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TASK-BASED LANGUAGE LEARNING AND TEACHING: A FOCUSED REVIEW ON THE TECHNOLOGY ASSISTED LEARNING CONTEXT

Xu Jin

Jinhua Polytechnic, CHINA

Email: edithxu@126.com

ABSTRACT

The last few decades have witnessed growing attention to task-based language learning (TBLT) and the important role that technology play in the development of TBLT. This article focuses on TBLT in the technology-assisted context by examining the advantages and challenges. This article draws on the current literature and discusses the various advantages brought about by technology-enhanced TBLT. For example, it helps to increase learners' motivation and relieve learners' anxiety, increase the quantity and quality of language production during task performance and promote learners' long-term development of language in syntactic, lexical, oral, writing, and even cross-cultural competence. It then presents the findings of empirical studies to draw on challenges that learners, teachers, and researchers meet. By way of conclusion, this article discusses the implications of the aforementioned studies for more effective endeavors to implement TBLT in a technology-assisted context.

Keywords: Task-Based Language Learning and Teaching, technology-assisted context, advantages and challenges.

INTRODUCTION

There is an increasing growth of interest in Task-based Language Teaching (TBLT) for the last several decades. Numerous research has been done on the notion of the task and its application in various contexts from a variety of perspectives. TBLT is a language teaching approach that is process-oriented and emphasizes communicative language teaching in its syllabus design and aims of instruction (Ahmadian, 2018). The essence of TBLT is that communicative tasks serve as basic curricular units and are the only components in the educational cycle in which meaning takes precedence (Ellis,2018). Language education centered on tasks is anticipated to provide learners with an educational experience that enables them to use the target language for meaning formation, and this process is expected to stimulate and advance learners' language acquisition (Samuda & Bygate, 2008).

Several characteristics might be observed across all of the numerous definitions of tasks in large volumes of literature. Firstly, tasks should be connected with and resemble real-world activities (Skehan, 1998). Secondly, tasks require the collective investigation and pursuit of foreseen or emergent aims within a social context (Candlin, 1987, p. 10). Thirdly, tasks have a primary focus

on meaning and nonlinguistic goals (Ellis, 2003; Skehan, 1998). Lastly, tasks have an emphasis on communication and completion, indicating that learners communicate information aiming at making decisions, solving issues, and achieving results (Pica, 2008).

However, one of the most difficult challenges of communicative tasks application in classroom settings is figuring out how to make assignments more real or regarded as authentic by language learners. The second challenge is creating a task that promotes meaning-based communication. Because it will be very difficult for instructors and learners to orient to language as a tool consistently and to adopt the role of language users when they both know that they are in the classroom for language learning and teaching (Ellis, 2003). According to some researchers, TBLT demands instructors and learners to forget they are in the classroom for foreign language learning, which is difficult to do given the classroom's educational imperative character. (Goffman, 1981). According to the previous research, several other difficulties and challenges have been discovered when tasks are carried out in language classroom settings. Firstly, in some sociocultural circumstances, students' passive learning style and overreliance on the instructor undermine the application of TBLT (Burrows, 2008). Secondly, if everyone in the class starts talking at the same moment, it will definitely result in many "uncontrollable" and "unwelcome" sounds (Bruton, 2005). Thirdly, mixed proficiency levels may bore faster students while leaving slower students unable to finish doing the language tasks in class (Mustafa, 2008). Finally, learners are sometimes reluctant of using a foreign language in performing communicative tasks (Littlewood, 2007).

Many of these issues which are caused by the temporal and physical limits of the classroom setting may be mitigated with the use of technology. With online resources and information technology, the range of tasks is broadened, the authenticity of tasks and motivation for task implementation is increased, student ownership of and agency in the tasks are facilitated (Reinders & White, 2010), and post-task work can help students advance their language and culture knowledge are provided. (Hinkelman, 2018; Ortega, 2009). Especially in these recent two decades when mobile technology has developed rapidly and seems to have pervaded virtually every single aspect of daily life, mobile technology has shown its tremendous power in stretching task-based language teaching to the real and outside world, providing authentic task-based learning materials and catering to individual differences and styles in task-based learning (Calabrich, 2016).

As TBLT in an online learning context is an instructional framework with great potential (Lai & Li, 2014; Ziegler, 2016), there is an increasing number of studies that examine the technology-assisted TBLT in recent years. The rest of this article provides a critical review of the increasing collection of research on technology-enhanced TBLT by analyzing its benefits and challenges so as to shed light on the future endeavors to implement TBLT in second language teaching and learning.

Advantages of Technology to Task-Based Language Teaching

Recent studies have explored the benefits that technology has brought to TBLT. Some crucial insights into how technology facilitates task-based language acquisition have been discovered (Chen & Lin, 2018; Chen, 2019; Eslami & Kung, 2016; Jiang, 2017; Xue, 2020; Ziegler, 2016).

Previous research has shown that implementing TBLT in a foreign language by utilizing new technologies (especially mobile devices such as smartphones and tablets), is an effective approach for increasing learners' motivation and willingness to communicate and relieving learners' anxiety. In Anwar and Husniah's (2016) study, they discovered that a task-based strategy mixed with technology not only improved students' accomplishments but also increased their drive to finish their writing. Furthermore, Ziegler (2016) discovered in his research that employing technology to facilitate task-based learning increased students' motivation, confidence, independence as well as willingness to communicate. Jiang (2018) found in his study of Chinese as a foreign language course in an Australian University that a WeChat communication task integrated into a foreign language curriculum under the TBLT framework could effectively promote foreign language learners' learning motivation. This mobile-assisted language intercultural task served as an important supplement to foreign language learners' classroom learning. In another study conducted by Zhou (2020), task-based online group work was suggested to be effective in lowering EFL learners' anxiety levels. In Zhou's research, a Chinese app DingTalk was utilized and installed on learners' tablets or smartphones and TBLT was designed with the aid of DingTalk. Students are required to do the tasks while working in groups with their smartphones or tablets. A stress-free environment was created for second language learners to work collaboratively and freely so that the research could examine whether and to what extent the online task-based instructional design has a positive effect on learners' anxiety. Meanwhile, the research on which online mode of task-based learning is more effective was also examined (i.e. the synchronous session or the asynchronous session). The results of this study showed that task-based online group work lessened foreign language learners' anxiety, and synchronous session lowered the anxiety more significantly than asynchronous ones (Zhou,2020).

Some researchers indicate that technology may improve learners' learning motivation and opportunities for practicing language skills, therefore, it may increase the quantity of language production during task performance (Chen, 2019). This has been proved in the form of mobile-assisted tasks, as Chen and Lin studied (2018). Their study found that using mobile technology to augment TBLT boosted fun English learning activities and reduced learners' anxiety about using their second or foreign language with peers. Meanwhile, technology allows for anonymous contributions to activities, which lowers affective filters during the task performance process and so has the potential to produce more language production among learners. Text-based technology-assisted tasks have been observed to improve the amount of language generated by learners, such as more words, sentences, and turns, since they were more relaxed and less anxious in such context (Eslami & Kung, 2016).

It has been discovered by previous research that different kinds of technology have different effects on the amount of language produced: Evidence suggests that multimodal technology-assisted activities, in which learners have access to audio, video, and text, serve to enhance language output during task performance. Furthermore, it is shown by previous research that multimodal tasks, in which learners have access to audio, video, and text, can increase language output in task performance. The inclusion of text chat to audioconferencing, for example, considerably promoted beginning learners' language production (Vetter & Chanier, 2006). Furthermore, independent of

the availability of photographs, learners generated a larger number of turns when they could see each other's images during online talking and more utterances utilizing target expressions in voice conversation (Yamada, 2009). Therefore, technology increases language production during task performance.

The previous study has also shown that technology can improve the quality of language production while performing a task. Text-assisted activities provide a type of written conversation which have the benefits of both oral and written communication for task performance. This trait leads to technology's advantage in evoking more complex structures and higher grammatical correctness in students' task performance when compared to face-to-face contexts (Böhlke, 2003). It is also shown by previous research that learners could produce a broader range of speech actions and discourse functions when performing tasks in a 3-D virtual world (Svensson, 2003). Furthermore, throughout online audio chat sessions, learners consistently used foreign language during task performance and engaged in discussion more frequently than during face-to-face interactions (Heins, Duensing, Stickler, & Bat-stone, 2007). Finally, it was discovered by Mak and Coniam (2008) that collaborative project-based assignments on a wiki induced increased writing creativity and more sophisticated language production over time (Mak & Coniam, 2008).

Different modes of online communication have different impacts on the types of discourse functions and linguistic features of language production: synchronous interaction was found to be freer and resemble face-to-face conversation, whereas asynchronous discussions were more constrained and resembled the initiation-response-feedback discourse in traditional classrooms. Asynchronous technology-assisted language tasks, on the other hand, induced more complex language, more lexical richness, and more correct, formal, and lengthier T-units in students' task performance (Hwang, 2008; Kitade, 2006). Different communication technology modalities also improve the quality of task performance in different ways. For example, during task performance through text chat, students displayed increased confidence in grammatical correctness and produced a greater number of self-corrections when performing tasks (Yamada, 2009). Written tasks also produced higher complexity and greater variation in students' use of pragmatic tactics than oral and face-to-face sessions (Sykes, 2005). As a result, the research findings are mixed, but they do show that technology can help improve the quality of second language production while performing a task.

Then is technology able to promote task-based language development? Researchers have been examining whether the observed increased quantity and quality of task performance mediated by technology contributes to language development. Researchers have studied how scaffolding from expert peers during technology-assisted task performance enabled learners to change from other-regulated to self-regulated performance. For instance, Fang (2021) found that mobile learning could enhance learners' language proficiency by providing TBLT with scaffolds in an EFL setting. A mobile-supported TBLT application was developed in his study to provide a linguistic and task scaffolding to solve the problems of inadequate language competency and provide feedback in TBLT. A group of university students studying English as a foreign language (EFL) took part in an experiment lasting for three weeks as part of a general English course. They were randomly

chosen to form the experimental group (mobile-supported TBLT) and the control group (traditional TBLT) respectively. The experimental group adopted TBLT with scaffolds incorporated into the app while the control group received traditional paper-based TBLT without scaffolds. An English achievement exam, testing participants' vocabulary, grammar, and reading comprehension, was given at the end of the experiment to see if the technological scaffolds improved the course's learning achievements. Results of the vocabulary and reading comprehension exams indicated that the mobile-supported TBLT group outperformed the standard TBLT group. In addition, the mobile-assisted TBLT group reported being more aware of fluency and accuracy-oriented speaking strategies compared with the control group. Pellerin's (2014) study produced similar findings that mobile devices contributed favorably to task building in TBLT to help EFL learners master language autonomously through meaningful and self-regulated language learning activities. Meanwhile, Similar findings have also been reported in a study on TBLT with the digital gameplay which confirmed that the interactions during the game help scaffold EFL learners' foreign language learning (Rankin,2008).

In addition, there is also evidence of the long-term development of language in syntactic, lexical, oral, writing, and cross-cultural competence due to technology-mediated task performance in literature. For example, some researchers carried out their research to show that intercultural tasks for a range of cross-cultural topics help learners to make significant progress in syntactic development and incidental vocabulary learning. What's more, positive evidence for the development of general listening and speaking skills is also found in the previous research. Mulyadi (2021) carried out a quasi-experiment with 97 nursing ESP learners as its participants to demonstrate that task-based instruction can both improve the listening and speaking skills of ESP learners.

Previous research has also found that technology-assisted TBLT plays a supporting role in the development of second language learners' writing skills and cross-cultural competency. For example, Putu Adelina (2020) found that mobile-assisted task-type learning has a significant impact on improving students' writing achievements. By carrying out a quasi-experimental study, the research examined the influence of mobile-assisted task-based language learning on learners' writing proficiency and motivation. Scholars like Murray and Hourigan (2008) found in their study the effectiveness of blogging tasks in facilitating L2 learners to improve their grammatical accuracy in second language writing. Meanwhile, project-based and intercultural communication tasks through blogging and WeChat were also found to be effective in promoting learners' intercultural competence and language learning motivation. (Jiang,2018; Elola & Oskoz, 2008). Therefore, there is sufficient evidence that task performance in TBLT in technology-assisted second and foreign language classrooms could support language development.

Challenges of TBLT in Technology-assisted Foreign Language learning contexts

Given the positive contribution of technology to TBLT in second language classrooms, the technology-assisted TBLT is a promising field for L2 teaching practitioners and researchers. Although technology brings great potential to TBLT, it also brings about a whole set of challenges and demands for learners and teachers. For language learners, doing technological language tasks

requires information technology skills. For language instructors, TBLT in a technology-assisted context requires them to change their pedagogical role. For researchers studying TBLT, tasks in a technological context require them to redefine some key concepts of TBLT and consider using new analytical frameworks and proper research methods that could fit into such context.

Learner Challenges

To ensure successful implementation of technology-assisted TBLT in second language classrooms, learners must have some indispensable skills and knowledge, e.g. technology skills and intercultural communication competence. For example, in the research done by Hauck and Youngs (2008), participants in a telecollaborative task-based experiment failed to develop the capacity to make good use of the Lyceum audioconferencing system, in spite of the initial stage of training on the function and usage of the system. In many cases, learners are often lacking the skills and capacity to use the technology involved in TBLT effectively to complete their tasks (Reinders & White, 2010). In addition to a lack of skills in using technologies, some studies have indicated language learners' inadequate intercultural competence, especially in some online collaboration tasks. Scholars like Kramsch and Thorne (2002) examined online collaborative task-based language learning through emails and illustrate the impact of sociocultural differences on learners' communication task performance. As learners from the two countries, which have different cultural origins, had different expectations towards online communication, misunderstanding and disappointments arise in their task-based online learning process.

Other challenges for learners are their concerns although they hold largely positive attitudes toward TBLT in a technology-assisted context (Chong, 2020). Learner concerns are mostly in three aspects. First, learners are concerned about whether sufficient grammar instruction would be provided in TBLT. The majority of L2 students believe in the idea that clear grammar instruction plays a crucial role in any of the second language classes so they are worried about the inadequacy of attention being paid to language form as technology-assisted TBLT has a focus on meaning and content. Second, learners are concerned that tasks are time-consuming. In some studies, learners complained that too much time and effort was spent on elements not related to language acquisition in a language learning task. Lastly, learners are worried about the heavy workload of tasks. Some students admit that passing the examination is their ultimate goal of learning the second language course which makes them reluctant to participate in doing the tasks.

Considering the above-stated demands on learners, it is important to equip learners with the necessary knowledge and skills to ensure the successful implementation of TBLT. At the same time, effort should be made to reduce learners' concerns about technology-assisted TBLT.

Teacher Challenges

The demands of technology and learners make the TBLT in a technology-assisted context complex and pose even more challenges to instructors. (Mulyadi,2021).

To achieve good learning outcomes from tasks, the teacher should be able to play multiple roles: To effectively arrange technology-enhanced task-based instruction in the ESP context, the teacher

needs to create situational and authentic tasks in a variety of foreign language learning settings in distance learning before the learning (Chen & Wright, 2017; Bryfonski & McKay, 2019). During the task, instructors should act as facilitators to help students in doing their language tasks in a technology-assisted context. After the task, teachers will help learners review the whole process of doing the task, provide comments on their performance and encourage them to reflect on the linguistic and cultural challenges that arose throughout the experience of doing the task. (Ware&O'Dowd,2008).

However, many studies have shown the teachers' lack of necessary skills for TBLT in a technology-assisted context. It is found that teachers are not well prepared to implement TBLT in such a context, for example, they are not skilled in using technology, or not well prepared to help students deal with intercultural communication failures, and to train learners for effective and culturally rich communication in a technology-assisted learning context (Carless, 2009). Moreover, many teachers themselves were found to have little faith in the advantages of technology-assisted TBLT. Some teachers think it is time-consuming to get familiar with the use of new technology and complains about too much time spent on the preparation for lessons, like making and uploading instructional videos. While others believe that learning outcomes of TBLT in a technology-assisted context are not always positive. (Chong,2020).

Therefore, to ensure the successful implementation of TBLT in a technology-assisted context, we should meet the challenge of confirming teachers' belief in the value of technology in facilitating TBLT and promoting their intercultural communicative abilities, so that they can serve as trainers and facilitators for their students. However, research concerning the issue of teacher training in this field are rare in literature. The only study is about the effectiveness of connecting US ESL teachers with German counterparts via online technology which enabled them to work collaboratively in designing TBLT tasks (Fuchs, 2009). In that case, still more research could be done to prepare instructors for technology-assisted TBLT.

Researcher Challenges

Technology-assisted task-based language learning poses great obstacles to carrying out research in this field. Following the traditional paradigms is not sufficient to give an accurate account of technology-assisted TBLT because of the complexities of the online tasks.

Technology-enhanced TBLT involves more than language acquisition but also other skills like cross-cultural communication skills, collaboration skills, and technology related skills (Chong,2020). Therefore, the measurement of task-based learning in a technology-assisted context should no longer be merely about the development of language skills but also about learners' effective online communication skills with peers interculturally and in some cases even their digital skills. Some researchers have started to realize it and are seeking to broaden their research scope beyond merely the linguistic gains. Though some of the learning outcomes in technology-assisted TBLT (e.g. intercultural communication skills and digital literacy) are not so easily measured.

In addition to reevaluating the outcomes of TBLT learning in a technology-assisted context, some scholars are also concerned about adopting more suitable analytical frameworks in the research of technology-assisted TBLT because the powerful technical characteristics of mobile technology generate new forms of learning platforms which change the nature of the physical relationships among instructors, learners and aims of learning (Churchill, Lu, & Chiu, 2014). For instance, Warner (2004) in his research pointed out that the standard definition of communication tasks is no longer sufficient to describe the entire communication in a technology-assisted environment while Chun (2008) put forward the suggestion of modifying the TBLT analysis model in a traditional face-face context to suit the various parameters in technology-assisted context. Therefore, an analytical framework more appropriate for a technology-assisted environment is in need to examine task-based language learning. In the very recent years, a few scholars, though not many, are striving to propose a new analytical framework for TBLT in a technology-assisted context. For example, Xue (2020) has proposed a conceptual model to integrate TBLT with mobile technologies which are specially developed to guide technology-assisted task-based language learning in research and practice.

Researchers also face some challenges in terms of research methods, e.g. data collection and data analysis. In a study carried out by Smith (2008), data analysis of online synchronous interaction was found to be inadequate as it failed to capture some important data such as deleted text produced when learners are doing some online text-based tasks, which may be quite important in revealing the learners' foreign language acquisition process (Sauro & Smith, 2010). Oversimplified data collection may result in the distortion of research findings. Some other researchers, like Seedhouse and Almutairi (2009), confirmed this point of view that only collecting data from chatting transcripts cannot capture the full picture of some online intercultural communication tasks due to the multimodal complexity. A holistic approach to analyzing the online communication tasks is collecting data from both verbal and nonverbal communication, i.e. relating the details of the verbal communication tasks to the physical performance and non-verbal communication. Mobile technology has the "capabilities of capturing, storing and processing multiple forms of data including photos, videos and audio files". (Xue,2020). Meanwhile, researchers also recommended the use of eye-tracking systems to capture learners' eye gazes (Suvorov, 2015). By capturing these subtle but important pieces of information, we can obtain a more dynamic and accurate representation of synchronous online interactions, which will be used to measure key cognitive structures such as attention and attentional forms in online task performance. However, the use of some data collection methods is uneasy to arrange, and the interpretation of the collected data is sometimes quite erratic. Similarly, when analyzing learners' online interactions, the adequacy of traditional discourse analysis methods for chat logs and other interaction records is also questioned.

However, capturing the complexity of task performance in a technology-assisted learning context is very time-consuming and laborious (Seedhouse & Almutairi, 2009). In addition, how to make the best use of massive amounts of information to understand the complexity of learners' behavior in online task performance is another challenge for researchers.

CONCLUSIONS

With the development of technology, we would envision TBLT in a technology-assisted context would play an even more important part in foreign language teaching and learning. In this focused review of task-based language learning in the technology-assisted context, we set out to understand how the previous literature has shown us the advantages and benefits of task-based language learning in a technology-assisted context and identified the challenges for further development, including the challenges teachers, learners and researchers meet. To further develop the field of task-based language learning in a technology-assisted context, more efforts should be put into the exploration of several directions which are crucial to the successful implementation of TBLT in technology-assisted contexts, such as better learner preparation and teacher training. More research is still needed in the construction of an effective guiding framework for TBLT in a technology-assisted context. Furthermore, scholars like Ortega and Zyzik (2018) also stated that future research should adopt a more cautious attitude while keeping an open mind to understand the benefits of task performance in technology-assisted context by learners with different cultural backgrounds.

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