Task Design in Telepresence-place-based Foreign Language Learning

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Abstract: This study examines the role of tasks and the concerns of task design in place-based foreign langauge learning mediated by a telepresence robot. A case study was conducted at an arboretum in an American university. Five foreign language learners in China controlled a telepresence robot to explore the arboretum and to have conversation with an English instructor. The results provide design insights for language tasks to motivate learners and to improve their language skills.

Introduction

Place is important for learning, especial when the learning objectives involve environmental, social, and cultural aspects (Holden & Sykes, 2011). At the same time, many places remain inaccessible to learners, due to physical limits of mobility and health, socio-economic factors, political, or temporal restraints. Our previous studies (Liao & Lu, 2018; Liao et al., in press) have found that telepresence robots could support more immersive experiences for FL learners into a target language country for FL learning purposes effectively. This study further examines the role of tasks and the concerns of task design in place-based FL learning mediated by a telepresence robot.

Literature review

Telepresence-place-based foreign language learning

Telepresence robots allow remote users to control the movement of the robots and the view angle of the camera on the robots, which provide remote language learners with the ability to explore actively environments around the robots. Liao and Lu (2018) conducted a case study, in which three FL learners in China had a one-on-one session with an English instructor via Romo, a small telepresence robot to discuss about the objects, buildings, and activities at important buildings on an American university campus. The results showed that the activities provided a more authentic learning context for FL learning and motivated the learners and the instructor to generate more conversational topics. Liao and his colleagues (in press) further framed the learning as telepresence-place-based foreign language learning (TPFLL) and proposed three design principles, including: (1) situate the learning in real-life settings, (2) scaffold the learning process, and (3) enhance learner agency. A case study was conducted to examine the applicability of these principles at a campus arboretum of an American university. The results showed TPFLL provides unique learning affordance for learners, especially when the above principles adopted in the overall design of the learning experience.

Task-based learning

Task-based learning (TBL) has long been used to imitate real conversation and help language learners acquire a FL (Ellis, 2000). According to Ellis (2000), tasks are essentially oriented towards meaning and content rather than the linguistic structures to be acquired. In other words, learners practice language skills through the task itself rather than acquiring linguistic ability as a pre-requisite for the task. Eillis (2009) further pointed that it is crucial to rely on learners' own linguistic resouces to complete the tasks and there should be gaps between what a learner has known before and after the learning activities. In addition, some scholars (e.g., Ozverir, Osam, & Herrington, 2017) stated that the authentic tasks would be more beneficial for learners.

In this study, we examine what role the tasks will play in TPFLL and if tasks could be an extended design concern for TPFLL. The research questions are as follows. (1) What are the perceived benefits and challenges of using tasks in telepresence-place-based foreign language learning? (2) What other kinds of tasks would be appropriate in telepresence-place-based foreign language learning?

Methodology

A native English speaker, who is a doctoral candidate in the college of education was recruited as a language instructor. Five adult EFL learners in China were recruited as remote participants. The research site was a campus arboretum at an American university. In each learning session, a learner controlled the a Keebot, a mid-size telepresence robot, to communicate with an instructor along the route (See Figure 1). A task list relevant to the

talking spots along the route was design as table 1. Two cameras were used to video-record each of the learning sessions and 5 hours of video interactions were recorded. All participants were interviewed and the interviews were transcribed and translated into English.

Figure 1. Interaction via a telepresence robot along the route at the arboretum.

Table 1: Tasks in the Learning Activities

Talking Spot	Tasks
Gate	Identify three different kinds of pumpkins at the gate
	Explain the cultural differences about pumpkins between American and China
Sundial/Lawn	Explain the concept of sundial
	Explain the differences among 'grass,' 'lawn,' and 'turf'
	Describe what activities could happen at a lawn
Pavilion	Explain the concept of 'pavilion.'
	Describe what activities could happen in a pavilion

Findings and discussion

The results on video observation and transcripts showed that (1) the provided tasks effectively help learners find and focus on the objects in the garden, (2) meaning-oreiented tasks provided a means of scaffolding students' understanding of the linguistic and cultural knowledge reletant to the space, (3) Giving a task list motivated both the learner and the instructor to focus on the listed tasks.,

However, some learner felt the tasks were too difficult while others felt too easy. The instructor might ignore topics that the learner were interested in but were not relevant to the tasks on the list. Both the instructor and the learners expected more adaptive task design, which is align with the challenge proposed by Calvert and Sheen (2015), 'How can a teacher who is inexperienced with tasks create ones that collectively engage learners, appropriately align to their level, and effectively meet shared learning goals?'(p.227). The participant also suggests more task types including (1) comparing and contrast, (2) telling a story relevant to the objects/activities, (3) pronounce and spell a new word, (4) asking and replying some professional questions about the arboretum.

In brief, our current data have provided preliminary insights about the task types, design, and scaffold in TFPLL. We hope to gain deeper insight with a larger number of participants with more diverse and adaptive tasks designs as well as task evaluations in future studies.

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