Specific Research Project "Technology integration and CALL beliefs in context: A longitudinal study of Japanese teachers and learners" Research Progress Report

GOBEL, Peter
KANO, Makimi

Abstract

Computer-mediated Task-Based Language Teaching (TBLT) refers to the use of technology, such as computers and the internet, to support and enhance language learning through task-based activities. The use of computer-mediated TBLT in language learning has several advantages, providing learners access to a wealth of authentic language input, and helping students to develop their communicative competence and increase their confidence in using the language. However, implementation of computer-mediated TBLT in language classrooms has been slow. Technical and support issues, digital literacy, and attitudes all have played a part in how computer-mediated TBLT is employed.

This research aims to investigate the attitudes of both students and teachers towards technology-mediated task-based language teaching (TBLT). Employing a mixed-methods approach, utilizing both quantitative and qualitative data collection methods the researchers hope to uncover how student and teacher beliefs are aligned with these discourses, and the potential influence of institutional policy and regional discourse on students and teacher beliefs. It is hoped that this comparison will help to inform smoother implementation of CALL and technology throughout the language curriculum in a Japanese context.

Keywords : computer-assisted language learning, CALL, task-based, technology-mediated TBLT, technology acceptance

1. Introduction

This is a study examining Japanese teacher and student beliefs regarding digital language learning skills and strategies in the field of computer-assisted language learning (CALL), from high school

through university. Using a multi-pronged approach, the study seeks to uncover factors explaining beliefs about CALL use among Japanese students and educators, and how these beliefs relate to institutional and regional discourse regarding technology. The study will focus on student and teacher beliefs about the integration of CALL in high school and university classrooms. Students at the high school and university levels will be surveyed about their attitudes and use of CALL in English language education. This qualitative data will then be compared with institutional regional discourses regarding CALL and digital technology in the classroom. The comparison will seek to uncover how student and teacher beliefs are aligned with these discourses, and the potential influence of institutional policy and regional discourse on student and teacher beliefs. It is hoped that this comparison will help to inform smoother implementation of CALL and technology throughout the language curriculum in a Japanese context.

2. Background of the research

In the past decades, and particularly in the last few years, there has been increased interest in the potential of digital technology in education, and in particular, second language learning. Computer-assisted language learning (CALL) refers to e-learning, web-based learning systems, and digital technology in the language classroom. Teaching today's young students calls for an increase in technology in the classroom (Gu, Zhu, & Guo, 2010). However, the efficacy of CALL in any language curriculum is directly related to teacher and student acceptance of technology for the purposes of language learning.

To date, exploration of CALL beliefs and technology integration has taken multiple paths, ranging from how teachers and students react to the integration of digital tools into their learning environments (Gobel & Kano, 2014; Ashrafzadeh & Sayadian, 2015; Cheng, 2017) as well as how they use them to how these tools can influence the learning of language, literacy, and culture in and out of the classroom (Otto, 2017). The majority of this research has been performed prior to the massive paradigm shift that occurred in 2020, with growing numbers of universities around the globe rapidly moving courses from offline to online learning. Although recent research has focused on technology acceptance, there is no denying that not only the teaching and learning needs have changed, but also the educational environment as a whole has changed, as evidenced by the amount of funding being afforded to help teachers and students become digitally ready.

A great deal of research has focused on student and teacher beliefs about technology. Much of this research is based on the premise that beliefs play a strong role in the effective adoption and use of technology and digital tools and the efficacy of CALL in any language curriculum is directly related to student acceptance of technology for the purposes of language learning.

    Research needs to move beyond this singular focus on CALL beliefs toward an understanding of the multiple facets that frame the understanding and use of digital tools for language learning. In other words, looking at CALL from a wider perspective, incorporating larger discourses of technology. Specifically, the research will be concerned with the CALL ecosystem - the multiple components that interact across multiple scale levels to impact the understanding and use of digital technologies in language learning (Blin, 2016). These include learners, teachers, technological devices, applications, and platforms, as well as the institutional and social processes that interact with one another and with other components of the system.

3. The present research project

The present project seeks to identify how students and teachers at a set of private high schools and universities understand technology in language learning and, more broadly, to relate these beliefs to both institutional and regional discourses of technology. One reason to highlight institutional and regional aspects is that, from an ecological perspective, these larger-scale facets have the potential to impact the CALL beliefs that language learners hold, thereby influencing how technological tools are understood and used for language learning. Exploring these larger facets of the CALL ecosystem and their relationships would shed additional light on teachers' and students' CALL beliefs and offer new directions for how to implement ICT in the language classroom. To this end, we have come up with the following research questions:

1. What are the underlying patterns of beliefs about CALL held by teachers and students?
2. How do these belief patterns relate to institutional and regional (Kansai) discourses of technology?
3. Do these belief patterns change over time?

The purpose of this study is to understand how Japanese teachers and students view and use CALL, and how this correlates with their ideas regarding foreign language education. These patterns will then be compared with institutional policies and the broader social discourse on technology. We expect to find areas of alignment between student and teacher beliefs and institutional and social discourse. We also expect to find areas of divergence between CALL technology and these beliefs.

4. Data gathering

Analysis

The first phase of coding consists of identifying salient beliefs about CALL in the survey responses. To identify the underlying belief structure the survey results will be submitted to a Principle

Component Analysis. These results will then be compared with interview data and case studies. The second phase of coding will focus on relating student CALL beliefs to institutional discourses, as defined by high school and university policies. This second phase of coding will take place on two levels: 1) how beliefs and discourses match and 2) how beliefs and discourses diverge. The analysis will be concerned with individual codes and their salience in the data set as well as in relationship to each other in order to identify patterns across the data. The third phase of coding will focus on relating participants' CALL beliefs to regional discourses on technology. This is important as mainstream media will afford an objective view of CALL and ICT use in education. To assess regional discourses of technology, we will use archives of major Japanese newspapers (Asahi, Yomiuri, Mainichi, etc.) and regional newspapers around Kansai (Kyoto, Osaka Nichinichi, Kobe, etc.). We will collect the articles from these archives to create two kinds of databases: one that shows how society perceives technology in general and the other that focuses more specifically on technology in language education. Analyzing how media treat the topics of technology will reveal the prevailing attitudes toward technology and ICT use in education. We can further see how they are similar to or different from the educators' perspectives.

We will also look at more specific archives. One is the Japan Educational Press article search database. By searching this, we will show future guidelines announced by MEXT, trends in the education industry, and initiatives at various educational institutions. This data will supplement the first and second phases of our study. The other archive we will look at is FPCJ (Foreign Press Center Japan). By collecting information from this site, we can reveal what foreign journalists in Japan are reporting about the Japanese technology environment and ICT use and what they think is unique about Japanese education.

5. Progress of the research

The current focus of the research is on computer-mediated task-based learning. Recent research in computer-mediated task-based language learning (TBLT) has focused on the effectiveness of incorporating technology in language learning tasks. Studies have shown that using technology can enhance language learning outcomes by providing learners with opportunities for more authentic and engaging tasks, immediate feedback, and personalized learning experiences. Researchers have explored various types of technology, such as mobile apps, virtual reality, and online collaborative tools, and how they can be used to support language learning tasks. Additionally, research has investigated the role of teacher mediation in computer-mediated TBLT, emphasizing the importance of teacher support in facilitating learners' language development through technology. Overall, the recent research suggests that computer-mediated TBLT can be an effective approach to language

learning, especially when technology is integrated purposefully and thoughtfully into language learning tasks.

Since recent research in environments similar to that of Japan has explored the effectiveness of computer-mediated TBLT from both the student, teacher, and administrative perspectives (Belda-Medina, J., 2021; Canals, L., Granena, G., Yilmaz, Y., & Malicka, A., 2021; Jiang, D., Kalyuga, S., & Sweller, J., 2021; Torres, J., & Yanguas, Íñigo., 2021), it was felt that a more comprehensive overview of this area was warranted. Research was undertaken to create a state-of-the-art summary of the effectiveness of technology-mediated TBLT, and the pitfalls of this approach from the student, teacher, and institutional perspectives. This summary was then presented at two international conferences (Gobel & Kano, 2023a; Gobel & Kano, 2023b) and feedback was obtained from experts in the field of TBLT and technology-mediated language education. This feedback was indispensable in reframing the research project and applying for future grants.

6. Development of future research

The research to date has created a concrete base for a more specific investigation of technology use in a Japanese environment. From this point, research will focus on the underlying belief structure regarding CALL among high school and university students and teachers. This will then be followed by research into the institutional beliefs and practices as defined by high school and university policies.

References

Belda-Medina, J. (2021). Enhancing Multimodal Interaction and Communicative Competence through Task-Based Language Teaching (TBLT) in Synchronous Computer-Mediated Communication (SCMC). *Education Sciences*, *11*(11), 723. MDPI AG. Retrieved from http://dx.doi.org/10.3390/educsci11110723

Canals, L., Granena, G., Yilmaz, Y., & Malicka, A. (2021). The relative effectiveness of immediate and delayed corrective feedback in video-based computer-mediated communication. *Language Teaching Research*, *0*(0). https://doi.org/10.1177/13621688211052793

Jiang, D., Kalyuga, S., & Sweller, J. (2021). Comparing face-to-face and computer-mediated collaboration when teaching EFL writing skills, Educational Psychology, 41:1, 5-24, DOI: 10.1080/01443410.2020.1785399

Torres, J., & Yanguas, Íñigo. (2021). Levels of Engagement in Task-based Synchronous Computer Mediated Interaction. *Canadian Journal of Applied Linguistics*, *24*(2), 234–259. https://doi.org/10.37213/cjal.2021.31319

Gobel, P., Kano, M. (2023a). *TBLT and Technology: Attitudes and Solutions.* 42nd Thailand TESOL, Bangkok, January 27-28, 2023.

Gobel, P., Kano, M. (2023b). *TBLT and technology: Attitudes and solutions.* 57th RELC International Conference, Singapore, March 13-15, 2023.

特定課題研究「日本の外国語教育におけるテクノロジーの導入と CALL に対する教員と学習者の意識：長期的研究」研究経過報告書

ゴーベル　ピーター

加　野　まきみ

要　旨

　コンピュータを介したタスクベース外国語教育（TBLT）とは，コンピュータやインターネットなどのテクノロジーを用いた外国語教育（CALL）を，タスクベースの学習活動に組み込み，語学学習を支援・促進することである。コンピュータを介した TBLT は，学習者に多くの「生」の言語インプットを提供し，学習者のコミュニケーション能力の向上や言語使用に対する自信を高めるのに役立つなど，いくつかの利点がある。しかし，外国語教育の現場におけるコンピュータを介した TBLT の導入は遅々として進んでいない。技術面やサポートの問題，デジタルリテラシー，テクノロジーに対する意識などが，コンピュータを介した TBLT の導入を遅らせている。

　本研究は，テクノロジーを介したタスクベースの言語教育（TBLT）に対する学習者と教員双方の認識を調査することを目的としている。量的・質的データの両方を収集・分析するアプローチを採用し，学習者と教員のテクノロジーや TBLT に対する認識がこれまでに日本と同様に英語教育の盛んな国々で行われてきた同種の研究で主張されてきたこととどの程度一致しているか，また，教育機関の方針や地域のメディアなどでの議論が学習者と教員の認識になんらかの影響を及ぼしているかを明らかにしたいと考えている。この分析によりもたらされる結果が，コンピュータを介した TBLT が日本の外国語教育カリキュラムによりスムーズに導入されることに寄与することが期待される。

キーワード：コンピュータ支援型言語学習，CALL，タスクベース，テクノロジーを介した TBLT，テクノロージー対する認識