

Utilizing the SimpleMind Application for Developing Mind-Mapping Strategies in ESL Students' Academic Essays

Linh Pham*

Waseda University, Japan

Abstract

SimpleMind is an interactive mind-mapping application that can be used on both digital and mobile devices. This study examines the use of the SimpleMind application as a mobile-assisted tool to support academic essay writing among 60 undergraduate students in a private Japanese university. Employing a mixed-method approach, data were collected through pre- and post-questionnaires, documentation of mind map products, and in-depth interviews. The three phases of technology training were designed following a model of training in CALL. The results indicate that students exhibited a strong interest in using SimpleMind and utilized various mobile devices to complete different mind-mapping tasks. Additionally, technology affordances and strategy training influenced their attitudes towards the application. The educational value of the technology training is discussed, with the pedagogical phase being identified as crucial for establishing a supportive and engaging learning community. These findings provide insights into the potential of digital-assisted mind-mapping applications for enhancing students' academic writing skills and highlight the importance of considering diverse factors when designing technology training programs for undergraduate students.

Keywords: Second language writing, Language learners, Computer-assisted language learning (CALL), ESL learners, SimpleMind, ESL students

*Corresponding Author E-mail: dieulinhpham@fuji.waseda.jp

Background

Second language writing is broadly recognized as one of the most challenging language skills for language learners to master (Hyland, 2019). Despite the importance of pre-writing strategies in modern writing practices and the diverse utilization of computer-assisted language learning (CALL) as a pioneering approach to bolster writing competence and self-confidence among ESL students, computer-assisted pre-writing strategies often receive insufficient attention from educators (Lan et al., 2015). As a result, Zumbrunn and Krause (2012) claimed that ESL writing instructors often acknowledge the difficulty of developing students' writing skills, leading to significant time and effort being required for effective teaching and learning languages using computers and other technologies.

Recognizing the potential of pre-writing strategies and digital mind-mapping software in enhancing writing outcomes for ESL learners, this study aimed to address the gap by investigating the utilization of SimpleMind, a digital mind-mapping software app, to structure academic essays among undergraduate ESL students at a private university in Japan. Through this research, the researcher sought to explore how such software can support students in organizing their thoughts and ideas during the pre-writing process, eventually enhancing their writing proficiency in academic settings.

Overview of the Methodology

SimpleMind is an interactive mind-mapping application that can be used on both digital and mobile devices (see Figure 1). This study examined the use of the SimpleMind application as a mobile-assisted tool to support academic essay writing among 60 undergraduate students in a private Japanese university.



Figure 1. SimpleMind application.

According to a mixed-method approach, data were collected through pre- and post-questionnaires, documentation of mind-mapping reflections, and in-depth interviews. The three phases of training in the technology were designed following a model of training in CALL.

Representative Results

The research question guiding the current study's investigation was as follows:

How can the SimpleMind application support ESL students in the pre-writing process?

The results from the pre- and post-surveys indicated that students exhibited a solid interest in learning English and in using the SimpleMind app. The specific reasons for them to use the application on their digital devices are reflected in Table 1 below.

The data collected from the in-depth interviews and reflective mind-mapping documents further elaborated on the following reasons mentioned in the surveys.

Mind Maps on Paper were Often Lost

"Mind maps on paper were often lost, causing frustration when trying to recall important information. My friends and I would spend more time searching for misplaced notes instead of focusing on our studies."

Learning Better with a Big Screen with SimpleMind on PCs

"I think I learned better with a big screen size using SimpleMind on my PC, as it allowed me to see all the details of my mind maps clearly."

Table 1. Reasons for using SimpleMind

No.	Reasons	No. of Responses (<i>n</i> = 60)	Percentage
1	Mind maps on paper were often lost	18	29%
2	Learning better with a big screen with SimpleMind on PCs	15	24.2%
3	Editing mind maps freely in SimpleMind (no need for re-creation)	13	21%
4	Being able to make colorful mind maps	9	14.5%
5	Learning a lot from SimpleMind	4	6.5%
6	Sharing the SimpleMind folder or pictures easily with friends	3	4.8%

Editing Mind Maps Freely in SimpleMind

“In SimpleMind, I can edit my mind map freely without needing to re-create it, making it easy to update and refine my ideas.”

Being Able to Make Colorful Mind Maps

“With SimpleMind, I was able to create colorful mind maps that made studying more engaging and enjoyable.”

Learning a Lot from SimpleMind

“Using SimpleMind after getting training, I learned about organizing my thoughts more efficiently through mind-mapping.”

Sharing the SimpleMind Folder or Pictures Easily with Friends

“When I finished the mind map, I effortlessly shared the SimpleMind screenshot with my friends, allowing them to see my progress and provide feedback.”

Discussion

Table 1 sheds light on the reasons why the SimpleMind application can support students in their pre-writing stages. The primary reason, indicated by 29% of the responses, was that mind maps on paper were often lost, suggesting a significant issue with the reliability and longevity of physical notes. The second most cited reason, with 24.2% of the responses, was the enhanced learning experience provided by the large screen size on a PC, which likely facilitated better visualization and organization of information. Additionally, 21% of the respondents appreciated the ability to edit mind maps freely in SimpleMind without needing to re-create them, reflecting the software’s flexibility. Furthermore, 14.5% of the participants valued the ability to create colorful mind maps in SimpleMind, which can enhance memory retention and engagement. Although fewer in number, 6.5% of the respondents reported that they learned a lot from using SimpleMind, indicating its educational value. Lastly, 4.8% found it easy to share their SimpleMind folders or pictures with friends, underscoring the collaborative potential of the tool. This analysis reveals the possibility that the digital platform not only addresses the practical limitations of paper mind maps but also offers additional benefits that enhance the overall academic writing experience.

Additionally, technology affordances and strategy training tend to influence their attitudes toward the application, as reflected in the six key themes

in the results section. The most prominent theme is the frequent loss of paper mind maps, pointing out a major drawback of the traditional method. Several participants felt they learned better with SimpleMind on PCs because of the larger screen size, which likely enhanced their ability to organize and visualize information. The flexibility of editing mind maps in SimpleMind after training in the strategy without the need for re-creation was another appreciated feature. Likewise, the learners enjoyed the ability to create colorful mind maps, which could improve engagement and memory retention. The respondents also reported noteworthy learning benefits from using SimpleMind after receiving the training, indicating its educational effectiveness. Lastly, they valued the ease of sharing SimpleMind folders or pictures with their friends, indicating the application's collaborative capabilities.

Therefore, when implementing a generic application for education like SimpleMind, the educational impact of training in technology is likely to be substantial for establishing a supportive and engaging learning community. These findings provide insights into the potential of a digitally assisted mind-mapping application for enhancing students' pre-writing experiences, reflecting on the importance of considering technical and pedagogical factors when designing technology-based training programs for undergraduate ESL students.

References

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