An Analysis of Practicality for Google Classroom Implementation in Kelantan State Secondary Schools

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Abstract

Using Google Classroom has become a priority in helping to create an effective and efficient learning environment. Despite this, previous studies have identified several issues and constraints that still need to be addressed, such as the fact that Google Classroom has not yet been fully explored, a lack of exposure and support, a lack of willingness on the part of teachers and students, and limited internet access. In order to improve readiness, several proposals were presented, such as improving teacher training, raising awareness and readiness among parents and guardians, improving ICT facilities and infrastructure, and promoting government-private sector cooperation. The purpose of this study is to enhance the quality of teaching and learning delivered to secondary school students using Google Classroom. A questionnaire was used in this study. A total of 480 respondents from secondary schools in Kelantan participated in this study. The findings indicate that there is a need to prepare teachers and students to not only be technically proficient in Google Classroom, but also to effectively understand the concept and topics; to re-evaluate best practices and make the use of Google Classroom clearer and more effective to teachers and students; and industry and stakeholders need to agree and collaborate to ensure that secondary students have access to technology use and support for online learning. Further research can also be developed by exploring opportunities for collaboration between schools and industry to make Google Classroom use more effective and widespread.

***Keywords*:** *Google Classroom, Teaching, Learning, Online, Secondary School*

1. Introduction

Malaysia's educational system has been modified in response to the Industrial Revolution 4.0 change in order to preserve its status as a world leader in the field of education (Al-Rahmi et al, 2019). Information and communications technology (ICT) development, which acts as the main platform, is one of the shifts that have taken place. ICT allows for the sparking of a more meaningful T&L process. E-learning is a modern technology that is widely used in schools today and is familiar to educators. The use of ICT as a teaching tool is another cutting-edge T&L strategy. Technology needs to be a trustworthy instrument for the existing instructional process, according to Chamidah et al (2020). To make it simple for people to understand and master knowledge. The growth of education technology has facilitated a need to support digital learning and simultaneously introduce the concept of digital classroom. Today's learners are interested in exploring learning through technology (Subandi et al. 2018), and this has urged educational institutes to innovate their teaching methods by integrating digital learning. For that reason, institutions require a stable system that is cutting edge, cost-effective (Al-Maroof and Al-Emran 2018), and adaptable (Bhat et al. 2018).

The LMS which is sometimes referred as Virtual Learning Environments (VLE) or Course Management Systems (CMS), are fundamentally tasked to support digital teaching and learning

(El Bahsh and Daoud 2016) and has been touted as one of the most widely used learning technology in higher education (Abazi-Bexheti et al. 2018). LMS utilizes various pedagogical technologies while offering an infrastructure to enable administration and management of learning contents, communication, assessment, and collaboration (Washington 2019). Some of the prominent LMS used by educational institutions are Moodle, Edmodo, Desire2Learn, Blendspace, Blackboard, Google Classroom, Sakai, Fronter, etc.

The Google Classroom application is one of the tools, platforms and media that is free and growing rapidly in the high school education process efficiently (Awang et al., 2019). With the Google Classroom platform, students and teachers are encouraged to share learning materials by forming an online learning environment community (Kaviza, 2020). In addition, other applications such as Google Drive, Google Slide, Quizizz, Kahoot, Quizlet, Ed-Puzzle and so on are available in this Google Classroom platform. These applications can be used as social networks, material sharing tools, interactive learning boards, data storage and provision of reinforcement training (Abdullah & Hussin, 2019). Therefore, all the applications found in Google Classroom play their own role and strength to emphasize the concept of 4K (communication, critical thinking, collaboration and creativity) in the implementation of 21st century learning strategies (Kaviza, 2020).

2. Literature Review

Technology and Development in Malaysia

In order to ensure that the development of education is in line with current technological developments, KPM has ranked bestari schools among selected schools and known as the Bestari School Project since 1999. Apart from the use of ICT, KPM has introduced various platforms such as the 1Bestari Net Project, the Virtual Learning Environment-Frog (Frog VLE) and Portal Digital Education Learning Initiative Malaysia (DELIMa).

a. Digital Education Learning Initiative Malaysia Portal (DELIMa)

The Digital Education Learning Initiative Malaysia (DELIMa) portal is one of the learning and teaching platforms organized by the Ministry of Education after the Frog VLE on 15 June 2020. This platform aims to channel information and collect data (Daud, Ab Rahman, & Adnan, 2020). Teachers and students can access this platform by using an existing Google account to carry out learning management. DELIMa is a platform that provides learning management system services as well as learning resources that can be used by educators and students to learn online. Ministry of Education Malaysia (KPM) shows its openness to a global approach in meeting the demands of the Fourth Industrial Revolution (Education 4.0) by pairing three world technology giants, namely Google, Microsoft, and Apple as strategic partners. Google provides the G-Suite for Education package which has proven to be one of the best the best online learning ecosystem based on cloud computing technology. Microsoft offers an alternative to applications from Google, while Apple wants to provide learning resources based on creativity to help teachers and students. In addition, this platform can also be accessed by using the Ministry of Learning (MOE) Digital Learning (DL) e-mail that has been provided by the ICT coordinator at the school (Lubis et al., 2021). There are various interesting and useful free applications such as Google Classroom, Microsoft Teams, Digital Textbook and Microsoft Office 365 through the DELIMa platform that can help researchers and students manage online learning (Lubis et al., 2021).

b. Google Classroom application in PDPR

Google Classroom is one of the service applications contained in the G-Suite Education package offered by Google. On July 1, 2019, Google Classroom was officially announced as a virtual learning platform in schools replacing Frog VLE. Google Classroom which originally only functioned as an alternative to support learning ICT (Information & Communication Technology) began to take center stage in schools after the refresh of DELIMA on June 15, 2020. The education sector that was severely affected by the COVID-19 pandemic was saved by Google Classroom which meets the needs of online learning involving 10 000 schools, 370 000 teachers and 2.5 million students throughout Malaysia.

The use of Google Classroom as a learning platform to replace traditional physical learning can create a 21st century learning environment. Google Classroom is growing rapidly because of its exclusive features which separately. Every individual who owns a Google account has access to Google Classroom without many restrictions or eligibility rules. Although in principle, Google Classroom aims to facilitate the creation, distribution and grading of assignments, but with the ability of this platform to combine applications within Google itself such as Google Drive, Google Docs, Google Sheet, Google Slide. Google Calendar, Google Meet and Gmail, in addition to being able to integrate with hundreds of other applications such as Quizizz, Kahoot, Quizlet, Plickers, Ed-Puzzle and so on, making Google Classroom's functionality go far in the world of education(Muhammad Alif & Sanimah, 2019).

Among them, Google Classroom as a social network, as a material sharing tool, as an interactive learning board, as a data storage center and as a preparation for reinforcement training (Mohd Amin Embi, 2013; Ahmad Fkrudin, Wan Norma & Nor Khayati, 2019). These functions make Google Classroom more interesting and able to increase student motivation.

c. Studies Related to Online Learning in Schools

The rapid development of online learning has increased the use of various platforms and technology applications in the teaching and learning process. For this reason, various studies have been conducted to ensure that researchers and students can benefit from this learning process. Kaviza (2020) conducted a survey of Form Four students to identify the level of students' perspectives on learning history with the Google Classroom application from the aspects of knowledge, skills and attitudes. A total of 114 fourth-grade students participated as a study sample. In this study, the questionnaire instrument was adapted to obtain the level of students' perspectives on learning History with the Google Classroom application. The findings of this study have shown that the level of students' perspective from the aspects of knowledge, skills and attitudes is moderate. Therefore, Kaviza suggesting the need for collaboration between the Ministry of Education, the teachers and also the students to increase the level of perspective towards the use of the Google Classroom platform in the subject.

The analysis carried out by Utami (2019) showed that 77.66% of students agreed and 24.78% of students disagreed with the acceptance of Google Classroom facilities as a learning platform in the subject of Psychology and Mathematics. In this study, most students support that the use of Google Classroom facilitates the teaching and learning process. For example, they can save, print and access important documents and assignments in Google Classroom. In addition, the use of Google Classroom makes it easier for students to obtain announcements given quickly (real time). This has made learning and teaching run effectively and efficiently (Rumyeni, 2017). Students' willingness to use Kahoot! in learning Arabic was carried out in Kelantan by Yusoff et al. (2019). Kahoot! is an application that can create an interactive and fun learning environment. Kahoot! can also be integrated in Google Classroom. R2 value for intention to use Kahoot! is as much as 0.423 showing that 42.3% of respondents agree that the use of Kahoot! can contribute in online teaching

and learning. The findings of the study also show that the expectation factor of ease of use is the main factor that drives students' intention to use Kahoot! in the class followed.

Based on the results of previous studies related to student readiness, it can be concluded that students are ready to use various applications including the Google Classroom application which can improve student achievement and the use of various teaching media integrated with ICT equipment can also improve the development of student knowledge. Based on these past studies, in general, studies on online learning in schools have been the focus. Therefore, this study was conducted to focus on the readiness in terms of knowledge, attitude, motivation and infrastructure facilities of upper secondary and lower secondary school students in Pasir Mas district, Kelantan towards Google Classroom.

3. Methodology

3.1 Research Design

This study implements a quantitative research method that is using a survey method using a questionnaire. According to Creswell (2008), survey methods can help researchers collect more accurate and quality data and information.

3.2 Sample Study

In this study, the population has been focused on high school students in Pasir Mas District, Kelantan as many as 19,000 students. These respondents consist of upper secondary and lower secondary school students from 3 types of schools, namely the National Secondary School (SMK), the National Religious Secondary School (SMKA) and the Government Aided Secondary School (SM SABK). This survey study aims to draw conclusions about the population based on the data and information contained in the sample (Rajuddin & Kaur, 2010).

The sample method used in this study is a simple random sample. A total of 480 high school students in Pasir Mas District, Kelantan were selected, consisting of 288 junior high school students and 192 high school students. The selection of this sample amount is appropriate. This is due to the large sample size increasing the possibility for researchers to select a sample that has the characteristics of the population (Talib & Abd Ghafar, 2008). The determination of these samples is in reference to the table made by Krejie and Morgan (1970). After identifying the selected sample list, the researcher has asked for the cooperation of the respondents to answer the questionnaire provided using Google Form to be filled out.

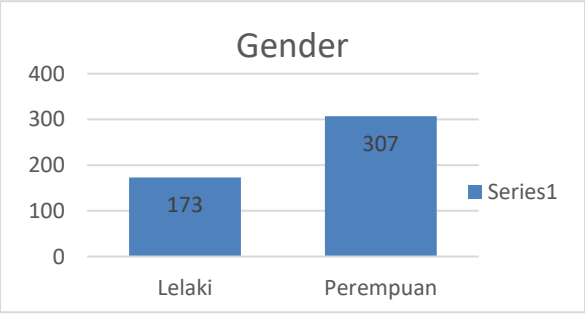

Figure 1: Respondent of Gender

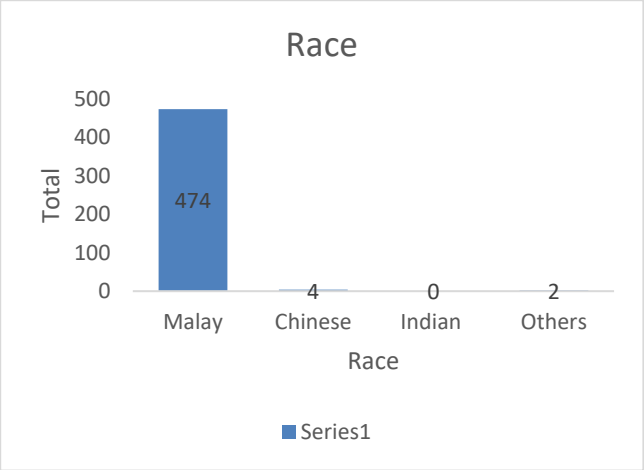

Figure 2: Respondent of Race

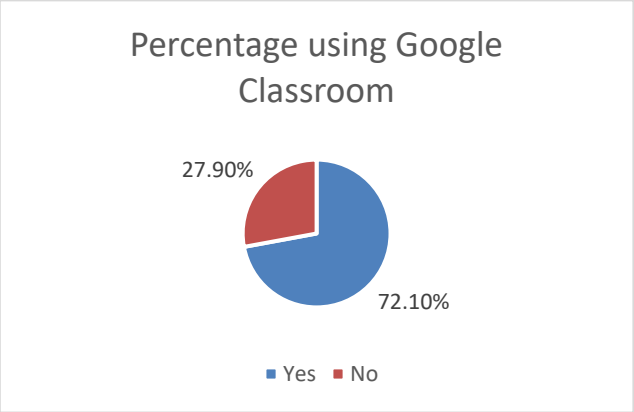

Figure 3: Percentage student using Google Classroom

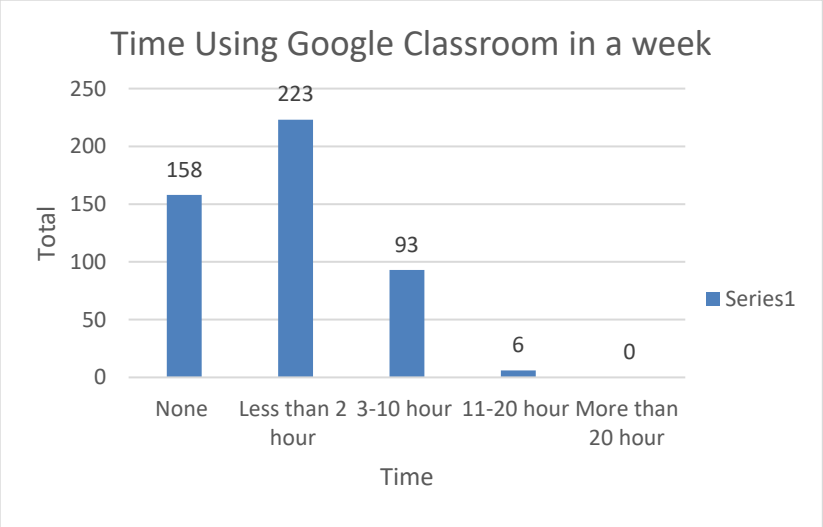

Figure 4: Percentage time in a week using Google Classroom belong to student

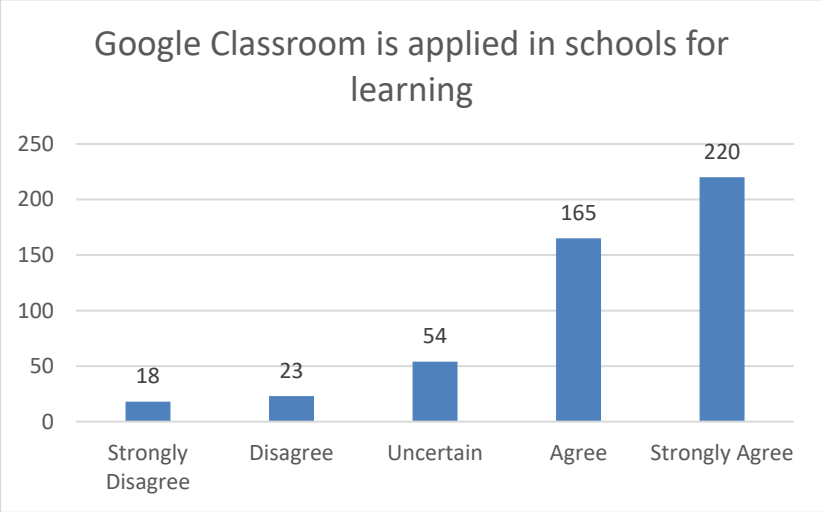

Figure 5: Percentage time in a week using Google Classroom belong to student

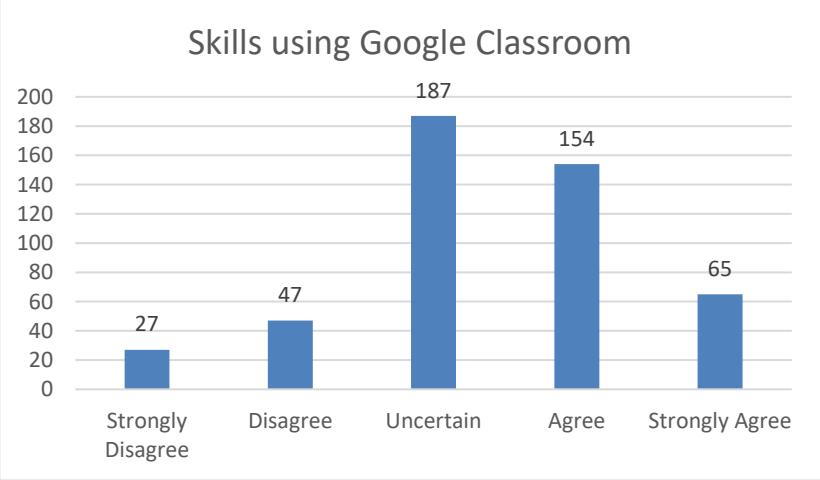

Figure 6: Percentage Skill using Google Classroom

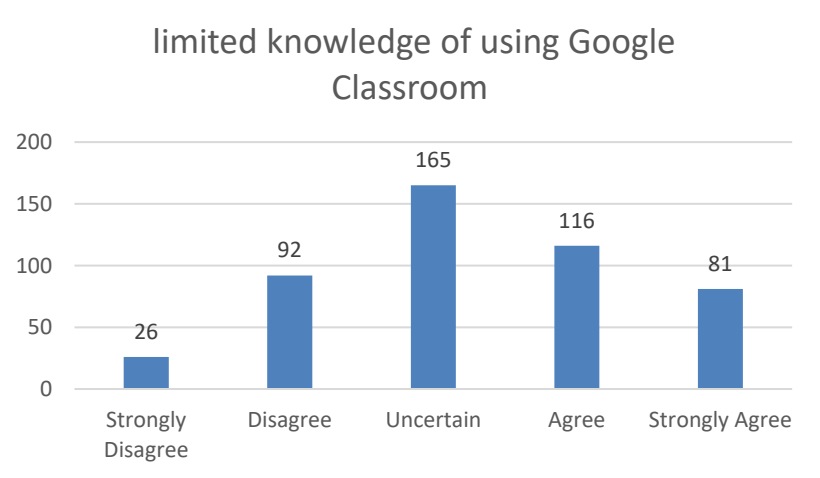

Figure 7: Percentage Limited Knowledge using Google Classroom

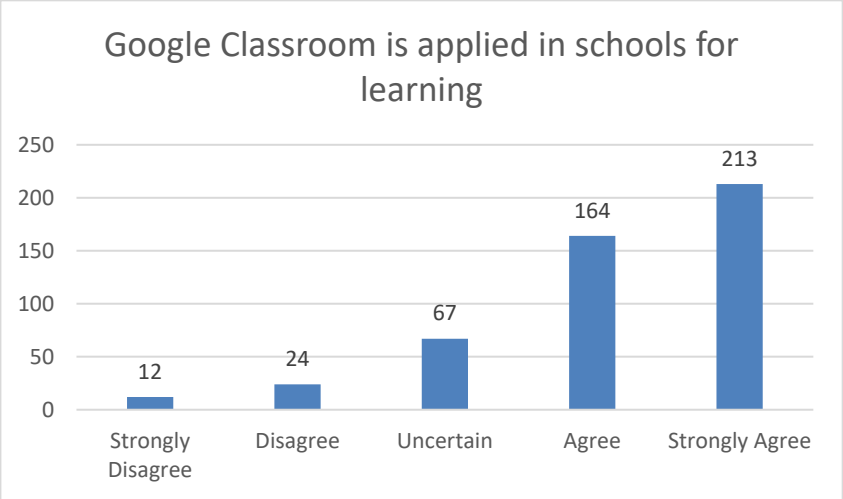

Figure 8: Percentage Google Classroom applied in school for learning

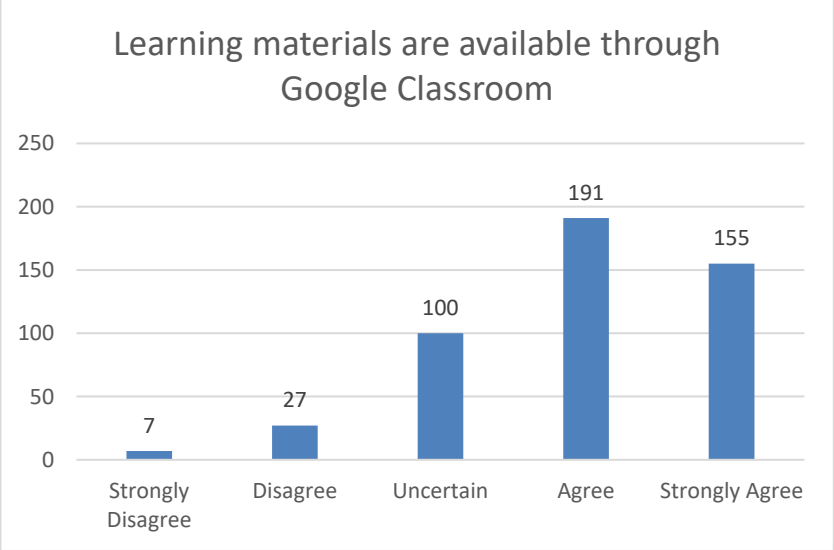

Figure 9: Percentage Learning materials available through Google Classroom

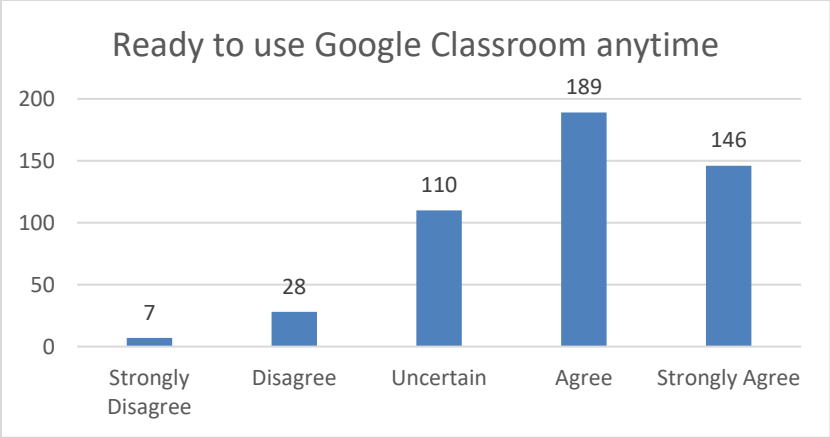

Figure 10: Percentage ready using Google Classroom anytime

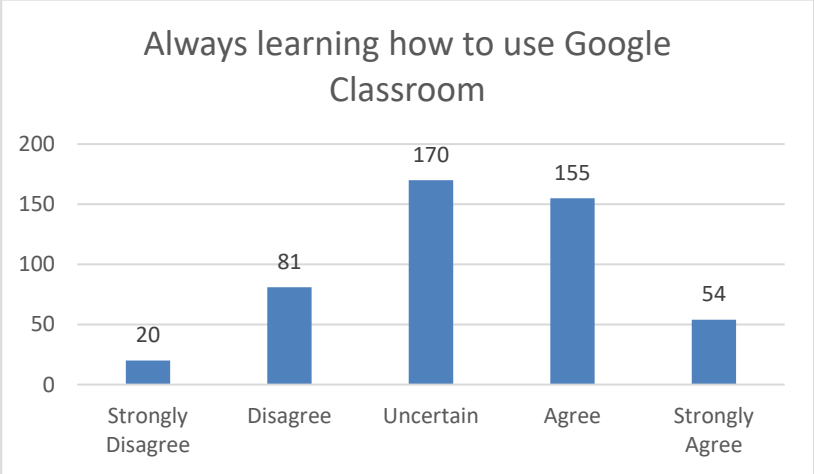

Figure 11: Percentage leaning how to use Google Classroom

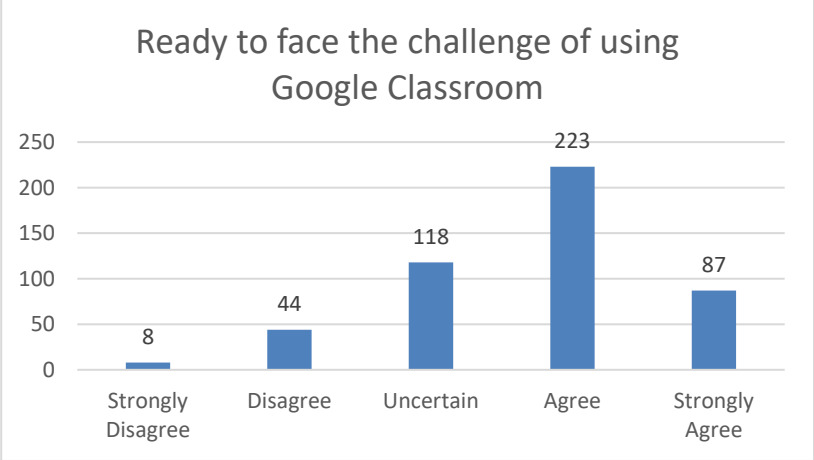

Figure 12: Percentage ready to challenge of using Google Classroom

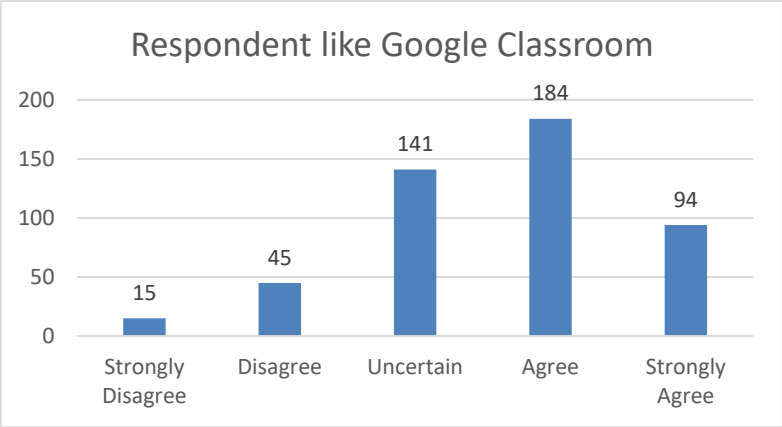

Figure 13: Percentage like using Google Classroom

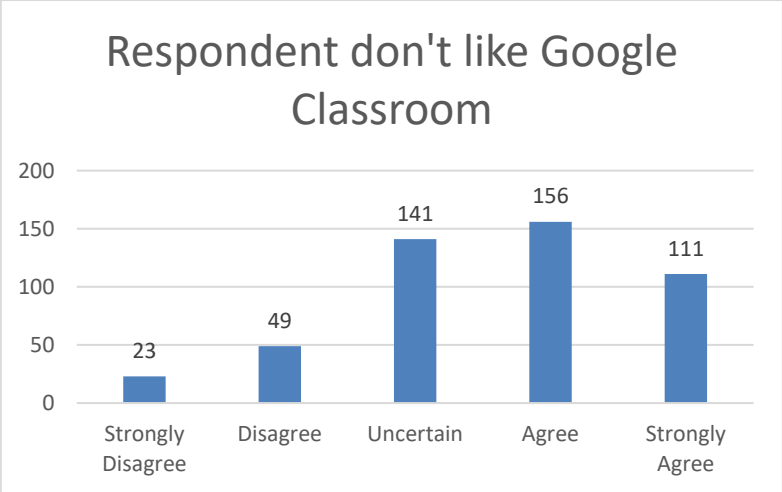

Figure 14: Percentage don't like using Google Classroom

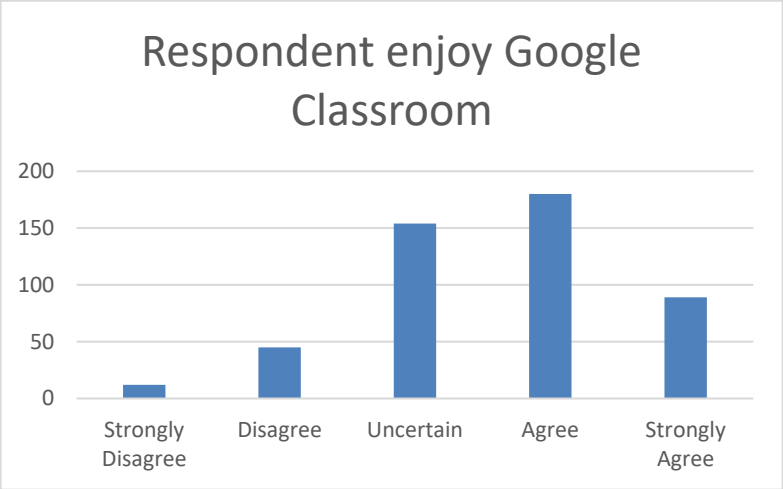

Figure 15: Percentage enjoy Google Classroom

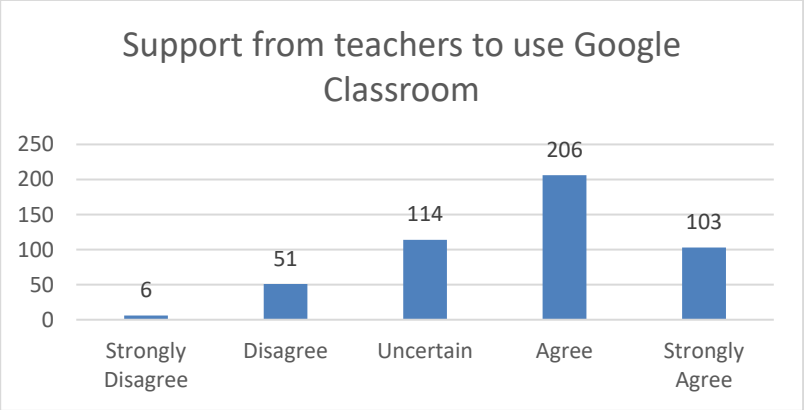

Figure 16: Percentage support from Teacher using Google Classroom

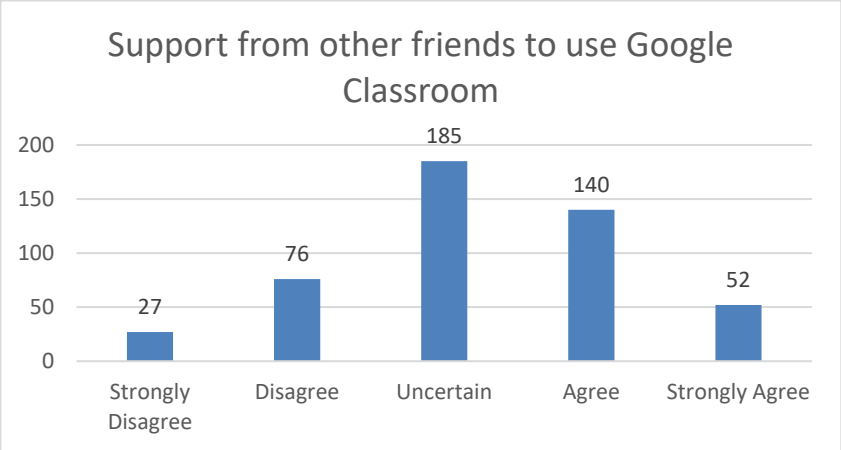

Figure 17: Percentage support from other friends to use Google Classroom

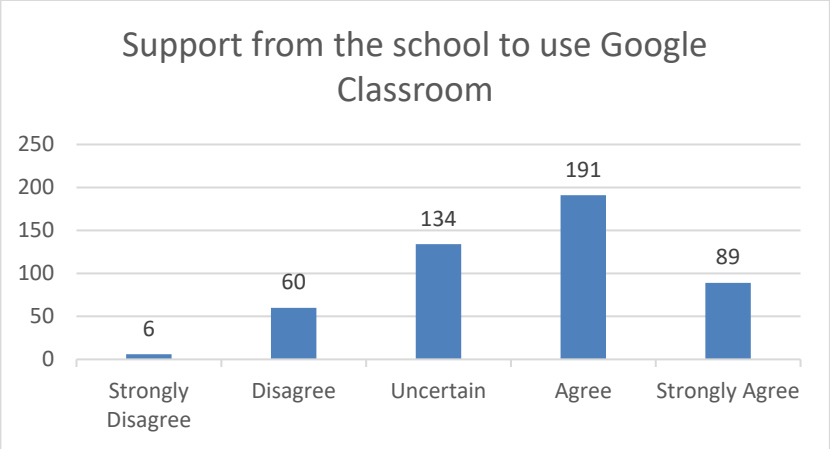

Figure 18: Percentage support from school to use Google Classroom

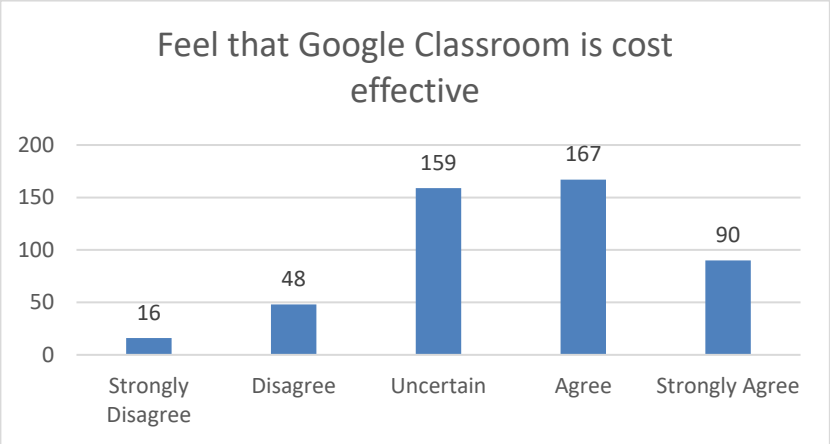

Figure 19: Percentage Feel that Google Classroom is cost effective

4. Finding

Google Classroom was first introduced in August 2014 and was developed by Google to help teachers create, submit, distribute and measure assignments in a paperless way. The main purpose of Google Classroom is to coordinating the process of sharing materials between teachers and students. The use of Google Classroom is an alternative learning that supports conventional education and helps continuous learning that aims to optimizing ICT integration for student self-learning. The use of online learning seems easy but to involve all students and teachers makes it a big challenge [1].

4.1 Issues and Challenges of Using Google Classroom in Pdpr

4.1.1 Google Classroom Has Not Been Fully Explored

The arrival of the Covid-19 epidemic has changed the education pattern of the country where the Google Classroom platform has become the choice and priority for teachers and students in carrying out Teaching and Learning at Home (PdPR) through online learning. Although there are many digital learning platforms that other such as Edmodo, Zoom Education, Microsoft Teams, Prezi and so on, the Google Classroom platform has become the main choice for teachers and students because KPM has provided a digital account which is one of the initiatives offered through the Digital Educational Learning Initiative Malaysia platform from KPM or DELIMa KPM for short. Each student, teacher and school will be given an account that allows them to access all facilities on Google Classroom individually free. Due to the lack of exposure and information about Google Classroom before, various parties are facing problems in use it especially to log into Google Classroom for the first time through a DELIma account. The use of the Google Classroom application as a history learning media is still new and has not been fully explored in the context of secondary school education, although its benefits and potential have been recognized in supporting the virtual learning process based on the use of ICT [2] . Although Google Classroom is still considered new in the national education pattern, many studies and issues have been discussed recently regarding the implementation of PdPR through this platform.

4.1.2 Lack of Support and Exposure

Before the pandemic, Google Classroom records only recorded a low amount of use among teachers and students. Some teachers and students are not familiar with using Google Classroom, and some do not even know it exists This Google Classroom. This is due to the lack of exposure and support regarding Google Classroom either among teachers, students and parents. After the implementation of PdPR, Malaysia is among the countries that recorded the highest Google Classroom word searches in the world. Announcement of all educational institution closures including the primary school level, due to the sudden spread of the Covid-19 epidemic, all parties, whether teachers, students and parents, experienced difficulties and there was no preliminary preparation regarding PdPR which had to be conducted online, especially through the Google Classroom learning platform.

4.1.3 Teacher readiness

The aspect of teacher readiness is seen in the context of implementing PdPR through the Google Classroom platform. The knowledge, skills and attitude of the teacher are important in the success of any implementation because the teacher is the main pillar in shaping the event students [3] stated that what needs to be emphasized in realizing the Malaysian Ministry of Education's desire to promote online learning is the level of knowledge and willingness of teachers to use the Google Classroom platform.

However, a study by [3] found that the level of knowledge of rural high school teachers about Google Classroom is at a low level. The results of the study by [4] also stated that the level of teacher readiness in the PdP process by using technology applications is very high, but there are still weaknesses in terms of knowledge, skills and school infrastructure. This is supported by the study of Alruwais et. al, (2018), states that most teachers have basic computer knowledge, but less skilled in providing digital learning materials. Meanwhile, [5] also stated that teachers who do not have skills sufficient technical skills will feel stressed in handling Google Classroom. The study of [6] stated that training can encourage teachers to improve knowledge and understanding related to the development process (Learning Management System) LMS-Google Classroom, teachers can create LMS-Google Classroom up to upload teaching and assessment materials using Google Form, as well as teachers able to improve skills in integrating technology in the process (Learning Management System) LMS-Google Classroom, teachers can create LMS-Google Classroom up toupload teaching and assessment materials using Google Form, as well as teachers able to improve skills in integrating technology in the teaching process using LMS-Google Classroom. Therefore, teachers need to be proactive to develop knowledge, skills and improve professionalism with mastering the skills of today, which is technological literacy.

4.1.4 Student readiness

Readiness plays an important role in ensuring the level of student involvement to learn [7] In implementing PdPR through the Google Classroom learning platform, readiness students are also taken into account especially in the aspect of influencing student motivation student involvement in PdPR. The success of online learning for students can influenced by motivation and involvement factors [8] .

The motivation and involvement of students is closely related to the willingness of students to undergo PdPR via Goosle Classroom. This is supported by the findings of [9] stated that a few students were lazy and did not attend PdPR online especially among students from backward classes due to lack of self-motivation. Based on the results of the study [10], students cannot give full focus on PdPR because some of them need to help their families in daily affairs, living in a residential environment is not conducive and not have electronic devices that support technology for learning.

Various issues involving student readiness, including the issue of students not being proficient using computers or online learning and need to undergo training in the early stages of implementation. There are also previous studies that reveal that students struggle to concentrate during online learning because they are not familiar with learning through their devices [11] . This difficulty of online learning can cause students feeling stressed and unmotivated to get involved in PdPR. In addition, the readiness of students from high-income families is better from low-income families reinforces that socioeconomic linkages family affects online learning during MCO [12]. Other constraints that we cannot deny especially for the students themselves who are less experienced with computers or online processes, computer and internet accessibility and constraints technical infrastructure in some areas [13] . Study by Kaviza (2020) found the level of students' readiness to use the Google platform Classroom is at a moderate level

and the results of this study are in line with the study conducted by [14] who have reported that as many as 85 percentage of students in the field of history education still do not know and have not use the Google Classroom application extensively in the teaching process and their learning. [9] explain the issue of student readiness as well include the ability and cooperation of parents in preparing the device.

4.1.5 Internet access

Online learning depends on the convenience of the internet to access learning material. The education sector has now prioritized the use of computers with a broadband Internet network that functions as a communication tool in the system information processing. The use of technology in education is not only applied in the clerical system, but also applied as a medium for convey knowledge. In this context, internet facilities that are internet access stable and sufficient internet data is needed by teachers and students to conduct PdPR through the Google Classroom platform. A study by [15] stated four main elements that are challenges and pressures to students during the new norm. The element is self-adjustment, problem internet access, time management weaknesses and financial issues to purchase data Internet. [16] , explains 70 percent of students from socio-cultural backgrounds low economies feel burdened by the need for online learning. Pupils from B40 families were found to be more affected because they had to subscribe internet data to enable them to participate in classes, exams and submit assignment. In going through PdPR, internet access is a must-have priority apart from devices such as laptops or mobile phones. Whereas, for using the Google Classroom application, does require internet access stable and sufficient data quota. The high cost of internet is a burden to poor families. A study by [17] stated that the problem of internet access and the cost of data is a burden to students who cause their absence to online learning.

In addition, the issue of internet access problems is especially for rural areas and The interior needs attention. Poor technical infrastructure development makin the use of technology in the field of education difficult to implement [13] . This is also supported by [9] , the majority of students facing difficulties in accessing the internet to follow PdPR through the application Google Meet. This emphasis on the internet issue was expressed by [19] which states that internet access should be taken into account to avoid gaps equal access to students.

4.1.6 Device Tools

Brilliannur et al. (2020) explained that PdPR is online for school students is less effective due to the existence of economic constraints in terms of means and infrastructure as well as teacher preparation in terms of knowledge level is also emphasized. Economic constraints have caused students to not be able to provide devices digital, less comprehensive broadband network speed, difficulty accessing internet and so on. Erick (2020) in his study stated that the absence devices may cause students to be unable to follow online learning further hindering students' opportunities to access this online learning. This statement is supported by Mazlan et al. (2020), students who come from families who less able will experience problems in undergoing PdPR because the possibility of not having a digital device for learning considering economic priority is more to the need for food, to support life.

A study conducted by [9] found that most students facing constraints in PdPR because students share devices with parents and other siblings. When parents are working, students cannot engage in PdPR due to the problem of device unavailability. This can

cause student motivation to be affected and disturb the students' readiness in PdPR which needs to be given attention by all parties. Buja et al. (2020) also stated the problem of students not being able to give full focus on PdPR because some do not have electronic devices that support technology for learning.

5. Conclusion

This concept paper brings up issues such as the Google Classroom issue that has not been explored completely, lack of exposure and support, teacher and student readiness, access limited internet and device constraints. Some solutions are also included such as helping the level of readiness with teacher training, raising awareness and the readiness of mothers, fathers and guardians, encouraging the cooperation of the government and the private sector and improve ICT facilities and infrastructure. The management is reasonable providing a support system from the aspect of facilities and training. Use of the platform Google Classroom in teaching and learning at home requires commitment teachers, students and parents. This concept paper provides implications for practice provide teachers and students who are not only technically proficient in using Google Classroom. Further research can be done by the Malaysian Ministry of Education (KPM) by re-evaluating good practices and making them clearer and more effective for use Google Classroom for students in elementary school. In addition, it is very important to observed other challenges faced in the use of this for modify the training plan. Industry stakeholders need to agree and working hand in hand to ensure that primary school students have access technology use and support in online learning.

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