

UTILIZING THE RAAEA MODEL: A CASE STUDY OF ICT TOOL USE BY A WRITING LECTURER IN THE 4TH SEMESTER AT UNIVERSITY OF ISLAM MALANG

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Abstrak

This research explores the utilization of Information and Communication Technology (ICT) tools by fourth-semester writing lecturer in the English Education Department at the University of Islam Malang, using the RAAEA technology integration model. The study employs a descriptive qualitative method with a single case study, focusing on one writing lecturer as the informant. In-depth interviews were conducted to gather data, which was analyzed through data reduction, data display, and conclusion drawing. The findings reveal that the lecturer uses various ICT tools in their writing classes and employs strategies to integrate them effectively. However, a significant challenge they face is internet connectivity. Although not familiar with RAAEA, the lecturer comprehend and apply its underlying principles in their teaching practices.

Key words: ICT, RAAEA model of technology integration

INTRODUCTION

The field of education has undergone a remarkable transformation with the advent of Information and Communication Technology (ICT). This innovative learning mode has made education more accessible and flexible than ever before. Online learning facilitates accessibility, as learners can study from anywhere. Even learners located in remote areas or overseas can easily access education, unhindered by distance, time, and space, as all learning processes take place online (Suhartoyo et al., 2021). Based on UNESCO (2002), ICT can be seen as a combination of informatics technology with other related technologies, especially communication technology. This aspect facilitates real-time learning and communication without distance barriers, and the education sector is one of the fields that benefits from this advantage. Integrating ICT in education has opened up new possibilities, offering both opportunities and challenges in the teaching and learning environment. The aim of ICT integration is to elevate and improve the quality, facilitate access, and enhance cost-efficiency in delivering instructions to students. This also implies gaining benefits from establishing networks within learning communities to address the current challenges of globalization (Albirini, 2006). The use of computer-based communication in everyday classes has revolutionized the traditional learning experience, presenting educators and students with captivating approaches that foster greater engagement and satisfaction. These approaches encompass a myriad of educational tools, such as educational videos, simulations, data storage, mind mapping, and the vast expanse of the World Wide Web (www) (Ghavifekr & Rosdy, 2015; Kearsley & Shneiderman, 1998; Sherman & Khursan, 2005).

With the rapid growth of online learning, the integration of ICT has become even more crucial, offering the potential to support effective and engaging learning activities in virtual settings. According to Anggraini et al. (2022), utilizing ICT in the process of language learning provides numerous benefits for students. The integration of technology can be characterized as "learning about technology, the utilization of technology in the education process" and "technology integration that enhances learning among students" (Dockstader, 1999). The utilization of ICT

offers various methods that can support teachers and students in learning their respective subjects (Rachmawati, 2019). To achieve this, educators must be equipped with the necessary competencies to navigate the digital landscape and create enriching online learning experiences. According to Yuniarto et al. (2021), the role of teachers is incredibly important in conducting and regulating the learning process and in efforts to enhance the effectiveness of the teaching and learning process. One powerful framework that guides educators in this endeavor is the Technological Pedagogical Content Knowledge (TPACK) framework. TPACK combines three essential dimensions of knowledge: technology, pedagogy, and content, providing a comprehensive guide for effective technology integration (Niess, 2015). Policy-makers, researchers, and education practitioners have gradually recommended the use of the Technological Pedagogical and Content Knowledge (TPACK) framework as a method to identify necessary knowledge in the teaching-learning process in the digital era (Chai et al., 2016). As a result, the TPACK framework has become a particularly significant choice in understanding perspectives, practices, and research in technology-rich classrooms (Tseng et al., 2011).

The TPACK framework comprises seven distinct components, each focusing on specific knowledge and skills that teachers need to possess for successful technology integration in education. These components are content knowledge (CK), pedagogical knowledge (PK), technological knowledge (TK), pedagogical content knowledge (PCK), technological pedagogical knowledge (TPK), technological content knowledge (TCK), and technological pedagogical content knowledge (TPACK). Technological Pedagogical Content Knowledge (TPACK) was created to address a teacher's technological knowledge within a framework aimed at producing effective teaching. It emphasizes the interaction between a teacher's content knowledge, pedagogy, and technology (Spector et al., 2014). Mishra & Koehler (2006) developed this formula to expand the understanding of teacher knowledge according to Shulman (2013), which becomes more complete by including the role of technological knowledge. By embracing the TPACK framework, educators can effectively design and implement curriculum and teaching practices, fostering critical thinking and learning with digital technology across different content areas. In the TPACK concept, a teacher's ability to integrate technology into the teaching and learning process makes learning more effective and efficient (Sihombing, et al, 2021).

Since its inception, the TPACK framework has spurred the development of various technology integration models, offering valuable insights into how technology tools can be utilized in the teaching and learning process. Two prominent models that have emerged are the SAMR model developed by Puentedura (Professional Learning Board LLC, 2022) and the RAAEA model developed by Niess et al. (2007 cited in Niess, 2013). The SAMR model emphasizes the progression of technology use, ranging from simple substitution to transformative redefinition. It encourages educators to move beyond mere substitution of low technology tools with high technology, urging them to explore innovative ways to leverage technology for deeper learning experiences. On the other hand, the RAAEA model focuses on the stages of technology tool usage, from recognizing and accepting technology's potential to adapting, exploring, and advancing its application in the teaching and learning process.

The five stages of RAAEA developmental process are:

1. Recognizing: where teachers know how to use technology and recognize the suitability of technology with content, but do not integrate technology into the teaching and learning process. Recognizing refers to the teacher's ability to identify and understand how technology, pedagogy, and content knowledge interact and influence each other in the learning process. This includes understanding how technology can be used to help achieve learning objectives, how pedagogy can

be adapted to overcome technological limitations, and how content knowledge should be delivered through effective technology and pedagogy.

2. Accepting: where teachers use appropriate technology to shape positive or negative attitudes toward teaching and learning. Accepting for teacher's is the ability to accept and understand how technology can support the learning process, as well as understand how technology can impact pedagogy and content knowledge. This also includes understanding how to effectively utilize technology in the learning process, and understanding the potential and limitations of technology in a specific learning context.

3. Adapting: where teachers make decisions about adopting or rejecting teaching and learning technologies. Adapting is the process of understanding and utilizing technology to modify instructional approaches and integrate them with appropriate content and methodology. This involves understanding how technology can assist in promoting effective learning and selecting and customizing the right technology to meet specific needs in particular learning situations. For teachers, adapting is the process of comprehending how to combine technology, pedagogy, and content knowledge in planning and implementation of instruction. Teachers must have the skill and competence to integrate technology into their instructional approaches and modify it according to the specific needs of students and learning situations. This involves understanding how technology can aid in achieving learning goals and choosing the right technology to meet those needs.

4. Exploring: where teachers integrate appropriate technology in the teaching and learning process. Exploring for teachers refers to the process of discovering and investigating new technology and its potential applications in the classroom. This stage involves teachers gaining an understanding of the technology, how it can be used to support student learning, and its limitations.

5. Advancing: where teachers evaluate and redesign curricula to integrate specific content topics for teaching and learning with appropriate technology. Advancing for teachers refers to the process of increasing their competence and proficiency in integrating technology into their teaching practices. The goal is to effectively use technology to support and enhance student learning.

Henceforth, RAAEA are used to explain how a teacher uses information and communication technology (ICT) in the teaching process. In this model, the teacher can be recognized for recognizing the potential of ICT for teaching, adapting its use, accepting and exploring its use, and improving its use in the teaching process. This model is used to evaluate and improve the use of ICT by teachers in the teaching process.

This article highlights the importance of integrating ICT in education and the role of educators in creating engaging and effective online learning experiences. The objective of this article is to explain how educators can enhance their TPACK-based competencies to effectively integrate technology and leverage the RAAEA technology integration model to support their instructional practices. By understanding and applying this model, educators can effectively maximize the potential of ICT to revolutionize education and shape a generation of tech-savvy learners prepared for the challenges of the digital age.

METHOD

The research design used in this study is a qualitative descriptive approach with a case study method. The qualitative research approach involves analyzing spoken or written words and studying things in-depth to capture inferred meaning in documents or items. Based on Arikunto (2010), the qualitative research method is a representation in the form of spoken or written words that are studied by researchers, and objects that are deeply scrutinized to understand the hidden meaning in

the document or object. In this case study, the researcher focuses on a single case, which is a female lecturer from the English Education department at the University of Islam Malang (UNISMA) who teaches writing. Data is primarily collected through interviews, where the researcher crafted, revised, and validated ten interview questions to explore the utilization of ICT tools in teaching writing from the perspective of RAAEA model of technology integration.

The data collection process involves conducting in-depth interviews with the research participant, who is a lecturer with a doctoral degree in English Language Education and significant experience in higher education. The questions asked to the informants amounted to 10, which were previously created by the researcher, revised, and validated before being presented to the informants. These questions were posed to answer the research question of the study, which aimed to determine the ICT tools used by teachers in teaching writing from the perspective of RAAEA. The interviews are conducted in both Indonesian and English languages and have been carefully prepared and validated to ensure comprehensive insights into the participant's use of ICT in teaching writing. The data collection took place at the University of Islam Malang, specifically in the Faculty of Teacher Training and Education, English Department. Researcher choose the setting and subject in Unisma due to the availability of the required research subjects, as well as the accessibility of the research location and good transportation facilities.

For data analysis, an interactive model of analysis is utilized, consisting of three stages: data reduction, data display, and conclusion drawing/verification. In the data reduction stage, the researcher simplifies and classifies the collected data to produce meaningful information. The data display stage involves presenting the simplified data in a structured narrative format to facilitate drawing conclusions. Finally, the conclusion drawing and verification stage allows for the researcher to draw initial conclusions, which may be subject to further verification during subsequent data collection. The research method used in this study is qualitative research with a single case study approach, focusing on interviews as the primary data collection method. The data collected through the interviews are analyzed using an interactive model of analysis, involving data reduction, data display, and conclusion drawing/verification stages. This method aims to gain comprehensive insights into the utilization of ICT tools in teaching writing from the perspective of RAAEA model of technology integration.

FINDINGS AND DISCUSSIONS

In the interview conducted by the researcher, it was found that the lecturer utilizes various ICT tools in their writing classroom teaching activities. However, the lecturer also faces challenges in using these ICT tools. As stated by the lecturer in the interview:

Lecturer: “...In teaching writing, I use several ICT tools, such as Edmodo, Kahoot, and Grammarly. I also teach them how to use reference managers like Mendeley and Zotero. I also incorporate YouTube videos for better understanding of the subject matter. I also use Zoom, but it is only used during the pandemic. I also use WhatsApp for communication and providing instructions to students. And I also used email. I ask my students to submit their assignments via email”.

Lecturer: “...Internet signal is the most challenging thing when using online applications, whatever it is”.

From the interview results, the writing lecturer utilizes various ICT tools in their writing teaching, including Edmodo, Kahoot, Grammarly, Zotero, Mendeley, YouTube videos, Zoom, WhatsApp, and email. The use of these tools aims to enhance learning and students' motivation in writing, as well as facilitate reference management and grammar checking. Despite the benefits of

using ICT in writing instruction, the lecturer encounters a significant challenge related to internet signal issues, which affects students' focus and comprehension during online activities. This challenge leads to incomplete understanding of the material and makes it difficult for students to fully grasp the lecturer's explanations. This finding is in line with the research conducted by Analyn and Esther (2022). The study revealed that educators encounter various difficulties in implementing online distance learning, with one prominent issue being connectivity. The availability of reliable connectivity is crucial for effective online learning, as it establishes virtual links within the classroom setting, benefiting both teachers and students.

In using ICT, the lecturer recognizes, accepts, adapts, explores, and advances the ICT tools. As stated by the lecturer:

Recognizing and Accepting

The lecturer recognizes how to use ICT and also integrates several ICT tools as mentioned in the interview:

Lecturer: “...I do recognize the critical importance of using ICT in learning”.

Lecturer: “...I used ICT tools to present knowledge, motivation..”

From the data above, it can be inferred that the lecturer recognized the various ICT tools. The lecturer accepts and actively utilizes ICT tools in the writing class. Overall, the lecturer supports the use of ICT tools to enrich the teaching and learning process in the writing class.

Adapting

The lecturer adapts the utilization of ICT according to the students' requirements, as mentioned in the following interview:

Lecturer: “...I adapt to the use of ICT based on my students' needs. I mention reference managers like Zotero and Mendeley because I want to ensure that my students are not forced to use a specific one. They can choose either Zotero or Mendeley based on what is compatible with their laptops. Some students use Zotero, while others use Mendeley. Some students use Zotero, while others use Mendeley. However, I teach them how to use these tools and make sure that I understand all the features of both tools before teaching the students. This way, I can effectively teach my students.”

In the provided information, it is evident that as an educator, the lecturer adapts the use of ICT depending on the individual needs of the students. The lecturer mentions reference management tools like Zotero and Mendeley, allowing students the freedom to choose the tool that best suits their laptop's compatibility. Some students opt for Zotero, while others prefer Mendeley. Nevertheless, the lecturer teaches them how to use both tools and ensures that they understand all the features of both tools before teaching the students. This way, the lecturer can effectively teach the students.

Exploring

The lecturer not only relies on existing applications but also actively explores and utilizes various other ICT tools during the teaching process. This was mentioned in the interview:

Lecturer: “..., I am trying to explore the use of ICT (Information and Communication Technology) not only limited to the applications I have but also using other ICT tools in my writing class later. Perhaps later, I will use Kahoot to check my students' understanding of

the theory, and then maybe I will also use Edmodo. I used Edmodo two years ago but haven't used it recently."

The data above describes that the lecturer explores ICT tools beyond the ones they currently have and also incorporates other ICT tools in their writing class. The lecturer explores various ICT tools beyond the ones they currently use. There is a possibility of using Kahoot to assess students' understanding of the theory taught, and they may also consider using Edmodo. The lecturer had previously used Edmodo about 2 years ago but has not used it recently.

Advancing

The lecturer advances ICT tools by combining various tools, such as integrating Grammarly with Zotero and also Mendeley, as mentioned below:

Lecturer: "...Advancing the use of ICT involves utilizing ICT tools separately, such as combining Grammarly with Zotero and Mendeley".

Based on the data provided, the lecturer utilizes various combined ICT tools to offer greater benefits in the teaching process. For instance, the lecturer can utilize Grammarly to check grammar and spelling errors in students' writing, while Zotero and Mendeley are used to organize and manage the references used in the writing. By integrating these tools, the lecturer can enhance the quality of teaching and provide additional advantages to the students.

To effectively integrate ICT, the writing lecturer implements strategies that involve recognizing the importance of ICT in improving learning, adapting the use of ICT tools to suit students' needs, exploring new ICT tools like Kahoot to enhance motivation and student engagement, and combining various ICT tools such as Grammarly, Zotero, and Mendeley to enhance students' writing skills. If combined with the right systems, tools, and ideas, online learning can assist in making the learning process more accessible to everyone, eliminating physical barriers as obstacles to classroom learning (Fang et al., 2019). The use of Mendeley and several other reference management tools such as Word references, Refworks, End Notes, and Zotero often become crucial requirements when submitting manuscripts for contemporary scientific journals (Chawla, V., Gupta, 2017). From the perspective of the RAAEA model, the writing lecturer consciously recognizes the significance of ICT in writing instruction, actively accepts and utilizes ICT tools, adapts their use based on students' needs, explores new ICT tools, and integrates various ICT tools to achieve more effective learning outcomes.

The lecturer is not very familiar with the term RAAEA but understood it when mentioned as recognizing, accepting, adapting, exploring, and advancing, as stated by the lecturer in the following interview:

Lecturer: "... I am not fully familiar with the term RAAEA, but when you say recognizing, accepting, adapting, exploring, and advancing, I understand it, because I recognize, accept, adapt, explore, and advance ICT tools. I am not familiar with RAAEA".

The findings from the interview with the writing lecturer revolve around the various ICT tools used in the writing class and how they relate to the principles of the RAAEA model of technology integration. The writing lecturer utilizes a range of ICT tools, including Grammarly, Edmodo, Kahoot, Zoom, Email, WhatsApp, Zotero, and Mendeley, to enhance the teaching and learning experience in writing. Each tool serves a specific function and contributes to different aspects of writing instruction, such as grammar checking, reference management, communication, online lectures, and student engagement. Although there are clear benefits in using ICT tools in the writing class, the research reveals a significant challenge: dependence on internet connectivity.

Unstable or disrupted internet connections can hinder the smooth utilization of ICT tools and have a negative impact on the learning process. The integration of ICT tools by the writing lecturers aligns with the principles of the RAAEA model. They recognize the importance of using ICT tools in writing instruction and identify specific tools to support various aspects of teaching. Additionally, they actively accept and incorporate these tools into their teaching practice, embracing the benefits and possibilities offered by ICT in improving student engagement, grammar checking, reference management, and accessing relevant resources.

The findings show that the writing lecturer effectively integrates ICT tools in the writing class, in line with the principles of the RAAEA model of technology integration. By recognizing, accepting, adapting, exploring, and advancing the use of ICT tools, the lecturer enhances the teaching and learning experience in writing, promoting student engagement, improving writing quality, and facilitating effective communication and collaboration. Despite facing challenges related to internet connectivity, the lecturer's proactive approach to ICT integration demonstrates their commitment to leveraging technology to improve teaching performance and student learning outcomes in the writing class.

CONCLUSION AND SUGGESTIONS

Based on the research findings, it can be concluded that the writing lecturer utilizes various ICT tools in their teaching and learning activities. These tools include online platforms such as Grammarly, Edmodo, Kahoot, Zoom, Email, WhatsApp, Zotero, and Mendeley. However, the main challenge faced by the lecturer in utilizing these ICT tools is internet connectivity. Unstable internet connection affects the quality of learning in the classroom and reduces the effectiveness of the teaching and learning process. Despite facing connectivity challenges, the use of ICT tools by the writing lecturer aligns with the principles of the RAAEA technology integration model. The lecturer recognizes the importance of ICT tools in teaching writing and adapts their use based on the specific needs of the students. The lecturer also explores new tools to enhance their teaching practices and effectively combine different ICT tools to maximize their benefits. Additionally, the lecturer combines various platforms and resources to support effective writing teaching.

Although the writing lecturer may not be familiar with the term "RAAEA," they demonstrate an understanding and application of its underlying principles. Essentially, the lecturer acknowledges the significance of ICT tools, adapts their use according to students' needs, explores innovative solutions, and integrates various tools and platforms to create an enriched learning experience in the writing class. The research indicates that writing lecturers in Indonesia face issues with unstable internet connectivity. This problem can hinder and impact the productivity of using ICT tools in teaching. To address this issue, it is recommended that lecturers enhance their technological proficiency and stay updated with technological advancements. Additionally, they should adapt the use of ICT tools according to students' needs, explore new tools and platforms that enhance writing instructions, and continuously evaluate their effectiveness in teaching writing. By implementing these recommendations, it is expected that lecturers can optimize the use of ICT tools, overcome internet connectivity challenges, and create an engaging and effective learning environment for students.

Based on the fourth research question, there is significant interest in the use of ICT tools in teaching and learning. The RAAEA (Recognizing, Accepting, Adapting, Exploring, and Advancing) integration model has become a valuable guide for integrating technology into writing instruction. By adopting the RAAEA model and focusing on the integration of ICT tools, this research has the potential to uncover the benefits and potential of technology utilization by writing lecturers. Therefore, researchers can proceed with a study that specifically focuses on the

integration of ICT tools in writing instruction. Through this research, it is expected to provide useful guidance for educators in effectively optimizing the use of ICT tools in writing instruction, as well as valuable practical and theoretical insights for developing effective and innovative approaches in teaching writing.

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