
DIGITAL LITERACY INTEGRATION AND TEACHER BELIEF IN PUBLIC ELEMENTARY SCHOOL: EXAMINING DECOMPOSED THEORY OF PLANNED BEHAVIOR

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Abstract

One of the most important aspects of learning in the twenty-first century has been acknowledged: the necessity of using digital technology into instructional materials. With these developments, special abilities are needed by teachers regarding their beliefs to integrate them so that learning can develop according to the provisions of learning objectives, security, and applicable ethics. This study is intended to examine teacher's belief in digital literacy integration in state elementary school using Decomposed Theory of Planned Behavior. The study was a qualitative study by means of case study research design to obtain a realible understanding of the phenomenon. The data were collected using interview, observation and study documentation. The result indicate that influence teacher's beliefs in the integration of digital literacy are found from self-efficacy, reseource facilitating condition and technology facilitating condition. Teacher's efficacy is influenced by teacher training. This situation implies that positive teacher beliefs about digital literacy have a good impact on efforts to integrate digital literacy in learning. This research also strengthens that digital literacy can be maximized if accompanied by the role of policy makers, especially school principals

Keywords

Digital Literacy ; Teacher Belief; Decomposed Theory of Planned Behavior



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INTRODUCTION

The process of conveying knowledge from educators to students is essentially education. Information education includes elements such as educators serving as information sources, the media presenting ideas and educational materials, and participant self-education. One innovation in the field of education that has helped to solve current issues is the use of the internet as a learning tool. The preparedness of human resources to become proficient and perform with support from information technology in the globalization age (Lahaya et al., 2023)

The Internet in its journey became a source of reference for all circles, in various ways. With the openness of the internet, it is possible to use it for good as well as evil. In light of this, the educational world has identified the development of digital competences as one of the most difficult educational tasks. It is crucial to teach the next generation of learners the very minimum of digital literacy so they may securely browse the internet, gather knowledge from it, and share it with others (Gómez-García et al., 2020). Digital literacy is a crucial aspect of 21st-century education, requiring teachers to integrate digital technologies effectively (Laksani et al., 2020). Digital literacy is a combination of technical, cognitive, and social skills that are conceived as a prerequisite for 21st century life to complete digital tasks efficiently. In order to become digitally literate in the twenty-first century, educators and learners must comprehend how digital media affects our society, devise critical analysis techniques, break free from its effect, and be open to experimenting with new teaching methods and education made possible by the information age. Digitally literate teachers are able to think critically about why, how, and when digital technologies can support teaching and learning (Sadaf, 2019).

In the context of English Language Teaching, propose the concept of digital literacy as an optimal application of ICT which primarily focuses on the utilization of digital tools in English language teaching (Baxa & Christ, 2018). Thus, teachers play a vital role in incorporating digital resources into the classroom, enhancing student motivation and improving the quality of the educational process (Alberola-Mulet et al., 2021). Teachers' decisions to effectively incorporate digital literacy in the classroom are influenced by personal beliefs, positioning them at the forefront of successful digital literacy integration (Opre, 2022). Educators hold diverse beliefs about utilizing digital media for learning, with motivations influenced by attitudes towards technology tools, message content, community connectedness, and learner-centered focus (Hobbs & Tuzel, 2017).

Teacher's belief is one of important factor that influence teachers to do or no to do something

in their class to achieve the goal of teaching and learning process. Borg (2003) suggested that beliefs are a major factor which affect in various areas of education. Likewise, the decision of teachers to integrate technology into classroom is affected by belief which they hold.

METHOD

This research uses a qualitative descriptive approach with a case study method. According to Cresswell, the case study is a qualitative methodology wherein the researcher examines a particular case by conducting comprehensive and in-depth data collection that encompasses multiple sources of information using various techniques such as observations, interviews, and document analysis. The fundamental rationale behind carrying out a case study was rooted in the exploration of comprehensive details pertaining to a specific issue (Cresswell, 2012).

Based on the procedural research model above, the author did several ways to get in-depth data. First, conduct interviews with English teachers in elementary schools who implement digital literacy. Second, make observations on English learning in the classroom to review the application of digital literacy. Third, conduct reviews based on learning documents such as lesson plans and modules to increase the wealth of data obtained from previous interviews and observations. The results of the research are then made into one complete discussion.

FINDINGS AND DISCUSSION

Findings

The results that were found, which show how EFL teachers integrate digital literacy in their classes using DTPB views, are discussed in this part. The explanation showed that teachers' belief to integrate digital literacy were driven mostly by their ideas, which were influenced by contextual variables.

3.1. Teaching's Practice in Integrating Digital Literacy in EFL Classroom

This section outlines digital literacy integration activities in the classroom as found from teacher interviews and lesson plans. Based on interviews and lesson plans, teachers mostly use project-based learning methods that integrate creativity, critical thinking, collaboration, functional skills and effective communication where digital technology is needed. The teacher's lesson plan shows the use of digital devices through LCDs used to deliver learning materials. In addition, teachers also use YouTube content to attract students' attention in the brainstorming process. In addition, through project-based learning the teacher directs students to make clippings about one of the themes to be done according to the group. The integration of digital literacy in this study uses

aspects of digital literacy according to Hague & Payton, as follows:

3.1.1 Creativity

In the aspect of creativity, teachers use the help of digital devices to create student worksheets (LKPD). In addition, teachers also use digital devices in the process of delivering learning materials. Teachers use the YouTube platform to brainstorm students about the theme to be learned. In addition, the observation process is carried out in listening to the dialogue in the YouTube content.

3.1.2 Critical Thinking and Evaluation

The critical thinking process is honed by teachers through interactive quizzes using the Quizizz platform. The platform features several questions that teachers create according to the theme and students work on for a limited time. This quiz model like Quizizz is also useful for evaluating student understanding. One of the quizzes used by teachers can be accessed through the following link: <https://quizizz.com/admin/quiz/5d7f02c2040bbe001e322219/bahasa-inggris-kelas-6-sd>

3.1.3 Cultural and Social Understanding

In this aspect, teachers admit that there are still shortcomings in their application in daily learning. However, usually cultural and social understanding is introduced through other subjects such as social sciences and civic.

3.1.4 Collaboration

In the collaboration aspect, teachers hone students using project-based learning. Students are asked to group up to create clipping-like works. With clippings, students utilize search engines to find material that matches the theme.

3.1.5 Ability to find and select information

The clipping task stimulates students to find relevant and correct material according to the teacher's instructions. Teachers teach in the use of search engines such as Google Chrome, Microsoft Edge, Opera Mini, and so on. Teachers also teach how to download quality images.

3.1.6 Effective Communication

Effective communication of students is stimulated by teachers through discussions, questions and answers and assignments. After the clipping assignment is completed, the teacher discusses and questions the students.

3.1.7 E-Safety

This aspect is directed by the teacher during learning orientation. Teachers give advice through cases that occur. In addition to students, this aspect is more important to discuss with parents. For the discussion process, more teachers gave directions through student guardian group by WhatsApp.

3.1.8 Functional Skill

This ability is stimulated through involving students to use digital devices in the learning process. This functional ability includes the ability of students to use digital hardware such as PCs, Laptops or HP and also the ability of students to operate digital software such as Google Chrome, WhatsApp, YouTube, Quizizz, and so on.

3.2 Teacher's Belief in Integrating Digital Literacy in EFL Classrooms based on Decomposed Theory of Planned Behaviour

In this section, teachers' beliefs are explored through in-depth interviews using the Decomposed Theory of Planned Behaviour (DPTB). Based on DPTB, teachers' beliefs are broadly divided into three things: behavioural belief, normative belief and control belief. Each of the findings is described as follows:

3.2.1 Behavioural Belief

From the perspective of educators, it is acknowledged that engaging in specific behaviours can result in favourable outcomes. The outcomes of behavioural beliefs can be classified into three distinct categories: perceived usefulness, ease of use, and compatibility. The findings of each attribute are as follows:

3.2.1.1 Perceived Usefulness

The results of the interview showed that the ease of technology increases the confidence of teachers to continue to integrate in learning. The ease of application, existing digital devices is something that is easily available in everyday life. Learning content in elementary schools is still relatively easy to adapt to daily applications outside the context of learning. So, teachers still find it easy to integrate digital literacy. Examples of its application such as the use of YouTube to display "Greeting" themed material.

3.2.2.2 Ease of Use

The benefits that more teachers receive, make a positive tendency towards teachers' beliefs in integrating digital literacy in learning. Not only used to deliver learning materials, digital literacy is useful in making learning administration such as RPP, Prota, Promes; create a

portfolio; assignment; and enhance learning creativity.

3.2.2.3 Compatibility

In the interview, the teacher conveyed that the learning material was delivered with digital devices to make the learning atmosphere livelier. Digital literacy also opens access to information, experience and knowledge for students which encourages them to be better prepared with 21st century learning skills. Highlighting the phenomena of digital world, teacher believes that integrating digital literacy in today education should be a requirement rather than an optional.

3.2.2 Normative Belief

Normative beliefs clarify the degree to which the opinions of others influence an individual's decision to participate in a specific activity. Within the framework of the DTPB, normative beliefs are categorized into two dimensions: peers influence and superior influence. In the interview, the teacher mentioned that the decision to integrate digital literacy in learning was also influenced by the support from fellow teachers. With this support, teachers exchange experiences with each other on digital literacy integration. Teachers also give each other suggestions and opinions if they feel they encounter difficulties in using digital literacy. Having different ages and experience, the colleagues' supports were needed to achieve learning objectives which were compatible with today's requirement.

Moreover, in digital literacy integration, teachers feel that the dominant factor is the support from the principal. The principal's policy affects the procurement of infrastructure, policies on the use of digital devices in the school environment, providing access to teacher training on the integration of digital literacy in learning.

3.2.3 Control Belief

Control beliefs assess the influence of individual beliefs on the execution of specific behaviours. Within this research, control beliefs are categorized as self-efficacy, facilitating resource condition and technology facilitating condition. In general, of the three things, teachers convey that the strong why in the integration of digital literacy in learning is their confidence. In his delivery, the teacher actually still feels less confident in his abilities but that's why he continues to spur himself to continue to try to be more honed in his abilities. Teachers feel that in this era with the condition of students as digital natives, teachers must also process to be the same, open to digital things so that the learning process is interesting and meets

expectations.

Meanwhile, related to resource facilitating conditions, the teacher conveyed the ideal resources according to teachers in this school are human resources such as teachers, school administrators, librarians and principals. The second is the school policy, which contains standard operational procedures for open learning for digital literacy integration. Third is the time and cost to set up a class that integrates digital literacy. Teachers need to prepare special time to make learning devices that match the learning objectives and digital devices available. Another cost incurred in the integration of digital literacy in schools is the cost of the internet, which sometimes needs to be paid by teachers themselves. Even for learning at home, sometimes the availability of internet quota for each student is hindered. If it is related to the cost policy, sometimes it also changes the teacher's strategy in delivering learning.

Moreover, the definition of a technology facilitating condition was the one in which technology made integration easier. The results of the interviews in this case demonstrated that one of the most important factors in integrating digital literacy was the availability of technology, including accessibility to devices, connectivity to learning apps, and dependable internet connections. The availability of digital devices in schools includes PCs, LCDs, internet connections and laptops, but one set per class cannot be available. The number of devices is still limited, so they have to alternate with other teachers who both use existing digital devices. Even so, teachers still try to use personal devices to smooth learning that integrates digital literacy.

Discussion

In the terms of normative belief, two characteristics revealed how much the support of peers and school officials contributed to the effective adoption of digital literacy in terms of normative attitudes. Peers support is believed to have affected teachers' use of digital literacy, especially when handling newly arising issues by offering support in the form of dialogue and help in using a digital device. Yang and Huang (2008) highlighted the importance of additional assistance from relatives in exchanging suggested strategies for utilizing technology. This notion aligns with findings from various studies. Tang et al. emphasized the transformative roles younger family members play in older adults' technology learning, adapting their teaching strategies to accommodate older adults' needs and abilities over time (Tang et al., 2022). In this way, it appears that educators employed resources such as materials, tools, and media when they had an assistive individual to guide them over a process difficulty. Social factors namely school culture, school administrator and peers,

motivate teachers' behaviour to employ digital technology during teaching (Ahmad et al., 2022).

The survey findings indicated that control beliefs play a significant role, with access to technology and high self-efficacy in digital media being identified as crucial factors influencing engagement in digital-based activities. The teacher concerned felt that he still lacked confidence about his ability in digital literacy, but did not make the teacher give up not to develop his ability. With its shortcomings, teachers feel encouraged to learn in the implementation of digital literacy in learning. That positive attitude has an impact on his confidence regarding digital literacy integration. This spirit is in line with the availability of technology available in schools. The availability of digital devices is still limited, but gradually fulfilled by the school. In terms of the introduction of digital technology in SDN, there are still various challenges related to facilities, infrastructure and readiness of SDN (Kuntarto & Prakash, 2020). State primary schools in Indonesia face challenges regarding the availability and utilization of digital devices compared to private primary schools. Research indicates that state elementary schools lack digital technology introduction in their curriculum, hindering students' exposure to digital tools (Salim et al., 2023). Conversely, private primary schools exhibit a higher level of digital literacy among teachers, utilizing smartphones, laptops, and various apps effectively for teaching purposes (Munauwarah & Achadi, 2023). Additionally, the digitalization policies in state schools have not been fully utilized by teachers to enhance the teaching and learning process, highlighting a gap in leveraging digital resources effectively. This discrepancy underscores the need for improved digital infrastructure and training in state primary schools to bridge the digital divide and ensure equitable access to educational resources (Tri Wahyuni et al., 2023).

The study's behavioural beliefs about teachers' belief commitment to incorporating digital literacy in the classroom were based on the benefits that teachers felt this would bring to their students. Aspects of usefulness and ease of use are felt by teachers to increase the level of student awareness, make learning interesting and active, and increase the ability of 21st century abilities that are useful for the future of students (Febianti et al., 2023). Compatibility aspects in digital literacy integration enabled teachers to provide lessons on technology use, creating a more engaging and efficient learning environment for students (Faridha et al., 2023). Overall, digital literacy enables students to access information quickly, save time and money, and enhance the quality of learning in today's digital era

CONCLUSION

The implementation of digital literacy of teachers in public schools in this study almost meets eight aspects of digital literacy according to Hague & Payton. The compatibility of the results of this research can be seen from teacher practice in learning activities and learning administration such as lesson plans. The implementation of digital literacy in schools is influenced by teachers' beliefs about benefits, ease of use and compatibility. Even so, there are still limitations of digital devices which in fact are quite hampering in the process of integrating digital literacy in learning.

REFERENCES

- Ahmad, N. L., Yahaya, R., & Ab Wahid, H. (2022). Teacher's Motivation on the Use of Virtual Learning Environment (VLE): The Effect of Social Factors, Self-Efficacy and Technological Support. *International Journal of Academic Research in Progressive Education and Development*, 11(2). <https://doi.org/10.6007/ijarped/v11-i2/13109>
- Alberola-Mulet, I., Jesús Iglesias-Martínez, M., Lozano-Cabezas, I., Guillen-Gamez, D., Vázquez Toledo, S., Latorre Cosculluela, C., & Albright, J. (2021). *Teachers' Beliefs about the Role of Digital Educational Resources in Educational Practice: A Qualitative Study*. 239. <https://doi.org/10.3390/educsci>
- Baxa, J., & Christ, T. (2018). The DigiLit Framework. *Reading Teacher*, 71(6), 703–714. <https://doi.org/10.1002/trtr.1660>
- Cresswell, J. W. (2012). *Research Design Pendekatan Kualitatif, Kuantitatif, dan Mixed*. Pustaka Pelajar.
- Faridha, N., Ernawati Adisiswanto, A., & Rahma, V. (2023). *Developing Teaching Materials Based On Digital Visual Literacy*. 6(1).
- Febianti, Y. N., Herawan, E., & Safitri, A. L. (2023). Digital Literacy and Student Creativity Through E-Resources on the Quality of Learning in College. *Journal of Education Technology*, 7(1), 25–33. <https://doi.org/10.23887/jet.v7i1.436>
- Gómez-García, G., Hinojo-Lucena, F. J., Cáceres-Reche, M. P., & Navas-Parejo, M. R. (2020). The contribution of the flipped classroom method to the development of information literacy: A systematic review. In *Sustainability (Switzerland)* (Vol. 12, Issue 18, pp. 1–13). MDPI. <https://doi.org/10.3390/su12187273>
- Hobbs, R., & Tuzel, S. (2017). Teacher motivations for digital and media literacy: An examination of Turkish educators. *British Journal of Educational Technology*, 48(1), 7–22. <https://doi.org/10.1111/bjet.12326>

- Kuntarto, H. B., & Prakash, A. (2020). Digital Literacy Among Children In Elementary Schools. *Diakom : Jurnal Media Dan Komunikasi*, 3(2), 157–170. <https://doi.org/10.17933/diakom.v3i2.92>
- Lahaya, N., Nusantara, E., Hamidun, M. S., Dama, L., Baderan, D. W. K., & Lamangantjo, C. J. (2023). Using Digital Learning Media as Information Literacy to Improve Learning Activity. *Jurnal Penelitian Pendidikan IPA*, 9(5), 3765–3771. <https://doi.org/10.29303/jppipa.v9i5.3390>
- Laksani, H., Fauziati, E., & Wijayanto, A. (2020). Teachers' Beliefs in Integrating Digital Literacy in EFL Classroom: Decomposed Theory of Planned Behavior Perspectives. In *Teachers' Beliefs in Integrating Digital Literacy Indonesian Journal of EFL and Linguistics* (Vol. 5, Issue 2). www.indonesian-efl-journal.org
- Munauwarah, R., & Achadi, Muh. W. (2023). Identifikasi Kebijakan Digitalisasi dan Ketimpangan Pendidikan (Studi Kasus Guru Sekolah Dasar Kecamatan Raba Kota Bima). *ALSYS*, 3(4), 312–325. <https://doi.org/10.58578/alsys.v3i4.1196>
- Opre, D. (2022). *Teachers' Pedagogical Beliefs and Technology Integration*. 112–118. <https://doi.org/10.15405/epes.22032.10>
- Sadaf, A. (2019). Exploring Teachers' Value Beliefs of Integrating Digital Literacy in K-12 Classrooms. *International Journal of Digital Literacy and Digital Competence*, 10(2), 1–14. <https://doi.org/10.4018/ijdlcd.2019040101>
- Salim, H., Waterworth, P. G., Daud, A., Dahnilsyah, & Hanif, M. (2023). The Integration of Digital Technologies into Practicum Classrooms by Smartphone-Savvy Pre-Service Teachers in Indonesia. *European Journal of Educational Research*, 12(2), 593–603. <https://doi.org/10.12973/EU-JER.12.2.593>
- Tang, X., Sun, Y., Zhang, B., Liu, Z., LC, R. A. Y., Lu, Z., & Tong, X. (2022). "I Never Imagined Grandma Could Do So Well with Technology": Evolving Roles of Younger Family Members in Older Adults' Technology Learning and Use. *Proc. ACM Hum.-Comput. Interact.*, 6(CSCW2). <https://doi.org/10.1145/3555579>
- Tri Wahyuni, Ari Saptono, & Riyadi. (2023). Learning Resources Digitalization for Elementary School Students. *International Conference on Education of Suryakancana*, 328–340.