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Adding Virtual Reality to the university self-access language centre: Brave new world or passing fad?

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Abstract

Immersing students in communicative situations facilitates learning, engages emotions, and fosters socio-cognitive conflicts leading learners to develop language abilities (Dewaele 2010; Bourguignon 2006; Privas-Bréauté 2017). In this context, the UFR Lansad – languages for the specialists of other disciplines – in charge of the language teaching for non-specialist students policy at the University of Lorraine (France) opened a virtual reality (VR) space in which experimentations are carried out. Researchers intend to study how virtual reality might support second language development and contribute to enhance students' cultural awareness. To do so, VR workshops are offered, VR sessions with student teachers implemented and an international collaboration experimentation in English for Specific Purposes (ESP) is under way. Although learners' reactions and feedbacks are very positive, the first implementation of the new VR space leads us to understand that VR and its pedagogical uses might suffer from some flaws.

Key words: foreign language education, immersive practices, intercultural awareness, language learning, self-access centres, university education, virtual reality, virtual exchange

Introduction

Since studies on the pedagogical value of virtual worlds show how they improve language skills in English for Specific Purposes (ESP) and Content and Language Integrated Learning (CLIL – Wigham and Chanier 2013), it is relevant for language education to explore the opportunities provided by this new tool. Immersing learners in communicative situations facilitates learning (Bourguignon 2006), engages emotions, and fosters socio-cognitive conflicts leading them to develop abilities (Dewaele 2010). The paradigm of 'enaction' (Varela 1993, 1996) has equally been referred to in the context of language acquisition (Aden 2017), cognitive neurosciences helping discover that body, emotions and mind contribute to language learning.

In this context, the UFR Lansad (Unité de Formations et de Recherche - LANgues pour Spécialistes d'Autres Disciplines) at the University of Lorraine (France), in its role of policy maker in language teaching for non-specialist students, acquired virtual reality equipment. It has been integrated to the new environment, called EDOLang, developed by the UFR. Composed of self-access language centers (SAC) and an online platform, the environment offers learners both physical and digital resources as well as language services giving them the possibility to choose what they need to learn a foreign language in the best possible conditions. We have been using the new VR equipment to start out projects and experimentations with undergraduate and post-graduate language students presenting different academic profiles. As non-language majors have limited foreign language learning opportunities, we wanted to verify if VR could help. The aim is to study the impact of interactions in virtual language exchanges on language skills as well as the (inter-/ alter-) cultural awareness of students who have little opportunity for travelling or studying abroad.

As any innovation in teaching-and-learning, introducing the use of VR into the practices of language teachers/ learners raises various questions: what are the opportunities VR brings? What needs are met? What is its social and professional acceptability? What are the effects on the quality of learning?

This article first explains the environmental and theoretical background behind our VR space. It then provides an overview of the workshops and projects the new space has been able to offer learners since March 2018. In this paper, through a comprehensive approach based on questionnaires, ‘astonishment reports’ (Vigier and Bryant 2009), interviews with some students and pedagogical scenarios, we will focus on the acceptability of VR as a language learning tool, the development of intercultural skills and, ultimately, the strengths and weaknesses of immersive virtual environments (IVE). We will eventually give the reasons why implementing virtual exchanges through immersive platforms can prove to be difficult.

1. Contextual elements

The UFR Lansad was created in 2014 at the University of Lorraine in order to homogenize and take in charge the policy of language training for non-specialist students. All the courses offered are based on a long tradition of research on learner autonomy carried out by the Crapel¹ research team since the 1970s. From its inception, the UFR has thus considered the means to be implemented to promote student autonomisation. The language training it offers learners provides both face-to-face teaching (focusing on language learning strategies) and guided self-study. The UFR’s pedagogical policy revolves around a learning environment, called EDOLang² – comprising self-access centres (SAC) and a digital platform – which promotes self-directed learning (Bailly and Chateau 2018; Chateau, Bailly and Ciekanski 2015; Chateau, Bailly and Willié 2017). EDOLang is therefore at the heart of the Lansad courses. It combines the virtual (online resources, tutorials, logbooks...) and physical environments of the self-access centres where learners find services such as thematic workshops, conversations with native speakers, or advising sessions. Some researchers have claimed online resources mean the end of brick-and-mortar language centres (Reinders 2012) but we do not believe in the end of SACs and take the view that: “The raison d’être for the language center must be organic to the pedagogical mission of language programs.” (Yaden and Evans 2017: 97). As a matter of fact, in the perspective of fostering students’ autonomy, the self-access centres of our UFR have always been in constant redesign so as to ensure “accommodating a plethora of ways of learning, relatively unbound by time, space, and grouping considerations” as recommended by Edlin (2016: 122).

In the recent years, our UFR, with the help and financial support from the university, has thus carried out projects to develop its training programs around the EDOLang environment, and to renew its SACs. Its objectives were to offer new resources and potential opportunities for learning languages which would be included in the EDOLang environment. As Jeanneau explains indeed, there is a “need for language centres to be very flexible when setting up new initiatives” (2017: 70). She also explains that the initiatives taken help transform “the SAC into a social and cultural hub where languages are practiced in an authentic way.” (2017: 70)

A project called ‘Centre de Langues du futur’ (‘SAC in the future’) carried out in partnership with students from two engineering schools between October 2015 and April 2016 helped us envision new possibilities of spaces to foster student interactions, such as a virtual reality

room. The idea was to create a learning space dedicated to collaborative work in languages through virtual reality.

The VR space opened in March 2018. It provides access to three headsets by ‘Oculus Rift’ powered by three computers by Alienware (cf. photos 1, 2, 3 and 4).



Photos 1, 2, 3 and 4. Pictures of the VR room

The ‘Oculus Store’ provides access to a wide range of free and payable VR applications games. Several examples of VR activities aimed at enhancing learners’ language skills are described below. At the moment, the VR room is accessible by the students of the University of Lorraine via workshops and activities conducted by language teachers of the UFR Lansad. The ultimate aim of this area is to provide the learners with more opportunities to practise their speaking skills.

The notion of VR being however understood and used in so many different ways, it seems necessary to precise our definition and the way we use the term, as well as to explain why we thought VR might be a good idea for our learners in this context.

2. Virtual reality and language learning/teaching

To start with, contrary to past experiments using 3D multi-users virtual environments (3D MUVes) such as Second Life, for our projects, we resorted to total immersive virtual reality using helmets. In this respect, we suggest keeping Fuchs’ definition of virtual reality: “The purpose of virtual reality is to make possible a sensorimotor and cognitive activity for a person (or persons) in an artificial, digitally created world, which can be imaginary, symbolic or a simulation of certain aspects of the real world” (2017: 9). This sensorimotor and

cognitive activity in a simulation of the real world described by Fuchs is made possible by the constant interaction between user and computer in a “perception, cognition, action loop” (Fuchs 2017: 11). Consequently, when interaction is not hindered by latency and sensorimotor inconsistencies, a feeling of immersion (Slater 1995: 204) and, more importantly, of presence – which is a distinguishing feature of total immersive virtual reality- appears (Steuer 1992; Slater 1995; Bouvier 2009). As Bouvier writes “The user considers the experience credible, accepts to take part in the game and, in response, feels a sense of presence, the authentic feeling of being in a world other than the physical world where our body finds itself” (2009: 49). It can be connected to the fact that, as Varela indicated, bodies and emotions are part and parcel of the learning process. Along those lines, Varela³ considers that the body/ mind continuum in learning – including language learning – enables long-term memorization. If thought is not separated from the body and emotions, then thought and speech are incorporated, they are incarnated, and cognition is enacted.

As an innovation, VR fits into recent developments in L2 language learning and use, including an increased focus on listening and speaking characterized by the emphasis on the development of oral skills, authenticity in communication, the use of real-life settings, the development of interactive skills via social practices (web 2.0), the use of multimodality to facilitate language learning and the development of informal learning practices as a complement to language learning (Sockett 2014). All these elements constitute a favourable ground for the integration of VR in language teaching-and-learning practices.

VR also responds to the new challenges of language teaching-and-learning. Dubreil and Thorne call for the cultivation of social pedagogies as a means to “bridge between pedagogical amplification in classroom spaces and social action in the world, ultimately giving students the translingual and transcultural tools to participate effectively in complex and diverse communities in the future” (2017: 6). Framing L2 pedagogical practices as social pedagogies is an incentive for language educators to seriously envision what it would mean to manage the interface between formal and informal learning contexts and to relate this interface directly to instructed L2 course design (Sauro and Zourou 2018). Especially, immersive virtual environment based on 3D appear to be a relevant solution for rethinking immersion in a formal learning context. Communicative intentionality would thus be closer to what exists in a real communication situation (Yamazaki 2018).

VR brings suitable arenas for language learning. As a simulation device, it provides a reference universe (a place such as a city, a building; an action such as a guided tour, a professional meeting) and functions as a framework that is both a thematic setting and a universe of discourse, stimulating all the language functions that this framework is likely to generate such as verbal interactions and language productions to name but a few. It thus makes it possible to test reality in the absence of reality and thus to better master the language and the communicative behaviour adapted to the day when the learner will encounter the real situation in question. VR has positive effects on learning: it increases learner engagement and collaboration (Girvan and Savage 2019). It has a positive psychological impact such as reducing learners’ anxiety, supports motivation and increases confidence and self-efficacy (risk-taking) (Borona et al. 2018).

As a learning resource, VR offers various possibilities: role playing through several settings to perform different roles based on the teacher’s instructions; virtual trips to several popular cities or to worldwide monuments or to museums are organized to stimulate possible spontaneous conversational scenarios among the learners or among the learners and the native

speakers found in the virtual world; quiz individually by interacting with the objects and the non-playing characters of the environment; maze games where learners have to find the way out of the labyrinth by interacting with several objects and by answering quiz questions, etc. These practices fall within and illustrate several learning theories: a socio-constructivist learning perspective (Vygostky 1984) in which learning occurs through social interactions and collaborative construction of knowledge, the cognitive theory (Piaget 1964) in which learning is an internal process that occurs through interaction with the environment, and it also echoes the natural approach (Krashen 1982) which focuses on vocabulary acquisition, the understanding of messages in the target-language and the principle that communication is above grammar rules.

In the light of this theoretical background, the objectives of the tentative experimentations with different types of learners described below were to check if VR is effective as a new pedagogical tool or if it is simply a new trendy gadget.

3. The use of virtual reality in a self-access centre for language learning

In this section, we will describe in detail the workshops and courses created to allow students to experience virtual reality in connection with language learning as well as one future project we intend to carry out in the new VR space.

3.1 VR workshops

The first type of language activities offered to students at the SAC are discovery VR sessions. These are aimed at having them explore the potential of virtual reality to improve their listening skills. Among those, in a 60-minute session, the first half is dedicated to showing the learners a couple of different free applications from the multiplicity the Oculus Store has to offer⁴. They can then explore those of their choice over the remaining time. ‘Travel VR’, which offers a large number of ready-made city tours either with a guide or a voiceover making comments in English as places of interest follow one another, is one of the learners’ favourite applications. Similarly, ‘Smithsonian Journeys Venice’ and ‘The People’s House’, which respectively offer guided tours of Venice with an Italian history scholar and of the White House with Barack and Michelle Obama, are highly appreciated. While ‘Mission: ISS’ enables students to complete missions on a space station, ‘The Body VR’ takes students inside the human body.

In order to provide learners with a more integrated approach to VR for their language learning, we have developed blended-learning workshops. Our workshop called “London Calling” is a good example of this practice. The learners start off by browsing the Internet using tablets for information about what to do in London for touristic purposes. Participants are then asked to list their findings on a white board for comparisons and have to choose one or two items and do further research on them (mainly practical information, i.e. prices, opening hours, specificities etc.). Then, the students are taken to the VR room to view a London city guided tour in English before coming back to the conversation room and ticking on the white board all the sites and items they managed to spot during the VR tour. They are also invited to discuss their VR experience and contrast it to real experiences if they have been to London before. Lastly, they need to come up with a London top 3 attractions out of the research and the VR trip that they completed.

Another example of blended learning activity is the workshop called “Immerse into Star Wars”. In this workshop, the students can choose to pursue different VR activities using the free application ‘Disney Movies VR’ – viewing a making-off of *Rogue One*, performing spacecraft piloting simulations, or repairing droids, among others. They are then invited to share their VR experience as well as their personal Star Wars culture, which part of the Saga they prefer (old vs new Star Wars), etc. To finish, they have fun with the ‘Star Wars’ version of the ‘Timeline boardgame’. Each part of this workshop (VR, discussion, game) lasts for approximately 20 minutes.

In order to verify how these types of activities are received by the learners (n=65), we have them complete a questionnaire after each workshop. The questionnaire aims at collecting information about two main topics on top of the usual metadata (i.e. name, age, degree pursued, year at university, etc.) – the students’ relationship to new technologies and their feedbacks on the VR workshop. The questions on the students’ relationship to new technologies inquires about whether they feel generally at ease in using new technologies, if they are generally interested in them, whether they are regular video players and if they had tried VR before the workshop. The questions on the learners’ feedbacks on the VR workshop inquires about whether they find the VR equipment user-friendly, if they appreciate using this type of equipment for language learning purposes, whether they find that VR can be useful for their personal language learning, and what they generally think of the workshop. The preliminary results to the questions related to the student’s relationship to new technologies show that 96% of the respondents feel at ease with the new technologies and 100% of them are generally interested in new technologies. When asked whether they are video game enthusiasts, only half of the respondents provide a positive answer. Our VR workshops thus seem to attract learners with a penchant for technology-related items but not as far as regular videos game players. Finally, around 70% have tried VR in our premises and the remaining 30% mostly at events (fairs, forums, museums).

The preliminary results show that 94% of the respondents find the VR equipment easy to use and all of them enjoy using it for language learning purposes. They also all report that VR can be useful for their personal language learning. Among all reasons that the learners specify, oral comprehension is the most frequent one directly followed by the fact that VR provides a playful or fun way to learn the language. The students also often say that VR can be useful for them to develop speaking and interactional skills, as well as for travelling and to discover some countries and cultural aspects of the target language. Regarding the questions where the students are asked what they think about the workshop that they participated in, all give positive feedback such as “great”, “super”, “good”, “it was very interesting” etc. Only three respondents give more detailed answers and highlight a fun aspect that allows to discover other things and a new way of learning languages while learning about other things at the same time or at least having fun. They also mention a wide variety of application choices and the fact that VR allows to discover things that they will – probably – never do (e.g. visiting the human body from the inside or discovering a satellite). One student wishes he could have practiced more languages (most of the free applications in the ‘Oculus Store’ come in English) and had the opportunity to speak or answer people. As you will see in the next part, this is what we are currently working on.

Overall, these findings are generally positive and seem to support the fact that oral comprehension via virtual reality, because of its immersive components, might be more motivating and engaging than standard 2D authentic documents. This is also confirmed by what some of the learners mention about the workshops in their logbooks on EDOlang (see

appendix). We might not yet exactly know what the contributions of our VR activities are and their impact on language learning, but the respondents seem to enjoy them. This is a good start when you know that these learners are students majoring in disciplines other than languages for whom languages are a source of anxiety – and especially English, when it is compulsory.

3.2 Teacher training

20 student teachers⁵ of English or Spanish working in secondary schools used VR for pedagogical purposes in a professional language didactics course during 6 sessions of 2 hours each. The purpose of these sessions was to prepare trainees for the use and appropriation of immersive devices for language learning, both theoretically and practically. They were asked to imagine that their schools might have VR capacity in the future and so to design activities for secondary school language learners. The training took place in two stages: the experience of VR by the trainees and its transposition into their school context through the design of a pedagogical scenario, based on a sequence of courses meeting the needs and objectives of their own pupils. Depending on the school, some activities could be tested in class. Research data include responses (n=20) to a questionnaire on participants' personal and professional digital practices to determine their level of familiarity and adherence to ICT. Moreover, 'astonishment reports' (n=20), a pedagogical tool often used in intercultural studies (Reinhardt and Rosen, 2012; Vigier and Bryant, 2009), helped students enhance the value of their experiences on their perception of the immersion context, communication situations and the nature of communication experienced through VR, and pedagogical scenarios designed with their respective pupils in mind (n=20). The pre-questionnaires highlight the pedagogical and digital practices of the trainees: 66% of them use authentic documents in their lessons, 55% of them use authentic documents on digital media. They use a rich diversity of broadcasting technologies (video, computer, BIT, video projector, podcast) specially to work on written or oral comprehension skills. 44% of them use smartphones and 33% tablets in class to allow individualized language practice. 50% of them use devices that support interactive practices in the target language (debate, role-playing, board games); 55% set up simulations mainly in the form of role plays. Only one student has access to VR helmets in her institution. 89% of them are familiar with VR but only 44% had already experienced it, mainly in a recreational setting. The profile of the population surveyed appears to be favourable to the development of language practices based on digital technologies, mainly for the development of comprehension skills. The development of interactive competence is promoted by the implementation of playful and collaborative mechanisms. These two dimensions appear to be strong factors for adherence to the two types of VRs tested (virtual trips and role playing).

After the VR experiment, the trainees' astonishment reports show a good "acceptability" of their social, spatial and self-presence (Roy 2017) in virtual worlds. They had the feeling of being immersed ("you thought you were there"; "very realistic", "the brain is deceived"), they reported positive emotions ("visual wonder"; "fascinated"; "transcendental experience") and highlighted their embodied experience ("the impression of proximity to places, people"; "we are in it"). The degrees of virtual presence however depend on the trainees' profiles (are they gamers or not?), which has an impact on the nature of their commitment in the actions provided by the virtual world.

The pedagogical scenarios proposed by the trainees showed that 13 of them used the VR resource as an "authentic document" to sustain the development of oral skills, 7 of them used

VR as a “collaborative device” to sustain interaction skills. Interestingly, English trainees have given priority to language skills whereas Spanish trainees used VR for culture learning. They showed that the subjectivity provided by the experience of VR allows new alter-cultural approaches, especially when working on complex themes such as political topics or cultural complexity.

3.3 Future research: the SWIFT project

A third experimentation aims at designing an international program facilitating language learning in a professional-like context. The “SWIFT” (Sansar Work in facilitating Team Talk) project is meant to be developed from September 2019.

The project consists in having groups of French B2/C1 graduate students and foreign students meet up in the virtual world Sansar (3D version of Second Life developed by the same company, Linden Lab) synchronously, but also work asynchronously in order to solve problems together in English. Our research question will focus on the development of language and intercultural skills from a cognitive standpoint through the creation of avatars and the role of emotions in socially immersive experiences (in light of the body-emotions-mind continuum that the paradigm of enaction puts to the fore). We want to verify to what extent virtual reality simulations can train French students to real, face-to-face professional situations, lessen the anxiety they feel when they must speak English, and prepare them to work in English. Ultimately, we want to examine the possible emergence of an inter-cultural community of practice (Wenger 1998). We intend to collect data through a) pre-questionnaires so as to get information on the students’ knowledge of English, the specificities of work in the target country and its culture, b) recordings of the simulations, and c) post-questionnaires to gather the students’ impressions on the experimentation. These data will be analysed to examine the development of the students’ language and intercultural skills (more particularly the professional use of English for specific purposes) in a professional-like context.

The research protocol that we plan to follow falls into three main phases developed below.

Phase 1: preparation phase

After finding our foreign partner, we will agree on the scenarios which will lead the learners to solve cases/ problems. This enables us to have the project fall within CLIL (Content and language integrated learning) pedagogy. We will then decide on a provisional calendar to plan the steps to follow (cf. table 1). After that, we will write the pre- and post-questionnaires and open an access on google drive so that learners can take the documents helping them to accomplish the tasks and activities required before solving the problem and share information if they need to.

Phase 2: performance phase

This second phase has to do with all the real and virtual contacts the teams of students will have, be they with the teachers or the other students. The project will fall into stages as table 1 shows. In this table, only the tasks and activities that the French learners must complete are considered:

<p>Step 1 Live meeting</p>	<p>Task 1: The French volunteer students are required to complete the pre-questionnaire to determine their language level, their cultural and intercultural skills and their knowledge of English for specific purposes. The team of researchers constitute the groups: in each of the groups, at least one ‘gamer expert’ and one student fluent in English are needed. Activity 1: Students are presented with the VR device (headsets and applications). Task 2: Students are asked to create their avatars on Sansar.</p>
<p>Step 2 Asynchronous work</p>	<p>Activity 2: Students discover the platform where the documents they will need are placed (google drive). Task 3: They introduce themselves and their avatar in a small video in English (posted on google drive) Activity 3: They discover/ read the problems to solve and choose one problem (they must determine the pros and cons of each problem). Activity 4: They watch the videos of the other team members so as to familiarize themselves with their foreign partners.</p>
<p>Step 3 Synchronous meeting on Sansar</p>	<p>Task 4: The mixed teams of students agree on one of the problems to solve after negotiating this on the virtual world Sansar.</p>
<p>Step 4 Asynchronous work</p>	<p>Activity 5: Students study the problem chosen at home or at university. They find and pass on documents to their groups via google drive so that they can solve the problem.</p>
<p>Step 5 Synchronous meeting on Sansar</p>	<p>Task 5: Students discuss the problem and determine the steps to solve it.</p>
<p>Step 6 Asynchronous work</p>	<p>Students work on the steps to solve the problem.</p>
<p>Step 7 Synchronous meeting on Sansar</p>	<p>Final task: Students present and explain how they solved the problem.</p>

Table 1 – performance phase

Phase 3: exploitation phase

Students will complete a post-questionnaire to provide the teachers and researchers with information about the device and the development of their skills. They are expected to say what they think about VR as a pedagogical tool to learn ESP so that teachers can measure its efficacy in developing pre-professional skills and linguistic abilities. One of the questions will have to do with the possibility of VR replacing real exchange insofar as VR is multimodal and avatars can take up body exchanges. The teams of researchers will analyse the results and then give some feedback to the students on their linguistic and general abilities.

The research outcomes will be to verify the value of Sansar in facilitating the interpretation, analysis and working of facts and information in an effective way that is conducive in resolving a problem and also in enabling further key information to be identified and requested. Then, the teachers and researchers will look at the effectiveness of VR headsets in enabling research from different linguistic, cultural and legal backgrounds to be facilitated, particularly with a view to pinpointing relevant theories. Thirdly, it will be of interest to determine the value of Sansar in effectively mediating the application, analysis and discussion of sources to a set of key facts with a view to coming to sound professional judgements, especially from different social, cultural and policy standpoints. Finally, the efficacy of Sansar in enabling cross-cultural dialogue and communication, linguistic understanding and growth between participants from different countries will be studied. Another experimentation following the same protocol will be carried out on skype to compare both devices and determine the added value of Sansar and virtual reality (specially the use of avatars) in such problem-solving situations.

4. Problems and limitations

The creation of the new space and the implementation of the activities we wished to offer learners was however faced to problems we had not completely envisioned. For the moment indeed, virtual reality activities can be offered via several different types of headsets, or even immersive rooms, and all these technologies are not necessarily compatible. Furthermore, that kind of equipment is still expensive and not many university language centers are yet equipped with it. This, has led us to have difficulties in finding potential partners with whom we could organize virtual tandem sessions for our learners; even though some researchers recommend the language centres of the future to be equipped with virtual reality spaces in order to give every student the opportunity to “put on [their] helmet” and visit Paris and interact with people through virtual reality in order to “improve [their] French in a carefully scaffolded Vygotskyan manner” (Ledgerwood 2017: 11). Another problem concerns the number of physical restrictions. Virtual reality equipment is indeed submitted to quite a number of restrictions and not recommended for people suffering from epilepsy, balance disorders, or heart problems.

Conclusion

We aimed at understanding to what extent the use of VR would allow learners to take better account of communication contexts and therefore a better understanding of related language practices. In this respect, virtual worlds seem to facilitate the development and consolidation of general as well as linguistic skills. They have an impact on collateral competences (Berry 2012) and practicing online enables the transfer of these competences onto real life (Turkle 2015; Berry 2012). Yet, even if VR also has weaknesses since, when introduced in pedagogical projects involving foreign partners, it generates logistical time-consuming problems and some health issues, we think that VR can contribute to professionalize learners. It may help replace real exchanges with foreign students and is an added value.

We would however like to emphasize the fact that the virtual reality equipment learners can use is only an element of our language policy. It is one of the many resources of a pedagogical context and environment that promotes learner autonomisation. We firmly believe indeed that: “Far from reducing users to language resource or service consumers, SACs should give learners opportunities to be actors of their own learning through interactions with peers, native or non-native speakers of their target language(s) and encourage the creation of

learning communities” (Jeanneau 2017: 65). The final aim of our language policy being to help students take charge of their language learning, virtual reality can prove to be useful if it helps learners become more active in their learning, which seems to be the case because of its immersive aspects as seen in part 2.1 Although it is a very new resource and only available in one of our SACs for the moment the feedback about some of the workshops proposed via this new device given by some learners in their logbooks is quite promising

At the beginning of this article, we were wondering whether virtual worlds and virtual reality could be considered as valuable pedagogical devices or if they were only fashionable for now. The question is still unanswered for the moment. Further experimentations we intend to carry out might help settle it.

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Appendix

Student logbook extract 1

My goal was to learn to express myself in Spanish while learning a new way of learning a language. In addition, it also allows me to start my journey around the world, since you can visit virtually every city in the world.

I was very curious about virtual reality because I had never had the opportunity to try it. So I signed up for this workshop to learn how to use applications and headphones and to see how they can be used to learn a language. I found it a good experience, even if I couldn't participate until the end because of the dizziness. I think it is a good tool to work on listening comprehension, while knowing a new place that we have never seen in our lives. We learn a lot about the cities we visit virtually. You could choose the city you wanted to visit, but for the "guided tour" to be in Spanish you had to choose a country or city where the official language is Spanish.

To conclude, it was an interesting, informative session that allowed you to practice listening comprehension, but it was difficult to practice speaking. I had thought before that we could talk to people who are also experiencing it through a microphone, but that's not the case. So one of my objectives, that is, to be able to practice oral expression, did not come true. The session served another objective related to language learning, that of oral comprehension. However, I would not suggest it for a person who tends to suffer from vertigo.

Student logbook extract 2

Today I participated in a workshop entitled "Fiesta de Muertos en Realidad virtual". During that hour, the Spanish teacher provided us with two controllers as well as audio and visual headphones, allowing us to see the images transmitted by the computer in 4D. The Earth was represented and we could choose a country to visit by clicking on it. However, we encountered some technical problems because the download that was supposed to allow us to visit Spain was not successful. So I turned to the countries of South America and more particularly Peru because it is a country I have always wanted to visit and whose first official/speaking language is Spanish, before Quechua and Aymara. I was thus able to visit and discover sumptuous landscapes such as Machu Picchu, an ancient 15th century Inca city. I still had difficulty understanding what was being told to us because it was a confirmed level of Spanish that did not correspond to my beginner level. I think it's a pity that we can't benefit from subtitles (in the language) during virtual reality because it would allow us to, perhaps, better understand what is being said to us (without the accents). However, the quality of the 360-degree images, these landscapes, these inhabitants, these temples... made me dream and travel for an hour and made me want to visit this Spanish-speaking country even more to combine the pleasure of travel and the desire to progress in the language.

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² Still under development (<https://edolang.univ-lorraine.fr/>)

³ 1994, http://www.canal-u.tv/video/cerimes/ne_pour_creer_du_sens_avec_francisco_varela.12824

⁴ It should be mentioned that none of the applications we use is specifically made for language learning: the target of these applications is not language learners in the first place.

⁵ The participants were Master MEEF students in their second year of teacher education spending time with their school classes and also at university.