INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 13, Issue 11, (2023) E-ISSN: 2222-6990

Exploring The Readiness of Google Slides Pedagogical Practices: Perspective of Primary Teachers

Lau Chia Wei[1], Kung-Teck Wong[2], Norazilawati Abdullah[3], Mahizer Hamzah[4]

[1]SJK (C) Wu Teck, Klang, Selangor, Malaysia

[2,3,4]Faculty of Human Development,

Sultan Idris Education University, Perak, Malaysia.

Corresponding Author Email: homas@fpm.upsi.edu.my

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v13-i11/19471 DOI:10.6007/IJARBSS/v13-i11/19471

Published Date: *21 November, 2023*

Abstract

This study explores the readiness of Google Slides pedagogical practices regarding knowledge, skill, and attitude levels among primary teachers. The study was conducted using an online questionnaire to collect data. This research has utilised questionnaires as the research instrument. The sampling method used in this research is stratified random sampling. The quantitative method has been used in the study. A total of 40 respondents from Primary school teachers were selected through a simple random sampling method to answer the questionnaire. The findings indicated that the teacher's knowledge and skill levels are high among the teachers.

Moreover, teachers' attitude towards using Google Slides in teaching and learning was positive. Inferential analysis using the T-test was conducted to compare the differences in the knowledge, skill, and attitude levels towards gender. The inference analysis revealed significant differences in knowledge levels associated with the teacher's gender. In contrast, there were no significant differences in skill levels and attitudes related to teacher gender when using Google Slides. Hence, this study contributes to the significant empirical results on the readiness of Google Slides pedagogical practices among primary teachers. The implications of this study are expected to contribute to government, stakeholders, teachers, students, school administrators, and educational organisations, especially practical and theoretical implications regarding teachers' readiness in terms of knowledge, skill, and attitude toward using Google Slides in teaching and learning.

Keywords: Knowledge Level, Skill Level, and Attitude of Teachers, Google Slides, Technology Acceptance Model

Introduction

Google Classroom (GC) has been introduced to teachers and students to create a learning environment aligned with 21st Century Learning. Junedi and Juliana (2019) believe collaborative learning techniques are better than conventional learning, and using Google Classroom aligns with the educational policy's emphasis on integrating technology in the teaching and learning process at all school levels, focusing on 21st-century learning needs (Kaviza et al. 2021). The various applications in GC are free for teachers and pupils as it is a new virtual learning place. These applications have improved continuous learning among pupils (Saidin & Husnin, 2021). Many studies have indicated that Google Slides is an effective way to create an interactive environment that can engage learners in asynchronous learning pedagogical practices (Harper, 2020).

Following the Movement Control Order in Malaysia, enforced on 18 March 2021, students and teachers must carry out Home-Based Teaching and Learning. This has been a catalyst for using Google Classroom among teachers and students. Because of this Movement Control Order, teachers who do not have the readiness for this knowledge and skills are forced to conduct online teaching and learning without any formal training and guidance. Therefore, the teachers only use conventional teaching methods to transfer them online through the PowerPoint "*share screen*," provided without the student's interactive teaching materials. Sumardi et al. (2022) noted that the learning process centralises the teacher. Besides, Doyle et al. (2019) also said that these Information and Communications Technology (ICT) skills should be used to enhance interactive learning.

Problem Statement

In this regard, the Malaysian Education Blueprint 2013-2025 emphasises the development of holistic individuals by focusing on the seventh shift, which is the utilisation of Information and Communication Technology (ICT) in education. In the third phase, it has been stated that teachers should be able to implement ICT programs and innovations for special needs groups to enhance the learning standards continuously. In other words, the Malaysian Education Blueprint has emphasised that teachers should have a high level of readiness regarding knowledge, skills, and attitudes for using ICT in the teaching and learning process. The importance of educational technologies and pedagogical practices has been highlighted in many previous studies related to technology in teaching and learning (Dangi & Saat, 2021; Mohd et al., 2020; Wan, Ghani & Wong, 2022; Wong et al., 2020)

The Malaysia Education Blueprint 2013 - 2025 emphasises the importance of educational technology in pedagogical practices to cultivate active learning via various classroom technologies. However, the findings from the informal studies indicated that many teachers still require extra skills and knowledge to integrate educational technologies into teaching and learning. The findings aligned with the study conducted by Wong, Muhammad and Abdullah (2020). According to Rasmitadila (2020), teachers who lack skills and readiness for technology in teaching online are less motivated because they find it challenging to transfer knowledge to students compared to face-to-face learning environments. Not only that but teachers are also required to adapt to online teaching and learning with a limited amount of time to acquire the necessary skills (Wan et al., 2021).

Henceforth, teachers should elevate their preparedness levels to implement collaborative learning effectively with educational technology pedagogical practices. One instrumental approach to achieve this is through the utilisation of Google Slides. As noted by Al Anshori and Syam (2018), Google Slides can be a potent tool in facilitating the learning process,

particularly during presentations and interactive question-and-answer sessions, accessible across all digital platforms. This perspective aligns seamlessly with the insights provided by Shah (2021), where both students and instructors can harness the potential of Google Slides for concurrent learning activities and collaborative sharing of information. Furthermore, Wong, Abdullah and Goh (2019) advocate that students should be granted opportunities for active participation in curriculum design and interactive learning experiences. Purnama and Pramudiani (2021) also noted that Google Slides are exceptionally suited for collaborative learning, substantiated by their impressive test performance based on the ADDIE model.

Based on the empirical findings presented in the studies mentioned above, it is unequivocal that Google Slides is pivotal in realising collaborative learning environments among students. Moreover, it is imperative to acknowledge that educators' proficiency in leveraging Google Slides as an educational, collaborative tool necessitates enhancement. This process should be facilitated through systematic training and sustained support initiatives orchestrated by educational authorities. Furthermore, Google Slides created interaction and knowledge sharing among students from diverse backgrounds. The usefulness of Google Classroom and slides influenced group learning, and cultural differences influenced collaboration (Chang & Benson, 2022). This view also aligns with Shah (2021), where students and teachers can simultaneously use Google Slides to learn via Virtual Resus Room (VRR) in shared Google Slide.

Hence, it is imperative to grasp the preparedness of educators concerning the enhancement and implementation of collaborative learning strategies, a pivotal aspect of the pedagogical process. Nonetheless, the extent of teachers' readiness to adopt Google Slides as a facilitative tool remains relatively unexplored and inadequately understood. The findings of this study could contribute to the planning process of encouraging teachers to continue learning and receiving training for personal development, thereby increasing their interest in using ICT in the teaching and learning process.

Consequently, the present study has been carried out with the primary aim of discerning the readiness levels among educators, encompassing facets of knowledge, skills and attitudes within the context of their utilisation of Google Slides that could contribute to the broader understanding of Google Slide pedagogical landscape. This knowledge gap persists due to the limited research dedicated to this area.

Objective

This study aims to achieve the following objectives

i. Identify teachers' level of knowledge of readiness to use Google Slides
ii. Identify teachers' skill levels against readiness to use Google Slides
iii. Identifying teachers' attitudes towards readiness to use Google Slides
iv. Identify differences in the level of knowledge of male and female teachers by using Google Slides
v. Identify differences in the skill levels of male and female teachers by using Google Slides
vi. Identify differences in attitudes of male and female teachers by using Google Slides

Methodology

This survey study is used to identify teachers' readiness for using Google Slides in terms of knowledge, skills, and attitudes of teachers. All information collected is population

demographic information and items that test teachers' knowledge, skills, and attitudes. The survey questionnaire was divided into two parts. The first part is the respondent's demographic information, i.e., gender, age, and teaching experience. The second part of the questionnaire is regarding the teacher's knowledge, skill level, and attitude in using Google Slides. Questionnaires are administered in Google Forms to be given to respondents. All data from Google Forms has been collected in Google Sheets and used SPSS for analysis.

The data of this study used descriptive statistics to explain teachers' readiness in terms of knowledge, skills, and attitudes in using Google Slides. Instead of the mean value of the knowledge and skill level item, the researcher can compare the mean score and assess whether it is low, medium, or high. At the same time, attitude items can be evaluated positively or negatively. In addition, data from this study has also been used in inference statistics to find the differences in the level of knowledge, skill level, and attitude of teachers between male and female teachers. These independent t-tests are used to differentiate levels into two different groups of males and females. The findings from the SPSS software were compared to the Mean and Standard Deviation values.

Result

The sample study involved 40 teachers from one of the Primary Schools comprising nine male and 31 female teachers. The number of male teachers made up 22.5% of the total sample of the studies. At the same time, the number of female teachers comprised 77.5% of the study's sample.

Table
1 Distribution of Respondents By Gender

Gender	**Frequency (f)**	**Percent (%)**
Men	9	22.5
Female	31	77.5
Total	40	100

This study is divided into three elements: teachers' knowledge, skills, and attitude toward the readiness of Google Slides. Each aspect contains ten items, and a 5-point ordinal scale has been used to identify the respondent's readiness towards Google Slides.

Descriptive data revealed a high knowledge level, with an average mean of 4.20. This is followed by a high level of teacher skills with an overall mean of 3.80. The teacher's attitude is positive, with an average mean of 3.64. Based on the average mean scores, it can be concluded that teachers have a high level of knowledge and skill level in the use of Google Slides, and they show a positive attitude toward the readiness to use Google Slides.

Table 2
Comparative Analysis of Knowledge Level, Skills Level And Teacher's Attitude To Readiness To Use Google Slides

Bill	Readiness to Use Google Slides	Average Mean	Level
1	Knowledge Level	4.20	High
2	Skill Level	3.80	High
3	Teacher's Attitude	3.64	Positive

Research objective four was employed to determine whether there is a significant difference in teachers' knowledge of using Google Slides based on gender. An independent samples t-test was conducted to compare knowledge scores between male and female teachers. It was found that there was a significant difference in scores between male teachers (mean = 4.58, SD = 0.66) and female teachers (mean = 4.09, SD = 0.43). Based on Levene's Test for Equality of Variances, the significance value for Levene's Test regarding teacher knowledge and gender was 0.21. This value is more significant than 0.05. Therefore, the results of the t-test analysis for the Equal Variances Assumed were referenced. Based on the Sig. (2-tailed) value of 0.01, this value is smaller than 0.05. Thus, there is a significant difference in knowledge scores between male and female teachers.

Research objective five was employed to determine whether there is a significant difference in teachers' skill levels to use Google Slides based on gender. An independent samples t-test was conducted to compare skill level scores between male and female teachers. It was found that there was a significant difference in scores between male teachers (mean = 4.14, SD = 0.89) and female teachers (mean = 3.69, SD = 0.612). Based on Levene's Test for Equality of Variances, the significance value for Levene's Test regarding skill level and gender was 0.25. This value is greater than 0.05. Therefore, the results of the t-test analysis for the Equal Variances Assumed were referenced. Based on the Sig. (2-tailed) value of 0.08, this value is greater than 0.05. Thus, male and female teachers have no significant difference in skill level scores.

Research objective six was employed to determine whether there is a significant difference in teachers' attitudes regarding their readiness to use Google Slides based on gender. An independent samples t-test was conducted to compare attitude scores between male and female teachers. It was found that there was a significant difference in attitude scores between male teachers (mean = 4.04, SD = 0.91) and female teachers (mean = 3.52, SD = 0.63). Based on Levene's Test for Equality of Variances, the significance value for Levene's Test regarding attitude and gender was 0.01. This value is smaller than 0.05. Therefore, the results of the t-test analysis for Equal Variances not Assumed were referenced. Based on the Sig. (2-tailed) value of 0.14, this value is greater than 0.05. Thus, there is no significant difference in attitude scores between teachers based on gender.

Discussion

The analysis of the study's findings can be delineated into three primary sections: an exploration of teachers' levels of knowledge, skill proficiencies, and attitudes regarding using Google Slides.

Drawing from the study's findings concerning knowledge levels, it is notable that the average mean of items within the knowledge construct stands at 4.20. These results

underscore that most teachers possess a commendable understanding of how to utilise Google Slides effectively. Furthermore, the data convincingly demonstrates that teachers exhibit a high degree of proficiency in this regard, thereby highlighting the pivotal role of knowledge as a critical determinant in adopting novel tools and practices.

Furthermore, based on the study's findings, the analysis of skill levels yields an average mean score of 3.80 within the skill construct. These findings also shed light on teachers' awareness of the accessibility of the Google Slides application for instructional purposes, emphasising its cost-free availability for teaching and learning sessions. This has been supported by the study done by Pius, Ahmad and Othman (2021), who argue that teachers lacking ICT skills may struggle to determine whether teachers use ICT or not in teaching and learning. Therefore, these skills are crucial for teachers to assess students' progress and enhance their academic performance accurately. Consequently, with the proficient use of Google Slides facilitated by these knowledgeable educators, the potential for improving students' learning performance is substantiated. Therefore, it becomes evident that concerted efforts and targeted training initiatives can be strategically deployed to augment educators' skill sets further.

Furthermore, teachers' attitudes towards using ICT in the teaching and learning process should also be emphasised. The study found that teachers generally have a positive attitude toward using Google Slides in their teaching, with an average score of 3.64. This supports the idea that educators are well-prepared and inclined to use Google Slides in their teaching. The study also showed that educators are enthusiastic about using Google Slides, which indicates their willingness to incorporate it into their teaching. The findings support the statement that teachers' interest in using ICT can enhance their desire to advance and transform their attitudes towards a more positive outcome (Mohiddin & Khalid, 2014; Wong et al., 2020).

Furthermore, using Google Slides as an Information and Communication Technology (ICT) tool has improved teaching and learning. In these findings, teachers did not encounter significant difficulties using Google Slides proficiently. The study's findings aligned with the literature studies and indicate the importance of educational technology in teaching and learning (Mohd et al., 2020; Wan, Ghani & Wong, 2022; Wong et al., 2020).

Additionally, the research outcomes have illuminated a conspicuous dissimilarity in levels of pedagogical knowledge predicated upon the gender of educators. The inference analysis revealed significant differences in knowledge levels associated with the teacher's gender when using Google Slides. In contrast, there were no significant differences in skill levels and attitudes related to teacher gender when using Google Slides.

Implications Of The Study

The practical implications of this research extend to the stakeholders, including the Ministry of Education, the State Education Department, schools, and parents of students. This study has curated pertinent insights encompassing knowledge, skills, and attitudes, serving as a valuable resource for those tasked with implementation.

Of paramount significance is the relevance of this study to educators. Teachers can leverage the findings to critically reflect on their knowledge, skill proficiency, and attitudes in the context of Google Slides-facilitated teaching and learning. It allows teachers to equip themselves with the requisite knowledge and skills for collaborative learning experiences, leveraging ICT competencies to benefit their students.

Furthermore, the study bears significance for parents of students. It offers parents an informed perspective on teachers' readiness, assuring them that educators possess the necessary knowledge and skills to enhance student's interest and motivation in learning through collaborative online experiences. Consequently, students can engage in collaborative learning initiatives within the digital realm. This study also draws interest to the Education Agency. It provides data to the District Education Office, State Education Department, and the Ministry of Education Malaysia regarding teacher competency in using Google Slides in teaching and learning. This has become a measurement tool for teachers so that education agencies can assist and provide training to teachers to further enhance the skills and knowledge of teachers in using Google Slides in teaching and learning, considering the gender attribute.

These findings have provided valuable insights into knowledge acquisition, skill development, and attitudinal factors, collectively shaping teachers' preparedness for integrating Google Slides. The comprehensive exploration of knowledge, skills, and attitudes has underscored their influential roles in shaping the readiness of primary school educators to embrace this technology within their teaching and learning environments. Lastly, the study holds importance for school administrators. It equips them with a tool to assess their teaching staff's performance and competency levels, thereby aiding in informed decision-making and the effective management of educational institutions.

Conclusion

This study proved that primary school teachers' knowledge and skill level is high. In addition, this study also shows that teachers' attitudes are positive, so teachers can foster positive interest in students to carry out quality teaching and learning for the school's digitalisation process. In addition, this study has proven that gender factors in differences in knowledge levels, skill levels, and teacher attitudes toward readiness to use Google Slides.

There are significant differences between male teachers and female teachers. This factor has received support from many past studies on the level of knowledge of male teachers being higher than that of female teachers. In addition, the study also proves that there is no significant difference between the skill level and the gender of the teacher. Previous studies also support that the differences between female and male teachers are not much different. Perhaps the skill level of male teachers and female teachers is equally at a high level. Therefore, this study has just shown no significant differences.

The study also proved that a positive attitude of the teacher did not show a significant difference with the gender of the teacher. This difference is slight since these two genders have shown a positive attitude in using Google Slides. Two main implications result from the findings, namely practical and theoretical. The practical consequences contributed to the implementers, such as the District Education Office, the State Education Department, and the Ministry of Education. Meanwhile, the theoretical implications give recommendations to the change in the Behaviorism Theory as a whole, such as the readiness of teachers to use the elements of technology involving three important components studied: knowledge, skills, and attitudes. Therefore, the teacher's attitude, skill, and readiness for using Google Slides should not be overlooked. Finally, the researchers suggest that future studies examine other angles in Google Slides, explore other applications such as Canva, and discuss the satisfaction aspect of using Google Slides as teachers increasingly use the app in teaching and learning.

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