

# Teachers' Perceptions of DELIMa 2.0 in Teaching and Learning Process

Low Wen Xuan, Nurfaradilla Binti Mohamad Nasri

Faculty of Education, The National University of Malaysia (UKM), Bangi, Malaysia

Email: p130291@siswa.ukm.edu.my, nurfaradilla@ukm.edu.my

To Link this Article: <http://dx.doi.org/10.6007/IJARPED/v13-i4/23164> DOI:10.6007/IJARPED/v13-i4/23164

**Published Online:** 23 November 2024

## Abstract

DELIMa 2.0 is a platform introduced by the Malaysian Ministry of Education to help teachers and students increase their knowledge of the latest information technology. In addition, DELIMa 2.0 can also help teachers to save time to provide materials for teaching in the classroom. Teacher perception is important in launching the use of DELIMa 2.0. Therefore, this study aims to identify the level of teacher perception in the use of the DELIMa 2.0 launcher in the teaching and learning process. This study utilized a review study design involving all SJKC teachers who teach in the Port Dickson area. Data will be collected by google form to assess the teachers' acceptance stage and the teachers' willingness stage towards the use of DELIMa 2.0 in teaching and learning process. The data analyzed using by Statistical Package for Social Sciences (SPSS) software to answer the study objectives. This study found that teachers have a high perception in the use of DELIMa 2.0 especially in teaching and learning process.

**Keyword:** DELIMa 2.0, ICT, Teachers' Perception, Teaching And Learning, Teachers' Acceptance

## Introduction

Information and Communication Technology (ICT) is an indispensable technology for achieving data processing goals. TMK involves the use of computers and software to convert, store, protect, process, transfer, view and obtain information (Nur Aisyah & Hazrati Husnin, 2022). The use of computers is usually used to find information in a short time. Therefore, information technology is also defined as a process of transmitting, disseminating, processing and storing information using the medium of information technology to the recipient.

By championing 21st century learning, Pelan Pembangunan Pendidikan Malaysia (PPPM) 2013-2025 phase 7 has emphasized the use of TMK to improve the quality of learning and teaching in Malaysia. This aim is to increase the capacity of the internet and learning over courses in addition to being utilized in critical subjects. As a teacher, they need to have TMK competency standards that have been set by KPM. This is to achieve the quality of teacher professionalism by integrating TMK in teaching and learning. By using TMK in teaching and learning process, it can facilitate and shape a quality teaching process. It is a necessity to integrate TMK in the teaching and learning process at every level of education to ensure the desire of KPM is achieved and give birth to a generation that is immersed in TMK (Norazly Nordin & Juppri Bacotong, 2021).

Minister of Education, Fadhlina Sidek has launched the Digital Education Foundation (DPD) on November 28, 2023 (Fahmy A Rosli, 2023). DPD is a commitment from the Malaysian Ministry of Education (MOM) to spur a change in the digital education landscape and also to create a more digitally fluent generation that is competitive through increased knowledge, skills and values. DPD is aligned with various national agendas including the concept of building country MADANI, Blueprint, MyDIGITAL, 4IR, JENDELA, ,PPPM 2013-2025 and DSTIN 2021-2030. By going through this foundation, students strive to utilize digital technology for learning as well as leverage digital innovation and transformation at school, home or everywhere.

The Malaysian Ministry of Education (KPM) proved this with the creation of platform DELIMa, or its full name "Digital Education Learning Initiative Malaysia", which succeeded in connecting teachers with students to continue the teaching and learning process despite being separated and limited by everything due to the COVID-19 pandemic. Director of BSTP KPM, Maznah Abu Bakar, online platform promote an innovative culture, from the generation of materials, ways of teaching and learning to the application of knowledge to create solutions to various problems, both faced by teachers and students. The BSTP lecturer also said that he wanted to achieve global standards in producing world-class innovations, hence the establishment of DELIMa with Google, Microsoft and Apple as strategic partners. "In DELIMa itself there is an ILMS (Intelligent Learning Management System) where students can PdP online using Google Classroom, Google Meet or Microsoft Team, there we see the innovation of teachers to produce appropriate and up-to-date materials that can attract the attention of millennial children," he said.

In 2022, DELIMa 2.0 has been enhanced. Many applications, contents and courses have been made available in an exclusive dashboard view. Teaching and learning resources and learning courses that match user trends and interests are also updated. Google Malaysia Affairs Director, Marc Woo also stated that with DELIMa 2.0, Google can facilitate and customize learning personally depends on different students and can help them to achieve optimum learning outcomes.

Lead Director of the Learning Delivery Sector of the Educational Resources and Technology Section of the KPM, Dr Wagheeh Shukry Hassan, has stated that DELIMa 2.0 gives focus to individual learning environments, meaning that students can also use the DELIMa 2.0 platform to learn individually. DELIMa 2.0 has combined three main aspects namely personalized learning, user experience and data analysis. These three aspects have used artificial intelligence (AI) and machine learning technologies that can help students experience learning experiences that can attract their attention. (Nur Iftitah, 2022).

### **Problem Background**

Technology needs to be used as one of the tools in the teaching process (Chamidah et al, 2020). This is because the use of technology is easier to convey information and is more easily accepted by students. Teachers are also given exposure to learn virtual education. Digital learning tools are often used in the field of education no matter from low school to Institute of Education (Ismail, 2020). Virtual education such as the use of apps, systems and platforms have become the new norm as they can benefit the teaching and learning process. Various well-known platforms that can be used in education such as Google Classroom, Webex, Google Meet, Zoom, Microsoft Teams have allowed teachers and students to learn online. In addition,

frequently used social media such as Whatsapp, Telegram, Youtube also provide great help to teachers so that teachers can provide more understandable notes or explanations to students in the process of teaching and learning.

Therefore, by adjusting the teaching and learning process during the pandemic, DELIMa has been launched to help teachers and students carry out teaching and learning online. This is because the DELIMa platform can ensure smoothness for administrators in schools not only to the student curriculum but also to the curriculum. Administrators and teachers who work at home can learn new technologies and integrate technology in leadership and administration (Rahimi et al. 2021).

After the pandemic period has passed, DELIMa 2.0 has also been launched. Therefore, the effectiveness of the DELIMa 2.0 platform still needs to be analyzed that whether it is still used by most teachers in the teaching and learning process or not. The results of the Julaihi and Hamdan (2020), study also stated that teachers understand the importance of technology but they lack confidence and cannot apply the technology. Therefore, this study was carried out primarily to explore whether teachers use DELIMa 2.0 in the process and teaching and teachers' perceptions of the use of DELIMa 2.0.

### **Problem Statement**

Dr Wagheeh Shurky has stated in Sinar Harian (2022) that the Malaysian Ministry of Education is facing a challenge in upgrading digital competencies to all teachers and students in the country's education system (Nur Iftitah Rozlan 2022). To overcome the problem of out-of-town teachers and students finding it difficult to use digital teaching and learning, DELIMa has provided various courses and programs that can be used by all schools regardless of whether they are out-of-town or in-town.

In addition, Dr. Wagheeh Shurky has stated some of the challenges faced in spreading the use of DELIMa 2.0. There are several challenges such as lack of devices and Internet access that KPM has been trying to resolve such as chaining to as many as 150000 students across the country. With this, the KPM initiative can help students to use the DELIMa 2.0 platform. Thus, most of the student challenges have been addressed in the use of the DELIMa 2.0 platform.

The Timbalan Minister of Education, Lim Hui Ying has stated that the DELIMa 2.0 platform has been accessed by 99.5 percent or 420000 as of November 9, 2023 (Sinar Harian, 2023). BH Online reports that more than 300000 teachers were screened and categorized according to the level of digital literacy until October 2023. (Rohaniza & Latifah 2023). According to the data above, most teachers in Malaysia have accessed the use of DELIMa 2.0.

In the observation of the reviewer, although most teachers and students have logged into DELIMa 2.0, but they still lack opportunities to use this platform in the teaching and learning process. This is in line with who stated that the use of the DELIMa 2.0 platform is still not fully utilized in the Malaysian education sector because it is still new (Ahmad Fikri & Effendi, 2023). Researcher also found that most teachers and students do not understand the function of DELIMa and DELIMa applications in depth. Therefore, they only transfer knowledge and no longer make a deep exploration of the use of DELIMa 2.0 (Syahfitri et al. 2020). In addition, the reviewer also found that some teachers and students do not have awareness of the

goodness and importance of using DELIMa 2.0 in improving the teaching and learning process. Thus, as a teacher, we should increase our competence in facing virtual education in this new era (Zazin & Zaim 2019). In conclusion, the perception of teachers in the implementation of DELIMa 2.0 needs to be reviewed so that the virtual education material can be continued because its success is influenced by teachers and students.

### **Review Objectives**

1. Identify the stage of teacher perception in using of platform DELIMa 2.0 in teaching and learning process
2. Assess the stage of teacher acceptance in using of platform DELIMa 2.0 in teaching and learning process
3. Review the stage of teacher willingness in using of platform DELIMa 2.0 in teaching and learning process

### **Research Question**

To achieve the above goals and objectives, this study is designed to answer several study questions such as the following:

1. What is the level of teacher perception in using of platform DELIMa 2.0 in teaching and learning process?
2. To what extent is the acceptance stage of teachers in using of platform DELIMa 2.0 in teaching and learning process?
3. What is the teacher's exposure stage in using of platform DELIMa 2.0 in teaching and learning process?

### **Conceptual Framework of the Study**

The conceptual framework of the study is the relationship between variables and accompanied from input to process to study results (Tuckman 1999). The conceptual framework of the study is used to state and explain the relationship between the variables and through the results of the study. The conceptual framework of the study in this investigation was built based on Fullan's (2001), Theory of Educational Change and Bryant's (1974) Educational Process Model.

The purpose of these theories and models chosen is to identify teachers' perceptions in the use of DELIMa 2.0 application in the teaching and learning process. Both theories and models emphasize teachers' willingness to accept and implement change. Theory of Educational Change, teachers are leaders in improving organizational achievement (Fullan's 2001). Therefore, teachers need to involve themselves in any educational change. Bryant's (1974) Educational Process Model also states three factors that can determine the effectiveness of education among teachers, namely teacher knowledge, teacher skills and teacher attitudes. These three factors also relate to teacher competence. Therefore, Fullan's (2001), Theory of Educational Change and Bryant's (1974) Educational Process Model have been selected.

Based on the conceptual framework of the study, teachers' knowledge, teachers' skills and teachers' attitudes are non-standard variables that influence the standardized variables, namely teachers' perception level of teachers in the use of DELIMa 2.0 application in the teaching and learning process. In summary, this study is designed to see the perception stage of

teachers in the use of DELIMa 2.0 application in the teaching and learning process and also to know the acceptance stage and exposure stage of teachers in the use of DELIMa 2.0 application in the teaching and learning process.

## Literature Review

### *Theory by Fullan (2001)*

The Theory of Educational Change introduced by Fullan (2001), has emphasized the willingness of teachers to accept new changes and also implement them. It is also a process that can change a situation or behavior of a person within a certain period of time. The process of change in the theory of educational change has been divided into three phases, namely the initiation phase, the implementation phase and the institutionalization phase. The inception phase is the research process given to teachers to make decisions by accepting the latest innovations. The implementation phase is also the phase in the first two or three years of use therefore it is also named as the initial development phase. In the implementation phase, teachers will engage themselves to gain initial experience while carrying out the teaching and learning process and subsequently implementing the changes. The last phase is the institutionalization phase where the changes have been made part of the new base or system being introduced.

In the initial phase, teachers play an important role to have high self-involvement in the process of educational change because only they know whether this change can meet their needs and also according to the current situation or not. If teachers have a positive attitude and are willing to accept change then new policies and systems can also be utilized.

There are six important change factors in organizations namely internal and external support, sufficient financial allocation, organizational members accepting the fact that change is necessary, organizational members being retrained to deal with new tasks, the presence of change agents who provide advice and assistance and finally a complete plan to meet the needs of organizational members and also overcome problems that may arise (Hairi 2006).

Fullan's (2001), Theory of Educational Change is appropriate in this study because the DELIMa 2.0 application is also a new application that is still not accepted by all teachers. Fullan's (2001) Theory of Educational Change also states that there are several factors that cause teachers to give low commitment. Among the factors that are also related to this study is teachers' lack of understanding of the ownership of the introduced DELIMa application. This is because they only feel forced from people outside the school who only give their own ideas and views without understanding the teacher's problems. This factor also affects teacher perceptions because it has added to the teacher's workload. This is because teachers need to attend various courses and briefings to get information related to DELIMa and also they need to make reports to monitor teacher utilization and student progress. Therefore, teachers feel pressured by the added burden apart from teaching but also need to make many reports related to DELIMa 2.0.

Fullan's (2001), Theory of Educational Change is appropriate in this study because the DELIMa 2.0 application is also a new application that is still not accepted by all teachers. Fullan's (2001) Theory of Educational Change also states that there are several factors that cause teachers to give low commitment. Among the factors that are also related to this study is teachers' lack of

understanding of the ownership of the introduced DELIMa application. This is because they only feel forced from people outside the school who only give their own ideas and views without understanding the teacher's problems. This factor also affects teacher perceptions because it has added to the teacher's workload. This is because teachers need to attend various courses and briefings to get information related to DELIMa and also they need to make reports to monitor teacher utilization and student progress. Therefore, teachers feel pressured by the added burden apart from teaching but also need to make many reports related to DELIMa 2.0.

In the study Fatahiyah & Siti (2020), also used Fullan's (2001), theory of educational change as their study theory. This is because they stated that the involvement of teachers in change is very important because teachers are leaders who are needed in improving the quality of organizational achievement. The results of their study also determined that teachers will consider accepting change and strive to implement stem education. Therefore, it is found that teachers' attitudinal grip is one of the factors that influence teachers' willingness to accept and implement change. Educational change requires teachers to have a positive attitude from the inception phase to the implementation phase.

A study instrument by combining several theories such as Fullan's (2001), Theory of Educational Change had been created by (Fenny et al., 2023). This is because the acceptance of changes in teaching approaches such as online is based on Fullan's Theory of Educational (Change, 2001). Their study also made a selection of instruments that represent the construct of teacher willingness by taking into account several change factors based on the educational situation during COVID-19.

In conclusion, this study is appropriate to use Fullan's (2001), theory of educational change because the DELIMa 2.0 application is also a new platform and was also introduced during COVID-19. Therefore, this study aims to identify the level of teacher perception especially when facing this new educational change.

#### *Bryant's Education Process Model (1974)*

Bryant's (1974) Educational Process Model has included three factors, namely input factors, work movements in teaching and attitudes that determine effectiveness in the field of education. The input factor in this study is the teacher's knowledge of the DELIMa 2.0 application. The teaching work motion factor is the aspect of teacher proficiency in using the DELIMa 2.0 application in the teaching and learning process. The teacher attitude factor is the teacher's attitude towards using the DELIMa 2.0 application. The reviewer pays attention to these three factors because these three factors can determine the effectiveness and success of teachers and students in using the DELIMa 2.0 application.

The elements of knowledge, skills and attitudes determine teachers' willingness to change (Fatahiyah & Siti, 2020). In addition, the study of Nasiyatun et al. (2023) also used Bryant's (1974) educational process model approach to identify and analyze the level of teacher willingness in implementing PIKeBM. The results of their study also coincide with this model, namely respondents who have positive attitudes coincide with the attitudinal aspects of this model.



*Factor of Teacher Knowledge in TMK*

Teachers should use the latest teaching approaches such as DELIMa 2.0 in the teaching and learning process. This is because students can learn in a fun atmosphere and using the latest digital tools. This can also help students more quickly and effectively acquire new knowledge. Teachers need to have a high level of knowledge to help students develop their performance and also increase their level of mastery in exploring the latest digital tools (Mengistie, 2020). This is because students are the hope of the nation and the pillar of the country in the future. Therefore, students now need to be influenced by the use of the latest digital technology tools. Teachers play an important role in having the latest technological knowledge, especially knowledge about the use of DELIMa. This is because technological knowledge will help teachers to use information and communication technology (TMK) in the teaching and learning process (Darling- Aduana & Heinrich 2018).

The results of Janet & Roslinda's (2020), study have found that 37 teachers agree they can master teacher knowledge while 43 teachers agree that they know how to use websites such as Youtube. In the findings of this study it was found that still some teachers lack the latest TMK knowledge. In the findings of Nur'alia & Norshidah's (2022) study also, the level of teacher knowledge of computer use is high but knowledge in the use of Google Classroom is also at a simple level. Therefore, the purpose of the reviewer wants to carry out this study also is to identify the perceptions of teachers especially the level of teacher knowledge, the level of teacher skills and teacher attitudes in the acceptance and use of the DELIMa 2.0 launcher in the teaching and learning process.

*Factor of Teacher Skill in TMK*

A teacher must have a high level of proficiency in order to create a teaching and learning atmosphere that can reach effectively to students (Sh Siti Hauzimah 2019). Teachers should have a high level of proficiency and know how to teach effectively because all teachers need to receive training at the Institut Pendidikan Guru. Teachers need to have a high level of proficiency in planning activities, assessing mastery levels and also need to have the skills to carry out assessments (Zahari et al. 2020). Therefore, teachers should have the skills to use DELIMa 2.0 because this platform can help teachers to teach and achieve objectives. Teachers who have a high level of proficiency can diversify the methods and activities in the teaching and learning process (Ng et al. 2023). In addition, teachers can also create a fun atmosphere for students to learn and can help them to apply knowledge more effectively.

The results of the Intan and Simah (2021), study have found that a total of 297 teachers as the study sample and the level of teacher proficiency in TMK is at a simple level even though the teacher's knowledge level is at a high level. The study findings of Nur'alia & Norshidah (2022) also stated that teachers' proficiency in the use of technology especially in carrying out online teaching and learning processes is at a simple stage. Their study findings also state that teachers also lack the skills to record teaching videos because the data is at a simple level. This also corresponds to the study findings of Intan Marfarrina and Simah (2021), which shows the proficiency of using sound and graphics in the teaching and learning process at a simple level. This corresponds to the words of Masfarizan & Yusoff (2020) that teachers lack sufficient skills and techniques in carrying out the teaching and learning process.

Overall, there are still many teachers who lack TMK skills and use less in the teaching and learning process. Therefore, this study also has the theme of being able to identify teachers' skills towards the implementation of the DELIMa launch and also find out whether the lack of skills is one of the factors that teachers lack opportunities to use DELIMa in the teaching and learning process.

#### *Factor Attitude and Willingness by Teacher*

Attitude is a person's thoughts, beliefs, actions and feelings towards a situation (Pavethira, 2021). Attitude is very important because it is related to teachers' feelings in using TMK (Syazwani & Zamri, 2024). Teachers must have a positive attitude and need to learn new methods to ensure their effectiveness in the teaching and learning process (Abdul Rahman et al. 2018). There are three factors that are important with the effectiveness of teaching, namely the factors of teacher knowledge, attitude and skills (Yuh & Husaina, 2020). Teachers need to be proactive to develop self-knowledge, self-skills and also improve self-professionalism for example mastering technological literacy skills (Fikriet al. 2023). Therefore, teachers should be open to adapt to the latest TMK and try to learn to improve their knowledge and skills to use DELIMa 2.0. This also corresponds with that teachers need to have an open mind, be flexible, be concerned and sincere so that they can prosper the teaching and learning process (Nor Aidawati & Mazidah, 2021).

The meaning of "willingness" of teachers according to the Council Dictionary (2007) is about being ready, ability and willingness. Willingness is a situation and willingness that shows someone is ready to do something (to Gill & Dalgarno, 2008). In the context of this study, teacher willingness is prioritized in using the DELIMa 2.0 application. Teacher acceptance of the DELIMa 2.0 application is the main core in this study. Teachers who are motivated and have high willingness can have higher confidence and tend to accept new tasks that are assigned. 99% of teachers who teach in the Philippines have a high level of willingness in carrying out the teaching and learning process online (Lapada, 2020). Teachers who teach Malay language subjects also have a high level of willingness while carrying out the teaching and learning process during the MCO (Ain's, 2020). Therefore, the attitude and willingness of teachers are important in this study, especially the attitude and willingness of teachers to use the DELIMa 2.0 launcher is one of the objectives to be studied through this study.

#### *Teacher Perceptions*

For example, the perception of a female teacher may be positive or negative towards the leadership style of a male chairman. If a teacher is older and has longer teaching experience than a male teacher, her perception of the leadership style of the younger teacher may be much different from that of the younger teacher. Likewise, a comfortable workplace atmosphere can form different perceptions from a less attractive workplace atmosphere and so on. So here it is clear that the perception of teachers towards the leadership attitude of the chairman can be said to be influenced by various factors and this situation plays an important role in determining the success of the organizational climate of a school and the academic achievement of a school.

Teachers have existing knowledge that can improve children's development in the teaching and learning process (Rushda et al. 2021). This has shown the perception of teachers in the implementation of project-based learning at a simple level. Therefore, the selection of



appropriate applications, especially DELIMa 2.0, is very important to help teachers increase their existing knowledge and be able to use it in the teaching and learning process.

There is a significant influence in student, professionalism and school-based assessment (Fordet al. 2019). The results of their study also state that the seriousness of teachers brings influence in designing, implementing and assessing student performance in the teaching and learning process in order to achieve teaching objectives.

### **Methodology**

This chapter discusses the methodology of the study, namely a discussion of the study design, sample selection, data acquisition procedures, pilot study and data analysis procedures. The method of study used aims to identify the perceptions of teachers in using the DELIMa 2.0 application in the teaching and learning process.

This study is a review study that uses a quantitative approach. The quantitative approach is a process that explains the study problem in numerical form. Quantitative studies use data in the form of numbers that can be measured to achieve the objectives of the study. Therefore, quantitative studies are more objective and more concerned with the results of the study. In this quantitative study, the reviewer will use a probing instrument to get data from the study sample. This instrument is a kind of measuring tool from the assessor to the study sample. The difference between quantitative and qualitative study designs is that the quantitative study design has been determined before collecting data while the qualitative study will be more flexible. Therefore, the reviewer chooses a quantitative study also because the instrument is already set and it is not easy to face other conditions that will change the design.

The investigator used a quantitative approach in this study to identify teachers' perceptions in using the DELIMa 2.0 launcher in the teaching and learning process. There are several factors for the quantitative approach used in this study. The first factor is that quantitative studies can help readers to understand this article briefly and easily. This is because the results of quantitative studies are more specific and narrow to a theme or title. In addition, quantitative studies will also showcase the results of the study in terms of data and statistics analyzed. Therefore, the results of this study are easier to understand and analyze because all the data can be measured and known for sure. In addition, quantitative studies are concerned with several aspects, namely rules, numbers, variables, significant levels and others. Through these numbers, the reviewer can collect data in an easier way and make judgments that are closer to objective.

Study design is one of the procedures for systematic processing of data that has been cited (Kerlinger, 1970). These cited data are to identify the relationships of the variables involved in this study. The content of the study design relates to the way the reviewer will carry out the study, the steps to carry out the study and also the techniques that will be used to answer the study questions (McMillan & Schumacher, 1984). With the study design, the points of bias that might interfere with the study findings can also be controlled.

In the context of this study, the investigator chose a review study as the study design. A review study is one of the methods that can get data from the opinions, attitudes and perceptions of the study sample (Cresswell 2005). This review study will also collect information by giving research questions to many respondents through various applications. Review studies

are usually used to get a clearer description of the characteristics that correspond to the objectives of the study.

This is also one of the reasons the reviewer chose the review study because this fulfills the title and objective of this study, namely to identify the perceptions of teachers in the use of the DELIMa 2.0 launcher in the teaching and learning process.

The type of sampling in this study is a probability sampling, namely group sampling. Group sampling is the division of the population into several groups because the population is dispersed. The purpose of group sampling is carried out in this study because the groups in this study have misalignment between small groups but have uniformity between all large groups.

There are three levels to carry out the sampling study in this study. The first level for conducting group sampling is that the population is divided into groups and then these groups are randomly selected. In this study, the reviewer will select all teachers who teach in Chinese Nationality Type Schools in the Port Dickson area as the population. The second stage is that the reviewer will categorize the schools as groups. There are 16 Chinese Nationality Schools in Port Dickson area therefore these 16 schools will be the groups. The third stage is that the researcher will randomly select the study sample from each school. The size of the study sample will be determined later.

The sample size used in this study is to use Krejcie & Morgan (1970) sampling to determine the study sample size. The purpose of the Krejcie & Morgan sampling is to determine the sample size required in this study so that it can achieve 95% confidence and 5% margin of error. In the Krejcie & Morgan (1970) study, a sample size determination schedule has been introduced and can be used by all reviewers to facilitate the study.

This study will use the questionnaire to obtain data related to the study issues. The questionnaire used in this study is to obtain feedback and data related to the perceptions of teachers in the use of the DELIMa 2.0 launcher from the study respondents. The questionnaire can also facilitate the data analysis process and the reviewer can get data as quickly as possible because it is only through Google Form online and does not need to use a lot of time to get data.

In the research question form, there are four parts, namely Part A which relates to the demographics of the respondents, Part B relates to the frequency of teachers to use the DELIMa 2.0 platform, Part C is the stage of teacher acceptance and the stage of teacher exposure to the use of the DELIMa 2.0 platform while Part D is the views or thoughts of the study respondents on the DELIMa 2.0 platform. The questions given in the research form are using a Likert scale therefore the study respondents only need to mark strongly disagree, disagree, uncertain, agree and strongly agree.

In Section A, the questions given were related to the respondent's gender, age, school and teaching experience. In Part B as well, that contains questions related to the frequency of use of DELIMa 2.0 such as how many times a respondent will use DELIMa 2.0 in a week. Part C also has 20 questions, 10 questions are related to the level of teacher perception such as teacher proficiency in using DELIMa 2.0 while 10 more questions are related to the level of teacher willingness to use DELIMa

2.0. Part D is also an open question so respondents can write their views, thoughts and challenges in the use of DELIMa 2.0.

Before the study is carried out, a framework is provided in advance to guide the course of the data acquisition process at the study site. The main points in the framework contain the following aspects: (1) obtaining authorization from the Port Dickson Regional Education Office (PPDPD) to conduct the study among the heads of the relevant schools, (2) requesting the authorization of teachers and professors as study respondents, (3) contacting professors for the purpose of authorizing acceptance as study respondents and knowing the study location, (4) building a bush list, (5) conducting a pilot study, (6) providing online questionnaires (Google Form) to study respondents. (7) extracting data from the Google Form, (8) analyzing the data, (9) determining the validity and reliability of the data, and (10) formulating and writing up the research.

According to Fraenkel and Wallen (1996), a pilot study is a type of preliminary study or a small pilot study. The purpose of the pilot study is to build a measuring instrument, check the research questions and also assess the suitability of the research questions that will be given to the study sample. The most important purpose of pilot studies is to determine the reliability and validity of test items. In this study, the reviewer will conduct a pilot study on 9 teachers who teach at SJK (C) Yik Hwa, which is a school that suits the reviewer because the reviewer works there. Therefore, the reviewer will give the research questions to them to answer first and also get feedback from them on the problems encountered or discrepancies in the research questions. So, the reviewer can more easily get data and can save cost and energy to carry out this study.

With this, the reviewer will also refer to the pilot study made by Syaubari & Yunus (2018) to carry out the pilot study. In their study, there are six steps that need to be done in a pilot study. The first step to conducting a pilot study is to conduct a pre-study. The second step was to conduct the study by collecting data through google forms. The third step is to conduct a post-study and analyse the study findings using spss. The fifth step is to make instrument validation while the last step is to conduct a field study.

In this study, descriptive analysis has been used. Analyzing qualitative data is a continuous process. It begins as soon as the first data excerpt begins. In conducting the process of analyzing data, researchers plan and manage data through three steps, namely; managing data, understanding data and analyzing data. The data obtained from the research questions will be analyzed using Statistical Package For Social Sciences (SPSS) software.

In this study, the reviewer will use the method of internal persistence to determine the trustworthiness of the data. The reviewer will give the instrument to a group of individuals once to see if the results obtained from the items are consistent or not. The reviewer will also use Cronbach Alpha to determine the validity and reliability in this study.

## **Conclusion**

In conclusion, the findings of this study have identified that the level of teacher perceptions towards the use of DELIMa 2.0 in the teaching and learning process is significant especially for teachers who teach at SJK(C) at Port Dickson. By going through this study, it is clearly seen that most teachers agree that the use of DELIMa 2.0 is appropriate in the teaching and learning

process even though it is also found that teachers face the problem of time constraints or need to constantly remind students to login to DELIMa 2.0. Therefore, the Ministry of Education Malaysia needs to take action and ways to encourage all teachers and students in Malaysia to use DELIMa 2.0 effectively.

## References

- Ishak, G. (1994). Stail Kepemimpinan Pengetua Sekolah Menengah Agama di Negeri Selangor Darul Ehsan dan kaitannya dengan kepuasan bekerja di kalangan guru-guru. Tesis Dr. Fal, Universiti Pertanian Malaysia.
- Abdul Rahman, K., Mohid, S. Z., & Ramli, R. (2018). Kesiediaan Guru menggunakan teknologi multimedia dalam pengajaran dan pembelajaran di sekolah rendah agama di Selangor. Kertas pembentangan. 4<sup>th</sup> International Conference on Information Technology & Society, Selangor Malaysia. 1-9.
- Izhar, A., & Ghazali, N. (2023). Meneroka penggunaan digital educational learning initiative Malaysia (DELIMa) dalam pengurusan kokurikulum sekolah di Lembah Klang. *International Journal of Education and Training*. Vol 9(2): 1-20.
- Agus, A. N. A. (2021). Tahap pengetahuan dan kesiediaan guru Bahasa Melayu dalam melaksanakan pendekatan terbeza dalam pengajaran dan pembelajaran di rumah semasa tempoh perintah kawalan pergerakan. *Jurnal Pendidikan Bahasa Melayu*. Vol 11(1): 75-87.
- Bryant, E. C. (1974). Associations Between Educational Outcomes and Background Variables. Denver: National Assessment of Educational Progress.
- Chamidah, N., Zaman, B., Muniroh, L., Lestari, B. (2020). Designing local standard growth charts of children in East Java province using a local linear estimator. *International Journal of Innovation, Creativity and Change*. Vol 13(1): 45-67.
- Darling-Aduna, J., & Heinrich, C. J. (2018). The role of teacher capacity and instructional practice in the integration of educational technology for emergent bilingual students. *Computers & Education*. Vol 126(1): 417-432.
- Ramli, F. (2022). Pelantar DELIMa 2.0 lebih inovatif dan berimpak global. *Dewan Masyarakat*, 22 Ogos.
- Sajari, F. F., Zulkifli, H., & Surat, S. (2023). Kesahan dan Kebolehpercayaan Instrumen Kesiediaan GPI melaksanakan model tasmik j-QAF secara dalam talian. *Journal of Quran Sunnah Education and Special Needs*. Vol (7): 16-29.
- Ford, T. G., Olsen, J., Khojasteh, J., Ware, J. & Urick, A. (2019). The effects of leader support for teacher psychological needs on teacher burnout, commitment, and intent to leave. *Journal of Educational Administration*. Vol 57(6): 615-634.
- Fullan, G. M. (1993). Why Teachers Must Become Change Agents. *Educational Leadership*. Vol 50(6): 1- 13.
- Fullan, M. (2001). *The New Meaning of Educational Change*. Edisi ketiga. London: Roudledge Falmer.
- Fraenkel, J. R., & Wallen, N. E. (1996). How to design and evaluate research. USA: Mc.Graw-Hill Inc. Ghasempour, Zahra, Bakar, Md Nor. & Jahanshahloo, Golam Reza. 2014. "Mix-method design in educational research: Strengths and challenges". *International Journal of Pedagogical Innovations*. Vol 2(2): 83-90.
- Gill, L., & Dalgarno, B. (2008). Influence on pre-service teacher's preparedness to use ICTs in the classroom. Annual Conference of Australasian Society for Computers in Learning in Tertiary Education (ASCILITE). Melbourne, Australia. 330-339.

- Yahya, H. (2006). Persepsi guru terhadap perubahan pengajaran dan pembelajaran sains dan matematik dalam Bahasa Inggeris di sekolah menengah. Tesis Ijazah Sarjana Sains, Universiti Putra Malaysia.
- Nazrul, I. (2020). Cabaran kepimpinan dalam pengurusan pembelajaran digital. *Jurnal Refleksi Kepemimpinan*. Vol 3: 20-24.
- Khalid, I. (2021). PdP yang lebih inovatif, kondusif dengan platform DELIMa 2.0. *Astro Awani*, 11 November.
- Julaihi, N., & Hamdan, N. (2020). Guru-guru Cemerlang dalam Pengajaran dan Pembelajaran Abad Ke-21[PAK 21]. *Jurnal Pendidikan Sains & Matematik Malaysia*. Vol 10(2): 64-73.
- Arumugham, K. S. (2019). Kajian Tindakan: Kaerah Amalan PdPc Berkesan. Seminar Pendidikan Negeri Kedah Darulaman. 1-5.
- Dewan, K. (2007). Edisi ke-4. Kuala Lumpur. Dewan Bahasa dan Pustaka.
- Kerlinger, F. N. (1970). *Foundation of behavioral research*. New York: Holt, Rinehart and Winston.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*. Vol 30(3): 607-610.
- Maslan, M., & Nor, M. Y. (2020). Kebolehlaksanaan pentaksiran bilik darjah(PBD) secara atas talian sepanjang perintah kawalan pergerakan (PKP) di daerah Sentul, Kuala Lumpur. Prosiding Seminar Nasional FIP 2020. 213-218.
- Musa, M. & Abdillah, N. A. (2021). Penggunaan Google Meet dalam proses pengajaran dan pembelajaran di politeknik Sultan Mizan Zainal Abidin. *International Journal of Modern Education*. Vol 3(8): 104-113.
- Mengistie, S. M. (2020). Primary School Teachers' Knowledge, Attitude and Practice of Differentiated Instruction: The Case of In-Service Teacher-Trainees of Debre Markos College of Teacher Education, West Gojjam Zone, Amhara Region, Ethiopia. *International Journal of Curriculum and Instruction*. Vol 12(1): 98-114.
- McMillan, J. H., & Schumacher S. (2006). *Research in Education*. Person Education, Boston.
- Microsoft Malaysia News Center. (2020). Ministry of Education launches new digital platform with participation from Google, Microsoft and apple., 15 Disember.
- Konting, M. M. (1998). *Kaedah Penyelidikan*. Edisi ketiga. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Ng, P. J., Rahman, S., & Surat, S. (2023). Tahap pengetahuan, kemahiran dan kesediaan guru terhadap pelaksanaan pentaksiran bilik darjah (PBD). *Malaysian Journal of Social Sciences and Humanities*. Vol 8(5): 1-13.
- Roni, N. S., & Mahamod, Z. (2024). Pengetahuan teknologi maklumat dan komunikasi dalam pengajaran dan pembelajaran guru Kesusasteraan Melayu. *Jurnal Pendidikan Bahasa Melayu*. Vol 14(1): 51-61.
- Nordin, N., & Bacotang, J. (2021). Isu dan Trend Penggunaan Teknologi Maklumat dan Komunikasi Dalam Pendidikan Awal kanak-kanak. *Jurnal Pendidikan Awal Kanak-kanak Kebangsaan*. Vol 10(1): 99-107.
- Yaacob, N., Ishak, R., Faizal, A. G. (2024). Hubungan kepimpinan multidimensi pengetua dengan penerimaan guru terhadap digital education learning initiative Malaysia (DELIMa): Satu tinjauan awal. *Jurnal Kepimpinan Pendidikan*. Vol 11(1): 16-26.
- Kamaluddin, N. A., & Husnin, H. (2022). Penggunaan Teknologi Maklumat Dan Komunikasi (TMK) Dalam Pendidikan. *Jurnal Dunia Pendidikan*. Vol 4(2): 333-343.

- Nawi, N. M., & Salleh, N. M. (2022). Pengetahuan dan Kemahiran teknologi guru Pendidikan khas integrasi untuk menjalankan pengajaran dan pembelajaran dalam talian. *Malaysian Journal of Social Sciences and Humanities*. Vol 7(5): 1-13.
- Marzuki, N. A. A., Tahir Z., & Nasri, N. M. (2020). PenguasaanKemahiran teknologi komunikasi dan maklumat (ICT) terhadap kecekapan kerja. *Journal of SocialSciences and Humanities*. Vol 17(9): 140-157.
- Hata, N. F. M., & Mahmud, S. N. D. (2020). Kesianaan Guru Sains dan Matematikdalam melaksanakan Pendidikan dari aspke pengetahuan, sikap dan pengalaman mengajar. *Akademika 90 [Isu Khas 3]* 85-101.
- Rozlan, N. I. (2022). DELIMa berwajah Baharu, tingkatkan kualiti PdP guru dan murid. *Sinar Harian*, 24 Ogos.
- Pavethira, G. (2021). Kesianaan guru terhadap pdp digital learning semasa penularan Covid-19 dalam kalangan sekolah kluster Johor Bahru. Laporan Projek. Universiti Teknologi Malaysia.
- Rahimi, M. Y., Yahya, D., Faiz, M. M. Y., Omar-Fauzee, M. S., Pang, L. C. (2021). Biasakan Yang Baharu: Analisis Gaya Kepimpinan Pemimpin Sekolah Semasa Pandemik Covid-19. *International Journal of Education Pschology and Counseling*. Volume 6 Issue 42.
- Ariffin, R. I. L. (2023). KPM saring lebih 300000 guru ikut tahap kecekapan digital. *BHOnline*. 30 November.
- Raieh, R. (2022). KPM perkasa pelantar DELIMa 2.0, gabung 3 aspek penting untuk pembelajaran menyeronokkan. *Sinar Harian*. Aug 22.
- Riduan, R. M., Yunus, F., Halim, L. (2021). Persepsi guru prasekolah terhadap pembelajaran berasaskan projek dan aspek pemerolehan Bahasa kanak-kanak. *Jurnal Dunia Pendidikan*. Vol 3: 524-539.
- Harian, S. (2023). 5.3 juta pengguna akses pelantar DELIMa -KPM. *Sinar Harian*. 27 November.
- Riska, S., Sari, D. P., Asri, W., Fatimah, S., Setiawan, H. R. (2020). Implementasi e- Learning Pada Mata Pelajaran Pendidikan Islam di Masa Pandemik Covid-19. *Al- Ulum Jurnal Pendidikan Islam*. Vol 1(1): 44-54.
- Tuckman, B. W. (1999). *Conducting Educational Research*. Fort Worth:Harcourt Brace College Publishers. Yuh, T. J. & Husaina Banu Kenayathulla. 2020. Pentaksiran Bilik Darjah dan prestasi murid Sekolah Jenis
- Zazin, & Zaim. (2019). Media Pembelajaran Agama Islam Berbaris Media Sosial Pada Generasi- Z. *Proceeding Antasari International Conference*. Vol 1(1): 534-563.