

Towards a Methodology of Language Learning in 3D – Environments. Evaluation Results from the AVALON Language Courses in Second Life.

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1 Introduction

3D environments have been used as an educational technology for some years [1]. Recent literature in the field endorses 3D environments as a particularly appropriate platform for the development of oral language proficiency in distance education, collaborative and intercultural learning contexts and vocational training [2]. Still, a methodology for teaching and learning in 3D environments is not yet mainstream in education. Consequently, evaluation criteria and thus a methodology for the evaluation of language learning in 3D environments is missing. Additionally theoretical considerations that consider the mediatic turn [3] connected with the introduction of 3D environments into language learning contexts are required. This paper suggests a teaching and learning methodology and a corresponding evaluation methodology for computer assisted language learning (CALL) in 3D environments and evaluation criteria for these methods. The methodologies are theoretically contextualized with recourse to the mediatic turn concept.

The methodologies are developed in the AVALON project which is funded by the EU Life Long Learning Programme. AVALON brings together a group of educators from 26 institutions who were either already aware of or had direct experience of teaching and learning in virtual worlds. In AVALON, Second Life is used as an example for 3D online environments.

2 The Development of a Methodology

As far as language education is concerned, it is still very difficult to provide learners with language practice in authentic and meaningful contexts. Despite the fact that student mobility has increased and been facilitated over the last two decades, it is nevertheless often the case that travel is too costly or not feasible for learners [4]. And, while Tandem schemes have proved fruitful, they nevertheless rely on access to speakers of target languages and the maintenance of motivation is often a problem [5]. Finally, for those European countries that increasingly depend on distance education programmes, distance learning platforms are clearly of particular interest. Thus, to provide examples of best practice for language education in virtual worlds and to build a specifically designed self-sustaining virtual location, is quite relevant.

Similarly to other telecollaborative tools, virtual worlds are spaces where genuine communicative acts can take place at a distance. Furthermore, virtual worlds also offer a host of unique affordances for synchronous communicative language-learning tasks which flow from the representation of self via an “avatar” and the highly immersive, interactive and participatory nature of the 3D environment [6].

Virtual reality worlds render themselves in particular to socio-cultural and situated learning models [7] [8] [9]. These models maintain that human activities take place in cultural contexts, are mediated by language and other symbol systems, and that knowledge is constructed when individuals engage socially in talk and activity about shared problems or tasks. In designing the learning scenarios and tasks for the AVALON project, special attention was placed to those aspects of communicative

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language learning which are enhanced by the virtual environment [10]. Tasks were created which 1) foster the creation of community and the sharing of knowledge; 2) explore identity and cultural perceptions of self and the other; 3) involve collecting artefacts or building; 4) encourage artistic expression or representation; 5) use SL as a source of information and as a place of navigation and movement. Features of gaming and reward models for learning have also been incorporated. In addition, the various phases of learner initiation and participation were carefully designed according to recent recommendations in the research literature [11][12].

The suggested methodology refers to the following learning objectives:

- learning to use virtual worlds for language learning, both as a tool for communication and a source of information (*technical competence*);
- collaborating with people from other language and cultural backgrounds in an online environment towards a common goal (*social and intercultural competence*);
- communicating effectively with others in meaningful and authentic tasks (*linguistic competence*);
- acquiring new specific knowledge (i.e. *content acquisition*).

The teaching and learning methodology is evaluated with an evaluation methodology developed within the project.

3 Towards An Evaluation Methodology For 3D Environments

Sequential explanatory mixed method designs [13] were used to develop the evaluation criteria and for the evaluation itself. For the development of the criteria a quantitative questionnaire was used. Teachers with experiences in 3D environments were asked to fill in the survey. Based on the results, an interview guide was developed. Interviews with selected teachers were conducted to get more detailed information about the issues concluded from the quantitative results. The analysis of the quantitative survey and the interpretation of the qualitative interviews were used to develop evaluation criteria for language learning in 3D online environments. General criteria are usability, learner satisfaction and communication.

Based on the evaluation criteria four instruments were developed. The developed instruments are quantitative questionnaires for pre and post course surveys and qualitative interview guides for post course interviews with teachers and learners. Online surveys with all participants of the AVALON courses were conducted. Based on the results, some participants were selected for online interviews. The results show advantages and disadvantages of language learning in 3D environments. These results are reflected by a recourse to the mediatic turn induced by 3D environments.

4 The Mediatic Turn

The mediatic turn theory [14] aims to understand the bias of media in teaching and learning. While for example the book forces the learner to learn alone and by doing nothing than just reading, online environments bias learner toward a much more cooperative and active learning style. These changes, that are supported by our evaluation results, can be understood by considering the specific mediatization [15] that is caused by 3D environments.

We describe the mediatization by reverting to the media theory suggested by the Toronto school. According to McLuhan, a cold medium like 3D environments creates a hot culture. A member of a hot culture expects involvement with other people and participation in activities. Thus, the media habitus [16] of these learners can be described by involvement and participation. Accordingly, a learner that often uses computer technology will probably prefer intense cooperation and a high participation level.

5 Conclusions

The mediatization connected with the introduction of online 3D environments into language learning biases the instructional setting. This has to be considered in the development of teaching and learning methods. From this point of view, methods that focus on learner activities and community building are appropriate for language learning in 3D environments.

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