Digital Gaming in the Language Classroom:
Student Language Performance, Engagement, and Perception

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ABSTRACT

Despite the increasing awareness of digital games' potential for language learning, only a handful of studies focus on their integration into classrooms. Informed by bridging activities, this mixed methods case study recruited six students to engage in instructed gameplay in class and game-related activities after class. Both qualitative and quantitative data were collected and analyzed so as to measure participants' learning outcome, document their engagement, and explore their perceptions of game-based language learning. Results suggest progress in vocabulary recall and transfer. Participants also reported gains in writing and listening, satisfaction with the project, along with a positive attitude towards GBLL. Moreover, it is found that the instructor has a pivotal role to play in pre-game set-up, in-game guidance, and post-game feedback. The study yields empirical evidence regarding the benefits of GBLL and may hold pedagogical implications for the integration of games into educational settings. The limitations of this research and future directions are also discussed.

KEYWORDS

INTRODUCTION

The proliferation of digital games in people's leisure time has sparked growing scholarly interest in their educational value and potential pedagogical application (Gee, 2003; Lacasa, 2013). In the field of second language acquisition (SLA), researchers have explored a diverse array of digital games for their potential in language learning and teaching from multiple theoretical perspectives (Peterson et al., 2020). To demonstrate the utility of digital games to facilitate language learning, researchers have reported benefits of computer gaming relating to various aspects of language acquisition, such as high levels of motivation (Connolly et al., 2011; Liu & Chu, 2010), lowered anxiety (Grimshaw & Cardoso, 2018; Horowitz, 2019), enhanced willingness to communicate (Reinders & Wattana, 2011, 2014, 2015), and increased use of target language (Rankin et al., 2006; Reinders & Wattana, 2011; Zheng, et al., 2009).

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In spite of these encouraging results, the literature is limited regarding pedagogical practices in the classroom-based gameplay and few attempts have been made to explore how to maximize learning through digital gaming. As deHaan (2019) argued, the literature is replete with game-based language learning, but not game-based language teaching. Moreover, empirical evidence regarding actual learning outcomes from digital gaming is focused on incidental learning and vocabulary acquisition. Even for the research that reported vocabulary gains, it is only the retention rather than the productive knowledge of words that was investigated. To address these gaps, this case study drew upon the model of bridging activities (Thorne & Reinhardt, 2008) to explore how digital games can be incorporated into the language classroom, with a focus on pedagogical mediation and the effects of instructed gameplay on student's learning performance, engagement and perceptions.

BACKGROUND

Digital Games and Language Learning

Existing studies on digital game-based language learning (GBLL) draw upon different theoretical groundings. Taking an ecological view, researchers have widely adopted the term "affordance" (van Lier, 2000) to refer to games' perceived opportunities and potential for language learning. This strand of research has emphasized that gameplay is a part of a larger ecology of game-related paratext (Apperley & Beavis, 2011) or attendant discourses (Thorne et al., 2009). From this perspective, language learning results from not only mere gameplay, but also the ecology encompassing gameplay including the broader discourses and activities in and around games (Reinhardt & Thorne, 2016). The sociocultural account of SLA has also been proposed to justify the use of games based on the assertion that they provide arenas for interaction. In a qualitative case study utilizing the game *World of Warcraft (WOW)*, Rama et al. (2012) examined the in-game interaction of two Spanish leaners. It was found that gameplay elicited collaboration, which helped develop learners' communicative competence. This line of research focused on games as a social setting where players would engage in language socialization (Marsh & Tainio, 2009; Peterson, 2012) and have access to opportunities for intercultural communication (Thorne, 2008; Zheng et al, 2009). Moreover, from the cognitive perspective of SLA, digital games are found to develop motivation and lower affective filters with their linguistically rich, cognitively engaging, and emotionally motivating learning environment (deHaan et al., 2010; Liu & Chu, 2010; Reinders & Wattana, 2011, 2014, 2015). One dominant theme reported in these studies is positive learner feedback. In Richardson's study (2016), 78 advanced EFL students completed challenging language tasks by playing the location-based augmented reality game *Mission Not Really Impossible*. Both student comments and researcher observation suggested a high degree of engagement. Similarly, based on gameplay observation and interview, Holden and Skypes (2011) demonstrated the desire and excitement of participants to engage with the local context when playing the place-based mobile game *Mentira* to learn Spanish. To better leverage this media for learning, Filsecker and Bündgens-Kosten (2012) called for more research into learners' cognitive engagement with the game and the wider learning experience.

When it comes to the linguistic gains of digital gaming, only a handful of studies have examined the use of digital games to facilitate writing (Allen et al., 2014; Lin et al., 2018; Suh et al., 2010), listening (deHaan, 2005a) and speaking (Liu & Chu, 2010; Hwang et al., 2017). The bulk of studies, however, were dedicated to investigating the impact on vocabulary learning. Bytheway (2014) examined the gameplay of six experienced *WOW* gamers and concluded that learners' vocabulary learning strategies were affected by in-game culture. Sylven & Sundqvist (2012) investigated young Swedish learners' out-of-school gaming behaviors and found vocabulary knowledge was positively related to gaming time. As for the effectiveness of using digital games for vocabulary learning, Tsai and Tsai (2018) conducted a meta-analysis and the results favored GBLL over traditional instruction. However, it was also noted that task design and scaffolding play a critical role in securing positive

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