

Relationship between Digital Competency and Motivation of Secondary School Teachers in Sabah

Azaredin Othman, Arzizul Antin*, Dg Norizah Ag Kiflee@Dzulkifli

Faculty of Education and Sports Studies, University Malaysia Sabah

DOI: <https://doi.org/10.47772/IJRISS.2026.100500850>

Received: 13 May 2026; Accepted: 18 May 2026; Published: 15 June 2026

ABSTRACT

This concept paper examines the relationship between digital competence and motivation among secondary school teachers in Sabah. The discussion emphasizes two primary research variables: digital competence and motivation. The study will employ a quantitative, non-experimental research design, with the survey method selected as the sole approach for data collection. The study sample will consist of 375 teachers from daily secondary schools across Sabah, selected through simple random sampling. Data will be analyzed using Pearson's Correlation Test with the aid of the Statistical Package for Social Sciences (SPSS). The outcomes of this study are expected to provide valuable insights into the relationship between teachers' digital competence and their motivation. Furthermore, the findings may serve as an important reference for policymakers and relevant stakeholders in designing strategies and policies aimed at strengthening teachers' digital competence, thereby cultivating a generation of educators who are highly proficient and adept in the use of technology.

Keywords: Digital Competence, Motivation, Secondary School Teachers, Sabah and Quantitative Research

INTRODUCTION

21st-century education places great emphasis on digital competency among secondary school teachers, making it a primary requirement for teachers to master the use of technology, digital communication, and information literacy to support teaching effectiveness. These requirements are because they align with the Malaysian Ministry of Education's (MOE) introduction and implementation of the Digital Education Policy in 2023 (MOE, 2023). The actions taken by the MOE are to emphasize the development of educators' competencies based on six strategic pillars, and one important pillar is to improve digital skills and better educational infrastructure. To empower these efforts, the MOE has outlined several initiatives in the Malaysian Education Development Plan (2026-2035) to transform digitally. Among the efforts to be implemented in the plan are the expansion of high-speed internet access, the expansion of digital pedagogical training for teachers, and the use of smart whiteboards (BERNAMA, 2024). In achieving this desire, teacher motivation plays an important role in ensuring that teachers are ready to learn and integrate digital skills into teaching and learning more effectively (Deci & Ryan, 2000). It is clear that teachers' mastery of digital competencies will further strengthen their professional level toward a higher standard and subsequently support the nation's educational aspirations, which focus on quality and student outcomes.

Problem Statement

The seventh shift in the Education Development Plan (PPPM) (2013-2025) states that the quality of learning in Malaysia needs to be improved through the integration of ICT (Information and Communication Technology). This means that educators are applying ICT in teaching and learning. In fact, the seriousness of the MOE toward digital competency among educators can be seen through the drafting of a new policy, namely the Digital Education Policy in 2023. In that foundation, it has been emphasized that educators need to have skills in digital competencies and subsequently apply those skills to teaching and learning.

Although the MOE has made various efforts to enhance digital competency among teachers, the reality faced by teachers, especially those in Sabah, is that they have to deal with various issues. Among the issues faced by teachers, according to a study conducted by Aminah Jekri et al., (2024), is the gap between policy and actual

implementation in schools. The study has shown that the use of technology among teachers is still lacking. The study was conducted in one of the districts located in Sabah, namely the Penampang district. The study has indirectly encouraged researchers to conduct a study across Sabah on teachers in daily secondary schools to assess their level of digital competency.

In fact, Bizimana et al., (2022) who conducted a study abroad, found that the issues faced by teachers were the lack of teacher training in digital competencies, leading to a lack of teacher motivation to integrate digital competencies into teaching and learning. Paudel (2020) also supported this statement by stating that limitations in infrastructure are one of the factors that discourage teachers from using their digital competency levels. If the issues faced by teachers are not addressed more seriously, it will certainly make it difficult for teachers to apply digital competencies in teaching and learning.

Study Objectives

This study will achieve the following objectives:

1. To study the relationship between digital competence and motivation of secondary school teachers in Sabah.

Operational Definition

a) Digital Competency

Oberlander et al., (2020) define digital competence as a combination of knowledge, attitudes, and skills used by individuals to perform work involving digital use more efficiently and effectively.

1. Information and Data Literacy

Information and data literacy refers to the ability of teachers to access, evaluate, interpret, and use the information obtained for teaching and learning purposes in the classroom.

2. Communication and Collaboration

Communication and collaboration refer to the ability of teachers to use digital technology as one alternative to convey information and ideas more clearly in order to build a positive professional relationship and collaborate with students to achieve the set teaching and learning goals more effectively.

3. Content Creation

Content creation is the effort of teachers in using various digital tools to produce, modify, and share materials created creatively and innovatively for the continued effectiveness of the teaching and learning process.

4. Safety and Security

Safety and security refer to the efforts of teachers in protecting personal data, student information, and digital resources to prevent the risk of intrusion, loss, or misuse by incorporating ethical values in technology use that adheres to the principles of privacy, digital well-being, and cybersecurity. The application of these ethical values includes teachers' awareness of online safety, the use of stronger passwords, and guidance for students on using technology more safely and efficiently.

5. Problem Solving

Problem-solving is about a teacher's ability to identify challenges faced in teaching and learning, analyze relevant information, and then use digital technology more creatively and effectively to plan, implement, and evaluate more suitable solutions to the challenges encountered.

6. Analyzing and Reflecting

Analyzing and reflecting refer to the teacher's ability to assess the suitability of the technology used and

subsequently reflect on the effectiveness of teaching and learning using that technology.

b) Motivation

According to Abdul Majid and Zanariah Dimon (2015), motivation refers to a continuous effort from within an individual to achieve a set goal. For the context of this study, motivation is the element that drives teachers to achieve a goal through three dimensions: the need for power, affiliation, and achievement.

1. Need For Power

The need for power refers to the teacher's ability to influence students to improve effectiveness in teaching and learning.

2. Need For Affiliation

The need for integration is that teachers are capable of building social relationships for the purpose of cooperation with students to maintain a more conducive and inclusive learning environment.

3. Need For Achievement

The need for achievement is for teachers who have a strong desire to improve their level of professionalism by setting teaching goals more effectively, striving to achieve high performance standards, and frequently improving effectiveness in teaching and learning.

LITERATURE REVIEW ON THE RELATIONSHIP BETWEEN DIGITAL COMPETENCE AND MOTIVATION OF SECONDARY SCHOOL TEACHERS IN SABAH

A study on the relationship between digital competency and motivation of secondary school teachers in Sabah has been conducted in several districts of Sabah state, but it has never been carried out in all districts in Sabah state, and it is also less common in our country. The findings of Gokbulut and Keserci (2024), who conducted a similar study in Turkey, explain that teachers who use digital technology to develop digital materials for classroom instruction often show high levels of motivation because most of them have a strong desire to utilize the technology available today in their classrooms.

This view was also agreed upon by Trujillo Torres et al., (2020) who stated that teacher motivation is closely related to teachers' confidence in digital competence and institutional support, as these factors will encourage teachers to participate in various digital competence training and apply the acquired skills more effectively in their teaching. The study also explains that teacher motivation is not the primary guarantee for teachers to integrate digital competencies in the classroom if there is less involvement in professional development, limited infrastructure, and various obstacles that lead to "technostress." It is clear that if the matter continues to drag on, it will certainly become difficult for teachers to maintain a high level of competence to apply in the classroom.

METHODOLOGY

Study Approach and Design

The research approach used in this study is a quantitative approach. The quantitative approach was chosen in this study because it can measure the objectives that have been set. For example, studies related to the relationship between variables (Divya Sreekumar, 2023). In addition, previous studies such as the one conducted by Johnson and Christensen in 2010 have shown that a quantitative approach can provide statistical evidence to support hypotheses in established studies. In this study, a non-experimental study design was chosen as the design for the study.

Study Population and Sample

The population used in this study is among secondary school teachers in the state of Sabah, totaling 15,231

teachers. However, the sample size used in this study was only 375 teachers, who were selected based on the simple random sampling method. The sample size used in this study was based on the Krejcie and Morgan sample size determination table.

Questionnaire Instrument

The questionnaire instrument used in this study is based on instruments previously developed by other researchers. Although the instrument was taken from previous researchers, it was modified by the researcher based on its suitability and compatibility for this study. The digital competence instrument was taken and adapted from the Addressing 21st-century digital skills in schools-Development validation of an instrument to measure teachers' basic ICT competence beliefs questionnaire. Meanwhile, the motivation instrument is from the David McClelland Motives Questionnaire. To ensure that the instruments to be used in the study are truly suitable, the validity and reliability process is carried out through the implementation of a pilot study. The process carried out is to ensure that the instruments to be used in the actual study are suitable.

Data Analysis Process

The raw data obtained from the actual research collection will be analyzed using the Statistical Package for Social Science (SPSS) version 29.0 software. Pearson Correlation Analysis will be used to determine whether there is a relationship between digital competence and teacher motivation or vice versa.

CONCLUSION

Overall, digital competency is very important for teachers and it is a necessity for teachers to have digital competency for the sustainability of effectiveness in teaching and learning. Teachers with digital competency skills will be able to produce more innovative and effective teaching sessions. Typically, teachers with digital competency skills tend to have high motivation to use them because they generally have high confidence that using technology in teaching and learning will be able to stimulate students' interest. However, improving the level of digital competency within teachers is not an easy task due to the various issues and challenges faced by teachers. If the issues and challenges faced by teachers, especially in Sabah, are not resolved quickly, it will certainly cause students to lose interest in their teachers' lessons. Therefore, a study on the relationship between digital competency and motivation of secondary school teachers in Sabah was conducted to find effective alternatives to overcome these issues and challenges. The findings of the study to be obtained can serve as a guide for stakeholders to address these issues and subsequently empower digital competency within teachers.

Awards

The researcher expressed gratitude to all parties who cooperated and assisted in the writing of this article until its completion.

REFERENCE

1. Aminah Jekri, Cripina Gregory K. Han, & Nur Farha Shaafi (2024). Teacher Motivation in Using Innovative Technology Based on Self-Determination Theory. Retrieved from https://mysitasi.mohe.gov.my/journal-website/get-meta-article?artId=e8cdf86b-fe97-4862-b9e5-dd77e8ee05a4&template=TEMP002_ARTICLE&jnlId=df261d16-5f76-11ef-a699-005056a6a970&env=web. Accessed on 14 September 2025.
2. Bernama (2024). New Blueprint Set to Reshape Education System, Meet Future Demand – Fadhlina. Retrieved from <https://bernama.com/en/news.php?id=2380804>. Accessed on 9 September 2025.
3. Divya Sreekumar (2023). What is Research Methodology? Definition, Types and Examples. Retrieved from <https://www.scribd.com/document/765336312/What-is-Research-Methodology-Definition-Types-And-Examples-Paperpal>. Accessed on 9 September 2025.
4. Jean Paul Borh Bizimana, Hesbon Opiyo Andala, & Faustin Mugiraneza (2022). Teacher Motivation Factors and ICT Integration in Teaching and Learning in Public Secondary Schools of Rwanda. Retrieved from <https://doi.org/10.5281/zenodo.7199133>. Accessed on 14 September 2025.

5. Juan-Manuel Trujillo-Torres, Hossein-Mohan, Melchor Gomez-Garcia, Hassan Hossein-Mohand, & Maria-Pilar Caceres-Reche (2020). Mathematics Teachers' Perceptions of the Introduction of ICT: The Relationship Between Motivation and Use in the Teaching Function. Retrieved from <https://doi.org/10.3390/math8122158>. Accessed on 14 September 2025.
6. Ministry of Education Malaysia (2013). Malaysia Education Blueprint (2013–2025). Retrieved from <https://www.moe.gov.my/pelan-pembangunan-pendidikan-malaysia-pppm-2013-2025-prasekolah-lepas-menengah>. Accessed on 14 September 2025.
7. Ministry of Education Malaysia (2023). Digital Education Policy. Retrieved from <https://www.moe.gov.my/dasarmenu/dasar-pendidikan-digital>. Accessed on 9 September 2025.
8. Maren Oberlander, Andre Beinicke, & Tanja Bipp (2020). Digital Competencies: A Review of the Literature and Applications in the Workplace. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0360131519303057>. Accessed on 9 September 2025.
9. Mariam Abdul Majid & Zanariah Dimon (2015). The Role of Motivation in Shaping Human Behavior. Retrieved from <https://ejurnalfp.wordpress.com/wp-content/uploads/2015/08/peranan-motivasi-terhadap-pembentukan-tingkahlaku-manusia1.pdf>. Accessed on 9 September 2025.
10. Pitambar Paudel (2020). Teachers' Skill and Motivation in Using Information and Communication Technology. Retrieved from <https://doi.org/10.3126/pjri.v2i0.33431>. Accessed on 14 September 2025.
11. Richard M. Ryan & Edward L. Deci (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. Retrieved from <https://doi.org/10.1037//0003-066x.55.1.68>. Accessed on 9 September 2025.