ADDRESSING THE DIGITAL PROFICIENCY OF VOCATIONAL TEACHERS IN INCORPORATING TECHNOLOGY IN CLASSROOM: THE CURRENT AND CHALLENGES

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ABSTRACT

The advancement of digital technology is transforming educational practices worldwide. One instructional model reflecting this shift is Bloom's Digital Taxonomy (BDT), which refer to Bloom's cognitive framework through the integration of digital tools and tasks. Despite its potential, many vocational high school English teachers encounter challenges in applying BDT effectively due to varied digital proficiency and institutional limitations. The drawbacks of its implementation become the main issue which needs to be further investigated. This study aimed to see the proficiency level of Vocational High School English teachers in integrating technology into instructions based on BDT as well as the factors influencing Vocational School English teachers' proficiency in integrating technology into instructions based on BDT framework. In order to obtain the result, the present study conducted an explanatory sequential mixed-methods design. This design was selected as it presents a comprehensive analysis of the methods in which quantitative results were extended and explained by the qualitative results. The data were collected from 20 English teachers across seven vocational schools through questionnaires and semi-structured interviews. The findings revealed that that most teachers more proficient at the "Applying" level (C3) of BDT, reflecting ability to use digital tools in instructional practices. Influencing factors included school facilities, curriculum requirements, digital training opportunities, teaching experience, and teacher collaboration. The study recommends future research to explore the integration of BDT and the TPACK framework using longitudinal methods, particularly within non-formal education contexts.

Keywords: Bloom's Digital Taxonomy, TPACK, Proficiency

INTRODUCTION

The rapid growth of technology and digitization in various sectors of human life are impacting not just social life but also the educational field. The teaching and learning process gradually shifted from traditional to digital learning. After Covid-19, teachers found that classroom process became very innovative and advanced when it was done remotely from home. Students' motivation also increased due to the application of technology during the classroom process (Peng & Fu, 2021). Furthermore, Mahbub (2022) also add that English is one of those subjects that need a lot of practice; therefore, a

teaching technique to improve student's skills is needed. Learning English requires more than just understanding theory; it also requires enough practice. As a result, during online learning, the practice of using English conducted independently by students is quite concerning (Mahendra, 2021). To address these issues, the integration of modern technology into the educational process has proven a significant advancement in English language education for students.

To effectively utilize technology in instructional settings, teachers must possess not just technological literacy, but also the pedagogical and content knowledge needed to integrate it, this led to Beri & Sharma (2021) research regarding Technological Pedagogical Content Knowledge that will be further mentioned as TPACK. The research showed the importance of TPACK in modern educational environment as a comprehensive model for understanding the relationship of pedagogy to support effective digital teaching, therefore, a classification system is required (Cata et al., 2020). To provide a better and more real categorization in educational scope, Churches (2012) introduce the framework known as Bloom's Digital Taxonomy (BDT) which serves as a useful tool for aligning digital tasks with cognitive processes. BDT builds upon the original Bloom's Taxonomy by incorporating digital verbs and tools at each cognitive level from remembering to creating thereby guiding educators in designing technology and digital based learning experiences to help learners' cognitive development.

In the present situation, the use of Bloom's Digital Taxonomy serves as a measuring tool to assess teachers' abilities in integrating TPACK into BDT qualifications. It has become the cornerstone of successful technology-based education (Koehler et al., 2013). Nonetheless, it is imminent to profile teachers' proficiency in applying digital bloom's taxonomy as well as explaining the challenges that follow. The drawbacks of its implementation become the main issue which needs to be further investigated. Thus, the researcher conducts further investigation on analyzing teacher proficiency in Bloom's Digital Taxonomy towards Vocational School English teachers in Denpasar.

The preliminary result demonstrates that vocational school English teachers mainly use technology to introduce subjects and main activities as well as occasionally during after-class activity, such as presenting material through PowerPoint or showing videos via YouTube. Tools as Google and speakers were also utilized, however there was little evidence of varied or strategic integration of digital media to promote deeper learning. In order to obtain more detailed responses, the study held a semi-structured interview which found that teachers encountered limitations in the usage of media since they considered it was not suited to students' expected skills in a specific major. Despite the challenges and limitations, teacher found technology also helpful since it assists them in teaching where teachers normally use PowerPoint, speaker, YouTube, and Google. Based on the interview data, it is proved that the usage of technology and digital tools are common for teachers in classroom setting. However, it also found that teachers meet challenges related to resources, media variations, and utilizing digital media to enhance students' productive skills.

TPACK proficiency that implemented along with BDT framework, has a significant impact on students' learning. It enables teachers to create learning experiences that extend beyond understanding and remembering, pushing students to apply their information, think critically, and engage in creative assignments. The strong connection between technology and pedagogy that is in line with BDT has been demonstrated by several studies. In a descriptive study conducted by Amin & Mirza (2020) the use of advance technology in BDT has improved their involvement in higher-order thinking assignments as well as obtaining better attendance from their students. However, Abalkheel (2021) study indicate that EFL teachers' digital skills are generally low since they prefer to employ traditional methods. Other than that, a quantitative study

conducted by Matore (2021) found that most teachers tend to be more proficient in higher order thinking skills than in lower order thinking skills. This arises from the teacher's practice of integrating higher order-based tasks into the lesson plan. However, barely any aspect of BDT is fully explored in this study. In addition to that, Nava et al. (2022) revealed that BDT found to improves student performance in class,

It is practical to conclude that the present study is going to bridge the gap left from previous empirical studies that examines Bloom's Digital Taxonomy. The present study investigates BDT integration and related factors that influence the proficiency in Indonesian EFL classrooms especially with vocational English teachers where they face distinct instructional demands and student needs, particularly in aligning general English competencies with industry-specific skills. This study also explore how vocational school English teachers integrate technology into instruction using the BDT framework and what factors influence their TPACK proficiency. Therefore, the present study is expected to contribute a clearer understanding of technology integration in vocational education and utilization of digital technology in traditional classrooms that is in line with BDT framework.

Based on the explanations provided above, the research questions constructed as follows: 1) what is the proficiency level of Vocational High School English teachers in integrating technology into instructions based on Bloom's Digital Taxonomy? 2) What are the factors influencing Vocational School English teachers' proficiency in integrating technology into instructions based on Bloom's Digital Taxonomy?

METHOD

The present study employed an explanatory sequential mixed-method design, which consists of two primary phases: the quantitative phase followed by the qualitative phase. This design was selected to provide a more comprehensive understanding of the topic. According to Creswell & Clark (2018), the explanatory sequential design integrates quantitative and qualitative data in sequence. The two-phase design is where quantitative data are collected and analyzed then followed by qualitative data that will support the credibility of the data result (Creswell, 2018). This study was conducted in vocational schools located in Denpasar. To obtain a representative sample, a multistage random sampling method was applied, which consisted of stratified sampling to divide Denpasar into geographical areas and cluster random sampling to select schools. As suggested by Fraenkel et al. (2006), stratified sampling ensures representation of the population's variety, while cluster sampling allows the selection of groups instead of individuals. South Denpasar was selected through a random draw, and from this area, two schools were chosen using cluster sampling. In line with Gay and Diehl's (1992), a minimum of 10% of the total population is considered a sufficient sample size. As a result, two vocational schools in South Denpasar were chosen as samples with 20 vocational English teachers involved. Research subject vary between female and male teachers, with teaching experience ranging from 9 month to 20 years which allowed the researcher to explore how different professional backgrounds influenced teachers' technological integration.

To gather data, four main research instruments were used: a questionnaire, interviews, classroom observations, and document analysis. The questionnaire was a closed-ended instrument using a five-point Likert scale, designed to measure the participants' technological proficiency across six levels of Bloom's Digital Taxonomy: remembering, understanding, applying, analyzing, evaluating, and creating. According to Fraenkel et al. (2006) the overall percentage obtained from the questionnaire provide a picture of the teachers' level in TPACK proficiency based on BDT framework. Each section of the questionnaire contained 8 items aligned digital actions and tools associated with BDT levels. The questionnaire underwent content validity testing using Lawshe (1975) principles and the content validity ratio

(CVR) as the odd-number of Likert scale which validated by two experts in English education departments.

The interview questions were adapted from previous studies on TPACK by Schmidt et al. (2009) and Tseng (2014), focusing on teachers' personal experiences, attitudes, institutional support, challenges, and perceptions of student engagement. The combination of data analysis technique provides a comprehension and interpretation of the topic and the categories in this approach are naturally produced from the data itself (Griffee, 2012). Classroom observations were also conducted using a checklist derived from BDT based indicators. The researcher observed each selected teacher during English lessons to see how digital tools were used in real-time classroom contexts. Observations focused on interaction with digital content, how technology supported instructional goals, and whether the digital tasks aligned with lower-order or higher-order thinking skills. Furthermore, document analysis was performed by analyzing teachers' lesson plans and teaching modules. These documents were examined to determine the degree to which digital activities were integrated into curriculum. The analysis criteria were focused on aligning tasks and tools with BDT to ensured consistency across all instruments. The analysis process of qualitative data followed systematic steps from Miles et al. (2014) including: Data Collection, Data Condensation, Data display, and Data interpretation. Secondary assessment analysis also conducted with corroboration techniques in order to improve the validity of the research. Experts reviewed the results of the observations and interviews to determine the validity and consistency of the data until an agreement or saturation point is reached. This procedure provides validity to the research findings and strengthens the interpretation of the findings.

RESULT

The questionnaire items were constructed from BDT components as the indicators, resulting in 48 statements that are measured using Likert-scale with values ranging from 1 to 5, where 1 is the lowest value and 5 is the highest. The data is then analysed using Microsoft Excel. Each respondent's score is added together to calculate the index score, which indicates their level of proficiency. The scores were then averaged across each cognitive component to establish the level of proficiency among vocational school teachers in South Denpasar. The average score is shown as a table representation below:

Table 1. BDT Proficiency Level
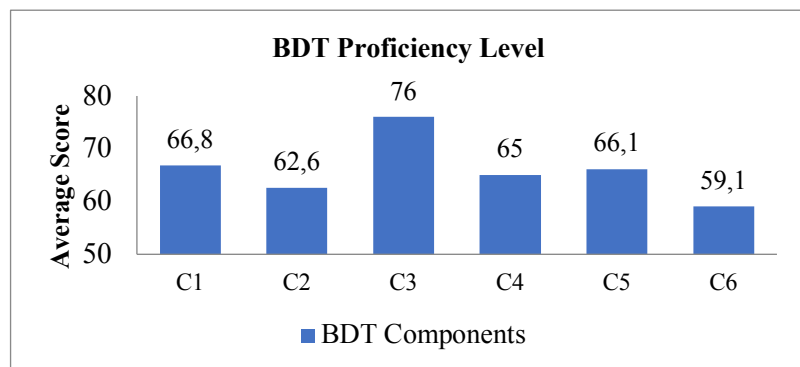
In accordance to the questionnaire's results, teachers at Vocational High Schools (SMK) achieved the highest level of English language proficiency at the C3 (Applying) level, scoring 76 out of 100, while the lowest level occurred at the C6 (Creating) level, scoring 59.1 out of 100. This phenomenon implies that teachers were more proficient at applying their knowledge of English concepts and language than they are at creating original materials or content for the classroom. This additionally is consistent with the

findings of the qualitative triangulation, in which the teacher shows that teachers' dominantly perform digital activities in C3.

To acquire a better understanding of the factors influencing teacher proficiency, the researcher conducted semi-structured interviews with two teachers who represented different proficiency categories (lowest and highest) at two distinct schools. The result reveal both teachers emphasised that the availability and standard of technological equipment in classrooms had a substantial impact on their capacity to integrate digital technologies:

> *I find it difficult due to the limitations of school equipment, like speakers that often can't be used for lessons requiring audiovisual support. Uneven classroom facilities also pose quite a hurdle in delivering the material effectively. –Teacher 12, April 26th 2024*

Following that, the pressure to meet curriculum requirements while coping with limited instructional time also shared by teacher 9:

> *Teachers' roles in the modern educational environment have changed from being merely source of knowledge to being learning partners. I offer relevant content, facilitate exploration, and incorporate it into Google Classroom (GCR). The current curriculum limits the amount of time allotted to English subject." –Teacher 9, April 29th 2024*

Large class sizes pushed teachers to adopt technology to better manage and engage their students where teachers use digital technology to help the learning process:

> *I adapt technology and digital tools according to students' needs. I combine both online and offline learning sessions simultaneously, utilizing various technologies to aid students' comprehension of the materials. By integrating these digital tools, I can deliver the material to a large amount of students and capture their attention. –Teacher 9, April 29th 2024*

Additional factors that influence proficiency of technology are discovered on teachers' collaboration, where teachers exchange their experiences with the latest digital-based information:

> *I became more aware of and interested in technical advancements. I joined the forum of MGMP English Teacher Denpasar to follow the current technology advance with fellow teachers. My teaching method has changed from being primarily paper-based to being digital. –Teacher 12, April 26th 2024*

Following the statement above, teachers also recognize that receiving digital training has improved their ability to employ relevant digital tools and applications as well as quickly adjust to technology advacements.

> *I took digital teacher training to improve my skills in developing learning media. The process helped me understand how to design engaging and effective learning materials for students." (Teacher 12, April 26th 2024)*

Educational backgrounds of teachers with English education and non-English education graduate are also found to be the factors influencing digital proficiency.

> *From years of learning as a student and implement it into teaching, dealing with boring classes is always part of the problem, but it depends on how we manage the class. I combine the pedagogy and digital thing to help me deal with class." (Teacher 9, April 29th 2024).*

The researcher also discovers that personal experiences have a significant impact on the technological proficiency regarding technology integration in education as stated by the following statement:

> *My ability to operate these digital media wasn't instant or significant. It all came from years of teaching experience and the curiosity to try new things in the classroom. I'm not afraid to invest in premium digital applications to provide students with access to quality and enjoyable digital media. This is the best we can do for others. – Teacher 9, April 29th 2024.*

Teachers' years of experience with technology influences how comfortable and competent they appear when utilizing digital technology in the classroom. Teachers' motivation also found to encourage the autonomous learning that resulted from a strong desire to implement digital technology into teaching.

> *I teach because I'm passionate about it, not because of anything else. I've adapted to all eras; throughout my teaching career, I've found that all students are generally easy to manage. I'm comfortable and familiar with technology and always have the desire to improve. Everything I've done is self-taught, relying on my experience and curiosity. –Teacher 9, April 29th 2024.*

Following that, based on TPACK analysis, the ability to integrate technology into classroom setting are then addressed using the classification from BDT occurrences. The average TPACK proficiency scores demonstrate variation across the components of Technological Content Knowledge (TCK), Pedagogical Content Knowledge (PCK), Technological Pedagogical Knowledge (TPK) and Technological Pedagogical Content Knowledge (TPACK). The numbers show the occurences of digital activities as shown bellow:

Table 1. TPACK Proficiency Analysis

Proficiency level	TCK	PCK	TPK	TPACK
C3 - Applying	4	-	3	8

The analysis of teachers' use of technology in pedagogy can be described as follows using the BDT classification approach: 1) TCK: activities in this category refer to the use of technology in order to expand content knowledge, as demonstrated by various teacher activities such as lesson planning, storing management such as using Google Drive and the cloud to save learning progress, implementing digital training to improve skills in creating appealing digital teaching materials, and basic training in the use of numerical data processing programs.

The ability of teachers in PCK was not directly obvious. This indicates that the teacher had implemented the three-step teaching sequence incorporating digital aid tools. 2) TPK: The implementation of activities in this category related to the use of technology to enhance teaching and learning processes, with the objective of producing a positive effect on students. The use of digital media to support learning was very visible, such as the publication of material on learning platforms that can be easily accessed at any time, the use of digital learning media in the classroom, such as Power-Point slideshows, and the use of digital assessments, such as wordwall activities, to engage students in learning and boost participation.

In addition, the extent of teachers ability to incorporate technology in accordance with the concept of digital learning entails their personal utilization of technology for pedagogical understanding as well as the utilization of it to aid students in understanding the material, that relates towards, 3) TPACK: In this category, teacher activities include proficiency in the use of Microsoft Teams, Google features such as Google Slides, Google Forms, Google Sites, and Google Classroom to aid in the delivery of material and evaluations that

allow teachers to collect student performance and make objective assessments. Additional tools particularly Canva and WhatsApp was used to facilitate the creation of engaging lesson plans and homework, which then, uploaded to social media platforms for individual and group utilization.

The relationship between BDT levels and TPACK components indicates that higher-order BDT skills require strong TPACK expertise, particularly in merging technology and pedagogy. It also appears that teacher digital skills are primarily used to support the TPACK (Technological Pedagogical Content Knowledge) idea. The present study found that teachers' digital proficiency are utilized effectively in managing and presenting learning content with digital aid, strengthening the pedagogical process, and increasing students' understanding of the learning material.

DISCUSSION

Findings from the research indicate that level C3 is the highest extent of teacher proficiency, and level C6 is the lowest. Teachers additionally utilize Level C3 extensively during major activities to facilitate TPACK. These relevant findings are supported by studies from Amin & Mirza (2020) who found that teachers tend to engage in activities related to lower-order thinking skills at level C3. The similar issue also addressed by Ramaila & Molwele (2022) where technology integration in curriculum has been found to promote the acquisition of 21st century skills and competencies. This demonstrates that teacher proficiency at level C3 is due to curriculum requirements that emphasize to lower order thinking skills. Teachers are able to utilize digital technology to more effectively manage learning, enabling teachers to satisfy curriculum expectations and improve student learning results.

Researchers also discovered that teachers' lowest level was at C6, this finding is supported by Matore (2021) which found that the C6, is actually the most difficult BDT level to achieve. Utilization of technology at this level requires higher order thinking skills, as teachers rarely engage in creative activities during the classroom learning process. This indicates that, although digital technology has the potential to build higher-order thinking skills, its implementation in learning environments remains limited, and teachers should be encouraged to actively think critically, evaluate, and create when using technology.

Additional factors that determine teachers' proficiency, as explained by Alharbi (2021), who distinguished two key categories: internal and external who stated that there is a strong association between internal and external factors, which are both which have significant effects on teachers' learning outcomes and proficiency levels. 1) Schools' facilities could foster digitalization of education. The research findings are supported by Abalkheel (2021) where teacher when equipped with proper digital tools, they could enhance their teaching ability and fostering modern technological advancements. The solid proficiency of TPACK and the findings of the analysis reveal that facilities definitely play a part in proficiency level. The analysis findings are also in line with Naing & Wiedarti (2023) who emphasize teachers' digital proficiency is definitely influenced by the extent of exposure to technology. However, in terms of developing TPACK, the emphasis is on "soft skills" such as teachers' ability to incorporate digital activities into the learning process where the soft skills ability obtained from the utilization of digital technology. 2) Curriculum requirements encourage the use of technology to produce more flexible, interactive, and student-centered learning. The curriculum has been strengthened and focused on highlighting interactive and project-based on long-term learning in order to conduct an active exploration (Kemendikbud, 2022). Therefore, in addition to the development of independent curriculum regulations that genuinely promote digital empowerment, there is a lack of time allocated for learning, particularly English classes. Similar findings also found on (Kusuma Astuti et al., 2023; Witarja, 2022) where a lot of content is expected to be covered in a limited

period of time in the Indonesian curriculum. Language teachers are required to be able to complete the curriculum's objectives within a specific time frame.

The curriculum demand also resulting in another factor 3) Workload, which causes teachers who teach in large classrooms to optimize the use of technology throughout the learning process. The findings are supported by (Almaiah et al., 2020; Philemon, 2020; Mercader & Gairín, 2020) where excessive workload is barriers for teachers in classroom, where teachers are expected to teach a large number of students, completing administrative demands, and teaching period per-week. Teachers have to provide relevant learning content while fostering student participation. As a result, through the use of digital technology, teachers could address any issues that arise, particularly during preparation and administration that could lead to job dissatisfaction (Almaiah et al., 2020).

Furthermore, studies discovered that 4) teachers' collaboration where teachers who join a forum or community and engage with other teachers, demonstrate a high level of technological skill. The findings' results are supported by Meyer et al. (2022) where teachers have the opportunity to enhance their teaching quality and grow professionally through collaboration among their peers. Teachers are able to discuss learning needs and find potential for innovative development. As evidenced through this, teachers who collaborate together can exchange modern concepts and knowledge to improve their teaching skills. These programs allow teachers to focus on learning new information about digital tools that can be utilized to improve the teaching and learning process. Following that, Rodrigues (2020) reported that when teachers build a community of practice, they show support for the ongoing exploration of technology and encouragement of the learning process. This factors also led to 5) Teacher training program that allow teachers to focus on learning new information about digital tools that can be utilized to improve the teaching and learning process. Following that, Rodrigues (2020) reported that when teachers build a community of technology practice, they show support for the ongoing exploration of technology and encouragement of the learning process. This is also corresponded to Abalkheel (2021) & Nava et al. (2022) where teachers' digital training program could foster digital ability integration in classroom. The findings from the present study also found that teachers believe their digital skills increase when they participate in digital training programs.

Following that, researcher also found additional factor 6) Educational background where English education graduates demonstrate higher digital technologies in relation to TPACK. This is related to the teacher's awareness of which educational expectations are suitable for educational graduates. This is corresponded to Wardani & Fatimah (2020) where individuals with mismatch job have to adapt to new cultures and knowledge and are expected to make contributions to the institution's progress by directing potential towards desired outcomes. As a result, teachers' educational background leads to better learning outcomes. English education students are trained as teachers who are not solely fluent in English but as well are dedicated for educational practice and its elements such as classroom, strategy, teaching methods, and students' needs. With the underlying background, educational graduate is also prepared to diagnose and find solution to address the proper issue regarding classroom practice, including the use of digital technology to assist teachers and facilitate students learning process.

The researcher then analyzes the internal factors that influence teacher proficiency. Safian et al. (2023) mentioned that teacher proficiency can also be influenced by internal factors, such as cognitive components like motivation and a strong desire to learn. 7) Teaching experience, teachers with years of experience obtain the privilege of having more knowledge and exposure towards the utilization of technology. Additional theory from Tschannen-Moran & Hoy (2001) also claimed that more years of experience leads to a higher sense of proficiency. The statement is supported by Guillén-

Gámez et al. (2022) and Amirova et al. (2023) where teachers with years of experience represent the individuals with the most exposure in the use of digital resources, which is relevant across all areas of knowledge and TPACK. Another factor found is 8) Teachers' self-motivation where they highly motivated and willing to continue learning and obtaining new skills. Teachers who engage in autonomous learning demonstrate committed behaviors and a strong desire to learn new things, keeping up with technological advances. Wang & Zhang (2022) study also discovered that the desire to learn can be a significant factor in digital proficiency. The findings of the present study also supported by empirical study conducted by Nava et al. (2022) where autonomous learning introduces individuals to a diverse set of digital tools and platforms, boosting their familiarity and ability to utilize them successfully.

Researchers discovered that teachers have successfully incorporated the TPACK components based on the BDT framework, based on data from proficiency levels and factors impacting technology integration. These findings indicate that teachers primarily recognize technology and how to use it in the classroom. Nuangchalerm (2020) also highlight successful content, pedagogy, and technological implementation of TPACK components. In the present study, the effectiveness of TPACK implementation was measured using the BDT framework, which found to have a high potential for increasing the quality of teaching and learning through technology.

This represents a milestone in education where the urgency of mastering digital tools, in alignment with TPACK must be addressed (Aleman-Saravia & Deroncele-Acosta, 2021). The mastery of TPACK and Digital Tools among teachers is essential, especially during the digitization in education. Teachers' passion towards their implementation indicates that they have successfully achieved the curriculum requirements. This aligns with research from Kozikoğlu & Babacan (2019) where it is noted that, teachers' responsibilities and duties are expanding in parallel with the demands teachers meet, which makes expertise of TPACK increasingly important during the learning process. Teachers are provided with digital tools that assist them with classroom process, including administrative tasks that must be completed. This is further supported by Erbas et al. (2021), which demonstrating that technology is an important tool in assisting teachers during the English language teaching process. This is also consistent with the teacher's statement, which claimed that students were significantly more engaged in teaching and learning process.

This study is one of the first to examine the effectiveness of Bloom's Digital Taxonomy in the setting of English language acquisition in vocational high schools. The novel study is due to the integration of two supporting frameworks: Bloom's Digital Taxonomy (BDT) and Technological Pedagogical Content Knowledge (TPACK). Individually, TPACK has demonstrated effectiveness in assisting teachers in integrating technology with pedagogy and content, whereas BDT provides a solid structure for understanding and implementing digital technology in the cognitive context of learning.

CONCLUSION

The findings revealed that teachers' proficiency was at level C3, with the highlighted factors including 1) school facility, 2) curriculum requirements, 3) workload, 4) teacher collaboration, 5) teacher digital training, 6) Educational background 7) teaching experience, and 8) autonomous learning. The results influence how teachers accept digital technology, as well as their ability to use it in the classroom. The highest level attained by a South Denpasar English teacher is C3, and it is confirmed that the teacher implements this C3 for the purposes of TPACK, indicating that the teacher has successfully implemented and fulfilled the requirements of the curriculum, as well as delivered the teaching materials properly and correctly based on their level of proficiency. The primary limitations of the present study are the

limited sample size of teachers. Given the small number of participating teachers, the findings are not representative of the entire teaching community. To improve the representativeness of the results, larger sample sizes should be the target of future study.

Following that, as the present study examine the teachers' proficiency in a particular time; future research should conduct longitudinal studies to track the development and impact of Bloom Digital Taxonomy and TPACK integration over an extended period. This approach could provide insights into how teachers' comprehension and practices evolve over time as well as the long-term effects on student learning outcomes. In addition to that, this study is limited to the use of TPACK and BDT in supporting learning in formal education, therefore non-formal education programs outside of the school environment, such as community learning centers, tutoring, and home schooling should be conducted to evaluate how TPACK and BDT are implemented in non-formal education.

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