

Use of a Wiki for Inquiry-based Language Learning

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Abstract

Wiki use may offer EFL instructors a helpful tool for inquiry-based language teaching and learning. The purpose of this study was to investigate the effects of wikis on the EFL learners' inquiry-based learning process. Forty-nine EFL students at a Taiwanese university participated in the study. The Non-wiki group ($n = 25$) received traditional inquiry instruction and the Wiki group ($n = 24$) received wiki-mediated instruction during their inquiry-based learning process. Data were collected through surveys at the stages of presearch, formulation and completion of the inquiry activity. The instruments sought to measure differences in knowledge accumulation, specifically in relation to implicit knowledge and estimate of knowledge between Wiki and Non-wiki group, as well as the challenges students encountered during their inquiry process. The results revealed that the use of wikis can provide support to (a) help students go beyond information accumulation and regurgitation of facts and move toward generating more integrated and synthesized knowledge representations and (b) address the challenges of traditional inquiry-based learning including planning the task, organizing multiple resources, managing the inquiry process, and coordinating the final product. Findings suggest that wikis can constitute a dynamic forum that keeps students engaged in staging the sequences of structured inquiry process and improve ability to perform inquiry-based tasks in an efficient manner.

Keywords: Wiki; inquiry-based learning; EFL; knowledge accumulation

1. Introduction

Over the decades, educators have been committed to finding a way to make language learning more meaningful and transferable and the notion of inquiry-based learning has been around in both theory and practice of this long-term desire (Lim, 2004). Inquiry-based learning is a recent manifestation that provides the students with a learning environment in which they are at the center of their learning (Edelson, Gordin & Pea). In this respect, it plays a very important role in language teaching and learning. Studies indicate that inquiry processes provide the context and opportunity for language learners to use academic language and increase their achievement not only in reading and writing but also in their content knowledge (Amaral, Garrison, & Klentschy, 2002). Through the process of feeling curious about a topic, asking questions, and seeking answers, language learners can clarify their understanding of the content and develop their language skills simultaneously. In this way, students learn on their own to possess substantial linguistic knowledge, which makes learning most effective and permanent.

2. Literature Review

1. Challenges for Inquiry-based language learning

Although inquiry offers compelling opportunities for language learning, it is not used so much because there are many challenges to the successful implementation of inquiry-based learning. Firstly, students might

encounter problems to perform the tasks that their investigation requires, or misunderstand the goals of each step of inquiry based learning especially if they are the first time to engage in inquiry (Edelson Gordin, & Pea, 1999). Without clear guidance and intervention throughout the process, students often approach the process as a simple collecting and presenting task by copying and pasting from single source (Kuhlthau, 2010). Also, the lack of English proficiency made the students have difficulties in understanding found information and summarizing the content (Kim & Todd, 2008). Moreover, Students may not have the ability to achieve the ultimate goal of open-ended inquiry, which requires planning and coordination of activity and the management of resources and final products (Edelson, Gordin, & Pea, 1999). Lastly, students may have difficulties conducting inquiry based learning if assignments are set up as isolated work to be accomplished independently and outside of the school setting. Consequently, they either fail to participate in inquiry activities, or they participate in them in a disengaged manner that does not support meaningful learning (Edelson, Gordin, & Pea, 1999)

2. Incorporating wikis with Inquiry-Based language Learning

Wikis, as one of the Web 2.0 social networking tools, have been increasingly integrated into second language (L2) instruction to promote teaching and learning (Lee, 2010). In the field of second language (L2) learning, wikis have been mainly used for collaborative

learning and knowledge construction (Cole, 2009). Lund (2008) argues that wikis hold transformational potential and offer a collective approach to language development and production. When students use an inquiry based approach to searching, central to composing wikis focuses on engaging learners in the process of constructing their knowledge of a topic in a multidimensional way and transform founding information into personal knowledge. In order to accomplish an inquiry-based task, students need to develop the ability to use prior knowledge to recognize the value of new information, assimilate it, and apply it to create new knowledge and capabilities. The use of wikis at this point enables maximization of store, transform, and transport knowledge throughout the organization. Moreover, wikis allow students to capture, reconcile, and transfer knowledge in an efficient manner. Thereby eliminate the challenge of understanding and planning tasks, coordination of activity and the management of resources.

Research Methods

The research is to measure students' learning in multidimensional ways including growth of knowledge of their content topic and major difficulties during the inquiry process. A combination of qualitative and quantitative method will be used to examine and measure the students' learning. The data will be collected at three stages of the students' inquiry process: at the presearch of the research task, midway during the task, and at the

completion of the task. Data were collected through survey instrument which captured responses to open-ended questions as well as categorical responses. The following research questions guided this study:

1. Is there any difference on EFL students' inquiry-based learning process in terms of gaining content knowledge?
2. What were the major difficulties of traditional inquiry-based language learning and wiki-mediated inquiry-based language learning?

The participants will be 49 college students in Taiwan in two sophomore English classes taught by the teacher-researcher. Both the Wiki group ($n = 24$) and the Non-wiki group ($n = 25$) are similar in terms of age (ranging from 18 to 21) and English proficiency level (intermediate).

The activity used in this study is the same for both groups. During the inquiry process, students in both groups are free and encouraged to seek and engage with a diverse range of sources to explore topics and build background knowledge. However, only the participants in the Wiki group need to record their online inquiry learning process. Google sites are employed to serve as virtual platforms where the students can post their progress of each step and share their inquiry data. That is, the support of wiki makes their thinking visible and their thoughts can be externalized. For participants in the Non-wiki group, approaches to source logs recording and places to publish their final project are

not prescribed. They only need to turn in their final work and relevance reference as a Word file.

Results and discussion

Does the use of Wiki as a supplementary tool affect EFL students' inquiry-based learning experience? The study will collect data by tracking how Wiki and Non-wiki groups build knowledge of a topic through the inquiry based learning and surveying their perceived challenges. The results are expected to reveal some critical issues to be considered when one tries to implement IBL on the web. Such a study may help clarify some entangled and unsolved issues surrounding various types of technology supported IBL. Ultimately, it is hoped that such a study may shed some light in providing a theoretical and a pedagogical foundation for the premise that active participation of information seeking and knowledge assimilating processes, two of the key principles of IBL, are supported in many ways by a well-designed IBL on the web.

References

- Amaral, O. M., Garrison, L., & Klentschy, M. (2002). Helping English learners increase achievement through inquiry-based science instruction. *Bilingual research journal*, 26(2), 213-240.
- Cole, M. (2009). Using Wiki technology to support student engagement: Lessons from the trenches. *Computers & Education*, 52(1), 141-146.
- Edelson, D. C., Gordin, D. N., & Pea, R. D. (1999). Addressing the challenges of inquiry-based learning through technology and curriculum design. *Journal of the Learning Sciences*, 8(3-4), 391-450.
- Kuhlthau, C. C. (2010). Guided inquiry: School libraries in the 21st century. *School Libraries Worldwide*, 16(1), 1-12.
- Kim, Sun Un & Todd, R. J. The Information Search Process of English Language Learner (ELL) Students in a Guided Inquiry Project: An In-depth Case Study of Two Korean High School Students in the United States. Paper presented at the Annual Conference and Research Forum of the International Association of School Librarianship, Berkeley, California August 2008. CD Publication.
- Lee, L. (2010). Exploring Wiki—Mediated Collaborative Writing: A Case Study in an Elementary Spanish Course. *CALICO Journal*, 27(2), 260-276.
- Lim, B.-R. (2004). Challenges and issues in designing inquiry on the Web. *British Journal of Educational Technology*, 35: 627–643.
- Lund, A. (2008). Wikis: A collective approach to language production. *ReCALL*, 20, 35-54.