

Panel—Improve Foreign Language Speaking Proficiency in Immersive Environment

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Abstract—Foreign language learners, especially adult beginning learners, often experience anxiety when acquire speaking proficiency. This negative emotional state hurdles the learners from starting to practice the target language with native speakers, their instructors, and their peer learners. The immersive learning environment provided through Virtual Reality (VR) technology enables students to start orally practicing the target language without directly facing the real audience at the beginning of their learning journey. In this panel, it is projected to present the possibility of applying VR language learning tools for students to practice speaking in a low-anxiety immersive environment for multiple languages: English, French, and Chinese. With four panelists, the possible tools, their affordance, appropriate instructional design, and activities suitable for VR delivery in the foreign language classroom will be discussed.

Index Terms—virtual reality, foreign language speaking proficiency, anxiety, immersive learning environment

I. INTRODUCTION

Learning and starting to speak a foreign language can be very challenging. Anxiety has been identified as a common emotional reaction in foreign language (FL) classrooms [1]. Researchers have found that one-third of the foreign language learners experience at least a moderate level of foreign language anxiety [2]. Researchers have also documented the wide range of potential negative effects that foreign language anxiety has on foreign language learning [3]. Among the four skills of acquiring a language (reading, listening, speaking and writing), speaking has been identified as a high-anxiety proficiency [1], [4], [5], and the anxiety debilitates the oral performance of second language learners [6]. Foreign language educators and scholars have been conducting research on finding out the causes of foreign language anxiety. Young [5] has categorized six types of causes: personal and interpersonal anxieties (e.g., self-esteem, communication apprehension), learner beliefs about language learning, instructor beliefs about language teaching, instructor-learner interactions, classroom procedures (e.g., speaking in front of peers), and testing. Research on FL anxiety can be found not only with English learners, but also many widely studied languages like French [7], Spanish [8], German [9], Japanese [10], and many less commonly taught languages like Arabic [11] and Chinese [12].

Virtual Reality (VR) has becoming one of the most popular newly used technology in recent years. It has been widely used in a wide range of fields including psychology, medical science, industrial design and education. Among these, psychologists

applied VR for both clinical and non-clinical purposes in curing anxiety disorders [13]–[15], as well as public speaking disorders [16], [17]. Educators and educational researchers have been explore how to use it in teaching learning, including the second language learning. A number of studies have documented the application of VR technology in language learning [18]. Macedonia [19] built an Intelligent Virtual Avatars (IVAs) to teach vocabulary and received two levels of outcome from learners: better performance in memorizing new words and high acceptability of IVAs. Repetto [15] mentioned VR may provide a virtual environment for better language learning and comprehension in a low anxiety environment. However, the investigation of whether using VR as a speaking practice tool can create a low anxiety environment and facilitate speaking practice is scarce. Based on this situation, this panel is proposed to explore the important issues related to applying available immersive foreign language learning tools to create low-anxiety and effective environment for adult learners of multiple languages.

II. LITERATURE REVIEW

A. Anxiety

Anxiety is one of the most common emotional reactions in people's learning experience, it can be found in almost all situations when learning and teaching happen. Researchers have been conducting studies on a wide range of subjects and learners when anxiety affects the learning, most of the studies have proven that anxiety generates negative learning experience across subjects [20], [21], and age group [22]. Among the above, anxiety in foreign language learning is one of the earliest areas that anxiety was noticed and studied.

B. Anxiety and Foreign Language Learning

The phenomenon of anxiety in foreign language learning or classroom was first studied by Horwitz, Horwitz, and Cope [1]. They defined foreign language anxiety as “a distinct complex set of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process”. Many later studies have proved that foreign language anxiety had a statistically significant negative effect on learners. Three types of foreign language anxiety are communication apprehension [23], fear of negative evaluation [24], and test anxiety [25]. The instrument, the Foreign Language Classroom Anxiety Scale (FLCAS), was created to measure foreign language anxiety [1]. A lot of studies suggested that language educators reduce the language anxiety by creating

a friendly and supportive environment in class, and teaching students anxiety-reducing strategies.

C. VR in Foreign Language Education

A number of papers have documented the application of VR technology in language learning. Macedonia et al. [19] built Intelligent Virtual Avatars (IVAs) to teach vocabulary and received two levels of outcome from learners: better performance in memorizing new words and high acceptability of IVAs. Repetto argued that VR may provide a virtual environment for better language learning and comprehension in a low anxiety environment [15]. Papin proposed to use 360 VR to stimulate the communication willingness among target learner of French [26]. However, VR in foreign language education research still appear to be lacking of empirical evidence [27]. Therefore, this panel is projected to provide not only the available immersive learning tools for three commonly taught languages in the world: English as Second Language (ESL), French and Chinese, but also the theoretical rationale of why these tools are suitable for language educators and learners.

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