Effects of Social Network Information on Online Language Learning Performance:
A Cross-Continental Experiment

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ABSTRACT

This study examines the value and impact of social network information on a user's language learning performance by conducting an online experiment in a peer-to-peer collaborative language learning marketplace. Social information or information about others in one's network can present a socially networked learning environment that enables learners to engage more in the learning process. Experimental research design in an online language learning marketplace was conducted. The study finds evidence that the mere visibility of social network information positively impacts a learner's learning performance. Learners that engage with social interaction perform better than those that do not. In addition, active social interaction has a stronger impact on learning performance as compared to passive social interaction. The study concludes with implications for platform developers to enable the visibility of social information and engineer the user experience to enhance interactive learning.

KEYWORDS

E-Collaboration, Interactive Learning, Learning Efficiency, Online Language Learning, Peer-to-Peer, Social Information, Social Interaction, User-Generated Content

INTRODUCTION

Web 2.0 technologies such as e-learning platforms, podcasts, social network sites, mobile applications, and online learning marketplaces are now used as a source of language learning (Godwin-Jones, 2018). Web 2.0 learning tools have helped in making foreign languages more easily accessible and offer endless possibilities for authentic interaction with native speakers in any target language (Sylv & Sundqvist, 2017).

In the past decade, the potential link between Web 2.0 learning tools and language learning has been frequently examined and has been a subject of debate (Alhamami, 2019; Shadiev, Hwang, & Huang, 2017; Y.-F. Yang, 2018). A meta-analysis of this stream of research found that the relationship between the use of Web 2.0 tools and language learning performance is weak and inconclusive in terms of direction and substantial effect (Luo, 2013; Parmaxi & Zaphiris, 2017). On one hand, studies have found that technological innovations can increase learner interest, pleasing value, and motivation (Chang, Chen, & Chiang, 2019; Collins & Halverson,

2018), providing students with increased access to the target language (Ahn & Lee, 2016), providing new learning opportunities for the unfortunate (Schröder, Grüttner, & Berg, 2019), providing increased engagement opportunities (Batanero, de-Marcos, Holvikivi, Hilera, & Otón, 2019), and facilitating peer learning (Lim, Ab Jalil, Ma'rof, & Saad, 2020). On the other hand, studies have found that the use of Web 2.0 learning tools can result in inappropriate input, shallow interaction (Anshari, Almunawar, Shahrill, Wicaksono, & Huda, 2017), inaccurate feedback, frustration with the digital channel (Fisher, Howardson, Wasserman, & Orvis, 2017), and distraction from the learning task (Garcia, Falkner, & Vivian, 2018). With empirical evidence supporting both sides, it is difficult to see the nature of the actual relationship. The findings thus far seem to suggest that different types of Web 2.0 tools, designs, and use relate to differential impacts on learning performance (Parmaxi & Zaphiris, 2017; C. Wang, Fang, & Gu, 2020). Whether or not Web 2.0 learning tools fosters or undermines language learning remains a topic of discussion among scholars (Luo, 2013; Parmaxi & Zaphiris, 2017), and in particular, the design characteristics that promote learning in Web 2.0 learning tools is not yet clear (Gray, Thompson, Sheard, Clerehan, & Hamilton, 2010).

One popular and growing Web 2.0 learning tool is online language learning marketplaces (OLLMs) such as Babbel, Busuu, and Duolingo, where users can teach each other languages. These OLLMs allow for social information visibility. Users' learning network, performance activities of a user and his friends, how well the user is doing against others in the community, along with other related information - is all made visible. This type of information is social information – information about others in one's network. OLLMs have a choice of two broad information-provisioning strategies (Parmaxi & Zaphiris, 2017). These marketplaces can continue to target potential consumers using traditional "non-social" formats such as regular courses, quizzes, etc., or adopt emerging "social formats" such as the visibility of peers' performance, the interaction with peers, the newsfeeds from peers, etc. While firms are actively experimenting with both "social" and "non-social" information-provisioning formats, there is a dearth of research to guide decision making in this context (Chakowa, 2018; Gray et al., 2010). Furthermore, "social" collaboration and interaction on language learning has been examined on mainly Blogs and Wikis (Luo, 2013), studies have not yet examined OLLMs which have altered the level of interaction among users and the number of languages that can be learned. A current meta-analysis has highlighted the need to further investigate such emerging marketplaces (Parmaxi & Zaphiris, 2017). Understanding how social information can impact one's language learning performance in OLLMs remains a wide gap in the existing literature. Furthermore, while interaction has been commonly examined through English as the taught language, how Web 2.0 learning tools respond to less commonly taught languages are largely unknown (Luo, 2013).

The present study seeks to address the gap in the literature by investigating the relationship among the OLLM design characteristics and language learning performance by empirically examining the value of "social information" and social interaction on learning performance. This study seeks to examine the value and impact of "social information"— wherein, a user sees and interacts with the learning activities of her peers—on his language learning proficiency. This study will help academics better understand the relationship between Web 2.0 learning tools and learning effectiveness by examining factors that have been overlooked; the "social" design factor in an understudied emerging marketplace. This study responds to the call for research for such marketplaces, and in particular, for languages other than English (Luo, 2013). The findings of this study will enable e-learning platform providers and Web 2.0 tool designers to value the effectiveness of "social information," and will identify the types of information or viral product design features that impact use, effectiveness, and ultimately sales.

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