Teachers' Perception of the Delima Platform in Mathematics Teaching in National Type Chinese Schools in Johor Bahru District

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ABSTRACT

The advancement of digital education in Malaysia has accelerated the adoption of integrated learning platforms, such as the Digital Educational Learning Initiative Malaysia (DELIMa), to enhance teaching and learning, particularly in mathematics. Developed by the Ministry of Education Malaysia, DELIMa provides both educators and students with access to a wide range of digital resources, interactive content, and online tools that facilitate the integration of technology into instructional practices. The effectiveness of such platforms, however, largely depends on teachers' perceptions, acceptance, and readiness, as they are the main facilitators of classroom instruction. This study aims to examine the levels of acceptance and readiness among mathematics teachers in using DELIMa for mathematics instruction in Chinese National Type Schools within the Johor Bahru district, as well as to determine whether these levels differ according to age. A quantitative survey design was adopted, involving 80 mathematics teachers from eight schools selected through cluster random sampling. Data were collected using a structured questionnaire based on a five-point Likert scale and analyzed using descriptive and inferential statistics with SPSS. The findings reveal that teachers display high levels of acceptance (mean = 4.113) and readiness (mean = 4.02) toward the DELIMa platform, indicating positive perceptions regarding its usability, functionality, and relevance in supporting lesson preparation, classroom management, and student assessment. Additionally, the Kruskal–Wallis test shows no significant differences in acceptance or readiness across age groups. Overall, the study demonstrates that DELIMa is positively received by teachers and holds significant potential to support effective mathematics teaching, suggesting that integrated digital platforms can play an important role in promoting interactive and student-centered learning in Malaysian primary schools.

Keywords: DELIMa, mathematics teaching, teacher perception, teacher readiness, digital learning platform

INTRODUCTION

The rapid advancement of digital technology has brought significant transformations to education worldwide, including in Malaysia. This shift has been particularly noticeable with the introduction of the DELIMa platform by the Ministry of Education Malaysia, a national initiative designed to consolidate various educational applications and resources into a unified digital ecosystem that is easily accessible for both teachers and students (Subri et al., 2021). Through DELIMa, educators can utilize tools such as Google Classroom, Microsoft Office 365, Apple Education, and a range of other learning resources aimed at supporting teaching and learning in diverse educational contexts. According to the Ministry of Education Malaysia (KPM, 2022), the platform is applied not only for Home-Based Teaching and Learning but has also been continuously improved to enhance face-to-face instruction, fostering more interactive and engaging learning experiences in schools (Ismail, 2020).

In the context of mathematics teaching, the importance of using digital platforms such as DELIMa is becoming increasingly relevant (Chamidah et al, 2020). Mathematics is a core subject that requires a systematic, effective teaching approach capable of stimulating the development of higher-order thinking skills. The use of digital technology enables teachers to convey abstract concepts more clearly through visual materials, animations, interactive simulations, and technology-assisted applications that can help students better understand the content (Suri & Rachmadtullah, 2021). With that, DELIMa has the potential to become a primary support medium in strengthening the effectiveness of mathematics teaching, while also enhancing student motivation and engagement. However, an important question that deserves attention is the extent to which Mathematics teachers

are truly prepared, accept, and have a positive perception of using DELIMa in their daily teaching and learning activities. Without the acceptance and confidence of teachers, the effectiveness of this platform may not be fully realized (Muhammad Izzat, 2021).

Previous research consistently indicates that the effectiveness of technology integration in mathematics instruction is largely determined by teachers' competence and readiness, as they serve as the primary facilitators of the teaching and learning process. Ishak et al. (2020) highlight that incorporating technology into mathematics education has become an essential pedagogical requirement, particularly in assisting students to grasp abstract concepts, improving the clarity of mathematical representations, and fostering the development of reasoning and problem-solving abilities. In line with the expectations of 21st-century education, Thian and Mohd Matore (2021) assert that mathematics teachers must possess strong digital literacy skills and be able to implement creative teaching approaches that align with student-centred learning practices. Yeo, Rutherford, and Campbell (2022) demonstrate that teachers' perceptions of the use of Mathematics platforms and software are the main determining factors influencing the level of acceptance and application in the classroom. Furthermore, Saykili (2024) emphasizes that the effective integration of digital technology can enhance students' cognitive and social engagement through interactive learning activities, dynamic visualization, and more meaningful modeling of mathematical concepts. However, variations in the level of technology use still exist among Mathematics teachers, influenced by teaching experience, professional readiness, ongoing training support, and the state of technological infrastructure in schools.

Although various past studies have examined the issue of technology integration in education, there is still a lack of research focusing on the context of Mathematics teachers in Chinese National Type Schools, particularly in Johor Bahru, which has a diversity of cultural and linguistic backgrounds. It is important to fill this gap because the use of educational technology should consider the different contexts of national-type schools compared to mainstream national schools. Furthermore, although DELIMa offers various facilities and advantages, its effectiveness can only be realized if teachers have a positive perception and are willing to utilize it consistently (Burke & Dempsey, 2020). Therefore, this study will make a significant contribution by examining teachers' perceptions of DELIMa, thereby helping to identify the factors that influence the acceptance of educational technology in Malaysia. The results of this study are expected to provide practical implications not only for researchers but also for policymakers, school administrators, and teachers themselves in their efforts to improve the quality of mathematics teaching and learning.

In this regard, this study focuses on examining teachers' perceptions of the use of DELIMa in mathematics teaching and learning in primary schools. The objectives of this study are as follows:

i. To study the level of acceptance among teachers toward the use of the DELIMa platform in teaching Mathematics at Chinese National Type Schools in the Johor Bahru district.
ii. To examine the level of teachers' readiness to use the DELIMa platform in teaching mathematics at Chinese National Type Schools in the Johor Bahru district.
iii. To examine the significant differences in teachers' acceptance levels of using the DELIMa platform in mathematics teaching based on age factors.
iv. To examine the significant differences in teachers' readiness to use the DELIMa platform in mathematics teaching based on age factors.

This study is conducted in the context of mathematics teachers in Chinese National Type Schools around Johor Bahru, while the unit of analysis is the teachers themselves as the main implementer in the classroom. Through the analysis of teachers' perceptions, this study is expected to provide a clearer picture of the extent to which DELIMa can be made an important instrument in supporting mathematics teaching and learning in primary schools.

LITERATURE REVIEW

The development of educational technology in Malaysia occurs gradually through the implementation of policies and strategic initiatives by the Ministry of Education to support the national digital learning agenda. This transformation began with the implementation of the 1BestariNet Program and the use of Frog VLE as

the official virtual learning platform for schools, but its effectiveness was reported to be limited due to a lack of professional training and disparities in technological literacy among teachers (PPPM Report, 2020; Low & Nurfaradilla, 2024; Momani et al., 2023). In line with the needs of the Fourth Industrial Revolution and the educational challenges during the COVID-19 pandemic, the Ministry of Education Malaysia launched DELIMa as an integrated digital learning platform that is more user-friendly and comprehensive. (Chandru & Manonmani, 2025; Ministry of Education Malaysia, 2022; Saal & Graham, 2023).

The use of DELIMa increased significantly when online teaching and learning became a necessity to ensure the continuity of education during school closures. The development of this platform involves strategic collaboration with Google, Microsoft, and Apple, which provide a digital ecosystem for learning management, online assessment, student data analytics, and access to interactive materials. (Chandru & Manonmani, 2025; KPM, 2022; Momani et al., 2023). This change reflects a paradigm shift from teacher-centered instruction to more flexible and data-driven digital learning. However, the effectiveness of DELIMa's implementation highly depends on the acceptance and readiness of teachers as the primary implementers in the classroom (Hui & Mahmud, 2022; Low & Nurfaradilla, 2024; Othman & Dinyati, 2021).

In the context of mathematics teaching, the use of digital platforms has been found to have the potential to enhance the understanding of abstract concepts through visualization, simulation, and more dynamic interaction. For example, a study by Mat Nor and Din (2023) shows that the use of Google Classroom helps mathematics teachers deliver content more systematically and allows students to conduct self-study exercises flexibly. This finding is supported by Saal and Graham (2023), who found that DELIMa can enhance the clarity of mathematical concepts using digital interactive materials, particularly in challenging topics such as fractions and geometry. However, Hui and Mahmud (2022) reported that the use of technology by teachers is often limited to the delivery of information without deep pedagogical integration, thereby restricting the true potential of digital platforms in mathematics teaching and learning.

The phenomenon of minimal or compliance-based technology use has also been identified in the context of vernacular schools such as Chinese National Type Schools. Li et al. (2022) and Zhu et al. (2023) emphasize that the culture of mathematics teaching in Chinese National Type Schools is still exam-oriented, with an emphasis on intensive practice and procedural accuracy, causing technology to be used only as an additional support. Low and Nurfaradilla (2024) also state that most previous studies have focused more on the use of DELIMa in national schools, while studies specifically focusing on mathematics teaching and learning in Chinese National Type Schools are still limited. This situation indicates a gap between the potential of educational technology and actual practices in the classroom, particularly in the context of vernacular schools that have their own academic culture (Hui & Mahmud, 2022; Li et al., 2022; Zhu et al., 2023).

To explain how teachers adopt and utilize technology, the Technology Acceptance Model (TAM) introduced by Davis (1989) is commonly employed as a key theoretical foundation. This model highlights two core constructs, namely Perceived Usefulness and Perceived Ease of Use, which significantly influence users' attitudes, behavioural intentions, and actual usage of a particular technology (Arthur, 2022; Davis et al., 1989; Othman & Dinyati, 2021). In the context of this study, teachers' acceptance of DELIMa represents the notion of perceived usefulness, whereby teachers recognize the platform's potential to improve the effectiveness of mathematics instruction. On the other hand, teachers' readiness to use DELIMa corresponds to perceived ease of use, reflecting both their confidence in operating the platform and their willingness to incorporate digital technology into their everyday teaching practices (Davis et al., 1989; Nizam & Rosli, 2021; Zhu et al., 2023).

The application of TAM in the context of Chinese National Type Schools is significant because mathematics teachers face time constraints, exam achievement pressures, and strict curriculum requirements. Othman and Dinyati's (2021) study found that teachers who perceive technology as easy and beneficial are more likely to use it consistently without coercion. However, the tendency of teachers to maintain conventional teaching approaches that emphasize memorization, written exercises, and exam-based academic achievement in the Chinese National Type Schools environment has the potential to limit the meaningful use of digital technology in the classroom (Hui & Mahmud, 2022; Nizam & Rosli, 2021; Zhu et al., 2023). Therefore, the use of TAM in this study not only identifies the general acceptance of technology but is also tailored to the actual reality of mathematics teachers in Chinese National Type Schools.

In addition to perception factors, previous studies have also shown that demographic factors such as age influence the level of technology acceptance among teachers. Dong et al. (2020) reported that younger teachers are more open to the use of technology compared to older teachers who have less digital exposure. However, these findings have not been studied within the context of Chinese National Type Schools which has a different organizational structure and teaching culture (Li et al., 2022; Low & Nurfaradilla, 2024; Zhu et al., 2023). Therefore, it is important to examine whether age differences also influence mathematics teachers' perceptions and acceptance of DELIMa in teaching and learning.

Research on digital learning platforms in mathematics education has also been widely discussed at the international level. Studies have shown that digital learning platforms provide opportunities for interactive learning environments that support conceptual understanding, collaborative learning, and flexible access to learning resources (Scherer et al., 2021; Momani et al., 2023). In addition, Altan et al. (2024) found that teachers' acceptance of educational technology increased significantly when digital platforms were perceived as useful in supporting pedagogical tasks and reducing instructional workload. Similarly, König et al. (2020) reported that the rapid shift toward digital teaching during the COVID-19 pandemic accelerated teachers' exposure to educational technology and increased their confidence in using online platforms for instructional purposes. These international findings suggest that teachers' perceptions and readiness remain key determinants in the successful implementation of digital learning platforms in schools.

Based on the literature findings and the TAM framework, this study's hypothesis was formed to examine the level of mathematics teachers' perception of DELIMa and the differences in perception based on age factors. According to Davis et al. (1989), perceptions of usefulness and ease of use significantly impact users' behavioral intentions in applying technology, while studies by Dong et al. (2020) and Hui and Mahmud (2022) show that although teachers accept the use of technology externally, intrinsic motivation only exists when the technology truly supports their pedagogical objectives. Therefore, this literature review reinforces the rationale that the current study needs to be conducted to empirically identify the perceptions of Chinese National Type Schools mathematics teachers toward DELIMa in a contextual and theoretically sound manner.

RESEARCH METHODOLOGY

This study uses a quantitative approach in the form of a survey to identify the level of teachers' perceptions toward the use of the DELIMa platform in mathematics teaching at Chinese National Type Schools in Johor Bahru district. The quantitative approach is used because it allows for the systematic collection of data in numerical form and is suitable for objectively measuring the construct of teachers' perceptions through statistical analysis. The survey research design also allows the researcher to obtain a comprehensive picture of the phenomenon being studied based on the respondents' views in the actual context of teaching and learning.

The population in this study involves Chinese National Type Schools mathematics teachers in the Johor Bahru district who are under the administration of the Johor Bahru District Education Office. This study uses the cluster random sampling method, where schools are designated as cluster units for sample selection. Out of the 17 Chinese National Type Schools listed under Johor Bahru District Education Office, 8 schools were randomly selected through a draw to form the research clusters. All mathematics teachers serving in these selected schools were made respondents of the study. A total of 80 mathematics teachers from these schools were involved as research samples, representing the entire research population.

Research instrument

The instrument used to collect data in this study was a structured questionnaire, adapted from previous research and modified to align with the objectives of the current investigation. The questionnaire consisted of three main sections. Section A collected demographic information from the respondents, including factors such as age and teaching experience. Section B focused on assessing teachers' acceptance of the DELIMa platform in mathematics teaching, while Section C examined their readiness to implement the platform in instructional practices. For Sections B and C, a five-point Likert scale was applied, ranging from 1 (strongly disagree) to 5 (strongly agree), allowing the degree of agreement among respondents to be quantitatively measured and analysed.

Validity and reliability

To ensure that the research instrument was both valid and reliable, several preparatory steps were undertaken prior to the main study. The content validity was established through evaluations by three specialists in educational technology and mathematics education, confirming that each item corresponded with the research objectives and was appropriate for mathematics teachers in Chinese National Type Schools. Furthermore, a pilot study was conducted with eight mathematics teachers from a Chinese National Type School located outside the Johor Bahru district. This pilot aimed to assess the clarity of the items, the suitability of the language used, and the overall practicality of the instrument. Results from the pilot indicated a Cronbach's Alpha of 0.907, demonstrating a very high degree of reliability and confirming that the instrument was appropriate for use in the full study.

Research procedure

The research procedure was conducted by obtaining official approval through the eRAS 2.0 system, followed by approval from the State Education Department, Johor Bahru District Education Office, and the school administration involved. A list of 17 Chinese National Type Schools in the Johor Bahru district was used as the framework for cluster sampling. From this list, 8 schools were randomly selected through a draw method as the study clusters. All mathematics teachers serving in the selected schools were made respondents, and the questionnaire was distributed using Google Form. Respondents were informed about the purpose of the study, the confidentiality of the information, and their right to participate in the study voluntarily. Although the sample selection was based on school clusters, data analysis was conducted at the individual respondent level in line with the study's objectives and the statistical tests used.

Data analysis

The SPSS software is used to analyze the study data. Descriptive statistical analysis was conducted to obtain frequencies and percentages, while simultaneously depicting the respondents' profiles and the overall mean value. Inferential statistical analysis was then conducted for the purpose of hypothesis testing. One-way ANOVA was initially considered to examine the differences in teachers' acceptance and readiness based on age categories. However, since the assumption of normality was not met, th**e** Kruskal–Wallis test was used as a non-parametric alternative to determine whether significant differences existed between age groups.

RESEARCH FINDINGS

The level of teachers' acceptance toward the use of the DELIMa platform

The study findings indicate that the level of teacher acceptance toward the use of the DELIMa platform in mathematics teaching is high, with an overall mean score of 4.113. Most teachers showed a positive reception toward the usability of DELIMa, with 66 teachers (82.6%) agreeing and strongly agreeing that the platform is easy to use. In addition, 62 teachers (77.5%) also agreed that DELIMa is a good idea to support mathematics teaching and learning.

In terms of support for the implementation of teaching and learning, the findings show that 63 teachers (78.7%) agree that applications like Google Slides, Canva, and WolframAlpha help in the preparation of mathematics teaching and learning materials, while 61 teachers (76.3%) state that applications like Edpuzzle, Plickers, and Thinkercad make teaching and learning materials more engaging. For the aspect of teaching and learning management, a high percentage of agreement was recorded when 72 teachers (90.1%) agreed and strongly agreed that applications like Google Drive and OneDrive facilitate the management and updating of teaching and learning materials.

66 teachers (82.5%) agreed that applications like Google Classroom and Microsoft Teams facilitate the submission of assignments to students, while 70 teachers (87.5%) acknowledged that assessment applications like Google Form, Kahoot, and Quizizz help the evaluation and assessment process in mathematics teaching and learning process. Overall, 69 teachers (86.3%) agreed that the use of DELIMa improved the quality of

mathematics teaching and learning, and 71 teachers (88.8%) reported an increase in ICT skills because of using the platform.

Table 1. Data analysis for the level of teacher acceptance of the use of the DELIMa platform in Mathematics teaching

No.	Teachers' Acceptance of the Use of the DELIMa Platform in mathematics Teaching	1	2	3	4	5
7	The DELIMa platform is easy to use.	0(0%)	0(0%)	14(17.5%)	45(56.3%)	21(26.3%)
8	The DELIMa platform is a good idea for mathematics teaching and learning.	0(0%)	2(2.5%)	16(20%)	46(57.5%)	16(20%)
9	Applications in DELIMa (e.g., Google Slides, Canva, and WolframAlpha) help me create mathematics teaching materials.	0(0%)	2(2.5%)	15(18.8%)	41(51.2%)	22(27.5%)
10	Applications in DELIMa (e.g., Edpuzzle, Plickers, and Thinkercad) make my teaching materials more interesting.	0(0%)	1(1.3%)	18(22.5%)	39(48.8%)	22(27.5%)
11	Applications in DELIMa (e.g., OneDrive and Google Drive) make it easier for me to manage and update teaching materials.	0(0%)	1(1.3%)	7(8.8%)	39(48.8%)	33(41.3%)
12	Applications in DELIMa (e.g., Google Classroom and Microsoft Teams) make it easier for me to send assignments to students.	0(0%)	0(0%)	14(17.5%)	38(47.5%)	28(35%)
13	Applications in DELIMa (e.g., Google Forms, Kahoot, and Quizizz) can be used for assessment and evaluation.	0(0%)	0(0%)	10(12.5%)	42(52.5%)	28(35%)
14	The DELIMa platform can improve the quality of mathematics teaching and learning.	0(0%)	1(1.3%)	10(12.5%)	48(60%)	21(26.3%)
15	The DELIMa platform improves my Information and Communication Technology (ICT) skills.	0(0%)	0(0%)	9(11.3%)	46(57.5%)	25(31.3%)
16	DELIMa is suitable to be used as a platform for mathematics teaching and learning.	0(0%)	1(1.3%)	15(18.8%)	47(58.8%)	17(21.3%)
Overall (Mean / Standard Deviation): 4.113						

The readiness level of teachers to use the DELIMa platform

The study findings indicate that teachers' readiness to use the DELIMa platform in mathematics teaching is high, with an overall mean score of 4.02. Generally, most teachers show a clear readiness to actively integrate DELIMa into mathematics teaching and learning. This can be seen when 64 teachers (80.0%) agreed and strongly agreed that they are ready to optimize the use of DELIMa in mathematics teaching.

In terms of the use of resources and digital applications, the findings show that 62 teachers (77.5%) are ready to access the Basic Digital Textbook (BTDA) for mathematics teaching and learning, while 57 teachers (71.3%)

agree to use digital teaching and learning applications such as Google Meet and Microsoft Teams. Additionally, a high level of readiness was also recorded for the use of digital tools such as Google Classroom, Google Docs, and Google Slides, with 69 teachers (86.2%) expressing agreement and strong agreement to use them in mathematics teaching and learning.

For the aspect of student management and engagement, the study findings indicate that 73 teachers (91.3%) are willing to use applications such as Google Drive and OneDrive to manage mathematics teaching and learning information. 69 teachers (86.3%) agreed to use application links such as Quizizz, Kahoot, and Canva to engage students, while 60 teachers (75.0%) were willing to use educational videos such as Edu WebTV and Google YouTube to enhance students' self-learning. Finally, 65 teachers (81.3%) expressed their readiness to accept the challenge of implementing mathematics teaching and learning through the DELIMa platform.

Table 2. Data analysis for the level of teacher readiness toward the use of the DELIMa platform in mathematics teaching

No.	Teachers' Readiness to Use the DELIMa Platform in Mathematics Teaching	1	2	3	4	5
17	I am ready to optimise the use of DELIMa for mathematics teaching and learning.	0(0%)	0(0%)	16(20%)	54(67.5%)	10(12.5%)
18	I am ready to access the Basic Digital Textbook (BTDA) for mathematics teaching and learning.	0(0%)	2(2.5%)	16(20%)	46(57.5%)	16(20%)
19	I am ready to use digital teaching and learning applications (e.g., Google Meet and Microsoft Teams) for mathematics teaching and learning.	0(0%)	0(0%)	23(28.7%)	45(56.3%)	12(15%)
20	I am ready to use digital tools (e.g., Classroom, Google Docs, Google Slides, Google Forms, Jamboard and Google Earth) for mathematics teaching and learning.	0(0%)	1(1.3%)	10(12.5%)	51(63.7%)	18(22.5%)
21	I am ready to use digital applications (e.g., Google Drive and OneDrive) to manage information for mathematics teaching and learning.	0(0%)	1(1.3%)	6(7.5%)	47(58.8%)	26(32.5%)
22	I am ready to use application links (e.g., Edpuzzle, Quizizz, Kahoot, Padlet and Canva) to attract students' interest in mathematics teaching and learning.	0(0%)	0(0%)	11(13.8%)	48(60%)	21(26.3%)
23	I am willing to use videos (e.g., Edu WebTV and CikgooTube) to enhance students' self-directed learning skills in mathematics teaching and learning.	0(0%)	2(2.5%)	18(22.5%)	48(60%)	12(15%)
24	I am ready to accept the challenges of mathematics teaching and learning through the DELIMa platform.	0(0%)	1(1.3%)	14(17.5%)	46(57.5%)	19(23.8%)
Overall (Mean / Standard Deviation): **4.02**						

The difference in teachers' acceptance levels toward the use of the DELIMa platform based on age factors

To address research question 3, an inferential analysis was performed to determine whether teachers' acceptance of the DELIMa platform differs significantly according to age. Prior to conducting the comparison test, a normality assessment was carried out to verify the suitability of the chosen inferential method. The Shapiro–Wilk test was applied, as the sample size for each age category was below 50 respondents. The test results

indicated a W statistic of 0.956 and a p-value of 0.008. Since the p-value is smaller than the significance level of 0.05, the null hypothesis stating that the data is normally distributed is rejected. Therefore, it can be concluded that the teacher acceptance score data is not normally distributed.

Table 3. Normality Test for the level of teachers' acceptance of the use of the DELIMa platform

Shapiro-Wilk			
	Statistic	df	*Sig.*
Acceptance's Mean	.956	80	.008

a. Pembetulan Signifikan Lilliefors

Given that the data did not satisfy the normality assumption but fulfilled the homogeneity of variances requirement, the Kruskal-Wallis test was applied to examine differences in teachers' acceptance levels of the DELIMa platform across age groups. The analysis yielded a Kruskal-Wallis statistic of H = 4.606, with 3 degrees of freedom (df), and a p-value of 0.203. Because the p-value exceeds the 0.05 significance threshold, the null hypothesis cannot be rejected. These results suggest that teachers' acceptance of using the DELIMa platform in mathematics instruction does not differ significantly according to age.

Table 4. Summary of the Kruskal-Wallis Test for Acceptance Scores Across Age Groups

Test Statistics	Value
Number of Respondents (N)	80
Test Statistic (χ^2)	4.606[a]
Degrees of Freedom (df)	3
Asymptotic Significance (Two-tailed)	.203

[a] the test statistic has been adjusted for ties.

Differences in teachers' readiness to use the DELIMa platform based on age factors

To fulfil Research Objective 4, an inferential analysis was carried out to examine whether teachers' readiness to use the DELIMa platform differed according to age. Prior to conducting the comparative test, a normality assessment was performed to ensure the appropriateness of the chosen inferential method. The Shapiro–Wilk test was applied, as the sample size for each age category was below 50 respondents. The results indicated a W statistic of 0.968 with a p-value of 0.045. Because the p-value is below the 0.05 significance threshold, the null hypothesis of normal distribution was rejected. This suggests that the data on teachers' readiness scores do not follow a normal distribution.

Table 5. Normality Test for Teacher Readiness Level toward the Use of the DELIMa Platform

Shapiro-Wilk			
	Statistic	df	*Sig.*
Readiness's Mean	.968	80	.045

b. Lilliefors Significance Correction

As the data did not meet the normality assumption but satisfied the homogeneity of variances requirement, the Kruskal-Wallis test was used to determine whether teachers' readiness to use the DELIMa platform differed among age groups. The test yielded a statistic of H = 1.627 with 3 degrees of freedom and a p-value of 0.653. Since the p-value is greater than the 0.05 significance threshold, the null hypothesis could not be rejected. This indicates that teachers' readiness to apply the DELIMa platform in mathematics teaching does not differ significantly across different age categories.

Table 6. Summary of the Kruskal-Wallis Test for Readiness Scores Across Age

Test Statistics	Value
Number of Respondents (N)	80
Test Statistic (χ^2)	1.627[a]
Degrees of Freedom (df)	3
Asymptotic Significance (Two-tailed)	.653

[a] the test statistic has been adjusted for ties.

DISCUSSION

Teachers' acceptance of the DELIMa platform in mathematics teaching

The findings of the study reveal that teachers exhibit a high level of acceptance toward the DELIMa platform in mathematics instruction, as indicated by an overall mean score of 4.113. These results demonstrate that teachers generally hold a positive perception of the platform's usability, features, and relevance in supporting mathematics teaching and learning in Chinese primary schools within the Johor Bahru district. The high acceptance level further suggests that teachers encounter minimal technical challenges and consider DELIMa to be a practical and effective tool for addressing the instructional needs of mathematics education.

Teachers' strong acceptance of the DELIMa platform can be explained using the TAM, which highlights that individuals are more likely to embrace a technology when they perceive it as useful and easy to operate. In this study, the positive feedback from teachers regarding the platform's usability, along with their recognition that DELIMa aids in lesson preparation, classroom management, and student assessment, demonstrates high levels of Perceived Usefulness and Perceived Ease of Use. Such perceptions are widely regarded as significant factors influencing the adoption of technology in educational contexts (Arthur, 2022; Yeo et al., 2022). These results, therefore, provide further support for TAM by showing that teachers' acceptance of educational technology is largely shaped by their belief in its potential to enhance teaching effectiveness.

From a pedagogical perspective, the high acceptance of technology applications such as Google Slides, Canva, WolframAlpha, Edpuzzle, and Plickers indicates that teachers recognize the role of technology in enriching mathematics delivery strategies. The use of technology applications allows teachers to diversify their teaching methods, making abstract mathematical concepts more concrete, visual, and easier for students to understand. The study by Scherer et al. (2021) related to digital learning platforms shows that when teachers view technology as a tool to help achieve their pedagogical objectives, acceptance of that technology increases significantly.

Furthermore, the very high acceptance of management applications such as Google Drive and OneDrive reflects teachers' awareness of the importance of systematic and efficient management of teaching and learning materials. The ability to manage teaching and learning materials digitally not only enhances teachers' work efficiency but also supports a more organized continuity of teaching and learning. These findings are consistent with the studies by König et al. (2020) and Altan et al. (2024), which show that teachers tend to embrace technology that helps reduce administrative workload and enhance professional productivity.

However, the study findings show that almost all items recorded high mean scores, thus requiring a more critical interpretation in the discussion of the findings. This consistent pattern of agreement should not be directly interpreted as evidence of the overall effectiveness of pedagogy in mathematics teaching. On the contrary, these findings more accurately reflect the teachers' readiness to use the DELIMa platform as a supportive tool in carrying out their daily teaching tasks. This interpretation aligns with post-pandemic research findings that show the use of educational technology among teachers is increasingly becoming a common professional practice and is no longer viewed merely as a pedagogical innovation (Altan et al., 2024; König et al., 2020).

The readiness of teachers to use DELIMa in mathematics teaching and learning

In line with the high level of acceptance, the study findings also indicate that the readiness of teachers to use DELIMa in mathematics teaching and learning is at a high level with an overall mean score of 4.02. The findings

show that teachers not only accept DELIMa in terms of attitude but are also ready to actively use it in the implementation of mathematics teaching and learning. The teachers' readiness reflects their professional adaptation to the increasingly urgent need for digital education in the current education system (König et al., 2020; Scherer et al., 2021).

A high level of readiness for the use of digital tools such as Google Classroom, Google Docs, and Google Slides indicates that teachers have moved beyond the basic use of technology and are at a more structured integration stage. Teachers use technology to support content delivery, lesson management, and student learning interactions, which is consistent with the study by König et al. (2020) that found teachers' technological readiness increases when technology is integrated with curriculum structure and daily pedagogical practices.

However, the willingness to use educational videos to enhance students' self-directed learning was found to be slightly lower compared to other items. This situation may reflect teachers' concerns about the autonomy of primary school students and their ability to manage self-directed learning effectively. The study by Bond et al. (2021) shows that the use of educational videos requires clear pedagogical design so that learning is not passive and becomes more supportive of self-directed learning.

Differences in teachers' acceptance levels based on age factors

The study findings indicate no significant difference in teachers' acceptance levels toward the use of DELIMa based on age factors. These findings challenge the traditional narrative that younger teachers are more receptive to technology compared to older teachers. The findings of this study indicate that age is not the main determining factor for teachers' intention to use digital technology. Instead, the effectiveness of the educational ecosystem that supports the systematic integration of technology plays a more dominant role, in line with the findings of Saidah Muhamed and Intan Farahana Kamsin (2025). The study by Altan et al. (2024) and the study by König et al. (2020) also show that age differences in the acceptance of educational technology are not significant in the post-pandemic context when many teachers have been exposed to intensive use of technology.

There is no significant difference that can be interpreted as the effect of home-based teaching and learning experience, which forced all teachers to use digital technology intensively regardless of age, thereby helping to reduce the digital generation gap. This is in line with the study by Marni Izzati Kamaruddin (2020), which states that professional experience, continuous training, and support from the education system have narrowed that gap, thereby reducing the impact of age as a significant differentiating factor.

Differences in teacher readiness levels based on age factors

In line with the acceptance findings, there is no significant difference in the level of teachers' readiness to use DELIMa based on age factors. The study findings indicate that teachers' readiness to implement mathematics instruction through the DELIMa platform has now become a professional norm. The findings also indicate that organizational support and daily work demands are more determining factors for teachers' readiness to use technology compared to demographic factors such as age (König et al., 2020; Scherer et al., 2021). These findings are also in line with the study by Saidah Muhamed and Intan Farahana Kamsin (2025), which emphasizes that in an educational environment that fully supports the use of technology, teachers' readiness is more driven by pedagogical appropriateness and task requirements rather than demographic characteristics.

The study findings, which reflect the uniformity of teachers' readiness levels across age groups, should not be interpreted as an indication that the implementation of the DELIMa platform is free from issues or constraints. On the contrary, these findings indicate that the main challenges are more focused on mastering the use of the platform and the quality of pedagogical integration in teaching practices rather than the basic readiness of teachers to use technology (Marni Izzati Kamaruddin, 2020). Although the level of teacher readiness is reported to be high, this readiness more reflects the ability to meet the basic requirements of system usage and has not yet been fully translated into innovative teaching practices.

CONCLUSION

Overall, the findings of this study indicate that mathematics teachers in Chinese National Type Schools in the Johor Bahru district demonstrate a high level of acceptance and readiness toward the use of the DELIMa platform in mathematics teaching. The results show that teachers generally perceive DELIMa as a useful and practical digital platform that supports teaching material preparation, classroom management, and assessment activities. In addition, the analysis revealed no significant differences in teachers' acceptance and readiness based on age factors, suggesting that the use of digital learning platforms has become increasingly common among teachers regardless of generational differences.

These findings suggest that the integration of digital platforms such as DELIMa has become an important component of contemporary teaching practices. Therefore, educational authorities and school administrators should continue to strengthen professional development programs, digital pedagogy training, and technological infrastructure to support teachers in integrating digital tools more effectively in mathematics instruction. By providing continuous support and training, the potential of DELIMa can be further optimized to enhance teaching quality and student engagement in mathematics learning.

Although this study offers valuable insights, several limitations should be acknowledged. The research was conducted with a sample of 80 mathematics teachers from Chinese National Type Schools in the Johor Bahru district, which may restrict the applicability of the findings to other educational settings in Malaysia. Additionally, the study examined only age as a demographic variable, whereas other factors such as teaching experience, digital literacy, and professional development may also affect teachers' perceptions of digital platforms. Future studies are therefore encouraged to include larger and more diverse samples, as well as additional variables, to gain a deeper and more comprehensive understanding of teachers' acceptance of digital learning platforms. Despite these limitations, the study adds to the existing literature by providing empirical evidence on teachers' perceptions of the DELIMa platform in mathematics instruction within Chinese National Type Schools in the Johor Bahru district.

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