Relationship between Artificial Intelligence (AI) Readiness and Secondary School Teacher Motivation in Sabah

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ABSTRACT

This concept paper examines the relationship between Artificial Intelligence (AI) readiness and teacher motivation among secondary school educators in Sabah. AI is conceptualized as machine-based systems embedded with algorithms that simulate human cognition, deliver rapid responses, analyze learning data, and adapt to individual learner needs. Teacher motivation, in contrast, is defined as the internal drive that influences behavior, emotions, and cognition in accomplishing professional tasks. Adopting a quantitative, non-experimental survey design, this study employs questionnaires as the primary data collection instrument. The anticipated findings suggest an absence of a significant relationship between AI and teacher motivation. Despite this, the study is expected to yield valuable insights for policymakers and educational stakeholders, particularly the Ministry of Education Malaysia, in formulating effective training programs and intervention strategies to enhance teacher professionalism in relation to AI adoption. By addressing the intersection of AI and motivation, this study contributes to the discourse on digital transformation in education and provides a foundation for future empirical research in the Malaysian context.

Keywords: Artificial Intelligence, Teacher Motivation, Secondary School, Sabah, Quantitative Research

INTRODUCTION

The Industrial Revolution 4.0 has led to the development of Artificial Intelligence (AI), which in turn has had a significant impact on various sectors, including the education sector. The changes occurring in the education sector have prompted the Ministry of Education Malaysia (KPM) to revise the Digital Education Policy in 2023 (KPM, 2023). One of the terraces contained in the policy is Terrace 2, which aims to empower the use of digital technology among teachers so they can become educators who are proficient in using AI technology and apply it to teaching and learning in the classroom. The efforts made by the Ministry of Education are because AI has great potential in helping teachers apply more interactive teaching methods. Additionally, AI can assist teachers in lesson planning, thereby enabling them to focus entirely on more valuable pedagogy (Norbert et.al., 2025). However, according to Ding et al. (2025), teacher motivation plays a key role in enabling teachers to apply AI in teaching and learning. Therefore, teachers need to have strong motivation to integrate AI into their teaching in order to meet the Ministry of Education's desire for Malaysian education to be globally competitive.

Problem Statement

Malaysia's education system today is leaning more toward the use of AI. This can be seen through the Ministry of Education's actions in implementing various initiatives to ensure that Malaysian education can advance in line with education in regional countries. Among the initiatives by the Ministry of Education to increase the use of AI in education are the introduction of the Digital Education Policy in 2023 (KPM, 2023), the launch of the AI-4-Educator initiative in collaboration with the Ministry of Human Resources through HRD Corp (Hasimi Muhamad, 2025), cooperation with Google and the Gemini AI Academy to develop creative students (Akma Salleh, 2024), and many more.

Although the Ministry of Education has implemented various initiatives to achieve an approach to the use of

AI in education, there are constraints that are faced. This is because the inconsistent support from the administration toward teachers in the use of AI has caused teachers' motivation to be unstable (Bishara et.al., 2025). When this situation occurs, it makes it difficult for teachers to develop the level of AI usage that should be able to help them apply effective teaching methods. According to Du et al. (2025), this situation occurs because most teachers experience limitations in skills and infrastructure, which subsequently leads to a lack of motivation toward AI, even though in reality, AI is capable of assisting teachers, especially in teaching.

However, motivation cannot be considered a factor that can encourage teachers to integrate AI into teaching and learning because studies related to the relationship between AI and teacher motivation are still new and very rarely conducted (Collie and Martin, 2024). Therefore, this study needs to be conducted in the state of Sabah to see whether there is a relationship between AI usage and the motivation of secondary school teachers or not. Through the implementation of this study, it is hoped that it will provide guidance to stakeholders in resolving the issues faced by teachers through the implementation of more effective and efficient steps.

Study Objectives

This study was conducted to achieve the following objectives:

To study the relationship between AI usage readiness and the motivation of secondary school teachers in Sabah.

Operational Definition

Artificial Intelligence

According to Mohd Amzari Tumiran et al. (2025), AI refers to a branch of computer science that aims to develop systems capable of performing tasks that typically require human intelligence. This study will examine two perspectives of teachers regarding the use of AI, including:

Perceived Usefulness

Perceived usefulness refers to the extent of teachers' confidence in the use of technology, which can bring tangible benefits in improving the effectiveness of teaching and learning. Teachers with high confidence will see AI as a very important platform and beneficial to them, especially in relation to work such as preparing teaching aids. Conversely, if teachers lack confidence in AI, they will naturally consider it not to be a beneficial platform for them. This situation will result in the teacher having a rather weak level of technology acceptance.

Perceived Ease Of Use

Perceived ease of use refers to teachers' perception that AI is easy to use without requiring high skills. The easy-to-use response describes the teachers' willingness to accept the presence of AI through their user experience. Teachers' acceptance of AI can be seen if the AI platform used is user-friendly, simplifies the teaching process, has clear instructions, and can improve the effectiveness of teaching and learning.

Motivation

According to Emy Mumin (2018), motivation refers to the needs, desires, incentives, goals, and other factors that drive teacher motivation. Based on this study, teacher motivation is viewed from three aspects, namely:

Need Of Power

The need for power refers to the teacher's desire to influence students in teaching and learning. Typically, teachers who desire power are driven by three main tendencies: wanting to shape students' discipline and attitudes to align with the established classroom goals, desiring to gain respect, recognition, or both from students, and frequently showing a tendency to make classroom-related decisions such as assessments,

teaching methods, and activity management. Teachers who want power are usually not doing it for their own self-interest, but rather to bring about a change in creating a more conducive and organized learning environment.

Need Of Affiliation

The need for integration refers to the teachers' desire to build friendly relationships with students in teaching and learning. To realize this desire, teachers will strive to create an inclusive learning environment where students in the classroom can feel valued, accepted, and comfortable to reach their full potential in academics. Teachers with this desire will bring about a change not only in the classroom but will also contribute to the formation of a harmonious school climate and a more sustainable learning community-oriented environment.

Need Of Achievement

The need for achievement is a motivation for teachers to improve effectiveness in teaching and learning by setting clear academic goals and striving to enhance professional levels to a higher degree. Teachers with a strong desire to achieve high results will typically demonstrate persistent effort to reach them, even when faced with various obstacles and challenges. This happens because teachers are usually not satisfied with their average achievements, and as a result, they will look for ways to achieve higher results than they usually do.

LITERATURE REVIEW ON THE RELATIONSHIP BETWEEN ARTIFICIAL INTELLIGENCE (AI) AND SECONDARY SCHOOL TEACHER MOTIVATION IN SABAH

The study on the relationship between AI and secondary school teacher motivation in Sabah is a relatively new study conducted in our country, especially in Sabah. However, this study is not new in other countries, as similar studies have been conducted by researchers from other nations. For example, Rebecca J. Collie et al. (2024) conducted a study in Australia. The study was conducted because motivation is a key aspect that plays an important role in determining the level of teachers' use of AI in classroom teaching and learning. The study explains that teachers with high confidence are not only likely to apply AI in their teaching but also capable of integrating AI into their students' learning.

However, Bawaneh et al. (2025) in their study findings found that there is a relationship between AI and teacher motivation. This indicates that teachers have a high motivation to integrate AI into their teaching. In addition, high teacher motivation increases teachers' confidence to explore new and more effective pedagogical approaches. This happened because teachers see AI as an opportunity that can provide them with various benefits, especially in terms of effectiveness in teaching and learning. When teachers have such an attitude, they will certainly interpret AI in a way that is suitable for their students to ensure they understand the lessons being taught.

METHODOLOGY

Study Approach and Design

The approach used in this study is a quantitative approach through a non-experimental survey research design. This approach was chosen in this study because it is easy to use in obtaining data and can ensure that the data obtained is reliable, valid, and consistent. Furthermore, according to Creswell and Creswell (2017), survey studies are highly relevant to be conducted in research studies, such as the study on the relationship between AI and secondary school teacher motivation in Sabah, which is a survey-based study.

Study Population and Sample

The population in this study consists of 15,231 secondary school teachers from daily schools in the state of Sabah. To select the sample for this study, the researcher then used the simple random sampling method. Through simple random sampling, the sample size used in this study was 375 people. The sample size

determination in this study refers to the Krejcie and Morgan sample size determination table.

Questionaire Instrument

This study uses a questionnaire instrument adapted from instruments developed by previous researchers. However, the instrument has been modified to suit the context of this study. The Artificial Intelligence instrument was taken and adapted from the Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology questionnaire developed by Fred D. Davis. Meanwhile, the motivation instrument was also taken from the David McClelland Motives Questionnaire instrument developed by David McClelland. Although this instrument is adapted from an instrument developed by previous researchers, it will undergo a process of validity and reliability testing during the pilot study implementation. The implementation of this process is to ensure that the instruments used by the researcher are suitable for use in this study.

Data Analysis Process

The Statistical Package for Social Science (SPSS) software was used in this study to analyze data on the relationship between Artificial Intelligence (AI) and Secondary School Teacher Motivation in Sabah.

CONCLUSION

Generally speaking, the presence of AI has had a significant impact on the world of education, which in turn has had a very significant effect on teachers' instruction. This is because the AI introduced in the world of education is capable of bringing a new change to teachers' teaching, making it more interactive and creative, thus increasing students' interest and motivation toward learning. However, it is not an easy task for teachers to integrate AI into teaching and learning due to various issues and challenges that teachers face in integrating AI. If the issues and challenges faced by teachers are not addressed immediately, it will be difficult for teachers to use AI, which will indirectly prevent them from meeting the challenges of the Ministry of Education to compete globally. Therefore, this study will be conducted to see if there is a relationship between AI and the motivation of secondary school teachers in Sabah. The findings of the study can be used to further increase the use of AI among secondary school teachers in the state of Sabah.

Awards

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