8th International Conference of the Immersive Learning Research Network
Practitioner Proceedings iLRN2022

DOI: https://doi.org/10.56198/A6PFYM5ZN

VR *Piazza Italiana*: Learning Language and Culture Through Presence and Embodiment

Lucia Binotti and Amy Chambless

The University of North Carolina at Chapel Hill, Chapel Hill, USA
lbinotti@email.unc.edu

Abstract. Piazza Italiana is a VR environment and interactive Italian built on Mozilla Hubs and meant to be integrated into the curriculum of a second-semester language class. Our Experience takes you "inside" a Beginner's Italian textbook chapter dedicated to food and shops. The environment is designed on the model of a typical Italian piazza, a center of town where people shop, visit coffeehouses and restaurants, walk, and congregate. Within this VR piazza we plan to showcase three different immersive spaces -- an ice-cream shop (gelateria); a grocery shop (alimentari); and a pasta shop (pastificio) where the visitors will be able to perform sequences of task-based activities that engage immersive to improve and better retain their learning of Italian. We want to show how VR's provision of simulated realities engages students to learn and adapt to a language by interacting with and deriving meaning from it, as they use an infinite range of virtually recreated real-life contexts to support the way they develop their speaking and listening skills.

Keywords: virtual reality.

1 Proposal

1.1 Relevance to the Topic

Our presentation will be the companion of a Guided Adventure we are concomitantly submitting. In the presentation we will discuss our process and show how our prototype argues in favor of WebXR custom built environments as mini labs where to consider the scientific, technical, and applied potential of digitally enhanced immersive learning environments for language and culture teaching. It explores research questions to advance a shared understanding of the needs of Higher Ed language learners as well as use cases for XR accessibility. It promotes inclusive design for immersive and XR technologies in educational institutions as well as in the broader reskilling ecosystem. And it collaborates with standard development organizations (e.g. W3C, XRSI, OpenXR, etc.) on

accessibility user requirements and practices for hardware, platform software, and content in higher education language classes.

1.2 Objectives

In determining the character of our experience, we had several sets of goals in mind: (1) course goals; (2) disciplinary goals; (3) campus goals.

(1) Course goals: In keeping with the principle of backward course design, we identified learning goals consistent with the unit in which we placed the immersive experience.
(2) Students' interaction in the virtual environment should also allow them to meet pedagogical goals consistent with our discipline and defined by ACTFL's World Readiness Standards [1].
(3) Finally, we wanted the objectives of the specifically VR learning environment to map onto the broader learning goals of our our University's General Education Curriculum, especially the IDEAs in Action Curriculum [2].

1.3 Perspectives

WebXR and a new way of thinking immersively about concepts which traditionally are presented in 2D forms via textbooks (or more recently videos on a screen) offers exciting opportunities for foreign language learners in particular. For example, outside of languages, research suggests that augmented reality visualisation had positive effects on the spatial abilities of engineering students. Given the importance for language learners to develop deeper, more idiomatic language in order to demonstrate their aptitude in speaking and writing, providing more realistic 3D virtual models of objects which are found in similarly three-dimensional form in the real world will result in equally improved levels of language ability, as demonstrated by the kinesthetic language learning on the Words in Motion platform [3].

To design the experience, we adopted a task-based-learning prospective. Within the TBLT framework, tasks are defined as activities "where meaning is primary; there is some communicative problem to solve; some sort of relationship with real-world activities; and the assessment of task is in terms of a task outcome" [4] The driving force behind this approach - and one that VR supports through its provision of simulated realities is that students may learn and adapt to a language by interacting with and deriving meaning from it, as they use an infinite range of virtually recreated real-life contexts to support the way they develop their speaking and listening skills.

1.4 Looking Forward

During the piloting phase of the implementation of our project, we anticipate that 100-120 undergraduate students will be impacted directly. We hope to build upon the success of the pilot to expand it for use in French and Spanish in the following years. Such a broad effort will introduce 25 to 30 faculty and graduate teaching students to the pedagogies of immersive learning and teaching.

Eventually, we hope that many more students will be served by this initiative, as we become better trained in the use of these technologies and find innovative ways to integrate them into not only our lower-level courses but our intermediate and upper-level courses as well. We believe in a diffusion model that relies on a network of peer support for our colleagues who may adapt these technologies to their existing courses and to new courses as well and leads to collaboration with faculty and students in allied departments in the Humanities. Initiative and innovation in teaching and service have become an integral part of the professional development of our PhD students. Experiences in designing innovative lessons within emerging technologies development environments help our graduate students become confident and creative instructors, and moreover help them distinguish themselves when they go on the job market.

The ultimate beneficiaries of course are our undergraduate students, who will be empowered by the new tools with which they learn to communicate in a more effective manner in the foreign language, increasing their confidence and retention, as well as the communities all over the world that could be served by such innovations.

References

1. ACTFL's World Readiness Standards [2015].
2. IDEAs in Action
3. C.D.V. Machado, Kinesthetic Language Learning in Virtual Reality. Accessible at: https://www.media.mit.edu/posts/kinesthetic-language-learning-in-virtual-reality/. Accessed 30 Jan. 2021.
4. P. Skehan, A cognitive approach to language learning., Oxford, UK: Oxford University Press, 1998.