Can 360 virtual reality tasks impact L2 willingness to communicate?

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Abstract. This paper presents a research proposal that aims at examining the impact of communicative tasks mediated by Virtual Reality (VR) on second language (L2) Willingness To Communicate (WTC) outside of the classroom. The study will take place in Montreal, a Canadian city known for its regional variety of French and the bilingualism of its population, which is challenging for international students trying to practice the target language outside of the classroom. A mixed-methods approach will be used to follow the evolution of WTC levels while exploring in more depth students' perceptions of the virtual activities and their WTC.

Keywords: virtual reality, L2 willingness to communicate, task-based language teaching.

1. Introduction

Since the communicative approach and task-based language teaching have placed communication at the center of L2 teaching, the use of authentic learning material and simulation have been identified as two efficient strategies to improve learner's communicative competence (Ellis, 2003). Researchers have pointed out, however, that while some L2 learners with high linguistic skills are reluctant to initiate communication in L2, other learners, with less developed language skills, are eager to engage in conversations using the L2. This paradox can be understood through the concept of L2 WTC, defined as "a readiness to enter into discourse at a particular time with a specific person" (MacIntyre, Dörnyei, Clément, & Noels, 1998, p. 547). Although it is a complex model, literature has clearly identified that L2 anxiety and L2 Self-Perceived Communication Competence (SPCC) are the two main antecedents of L2 WTC. Since researchers have suggested that

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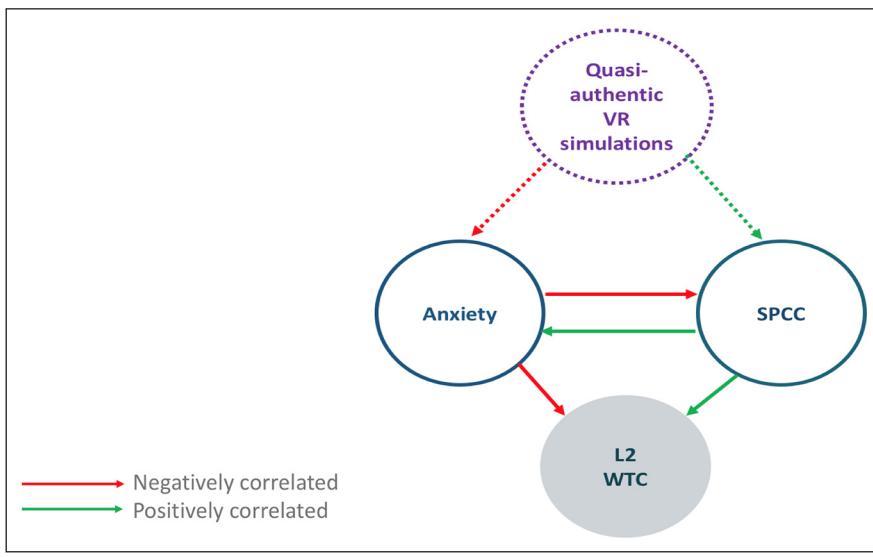
the development of L2 WTC be made the ultimate goal of L2 teaching, teachers interested in doing so should try to create learning material that help to reduce L2 anxiety while increasing L2 SPCC.

Empirical research indicates that computer-mediated communication has a positive effect on increasing L2 learners' WTC by lowering language anxiety (Rankin, Gold, & Gooch, 2006) and increasing SPCC (González-Lloret, 2017). One avenue for research that has not received careful attention is the pedagogical use of 360 VR, which relies on 360 photos and videos that can be displayed either on a computer (or phone) screen, or on a VR headset. In both cases, due to its immersive and real-life nature, and based on previous research showing that virtual environments can help lower anxiety (Grant, Huang, & Pasfield-Neofitou, 2013) while improving communicative and cultural skills (Johnson & Valente, 2009), we propose that the introduction of communicative tasks based on quasi-authentic VR simulations in the L2 classroom will positively impact L2 French WTC by preparing students for real life encounters in the L2, and thus reducing anxiety and increasing SPCC (Figure 1). As such, our research questions are the following: (1) how can quasi-authentic VR simulation contribute to L2 WTC and its two main antecedents, SPCC and L2 anxiety?, and (2) how do students perceive class communicative tasks using VR in preparing them for actual L2 use outside of the classroom?

Figure 1. The hypothesized impact of the introduction of quasi-authentic VR simulations on L2 WTC (dotted lines)



2. Method

2.1. Participants

The study will take place in a Montreal university setting, at a beginner level L2 French course over a period of ten weeks. To examine the impact of the communicative VR tasks on learners' L2 WTC, we will recruit 28 students (A2 level, according to the Common European Framework of Reference for languages). They are international students with low to moderate L2 WTC facing challenges to communicate in French outside the classroom. Many speak English as a first or second language.

2.2. Procedures

During the ten-week period, students will complete three VR communicative tasks reproducing scenarios that can be encountered in everyday life, such as ordering a hot drink in a café. The tasks will be anchored in the reality of the Montreal context: participants will be exposed to a variety of accents and local vocabulary during the VR tasks.

2.3. Material development

A Samsung Gear video camera will be used to shoot the 360 videos (to be used in the VR scenarios) in three different Montreal locations: a café, a bar and a grocery store. Volunteers (local French speakers) will be recorded while asking questions and giving instructions in French based on a pre-written scenario. The recordings will serve as prompts for the VR communicative tasks. The videos will be uploaded to YouTube and then embedded in an online learning platform that students will use to perform the tasks. The online platform will feature a speech-recognition tool that will be able to identify students' oral responses to the 360 video prompts and automatically play the next corresponding prompts (branching).

2.4. Instruments

Given the fact that 360 VR is still a technology in its infancy in L2 teaching, this research can be defined as an exploratory study, relying on survey questionnaires and qualitative data from student logbooks and focus groups. Mixed methodology allows for the observation of the psycho-affective variables underlying L2 WTC

(L2 anxiety and SPCC) while examining students' perceptions and reactions following the introduction of the VR material from a sociocultural perspective.

2.4.1. Surveys

At the beginning and end of the ten-week period, the participants will fill out pre-test/post-test surveys in which they will be asked to rate their levels of L2 WTC, anxiety, and SPCC. These surveys will rely on validated quantitative questionnaires using Likert scales (e.g. the 20-item L2 WTC questionnaire from MacIntyre, Baker, Clément, & Conrod, 2001) followed by open-ended questions that will give participants the opportunity to elaborate on their self-reported levels of L2 WTC, anxiety, and SPCC. Descriptive and inferential (correlative) statistics will be run on *SPSS 25.0* to analyse the results for questions using Likert scales.

2.4.2. Journals

Participants will also be asked to keep a journal during the ten-week period in order to reflect on their learning experience in Montreal and their willingness to communicate outside the classroom. To guide them in this reflection, they will be presented with different types of questions related to the use of VR in the classroom, their willingness to use the L2, and their actual use of L2 outside the classroom.

2.4.3. Focus groups

Finally, towards the end of the ten-week period, during focus group discussions, students will be invited to expand on the reflection initiated in their journal. These discussions, in groups of five to six students, will take place outside of class time and will be filmed. Transcriptions of the focus groups will be analysed using *QDA Miner 5.0*.

3. Discussion

Since research on the pedagogical implications of L2 WTC has not received appropriate attention (Gregersen & MacIntyre, 2013), this study will make a valuable contribution to the field of L2 learning. Even if no study has yet looked at VR tasks using 360 videos, results showing the positive impact of gamified virtual environments on L2 WTC (Reinders & Wattana, 2014) lead us to believe that the introduction of 360 VR tasks could increase students' L2 WTC. This research could also pave the way to the creation of a framework for the design of 360 VR

tasks for the L2 classroom, therefore helping task designers to avoid pitfalls such as *edutainment* (O'Brien & Levy, 2008).

One of the limitations of this study might be the bias of some participants due to the introduction of VR, a relatively new technology in the L2 classroom. However, this potential limitation could be mitigated due to the fact that by the beginning of the study, participants will already have performed one non-interactive task using VR as part of the regular course activities.

4. Conclusion

This study will focus on the pedagogical implications of L2 WTC. It will examine students' perceptions of 360 VR communicative tasks and seek to determine how their introduction in the L2 classroom impacted the students' L2 WTC outside of the classroom.

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