JOSELT (Journal on Studies in English Language Teaching)
Vol. 4, No. 2 December 2023
ISSN 2721 – 9097

PROMOTING STUDENT'S LITERACY SKILLS BY INFUSING TECHNOLOGY AS LITERACY INSTRUCTION IN READING AND WRITING CLASS

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ABSTRACT

The use of technology in the classroom is crucial to introducing students to the use of technology and enhancing student literacy, particularly digital literacy. The article demonstrates how to incorporate technology into lessons to help kids become more literate. This study was conducted as literature study that has 5 stages to be completed that are formulating the research questions, looking for the literatures, examining the inclusion, assessing the primary research, processing the data, and interpreting the data. Based on the literature study that has been done, SAMR model and TPACK model are appropriate model to infuse technology into literacy classroom. Regarding to literacy classroom, SAMR model focus on the effect of integrating technology into literacy classroom by dividing the integration into some levels, they are Substitution, Augmentation, Modification, and Redefinition. However, TPACK focuses on how technology is integrated in the learning content and also teaching pedagogy.

Keywords: literacy skills, technology, literacy instruction

INTRODUCTION

Currently, in 21st century, literacy is broader than only ability to read and write. Literacy in 21st century is related to the rapid improvement of digital technology where access to information is various and easy. 21st century literacy means ability to access, recognize, analyze, evaluate, use, communicate, and share the meaning of information through digital technologies like internet platforms, social media, and mobile devices. In 21st century literacy is important to individual to have 21st skills or digital literacy skills. With digital literacy skills, individual can utilize the digital technology and do 21st century literacy effectively, ethically, and responsibly.

The first and important literacy skill in digital literacy is information literacy skills. Information literacy skill is fundamental of long-life learning since information can easily accessed in this era of high development of technology. College and Research Libraries (ACRL) and the American Library Association (ALA) state that information literacy skill is ability to recognize when the information is needed and to locate, evaluate, and use effectively the needed information. Lecturers need to teach students about information literacy in order to be effective learners in searching,

defining, evaluating, using, communicating, and sharing information. In the process, information literacy skill improves students critical thinking (White, 2019) that essential for academic success, especially in reading and writing. Fredi, Prihandoko, Anggawirya (2020) state that information literacy skills are the foundation of academic writing skills, which are very urgent for students to carry out assignments and to complete research proposals and thesis. When they have graduated and then enter to community and professional work, this information literacy is very important as effective functioning in the workplace and participation in society as knowledgeable Citizen.

Based on explanation above, it can be concluded that utilizing technology in education is very important to familiarize students with the use of technology and also improve student literacy, especially their digital literacy. Therefore, this paper will be explained how infuse technology into classroom activities to promote students' literacy. Furthermore, there will also be examples of how to apply technology as instruction in reading and writing classes.

RESEARCH METHODS

This study was conducted as literature study. Generally speaking, a literature review can be thought of as a more or less systematic way of compiling and analyzing earlier research (Snyder, 2019). Based on Templier and Paré (2015), there are six stages in conducting literature study:

1. Formulating the concept and goal(s) of the research question(s).
2. Looking through the available literature.
3. Examining the inclusion.
4. Assessing of the quality of primary research.
5. Processing the data.
6. Interpreting the data and composing a summary.

FINDINGS AND DISCUSSION

Infusing Technology into Literacy Classroom

There are some models in infusing technology into literacy classroom. The first is the SAMR model (Puentedura, 2006) and the second is the TPACK model (Mishra & Koehler, 2006). Puentedura (2006) has developed the SAMR model, which provides a framework to show the impact of technology on teaching and learning. The SAMR model has Substitution, Augmentation, Modification, and Redefinition as four levels of technology integration (Shettel, J., & Bower, K., 2013). The SAMR model focuses implementation of technology

within each level. Substitution and augmentation can be described as a situation where the technology replaces an existing or an older technology, but with little improvement. In substitution or augmentation, the technology is said to be enhancing the existing teaching practice since the technology used is more advanced but the teaching process mostly remained the same. It can be seen by replacing Microsoft PowerPoint to do presentation into Google Slides, Canva, or Prezi. Modification and redefinition can be described as a situation how digital use has led to a significant change in the way teaching and learning is planned and delivered. In modification and redefinition, teaching and learning activities become flexible and promote student-centred learning. Here, teaching and learning process is conducted in learning management system such as Google Classroom, Edmodo, Schoology, Moodle, or TalentLMS. Learning management system help teacher to manage the class and promote active learning. Moreover, students can be independent learner by getting the sources for their learning by themselves through google, YouTube, podcast, khan academy, better explained, open learn, or wikiversity. Students also enjoy to learn and do their assignment since they are provided with interesting and challenging application such as canva, padlet, or popplet.

The level of infusing technology in promoting literacy classroom also proposed by Jennifer, et. al. (2013). These levels are technology as a novelty; technology as a necessity, and technology as a natural component of the classroom. Technology as a novelty is closely associated with the "Substitution" level of Puentedura's (2006). This level the strater to swap out traditional tools for more technology-based tools such as replacing reading text book into reading e-book in story weaver, literacy cloud, let's read asia, bookhub, bookboon, or open library. Implementing the BYOD (Bring Your Own Device) also kind of technology as a novelty. Technology as a novelty also can be applied in giving Assignment to the students such as writing assignment in google doc or making presentation using prezi or canva. Technology as a necessity means that technology is the main part of the teaching and learning process. Here some technologies are integrated to do classroom activity or assignment. For example, when teacher want to give assignment about writing a procedural text. Teacher has students to watch some videos related to procedural text. Then teacher has students to discuss and state their understanding about procedural text in class' padlet.

Teacher assigns students to utilized canva to write procedural text. The last, teacher asks students to submit their procedural text in google classroom. When technology becomes a natural part of the classroom literacy environment, the highest level of infusion has been achieved. At this level, utilizing technology to provide effective learning is very hight. This level initiates BYOT (Bring Your Own Tool/Technology) that the students have a choice in deciding which tool will work well to learn the content and do the assignment.

The TPACK framework was introduced by Punya Mishra and Matthew J. Koehler in 2006. TPACK is based on Lee S. Shulman's (1986) work on Pedagogical and Content Knowledge (PCK). As development of PCK, the TPACK model focus on content, pedagogy, and technology. It means that the framework of TPACK integrate technology into the content and pedagogy of the classrooms. There are three primary forms of knowledge in TPACK, they are Content Knowledge (CK), Pedagogical Knowledge (PK), and Technological Knowledge (TK). Content Knowledge (CK) means teacher needs to have solid understanding and knowledge of the subject that being taught. Pedagogical Knowledge (PK) means teacher needs to understand how students learn best and what kinds of instructional strategies that required to be applied. Technological Knowledge (TK) means teacher has to know what digital tools are available to be used by the teacher and the students and also which digital tool would be the most appropriate for the lesson being taught. Harris, et al (2010) proposed how to apply TPACK in the classroom. The first step is choosing the learning outcomes (content) that will be worked during the class session. The second step is choosing activity type as the pedagogy or how are the students going to learn the content. Finally, choosing technologies that will support the activity type and aid the students in learning.

The Application of Infusing Technology in Reading and Writing Class

Infusing technology in teaching and learning process to promote students' literacy skill can be applied in reading and writing instructions. Here is an example how to apply technology in reading and writing class.

Table 01. Reading Class

Type of Activity	Brief Description of the Activity	Technology
Presenting topic	Teacher informs the topic and activate students' prior knowledge	Canva, Prezy, Visme
Reading	Students read the text	Story weaver, Literacy cloud, Let's read asia, Bookhub, Bookboon, or Open library
Vocabulary Building	The students find out the meaning of unfamiliar words	Vocabulary.com, Vocab Grabber, Wordnik
Discussion	Students discuss the information that they get from the text	Padlet, Zoom, Gmeet
Summarizing	Students summarize the text	Pecha Kucha
Retelling	Students re-tell the information of the text	Youtube, Instagram, Anchor

Table 02. Writing Class

Type of Activity	Brief Description of the Activity	Technology
Presenting topic	Teacher informs the topic and activate students' prior knowledge	Canva, Prezy, visme
Getting Idea	Students find the topic or main idea	Yotube, Podcast,
Constructing ideas	Students construct ideas	Popplet, Plot-Generator
Vocabulary building	Students select appropriate words	Just The Word, Vocab Grabber
Writing	Students write text based on the genre	Story Jumper, Edublogs, Hemingway, Penzu

CONCLUSION

In the 21st century literacy is important for individuals to have 21st skills or digital literacy skills. It is therefore important to infuse technology into the teaching and learning process. Embedding technology into learning activities depends on the readiness of teachers, students, and also institutions. In the early stages of implementation, teachers can utilize technology as a medium to deliver material. Furthermore, if teachers and students are more familiar with the use of technology in learning, technology can be utilized in all

series of activities ranging from understanding content, doing tasks, and also conducting assessments. In order for the maximum utilization of technology, the technology used must be in accordance with the material taught and also the skills that want to be improved.

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