Web-Based Role-Play Simulations and Foreign Language Learning: An Attitudinal Survey

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Abstract

Role-play simulations have provided a multimodal interface in many learning environments because of their experiential component and because they can be adapted to different learner needs and ways of learning. These computer and Internet resources serve mainly to assist human-human interaction, while human-computer interactivity moves into the background. Computer-mediated communication, between groups or individuals, offers possibilities that have only recently been explored and continue to develop, creating language learning opportunities outside the real classroom.

This paper outlines the rationale and unique benefits of simulations and describes one such language simulation designed at the Universitat Jaume I in Castellón, Spain. The simulation entitled *A Trip to Australia* was generated with *Fablusi*™, a Web-based role-play simulation generator that uses an innovative "learning architecture", combining the power of goal-based learning, role-play and the capabilities of the World Wide Web for facilitating learning and teaching. The objective of this simulation was to provide ample practice to reading and writing skills in English as a Foreign Language (EFL).

A small-scale empirical study was conducted with a sample of Spanish EFL students at the Universitat Jaume I in Castellón, Spain. The treatment consisted of a synchronous communication module followed by an asynchronous communication one. Students had to accomplish a series of instructional objectives to complete the simulation successfully over a period of two weeks.

This paper reports on the results of a questionnaire administered to the participants to evaluate attitudinal aspects related to their usage of this instructional technology. The research questions of this study have been structured around the following issues: (1) Students' attitudes towards aspects related to the instructional software used; and (2) Students' attitudes toward issues dealing with instruction through Web-based learning environments in general.

Keywords

Web-based instruction, simulations, foreign language learning, attitudes, perceptions

1 Introduction

Web-based education, as part of the general e-learning revolution is rapidly becoming, not only the hand-maiden to class-room instruction but the main instrument of education being supported by class-room environments. Role-plays on the other hand have a long tradition as part of class-room instruction but never really as a major pedagogic tool but rather as a useful tool used by some teachers in a non systemic way.

Over the last ten years, however, online role-play simulations have become increasingly used in a variety of instructional contexts and disciplines – Political Science, Nursing, Early Childhood Teaching, Instructional Technology, strategic thinking and many more (cf. Literature Review) and now Second and Foreign Language Learning (SLL/FLL).

There are a number of institutional and pedagogical reasons for this increasing utilization of online role-plays. Perhaps the most significant is the pressure on secondary and higher education institutions to provide interactive online material for courses. The imperative of becoming familiar with online tools and the demand from students to have asynchronous access to course material have both created pressure on teachers to find and use interactive tools to motivate and generate student learning interest. An allied reason for this increase is that the gaming generation has come of age and are seeing the potential of games and simulations for teaching and learning in both training and educational contexts.

From a pedagogic point of view, the experiential component of online role-plays makes this particular tool highly attractive. For political science, for example, understanding the pressures and potential lines of actions of political leaders and states is better understood when students confront the dilemmas faced by leaders and stated as part of game in which they have to make the decisions and incur the consequences rather than reading it in a book or listening to it in a lecture. Similarly, for English as a Second Language (ESL) students, the very act of reading, writing and discussing issues within an authentic context helps them to acquire the language skills in a motivating and engaging way.

2 Literature Review

Though the literature on games and simulations in education and training has been rapidly growing over the past 10 years (Prensky 2001; Aldrich 2004), the research literature on role-play simulations has been almost non-existent. Increasing interest over the last few years, however, suggests that role-play simulations are gaining adherents in a number of disciplines as an effective pedagogy.

Online role-play simulations first appeared at the University of Melbourne in early 1991 under the guidance of Dr. Andrew Vincent (Vincent and Shepard 1998; Alexander 2005). On the basis of the pedagogy underlying role-play simulations (Linser, Ip and Naidu 1999) more research emerged that showed the utility of online role-play simulations in a number of disciplines: Teacher Education (Linser, Waniganayake and Wilks 2004; Waniganayake, Wilks and Linser 2006), Literature (Noggle 2005), Development Studies (Hintjens 2005), Nursing Education (Nelson and Blenkin 2007), and Political Science (Shaw and Mendeloff 2006; Linser 2004). Though research is still comparatively thin, the importance of research into the area has not gone unnoticed as evidenced by the work of Professor Wills at the University of Wolongong (Wills and McDougall 2006).

Though research is still thin and instruments for measuring the utility and effectiveness still in the early stages of development, the research clearly shows that students find role-play simulations very useful as evidenced in all the above research. It was therefore our objective to provide a more rigorous instrument for measuring student attitudes to verify the claim that students found role-play simulations useful for their learning, and more particularly learning a foreign language.

3 Methodology

This pilot study aims at assessing students' attitudes towards online role-play simulations as a means of instruction to enhance communicative skills in the foreign language. With that purpose in mind, a simulation was designed and developed. Students had to go through it for a period of two weeks and a half. Their attitudes were assessed after the treatment had been completed. The procedures used combined both quantitative and qualitative methodologies.

3.1 Population and sample

Forty eight English I and English II students participated in the study. All of them were Chemistry and Chemical Engineering majors at the Universitat Jaume I, Castelló, Spain. All of them had an intermediate proficiency level in English. Learners were given extra credit for their participation in the study.

3.2 Research design

The study conducted was a small-scale longitudinal study. The study was structured in three different stages, namely (1) introductory stage, (2) synchronous module, (3) asynchronous module and debriefing session. Learners were briefed on the contents and mechanisms of the simulation in the first stage, which lasted approximately half an hour. The synchronous module allowed learners to communicate only by means of the chat tool. The duration of the second module was one hour and a half. The third stage allowed learners to communicate using asynchronous ways of communication, and it lasted two weeks. Students had to log in every day. The treatment finished with a one-hour debriefing session where feedback was given to learners on their interventions throughout the treatment. The attitudinal questionnaire was administered at the end of the asynchronous module. The results from the questionnaire were complemented with the results of a structured interview carried out at the end of the debriefing section.

3.3 Instruments

Data were collected in this study by means of two instruments, namely an attitudinal survey (cf. APPENDIX) and a semi-structured interview. The former was a 56-item questionnaire making up 14 variables (see Table below). A 5-point Likert-type scale was used where 1 = strongly agree and 5 = strongly disagree. This questionnaire was administered after the treatment, and data were analyzed statistically. The latter aimed at collecting aspects of having worked with the simulation on the part of the students and it was conducted face-to-face, right after the debriefing session.

Factors of the attitudinal questionnaire:	
1. OVERALL	Level of **student satisfaction** after having worked with the simulation
2. GNRALOP	Students' general attitudes towards the **design** of the simulation
3. TIME	Students' perceptions towards the span of **time** allocated to students to cover the simulation objectives
4. PACEWORK	Students' opinion regarding the **pace of work** when exploring the simulated learning environment
5. USERFRI	Students' perception about the **userfriendliness** of the simulation
6. LEARNCNTRL	Students' views towards the **learner's control** over the instructional process / material
7. ONEPRCOMP	Students' views toward the fact that there was **one computer per student**
8. GROUPINSTR	Students' views towards **group instruction**
9. COMPINTERAC	Students' perception toward **interacting via computer** rather than face-to-face
10. TRANSLAT	Students' views toward having been given access to the **Spanish translation** of the contents of the simulation
11. COMTOOLS	Students' perception towards the need of additional **communication tools**
12. NOTETAK	Students' attitudes towards not having been allowed to **take notes** during the simulation
13. READING	Students' views towards telematic simulation as a suitable instructional environment for **enhancing reading comprehension** skills among foreign language learners
14. WRITING	Students' views toward simulated environments as means to **improve writing** skills in the foreign language learning context

3.4 Software description

We used the *Fablusi*™ the role-play simulation platform to create a role-play simulation entitled *A Trip to Australia*. The software enables setting up roles with each role with specific information pertinent to their role, create interaction spaces (threaded discussions), link in external resources, create tasks for the roles to complete, set the scenario and enable roles to communicate using an internal *SimMail* system, a synchronous chat system, and a file sharing system. The software also enables progress monitoring of the roles interactions and an assessment assistant that enables the teacher to mark contributions. Teachers, or moderators, can also interact with the roles using the above communication tools.

3.4.1 Scenario

To create an authentic context for students, one which they could identify with, our scenario put the student in the context of a travel agency that was contracted by the University Jaume I Student to offer an Australia package for students. The package, which was the object for the roles to create, was meant to combine studying English with pleasure (i.e., traveling around Australia) in summer time.

The students played the roles of three executives working for three different branches of Australia Travel Agency (ATA), based in three different cities. The main boss (lecturer) in Madrid

oversaw the development of the student holiday package to Australia which required the executives to create a collaborative report on what the students would get.

To do this, the roles needed to organize a three-week trip to Australia for themselves, on a limited budget of € 9.000 to check out potential places and things to do that would be included in this package and write the report.

They were provided with a list of English language Web-sites where tourist information on Australia could be useful for organizing a trip around Australia (e.g., maps, sightseeing monuments, museums, excursions, photo tours, local food, festivals and folklore, night life, weather and temperature, etc.)

3.4.2 Modules

The simulation was divided into two modules, a synchronous one and an asynchronous one. The aim was to see how students responded to these two different communication modes.

The synchronous module was conducted at a computer lab and lasted for one and a half hours using the internal chat tool of the *Fablusi*™ software. The task was to develop a role profile, publish it for all to read and organize how the team would work together. The roles needed to find out what the rest of the people were like in an attempt become more familiar with the other travelers. The students, as the different roles, also needed to reach consensus on various issues: What sort of accommodation would they book throughout the trip? Would they be sharing the same room?; What would they do once they got to a city? Further, a list of discussion topics was provided that included:

- Should they be together at all times?
- Are they going to do intensive sightseeing or will they take it easy? In other words, what is the sightseeing pace going to be like?
- Is it very important to do a thorough visit of every single city / town?
- Are they interested in cultural activities (museums, exhibitions, etc.)?
- Should emphasis be put on partying?
- What time are they planning to get up every day (if you want to make the most out of the day)? Is it important to get up early, or, on the contrary, will they be happy getting up late and going sightseeing later on?
- In what sort of places will they be having breakfast / lunch / dinner if they want to cut down on expenses?
- What means of transportation will be used in order to travel from city to city or within the city?
- How are they going to allocate responsibilities like getting flight information and purchasing tickets, checking accommodation availability within a specific range of prices and book these accommodations? Who should conduct research on the various sights to be covered in each city?

The pedagogical objective of the synchronous module was for the students to discuss the above in English by using the chat tool, to articulate and write their ideas and hence practice the language in real

time within an authentic context. The emphasis on real time meant that responses had to be fairly immediate thereby reflecting their current knowledge of the language.

The asynchronous module was not restricted to a particular location and students could log in wherever they had Internet access. They were required to log in during four different days, half an hour each day, and to fulfill a series of assigned objectives. They first needed to collect and evaluate information in accordance with the scenario. Then they needed to evaluate places and things to do in Australia and prepare the student holiday package in order to submit their final report to the Student Union. In doing so they needed to make various decisions based on the information gathered through the various links provided on Australia and were cautioned that this information was not enough to cover all their needs and further encouraged to conduct their own search on the Internet.

The final goal was to reach a consensus on the following issues: how to administer the budget money, what places to visit and why, taking into account the season of the year when they would be traveling, as well as distances between cities, budget, the itinerary to be followed, the order they were going to visit the various cities, how long they would spend in each city and why.

Finally they had to write up the report to be submitted to the University Student Union, explaining what the University students would get.

Students were cautioned that the **only** language they were allowed to use in the simulation is **English** and **only English**. However, each of the instructions they received, including the scenario were translated into Spanish. The students could access these by clicking on the translation button provided by the software.

4 Results

The results from the attitudinal survey are summarized in the table below (cf. Summarizing Table). It is worth noting that all the scales (except the USERFRI and COMPINTERAC) used in this questionnaire were reliable as indicated by the Chronbach's alpha coefficients, all of them above .75. It is also worth noting that the variable that measures user satisfaction (i.e., OVERALL) correlates significantly with the rest of the variables in the study, which supports the general positive views the students had towards the learning environment used in this study.

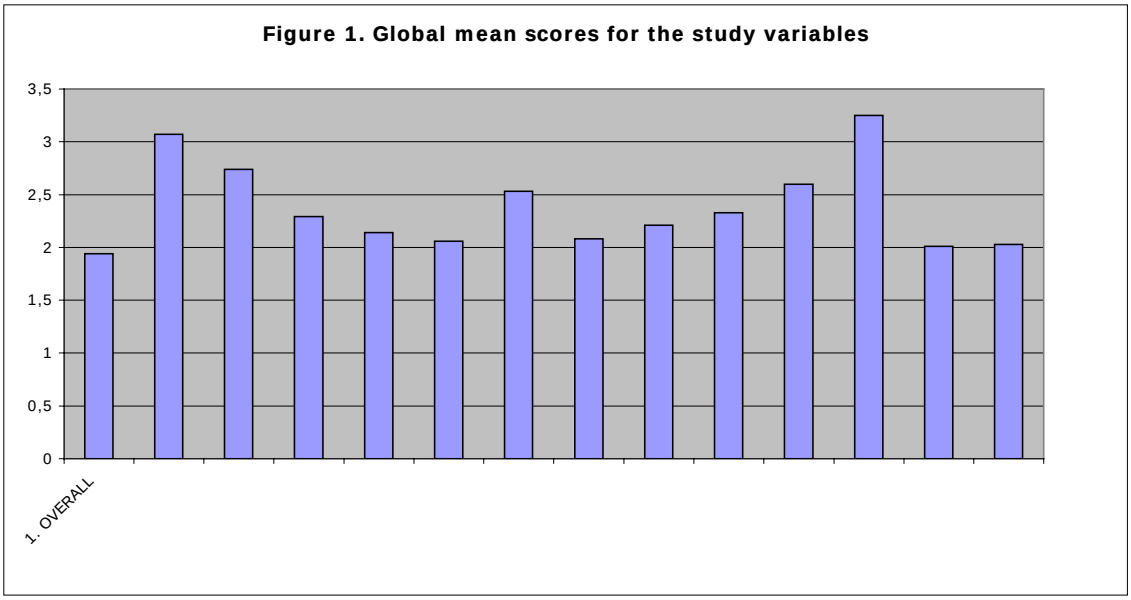
In general, nearly all the global mean scores obtained are below 3. A 5-point Likert-type scale was used to measure the results of the different dimensions. In all the scales used, the lower the score, the more positive the result. Figure 1 consists of a bar chart comprising the global mean scores of the variables used in the questionnaire.

SUMMARIZING TABLE

Means, standard deviations (SD), Cronbach's alpha (on the diagonal), and correlations for the study variables, N = 48

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. OVERALL	1,94	,75	r= ,76***													
2. GNRALOP	3,07	,66	-,09	r= ,54***												
3. TIME	2,74	,94	-,46**	,13	,85											
4. PACEWORK	2,29	,57	,41**	-,06	-,31*	,73										
5. USERFRI	2,14	,46	,20	,07	,09	,41**	,48									
6. LEARNCNTRL	2,06	,47	,44**	-,10	-,27	,60**	,31*	,82								
7. ONEPRCOMP	2,53	,65	,40**	,07	-,02	,22	,21	,22	,81							
8. GROUPINSTR	2,08	,54	,54**	,02	-,22	,32*	,11	,24	-,06	,82						
9. COMPINTERAC	2,21	,40	,42**	,05	-,29*	,46**	,26	,49**	,21	,37*	,44					
10. TRANSLAT	2,33	,78	-,12	,12	,16	,02	-,02	-,04	-,20	-,06	-,13	,85				
11. COMTOOLS	2,6	,69	-,30*	,47**	,52**	-,16	,20	-,20	-,13	-,15	-,11	,25	,79			
12. NOTETAK	3,25	,68	,23*	-,03	-,40**	,03	-,07	,08	,17	,23	,02	-,11	-,50**	,84		
13. READING	2,01	,62	,37*	,01	-,24	,48**	,30*	,35*	,21	,35*	,42**	,14	-,10	,07	,76	
14. WRITING	2,03	,52	,42**	,10	-,21	,53**	,39**	,36*	,48**	,23	,55**	-,08	-,09	,19	,54**	,76

Note: All correlations are significant at the ***p < 0.001 level, **p <0.01 level, *p < 0.05.



4.1 Summary of results from the attitudinal questionnaire

Results from the table above indicate that students thought that it had been a good experience working with online role-play simulations. They enjoyed working with the simulation and they would like to work within this instructional environment in the near future, in spite of the fact that there were certain design aspects that, in their opinion, should be improved.

The global mean scores shown in this table suggest that students had enough time to complete the instructional tasks within the simulated environment, although extra time would have been appreciated. Besides, students had fairly positive views towards the pace of work used when working within the simulation.

Students also found it intuitive to navigate within the application and found the user's interface easy to use. Additionally, learners had positive attitudes towards the freedom they were given to take the lead in the process of instruction.

Also, results show that students very much enjoyed working individually from their own computer terminal without having to share it with other members of the group work and also considered it to positive for working more efficiently. At the same time, they found it positive to work collaboratively with other peers towards the completion of a series of tasks.

According to the results of the pilot study, students thought that computer interaction was most helpful in keeping them engaged when working through the simulation.

The results obtained also seem to indicate that students had positive views towards the function available within the application that provided learners with a Spanish translation of the contents of the simulation.

Likewise, learners seemed to think that the range of communication tools provided within the simulation was sufficient to complete the various tasks assigned, although this could certainly be improved in future simulations.

Results also suggest that students were almost indifferent towards the fact that they had been deprived of the possibility of taking notes during the activity for subsequent review.

Finally, the global means for the READING AND WRITING scales suggest that students viewed simulations as a good learning environment to improve their reading skills as well as writing skills in the foreign language (i.e., English).

4.2 Results from the semi-structured interview

The results of the study were positive in general, as can be inferred from the attitudinal survey. However, they could have been better. The experimental conditions when implementing the simulation were not the most optimal ones. Factors that affected negatively the attitudinal outcome of the pilot study were gathered throughout the semi-structured interview and are presented below:

1) Timing. The timing was not very good. The simulation was administered between the final exams and the beginning of the new semester.
2) Length of the treatment. The students' participation in the simulation lasted two weeks. The time given for them to complete the simulation was too short, which resulted in a hectic stressful experience for many of them. Additionally, it took learners around three to four days to become familiar with the new instructional environment, which made things even worse.
3) Frequency in students' interventions. Learners had to log in every day, which was a bit overwhelming for them, especially for those who did not have Internet connection at home.
4) Students' dedication. The activity turned out to be time-consuming, so students had to invest more time completing the tasks than they initially thought they would. Participation was optional, so students were given extra credit to participate in the activity. The credit given was

very little, considering the amount of time and effort invested by students. Additionally, the course grades were published in the middle of the treatment. Many of the students that were initially participating in the study dropped out after finding out their final grade. This had a negative effect on the remaining members of the work group.

5) Technical difficulties. Students faced some minor technical problems (e.g., some of them were unable to upload files, to send out messages or even to log in) when they began to work with the simulation. These technical problems were rapidly sorted out. However, they created some tensions and confusion in the initial stage.

Despite all the negative comments above, learners showed overall positive attitudes towards this medium of instruction, being aware of the great potential that simulations pose in the field of FLL. They liked working in this learning environment because they found it “engaging”, “challenging” and because they felt immersed in the activity.

They described their experience in this instructional medium as “rewarding” in the sense that they realized that they were able to communicate in English in order to accomplish meaningful objectives, as they did in real life with their mother tongue (“I found it very positive because you get to see that you are able to communicate in English in order to accomplish a series of objectives”, “It was like real life”). Thus, students gained awareness of their real proficiency level in English, which resulted in an increased self-confidence in the usage of the foreign language.

Students found the experience positive because they gained extensive writing and reading experience in the foreign language. They also described the simulation as “an amusing way to work with English”.

As far as experiential learning is concerned, students liked working with the simulations because they learned many things about Australia (e.g., cities, weather, flora and fauna, traditions and so on). In that sense the simulation was very enriching and stimulating. Furthermore, students learned how to organize a trip with specific objectives in mind. One of the students interviewed said: “Before the exercise I knew nothing about Australia and now I love Australia. I consider myself fan number one of Australia”.

Students also enjoyed the activity because it turned out to be a hands-on experience. This was viewed as highly positive by the learners.

Finally, the student interviewed perceived the simulation as a very positive tool to improve the foreign language. They said they had incorporated new vocabulary into their repertoire as they worked through the simulation. Some learners reported to have experienced improved fluency in their writing and reading comprehension skills after having participated in the simulation. (“I realized that my fluency in English increased with the practice”).

5 Plans for future research

Next year the study will be replicated with a greater sample for a more extended period of time. Thus, the students will be asked to work with the simulation throughout the entire semester as part of the course requirements. The frequency required in the students' interventions will decrease. They will be required to log in a minimum of three times per week over a semester. Besides, learners will be given more credit for their participation in the study. A big percentage of the grade will be based on their participation in the simulation.

The design issues that did not work well in the present pilot study will be modified taking into account some of the experience gained this year, and trying not to make the same mistakes. In this direction, there

will be no division between synchronous module and asynchronous module. Both synchronous and asynchronous tools will be make available to students at all times from the beginning so that they can choose what they think is better for each situation. Their identities will be kept secret to prevent them from getting together or communicating outside the learning environment.

6 Conclusions

Our study seems to support conclusions reached in other disciplines that used online role-play simulations. These simulations offer many advantages in the field of FLL. Not only do they enable experiential learning (i.e., learning by doing), but they only help learners base language learning on authentic tasks (i.e., real-life situations and purposeful communication). Furthermore, simulations facilitate learning by playing, not to mention the fact that the affective filter in language learning is lowered. It is important to mention that simulations encourage a socio-cultural approach to learning by way of collaborative learning. Moreover, they optimize the interactionist perspective to foreign language learning by providing comprehensible input, encouraging negotiation of meaning and pushing learners to produce comprehensible output. Finally, simulations provide learners with controlled access to rich input.

All the advantages mentioned above result in positive attitudes, motivation, a learning environment that favors immersion, fluency development, integration of communicative skills and culture, development of critical thinking skills, and active participation n the part of the learners.

In conclusion, simulations as student-centered learning environments where learners take control over the learning process seem to us to be a highly useful tool for enhancing Foreign/Second Language Learning. If well planned and designed, simulations can help to improve communicative competence in the target language.

References

Aldrich, C. (2004) *Simulations and the future of learning.* San Francisco: John Wiley & Sons.

Alexander, S. (2005) Role play simulations for teaching political science. In: McKenzie, J. Alexander, S. Harper, C. and Anderson, S. *Dissemination, adoption & adaptation of project innovations in higher education, a report for the Australian universities teaching committee.* Sydney: UTS Printing Services. http://www.carrickinstitute.edu.au/carrick/go/op/edit/pid/98

Hintjens, H. (2005) Quixotic moves online: simulating conflict and democracy in action in Venezuela. *LoW2005, 2nd Annual Conference on Online Simulations, Role Playing and Virtual Worlds* November 14-18, University of Melbourne Australia. http://www.simplay.net/LOW/papers05/donquixote.pdf

Linser, R. and Ip, A. (2004) Creating learning opportunities using an RPS authoring tool. *AUSWEB04, The Tenth Australian World Wide Web Conference*, Seaworld Nara Resort, Gold Coast, 3rd to 7th of July. http://ausweb.scu.edu.au/aw04/papers/refereed/ip/

Linser, R. Ip, A. and Naidu, S. (1999) Pedagogical foundations of web-based simulations in Political Science. *ASCILITE 1999 Conference*, QUT, Brisbane, Dec. 5-8. http://www.simplay.net/papers/pedagog.html

Linser, R. Waniganayake M & Wilks S. (2004) A different lunch: role-play simulations in preparing early childhood leaders. *IASTED International Conference on Web Based Education*, Innsbruck, Austria, Feb 16-18. http://www.simplay.net/papers/dlunch.html

Linser, R. (2004) Predictive power of role-play simulations in Political Science: experience of an e-learning tool. *Proceedings of the International Conference on Politics and Information Systems, Technologies and Applications (PISTA)*, Orlando, USA, July 21-25. http://www.simplay.net/papers/RPSpredictive_power.html

McFarlane, A. Sparrowhawk, A. and Heald, Y. (2005), *Report on the educational use of games*. http://educationarcade.org/files/videos/conf2005/Angela%20MacFarlane-2.pdf

Naidu, S. Ip, A. and Linser, R. (2000) Dynamic goal-based role-play simulation on the web: a case study. *Journal of International Forum on Educational Technology and Society*. Special Issue on On-line Collaborative Environment, Vol.3 Issue 3.

Nelson, D. and Blenkin, C. (2007) (Forthcoming) The power of online role-play simulations: technology in nursing education. *International Journal of Nursing Education Scholarship.*

Noggle, M. (2005) A novel simulation for the literature classroom. *Proceedings of LoW2005 2nd Annual Conference on Online Simulations, Role Playing and Virtual Worlds*. November 14-18 University of Melbourne, Australia. http://www.simplay.net/LOW/papers05/novel_simulation.pdf

Prensky, M. (2001) *Digital game based learning*. New York: McGraw-Hill.

Shaw, C. and Mendeloff, D. (2006) Connecting students internationally to explore post-conflict peacebuilding. *International Studies Association Proceedings*. San Diego, CA. March.

Vincent, A. and Shepherd, J. (1998) Experiences in teaching Middle-East politics via Internet-based Role-Play Simulations. *Journal of Interactive Media in Education*. 1998 (11) online: www-jime.open.ac.uk/98/11

Waniganayake, M. Wilks, S. and Linser, R. (2006) Creating thinking professionals: teaching and learning about professional practice using interactive technology. In: Tony Townsend and Richard Bates (eds.) *Handbook of Teacher Education: Globalization, Standards and Professionalism in Times of Change*. Amsterdam: Springer.

Wills, S. & McDougall, A. (2006) Reusability, learning objects and learning designs: facilitating uptake of online role play. In: *Key Factor of Distant and ICT-based Education: Quality, ICDE 2006 Conference Proceedings*. Tianjin: China.

APPENDIX

The items that form the different factors utilized in the **attitudinal survey** correspond to the following statements in the questionnaire:

Overall, it has been a good experience to work with the telematic simulation **overall1** In a near future, I would like to be able to work again with telematic simulations of this sort **overall2**

The design of the simulation needs improvements **gnralop1** The simulation is well designed **gnralop2**

The time allocated has been enough to cover the task objectives **time1** The time we were given in each module was insufficient **time2** I was short of time and I did not get to cover the simulation objectives **time3** In future sumulations the time per session should be extended **time4** I would have liked to have more time to work with the simulation **time5**

To work at my own pace resulted in a more effective learning experience **pacework1** I feel more motivated when I am allowed to work at my own pace **pacework2** I don't like a specific pace of work to be imposed upon me **pacework3** I didn't like to be left working on my own **pacework4** I like a pace of work to be imposed so that I don't have to decide that myself **pacework5**

I didn't find the simulation confusing to work with **userfri1** The simulation was easy to use **userfri2** The simulation allowed for an intuitive usage **userfri3** It was easy to get lost when doing the tasks within the simulation **userfri4** Learning to use the simulation turned out to be complicated **userfri5**

I liked the feeling that I was the one taking the lead in the learning process **learncntrl1** When exploring the program I did not enjoy deciding what to do and how to do it **learncntrl2** I rather be told what to do and how to do it **learncntrl3** I was grateful for the freedom I was given to approach the activity my own way **learncntrl4** It is nice to be given control over the simulation in order to make the decisions on how to cover the objectives **earncntrl5** It is nice when you make the decisions yourself on how to work within the simulation **learncntrl6**

I enjoyed completing this task by myself, from my computer **oneprcomp1** I would have liked to have had a classmate sitting next to me to work together through the simulation **oneprcomp2** The simulation tourned out to be efficient thanks to the fact that there was only one student per computer **oneprcomp3** I enjoyed working from my computer without having to share it with other classmates **oneprcomp4**

I enjoyed doing this exercise as part of a group **groupinstr1** I like to study English by exchanging information with other classmates **groupinstr2** The interactions with other students kept me motivated **groupinstr3** I enjoyed sharing this learning experience with other students **groupinstr4**

The interaction via computer was positive **compinterac1** The interactions via computer kept me attentive **compinterac2** The interactions via computer bored me **compinterac3** The interactions via computer contributed to keep me busy for the duration of the task **compinterac4** **compinterac5** I would have preferred to carry out the simulation face to face instead of doing it through a computer

It has been positive to have been given the possibility of checking the Spanish translation within the simulation **translat1** Providing access to the Spanish translation of the simulation made the taks easier **translat2** It was nice to find out that we could gain access to the Spanish translation of the simulation **translat3** The quality of the simulation would have decreased without the function providing access to the Spanish translation of the simulation **translat4**

The communication tools available havebeen sufficien to carry out all the tasks **comtools1**

With the communcation tools provided within the program taks have been completed satisfactorily **comtools2** I believe that the simulation is insufficient as far as communication tools are concerned **comtools3** More communication tools should be included so that working conditions are improved **comtools4**

I missed having been given the chance to take notes during the simulation **notetak1** It was not necessary to take notes to be gone over subsequently **notetak2** It would have been positive to have been able to put ideas down during the simutaled sessions in order to go back to them once the exercise had been completed **notetak3** It wouldn't have been a bad idea to have been given the possibliity of taking some notes to be able to go over them subsequently **notetak4**

The simulation is not a good means to enhance reading comprehension skills in a foreign language **reading1** The instruction through simulations is effective as a tool to enhance reading comprehension in English **reading2** It is difficult to improve reading comprehension skills through simulations **reading3** It is easy to enhance reading comprehension in a foreign language through telematic simulations **reading4**

Simulations are a good means to improve writing skills in English **writing1** The simulation is not a very effective tool when it comes to improving writing skills in English **writing2** It is easy to write in English through one's participation in a simulation **writing3** The simulation helped me express myself better in written English **writing4**