentioned getting lost in the VW sometimes.

**Technical difficulties.** They reported problems with the installation of the viewer, that is should be "less heavy". In addition, delays inherent of slow Internet bandwidth were mentioned, as "the handling of the virtual doll (the avatar) left to be desired".

To conclude, overall students showed enthusiasm, feeling that the activity seemed like the real work scenario, and that it was useful to practice the knowledge. Although exploratory, the research is a field study, not a laboratory controlled one, with results that reflects the actual effect and experience of the VW intervention with real students from distance education.

## References

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