The West Coast of Malaysia: Unveiling School Teachers' Viewpoints on Google Classroom

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***Abstract*— The Western Coast of Peninsular Malaysia faced significant challenges during the pandemic, as the most densely populated region in Malaysia, impacting the education system. Many educators have been instructed to use Google Classroom as the main platform to conduct lessons. Thus, it is crucial to report the teachers' viewpoints on Google Classroom, specifically on the benefits and issues to recommend suggestions for improvements. A grounded-theory qualitative research design was employed to determine the viewpoints of 11 West Coast school teachers with diverse teaching backgrounds using semi-structured interviews. This research involved the use of ATLAS.ti to analyse the data. The beneficiaries were teachers, students, and parents, respectively; while the issues were within the application of Google Classroom, within the school, and beyond the school. The recommendations were for Google Classroom, schools, and the government. This study reveals that despite the importance of using educational technologies in today's classrooms, acknowledging the issues voiced by West Coast teachers on Google Classroom is of definite importance. By considering the suggestions, remedies must be taken to improve the state and quality of teaching and learning by providing valuable insights into the practices and policies in online education.**

***Keywords*: Google Classroom, School teachers, West Coast of Malaysia**

I. Introduction

In light of the COVID-19 occurrence, all individuals in Malaysia were requested to remain at home and comply with all rules as stated in the Prevention and Control of Infectious Diseases Act 1988 [1]. Malaysia has two major geographical regions, namely Peninsular Malaysia and Malaysian Borneo [2], which together consist of 13 states and three Federal Territories. Peninsular Malaysia includes 11 states (Perlis, Kedah, Penang, Perak, Selangor, Negeri Sembilan, Malacca, Johor, Kelantan, Terengganu, and Pahang), and two federal territories (Kuala Lumpur, and Putrajaya), while Malaysian Borneo consists of two states (Sabah, and Sarawak) and one federal territory (Labuan) [3]. Peninsular Malaysia is divided into the West Coast and East Coast. The West Coast faces the Strait of Malacca and is divided into three main regions: the Central Region (Kuala Lumpur, Putrajaya, Selangor), the Northern Region (Kedah, Penang, Perak, Perlis), and the Southern Region (Johor, Melaka, Negeri Sembilan) whereas the East Coast, facing the South China Sea, consists of Kelantan, Pahang, and Terengganu [4].

The Western Coast of Peninsular Malaysia faced significant challenges during the pandemic as the most densely populated region in Malaysia, which encompasses the national capital of Kuala Lumpur, affecting the education system. Throughout the outbreak, all educational institutions were instructed to remain closed, and all teaching and learning activities were conducted online. This compelled teachers to go fully online, and all aspects of school routines were affected. During this period, online classes became the dominant teaching mode, and many educators were instructed to use Google Classroom as the main platform to conduct lessons [5]. However, the integration of Google Classroom into online teaching has not been without challenges. For example, Google Classroom does not offer automated updates [6], poor network connections during the online lessons [7], [8], teachers with insufficient ICT training [7] and time management issue [9].

Based on the systematic review by Sari et al. [10], most existing studies were focusing on higher education contexts. This shows that there is an apparent population gap, as there are limited studies measuring the teachers' perspectives in secondary school context. Furthermore, there is a gap, with few studies specifically addressing the West Coast Region of Malaysia. Wong et al. [11] conducted a study with 595 secondary school teachers in Selangor on psychological status, e-teaching competencies, and teaching motivation [11]; Ahmad eset al. [12] studied six teachers in Johor Bahru and revealed positive insight on using Google Classroom [12]; Moses et al. [6] conducted study with five secondary school teachers in Selangor area by measuring only challenges of Google Classroom. Although some studies have explored the benefits and challenges of Google Classroom, their findings do not generalise to represent the findings of the West Coast region in Malaysia. Moreover, Moses et al. [6] highlighted an empirical gap, suggesting that future research should expand on their study by exploring ways to improve the integration of Google Classroom to better support education system in Malaysia. Therefore, this study seeks to address the empirical and knowledge gaps by examining the benefits, challenges, and recommendations for the effective implementation of Google Classroom in the West Coast region.

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II. Literature Review

Google Classroom is a part of the Google Workspace for Education. It was developed by Google Apps for Education in 2014 [13], and it stands out for its user-friendly interface [12]. Google Classroom can also integrate other Google applications, such as Google Drive, Google Docs, and Google Calendar. This application permits teachers to create online assignments, enhance collaboration among both teachers and students, and promote two-way communication with the students [14]. Apart from its features, the platform offers the advantages of being a free educational online platform accessible to all educational institutions [15].

Several studies have explored the benefits of Google Classroom [15], [16], [17]. According to Zakaria et al. [15], the benefits of Google Classroom can be categorised into five major themes: outcome satisfaction, process satisfaction, paperless, ease of use, and usefulness [15]. Outcome satisfaction is connected with aspects such as uploading materials and distributing documents online, which simplify the instructional purpose. Besides, teachers also highlight the benefits of process satisfaction, as Google Classroom enhances accessibility by allowing teachers to give instructions, share materials, and make announcements easily. Additionally, the ease of use also allows teachers to integrate with other Google applications easily. Many teachers find it convenient because they are familiar with Gmail and Chrome before; besides, it does not require a high cost, and only minimal data is required. The usefulness of Google Classroom is another key benefit, as it allows teachers to customise teaching materials for different groups of students [15], [17]. Besides, Google Classroom offers built-in software support tools, for instance, word prediction and autocorrect features, which help students enhance their writing skills [17]. Despite these benefits, a review study by Yie and Mohamad [16] highlights a research gap, as limited studies have explored the benefits of Google Classroom in the Malaysian context [16]. Thus, there is a need to further explore the perceived benefits of teachers in Malaysia.

Other than the benefits of Google Classroom, several issues have been highlighted by scholars regarding its implementation in teaching and learning. These include teachers feeling pressured due to the policy [18], poor usage and adoption of Google Classroom that fail to promote active learning [18], [19], and teachers' self-perceived lack of expertise in using Google Classroom [5]. Besides, Zakaria et al. [15] highlighted other challenges, such as the students' engagement in online discussions, the time to set up Google Classroom, the reluctance to switch from traditional methods to online teaching, and the unstable Internet connection. However, the studies were conducted at the higher education level, focusing on accounting lecturers only [15]. Therefore, it is imperative to explore the diverse experiences of educators across different subjects in secondary school settings.

On the other hand, scholars have also proposed recommendations for enhancing the effectiveness of Google Classroom for teaching and learning purposes. Systematic literature review of Google Classroom emphasised the pivotal role of stakeholders, suggesting that policymakers should provide online learning guidelines for Google Classroom implementation, principals should advocate for its use, and the private sectors should fulfil their social responsibilities by providing internet data plans to the students in need [10]. Although these suggestions were given, it is important to explore the teachers' viewpoints as the primary users and actual implementers of educational technology platforms on the benefits, issues, and recommendations of Google Classroom. In this rapidly advancing digital age, technology development has greatly affected education and teaching practices [20], and it has become imperative for teachers to stay updated on the latest educational technology tools. A review of existing literature demonstrates that teachers' instructional practices are shaped based on their pedagogical beliefs and preferred technological applications [21].

In the year 2019, Deputy Minister of Education Teo Nie Ching mentioned that schools are allowed to close down if the air pollutant index worsens due to haze [22]. Hence, there is a possibility of unforeseen events that could at any time result in the closure of schools, such as the pandemic. Despite being fully utilised during the pandemic, Google Classroom usage ceased afterward. However, the utilisation of Google Classroom will remain significant in the future. Therefore, the use of Google Classroom should not be neglected, as it is a useful tool for teachers to integrate into teaching and learning anytime, anywhere.

Based on the previous studies, Sari et al. [10] indicated that most studies were conducted in a quantitative study, and future researchers should expand insights by using the qualitative method [13]. Hence, this study seeks to fill the gap by expanding the insights via a qualitative research approach from the perspectives of West Coast Malaysia school teachers across various subjects.

Therefore, by addressing the aforementioned concerns of using Google Classroom, the purpose of this study is to achieve the following research objectives:

To explore the perceived benefits of using Google Classroom for teaching among West Coast school teachers.

To explore the perceived issues of using Google Classroom for teaching among West Coast school teachers.

To recommend suggestions for improvements from the West Coast teachers' perspectives on the usage of Google Classroom.

III. Research Method

A. Study Design

This study seeks to explore the perceived benefits and issues of using Google Classroom for teaching among Malaysian school teachers. Furthermore, it also seeks to recommend suggestions for improvements on the usage of Google Classroom. To achieve the objectives established, grounded theory is used as it gives numerous advantages associated with the present-day scenario. Accordingly, the grounded theory allows theory generation and construction at the end of the research where systematic and empirical data are obtained [23], [24]; grounded theory does not require an existing theory in exploring the phenomenon of interest [24], [25]; and researchers may use any form of research methods to explore the phenomenon of interest as grounded theory allows great flexibility [26], [27]. When real data is available, the researchers are then able to propose suitable suggestions to aid existing schools in overcoming the issues of using Google Classroom, potentially minimising any biases yet maintaining data that is representative of the phenomenon of interest.

B. Interview Procedure

Selecting a semi-structured interview method as the data collection method complemented the aim of capturing the viewpoints of the teachers on the usage of Google Classroom. The purposive sampling method was used to select a total of 11 participants who were teachers of diverse genders and ages, teaching experiences, teaching subjects, and areas of schools on the West Coast of Malaysia. The researchers selected West Coast teachers as the sample population for this study since it has the largest number of teachers compared to the East Coast and East Malaysia [23], [24]. Through interviews, the researchers captured these teachers' rich and in-depth experiences and stories from their perspectives of the online educational platform. Additionally, implementing semi-structured interviews also provided the flexibility to have an open discussion [30], in which the questions and

conversations were tailored to each unique experience of every participant interviewed. Appendix A shows the questions or protocols used to conduct the interviews. The participants were also informed that the interview would be audio-recorded, and consent was obtained from each participant before the interview sessions.

C. Data Analysis, Validity and Reliability

The interviews were carried out through telephone calls to elude any variation in the setting context that might affect the responses. This study focuses on the goal of maximising opportunities to generate data relevant to the objectives of the study. As mentioned in the literature, having enough participants to reach saturation happens at the point where information has become repetitive [31]. In this study, the repetition of information was noted, and data saturation was noted with 11 interviews, with new themes not likely to emerge with additional participants. In the interview protocol, most dichotomous opening questions were asked in the beginning, followed by open-ended questions. The dichotomous questions were asked primarily to ease the flow of the conversation during the interviews.

Thematic analysis was employed for the data collected in this study [32], which includes six steps, which are (1) familiarising data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) naming themes, and lastly, (6) writing up themes. These systematic steps of analysis supported the discovery of commonalities among the many viewpoints gathered, allowing themes to emerge and reflect West Coast school teachers' perspectives of online teaching. Each interview was coded in an open coding scheme. The themes were then identified using a grounded theory approach to ultimately identify significant findings that could address the purpose of this study.

As each interview transcript was carefully reviewed, the initial codes were assigned to meaningful text segments, and then the related codes were grouped into broader categories by identifying patterns and relationships between codes. Lastly, core themes were identified by integrating related categories, ensuring they aligned with the research objectives. The coding examples are depicted in Table 1, with interview excerpts, initial code, category, and final theme included.

TABLE I
CODING EXAMPLES

Interview Excerpt	Initial Code	Category	Final Theme
"Google Classroom is a good place for the recording and distribution of homework for the students."	Easy to assign homework	Benefits	Benefits for the teachers
"And the feedback can also be accessed by the parents."	Knowing the feedback	Benefits	Benefits for the parents
"The students are more engaged in learning, and they seem more interested in the lessons."	More interested in learning	Benefits	Benefits for the students
"Sometimes, not even computers, the family might also not have enough mobile phones. So, they can only do the homework, and they cannot attend the classes.''	Not having enough gadgets in the household	Issues	Issues beyond the school
"Those who are around 40 years old don't know how to use it (Google Classroom), it might be a bit hard for them."	Insufficient IT literacy among the teachers	Issues	Issues within the school
"If I assign a task like they have to label or draw some structures like animal cell and plant cell, this is something that Google Classroom cannot do, and the students actually have to upload their pictures after drawing it on a paper."	Drawing and labelling tasks are challenging	Issues	Issues within Google Classroom
"I hope it will have a game or learning application within Google Classroom."	Come out with its own gaming application	Recommendations	Recommendations for Google Classroom
"They have to ensure every location has a good Internet connection, including those rural areas."	Improve the Internet connectivity	Recommendations	Recommendations for the government
"The students must be equipped with basic computer literacy, whereby they know how to type in Microsoft Word or upload documents to Google Classroom."	Provide ICT classes to the students from young	Recommendations	Recommendations for the schools

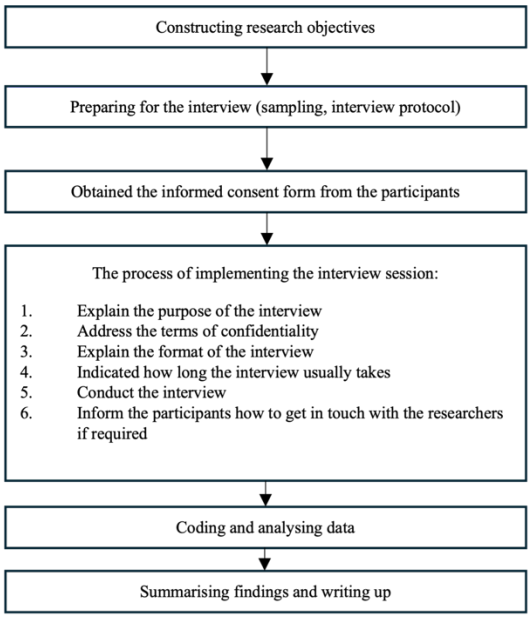
This research also involved the use of ATLAS.ti as the qualitative research software to transcribe interview recordings efficiently and systematically. In addition, ATLAS.ti is capable of making the process of coding and analysing more systematic and coherent. The software is indeed very useful for organising, reorganising, managing, processing, and storing data for facilitating communication among research team members [30]. Besides, the software can also search for certain word frequencies and generate a network of themes in which the findings can be depicted clearly. (Appendix B shows the word cloud of the findings for this study).

D. Ethical Procedures and Concerns

As a means of keeping up the ethical responsibility, the researchers have proactively addressed the safety and privacy concerns of the participants of this research before initiating the interview sessions.

Consent forms were sent to the teachers who voluntarily agreed to be interviewed. The participants had to read through the information sheet and explicitly agree to be interviewed after knowing how the information would be used. By signing and returning the consent form, it is also certified that the participants understood the purpose of their involvement and they also agreed to the conditions of their participation. Besides, the contact information of the researchers was also included in the consent form to ease communication if the participants had any questions or concerns regarding the research. The flow of the methodological process of this study is depicted in Figure 1.

FIGURE I
METHODOLOGICAL PROCESS OF THE STUDY



IV. FINDINGS

The main aim of this study was not to generalise the teachers' online teaching experience; rather, it was focused on the experiences of the 11 participants recruited. The summary of demographics for the 11 participants is depicted in Table 2, with pseudonyms assigned for each participant and their teaching experiences, teaching subjects, and location of schools.

TABLE II
SUMMARY OF THE PARTICIPANTS' DEMOGRAPHIC DOCUMENT INFORMATION FROM THE WEST COAST

Participant	Teaching Experience	Teaching Subject	Location of School	Region
Participant A, 33, Male	Around 9 years	Malay Language	Gombak, Kuala Lumpur	Central
Participant B, 22, Female	Less than 1 year (Teaching Practicum)	Malay Language	Desa Petaling, Kuala Lumpur	Central
Participant C, 29, Male	Around 5 years	English Language, Moral Education	Batu Pahat, Johor	Southern
Participant D, 33, Female	Around 10 years	Science	Kuala Pilah, Negeri Sembilan	Southern
Participant E, 37, Male	Around 13 years	History, English Language	Klang, Selangor	Central
Participant F, 41, Female	Around 17 years	Malay Language	Taiping, Perak	Northern
Participant G, 36, Male	Around 12 years	Arts, Music, English Language	Damansara, Selangor	Central
Participant H, 41, Male	Around 13 years	Malay Language	Bidor, Perak	Northern
Participant I, 42, Male	Around 10 years	English Language	Batu Pahat, Johor	Southern
Participant J, 52, Female	Around 25 years	Science	Batu Gajah, Perak	Northern
Participant K, 40, Female	Around 15 years	Islamic Education	Batu Gajah, Perak	Northern

A. *Benefits*

Several themes emerged from the interview data as perceived benefits of using Google Classroom among West Coast school teachers. The themes were categorised into three major groups; the beneficiaries were teachers, students, and parents, respectively.

1) For the Teachers

The perceived benefits among the teachers as users of Google Classroom are mostly related to the features of monitoring the learning progress, checking and grading assignments or homework, and also giving reminders to the students when necessary. For instance, Participant A mentioned "...and if you remind the students, the students do it and hand in, the grading system will label it as 'done late', so I will also know the students who have handed in the work on time and also the ones who did it late". In addition, Participant B and Participant C also found that Google Classroom allows them to assign homework and put reminders easily as "it can let the teachers post announcements and also homework and learning materials anytime" and "easy for me to make announcements or reminders". Participant K also stated that Google Classroom is more systematic, and the progress of students can be seen across different classes. On the other hand, Participant I emphasised that the assessment through Google Forms eased the work of marking and grading because Google Classroom can automatically organise the results or data gathered from the Google Form.

Additionally, Participant B mentioned that it is advantageous for the teachers as other learning applications like Kahoot and Quizizz can be incorporated into Google Classroom. She also mentioned, "I think the best part of it is the feedback, the students will get to know their strengths and weaknesses by receiving the feedback for their homework or exercises", emphasising the features of Google Classroom that enable giving feedback and comments.

Almost all the participants mentioned the usefulness of Google Classroom in organising teaching and learning materials. At the same time, some teachers, namely Participants F, J, and K, highlighted the function of Google Classroom in assisting the students to revise the learning materials via YouTube videos and online articles that have been shared on the platform.

2) For the Students

Most of the participants agreed that the students gain benefits from online learning using Google Classroom. Most participants noted that students exhibit increased interest in learning, as Participants I and K stated that integrating different media in teaching has attracted the students to be more engaged in lessons conducted through Google Classroom. Participants A and E also stated that Google Classroom is

beneficial for the students in terms of enabling the revision of lessons through recordings, especially for the ones who were absent by referring to statements like "the recordings of the lessons are very good for the students who were not able to attend the class on time", and "all the lessons can be recorded, and they can always trace back to the lessons anytime anywhere". Participant D also shared a similar view, that Google Classroom is prominent for the students as "it is slightly organised where the students can revise and review whatever they have learned before this" and "it makes it easier for the students that they don't have to do double jobs (take out files and organise notes into files)". According to Participant I, the students can also get immediate feedback or marks on the activities that they have participated in using Google Classroom.

Additionally, Participant A also mentioned that the 'raise hand' function, which has been included as an enhancement to the previous version of Google Classroom, is useful for both teachers and students. He also highlighted that "previously it only had a chat box at the side, the students can write questions, but when we are teaching, we are unable to view the content written in the chat box".

In addition, several participants also emphasised that Google Classroom improves the digital literacy of students and their awareness of online learning. In this, Participant I stated that before adopting Google Classroom, most of the students only used smartphones mainly for entertainment, but now with Google Classroom, they understand that learning can also take place through smartphones. Participant I further mentioned that the enhancement of students' critical thinking skills is possible with the use of Google Classroom. Participant K indicated that Google Classroom can help to prepare the students for future globalisation trends, supported by Participant J who stated that Google Classroom can also facilitate 21st-century learning among the students.

3) For the Parents

By having the background of teaching students with special needs, Participant B has stated that "feedback can … be accessed by the parents" through Google Classroom to allow them to "know their (child/children's) weaknesses and strengths" as well as "the learning performance of the students". These can help the parents monitor the individual student's progress and check if they have completed the assignments or homework assigned.

B. Issues

The issues related to using Google Classroom were viewed through three main facets: within the application of Google Classroom, within the school, and beyond the school.

1) Within the Application of Google Classroom

Firstly, the participants generally agreed that not all subjects can be taught to the students effortlessly. Participant G indicated that not all subjects are compatible or suitable to be taught through the online platform, for example, issues were often encountered while teaching the Arts subject. Besides, the use of Google Classroom may not be easily comprehended by both teachers and students. Participant C has accepted the fact that students who are "merely using their smartphones to do the homework" find it "very hard for them to complete my (Participant C) work within the time frame". This is certainly proven to be true as Participant D has given a vivid example where assigning tasks to the students "to draw and label pictures such as animal cells and plant cells is something that Google Classroom cannot do," and what's more, when using the phone. This problem was magnified when Participant A claimed that not everyone knows how to use Google Classroom effectively.

Overall, the learning experience for the students was indeed challenging, as Participant B had stated, "It takes more work… to maximise (the) learning experience" on Google Classroom. Participant C informed that the learning experience cannot be maximised if the students "were very passive" as there were students who were not answering the questions, even though the teacher (Participant C) called their names multiple times, and they also refused to turn on their camera when the teacher requested them to do so.

2) Within the School

Teachers were bombarded with too many challenges when using Google Classroom within the school. Half of the participants interviewed (Participants A, B, D, H, I, and J) said that teachers do not possess adequate IT literacy, and they took time to familiarise themselves with the functions of Google Classroom. Participant K's response was noteworthy as she cited her age as "40 years old" and "they do not know how to use". Evidently, age has become a factor that hinders teachers from using Google Classroom effectively in online teaching and learning. Due to the poor IT literacy found, Participant J mentioned that the teachers did undergo training in their school; however, Participants A, F, and I had to rely on self-learning through YouTube as they mentioned that there was no training provided in using Google Classroom. Participant A stated that training was insufficient, as "the school only provided us with an address and asked us to log in and change the passwords, that's all." Clearly, IT literacy was deemed important in schools, but the lack of training could have affected the quality of education then. Apart from struggling to use Google Classroom, Participant E argued that the implementation of online teaching and learning was inefficient as it cost a lot of time with "paperwork" when the teacher's key focus should be on "busy engaging students in the lessons".

In addition, the lack of awareness by the schools on the importance of online teaching and learning is also a challenge in conducting online teaching through Google Classroom. Participant G stated that some teachers perceived online teaching as worthless, supported by Participant A, who stated that there were teachers who only assigned homework to their students, and there were those who carried out short and incomplete online lessons.

3) Beyond the School

In terms of using Google Classroom and the issues identified that are beyond the school, the researchers classified the participants' responses into two distinct categories, students and parents. From the participants' point of view, students have discipline and attitude problems, as well as poor IT literacy. Almost all of the participants had reported students having discipline and attitude problems, with students who did not "submit the homework" (Participant D), "not paying attention to the lesson" (Participant J), and "procrastinating a lot" (Participant B). In fact, during lessons, students "will only look at the screen" after the teacher has scolded them (Participant E). Furthermore, responses from Participants C, and J revealed that the digital literacy of the students is limited, for examples are such as "don't know how to upload the document" (Participant C). Participant J stated that most of the students, especially those from rural areas or poor family backgrounds, are not ready for the use of technology. Evidently, it is shown that students need assistance to effectively utilise Google Classroom during online teaching and learning activities.

As for the parents' perspectives, gadgets and Internet connection have been the main concern. About 72.7% of the participants (Participants A, B, C, E, F, G, I, and J) reported unstable Internet connectivity. Some parents were worried about the shortage of gadgets to support all their children's online classes. Participant A had raised a concern about "not having enough mobile phones" and they had no choice but to have the children "only do the homework… and they cannot attend the classes". Moreover, Participants F and G also

indicated that some students need to share the limited devices in their household with their siblings. It is evident that even if teachers are making attempts to teach the students, the lack of gadgets and the Internet results in some students being unable to gain knowledge from the teachers.

Some of the participants also perceived that limited assistance from parents is one of the prominent issues of conducting online teaching through Google Classroom. Participant B highlighted that the effectiveness of online teaching and learning among students with special needs highly depends on the assistance and guidance provided by the parents throughout the lesson. Participant F also emphasised that parents play an important role in improving the learning motivation among the students. Participant J emphasised that parents need to know how to assist students in uploading assignments or homework onto Google Classroom. On the other hand, Participant K highlighted that some of the parents do help to monitor the use of devices among the students at home.

C. Recommendations for Improvement

During the interview sessions, the participants were also asked to provide recommendations to improve the use of Google Classroom. From the responses, these findings were divided into three different facets: Google Classroom, school, and the government.

For Google Classroom

Generally, two different views were obtained in terms of improving Google Classroom. Participants A, C, and E recommended improving Google Classroom's functionality, particularly to promote student engagement and ensure attentiveness during lessons, such as requiring them to turn on their cameras. Participant E even mentioned the word "pretend" to describe students who appear to be paying attention in the lesson when they are in fact, not.

The participants also believed that Google Classroom should come out with its own gaming and learning applications. Most participants did not give specific examples of the kinds of games that should be incorporated into Google Classroom, but it was recommended that learning can ideally be made engaging through games to avoid boredom. Participant B cited the need for Google Classroom to have its own quiz application so that the teacher does not have to "attach things from here and there" to Google Classroom.

1) For Schools

Different suggestions were obtained based on the participants' recommendations for the school. Participant E called for "more practices" since "Google Classroom already did enough", and he believed that there is a need to understand "how we (teachers) are supported to maximise teaching" by the schools. Participant C, on the other hand, shared that schools should provide "basic computer literacy" for the students, where "a compulsory class" is available for them to acquire this literacy, as supported by Participant J, who mentioned that students nowadays need to develop their ICT skills.

2) For the Government

The interviewed participants also shared their suggestions on actions that the government or the Ministry of Education could take. Generally, the suggestions offered aimed at helping the teachers gain IT literacy through training, with Participants A and C suggesting "the need for training" by sending "the teachers to attend training sessions". Participant E believed that "sufficient training" is needed by sending "some experts to guide us (teachers)". Other than training, the participants believe that guidelines are essential for the teachers as well. Participant D said that "guidelines" must be available "where teachers and students (from) both sides can know how to utilise Google Classroom".

In addition to the training, Participant G suggested that the government should enhance awareness among parents in supporting online teaching and learning. Besides, half of the participants (Participants A, C, E, F, G, and J) have called for the need to improve Internet connectivity and provide sufficient gadgets to the school members. Participants A and C have raised concerns about Internet connectivity, and the government has "to ensure every location (in Malaysia) has a good Internet connection, including those (in) rural areas". Participant E has suggested providing gadgets to the school members, which "the government (should) allocate a significant amount of money for… education," such as providing "some laptop or… tab for the students with the latest version" to learn at home.

V. Discussions

Based on the findings, the participants indicated several benefits of using Google Classroom. They indicated that the platform allows teachers to monitor students' progress more effectively, especially by tracking students' submissions, which helps teachers manage their classes more efficiently. Besides, Google Classroom is also beneficial for organisation purposes as it enables teachers to assign homework, post reminders, and make announcements conveniently. The platform supports teachers in monitoring students' progress across different classes, providing a comprehensive overview of their academic performance. In addition, the automated grading features simplified teachers' workload and facilitated instant feedback on assignments. The incorporation of online applications such as Kahoot and Quizizz also enhances teaching effectiveness, making the lessons more interactive and engaging. Previous studies have highlighted these benefits [14], [15], and the current findings further expand the literature review by providing additional insights into how Google Classroom enhances the educational experience. Besides, the idea of integrating additional online applications is also supported which revealed that gamified experiences in online learning can make the lessons more enjoyable and motivating for students [33], [34]. However, it is essential for teachers to carefully design these gamified lesson plans to ensure the successful implementation of Google Classroom in teaching and learning.

Google Classroom is not only beneficial for teachers but also for students and parents. Based on the findings, the participants expressed that students exhibit increased interest in learning and are more engaged in lessons when using Google Classroom. Recorded videos help students to understand better and improve their academic performance [35]. The participants in this study further mentioned that video recordings allowed students to review the lessons and learn at their own pace, while the feedback features improved their learning experience as they provided easy access to teachers' comments. Besides, this feedback feature also helps parents to monitor their child's progress by identifying their strengths and weaknesses. Online learning positively impacts parents by enabling them to spend quality time with their children and allowing communication with teachers [36]. In addition, it was mentioned in this study that the 'raise hand' feature improves classroom interaction by enabling students to ask questions more effectively. Thus, Google Classroom enhances the overall learning outcomes by improving the students' digital literacy skills and developing essential 21st-century skills to prepare them for future globalisation trends.

While Google Classroom offers various benefits of using Google Classroom for teachers, however, there are also issues encountered by teachers. Participants highlighted difficulties with tasks requiring drawing and labelling, such as teaching the structures of animal and plant cells that require a graphic presentation. Hence, the findings highlighted the need for stakeholders to develop guidelines or modules to better support Science subjects. Besides, there is a lack of social presence during online learning, especially when students refuse to

respond to the teacher despite being called multiple times. Although the platform promotes two-way communication [14], the students may experience a lack of interaction with teachers to comprehend the learning materials [37]. Thus, addressing these issues is crucial for maximising its effectiveness in online teaching and learning.

Apart from that, the lack of IT literacy among the teachers also poses one of the significant issues regarding the use of Google Classroom. Interviewees revealed that the training provided is insufficient, as it only covers basic functions. Consequently, teachers often have to take the initiative to learn more advanced features via YouTube, resulting in an increased workload during the implementation of online learning. Additionally, there is a lack of awareness about the importance of online teaching and learning in schools, making it challenging for teachers to initiate online lessons. Previous studies mentioned that teachers are adopting Google Classroom poorly when conducting online teaching and learning [18], [19]. Findings have revealed that such poor adaptation may be a result of teachers not possessing adequate IT literacy and difficulty in teaching certain subjects through Google Classroom. Empirically, teachers seem to greatly lack IT literacy and are in great need of training to be provided by the government to utilise Google Classroom. Subsequently, it might lead to a situation where Google Classroom fails to uphold its potential as a learning platform, similar to the unsuccessful implementation of the Frog VLE [5].

Furthermore, students' discipline and attitude serve as an important matter in effectively implementing Google Classroom. Participants highlighted student procrastination in submitting homework and insufficient IT literacy among students from rural areas. Besides, the unstable network connectivity and lack of online tools and gadgets disrupt the learning process of the students as evidenced by the participants. As there were limited devices to use among the siblings, thus, some students were unable to participate in online lessons. Parental involvement is also essential, as parents play an important role in motivating their children by ensuring their children complete their homework. A similar study indicated that students hardly tune in to their homework and exhibit low participation in online learning [7]. Due to the socio-economic disadvantage backgrounds of students, it is challenging to have proper devices for online lessons [38]. Many students do not have sufficient access to mobile phones and computers to participate in online lessons [39]. Therefore, it is important to support the students in acquiring proper devices for online learning [40]. Remedies must be taken to help these teachers and students resolve the issues for quality education to be continued, regardless of the levels of education in the nation.

To improve the use of Google Classroom, participants provided some suggestions. Firstly, the participants revealed the need to improve the Google Classroom features by incorporating online gamification and learning applications into the platform. Such improvements could make lessons more engaging to attract the students. Additionally, schools need to conduct more ICT lessons to equip students with the necessary ICT knowledge and skills. Studies conducted found that some students were not technology literate and lacked exposure to utilising Google Classroom [38], [41]. Therefore, the government needs to take the initiative to improve students' ICT knowledge and skills to achieve the seventh shift of the transformation aspiration in the Malaysia Education Blueprint 2013-2025 – Leveraging on ICT for Quality Education [42]. Participants have expressed the need for the Malaysian government to take action to improve the quality of online teaching and learning. They suggest that providing sufficient training conducted by professionals, along with standardised guidelines for utilising Google Classroom, could help improve the teachers' ability to deliver online lessons effectively. This recommendation aligns with a study that highlights the importance of providing ICT training and guidelines for teachers, as it can equip teachers with the necessary knowledge and skills for using technology effectively [43]. Moreover, encourage stakeholders to introduce more online learning modules that align with 21st-century teaching approaches [43]. The National Fiberisation and Connectivity Plan 2019 – 2023 also focuses on the need to improve digital infrastructure in Malaysia [44]. Implementing these recommendations would not only enhance the effective integration of Google Classroom in teaching and learning but also reduce the digital divide between rural and urban areas.

As one of the critical themes that emerged in this study is the lack of IT literacy among teachers, it is undeniable that currently, the teacher training policies of Malaysia are still emphasising subject knowledge and pedagogical skills. There is a lack of structured, ongoing professional development in digital competencies despite the introduction of programs such as Digital Educational Learning Initiative Malaysia (DELIMa), which aims to provide resources for teachers, but it is apparent that these initiatives require stronger implementation and assessment mechanisms. To bridge the digital literacy gap among Malaysian teachers, it is recommended to primarily strengthen the digital training in pre-service education. The Ministry of Education (MOE) should mandate comprehensive IT competency courses in teacher training colleges and universities. These courses should include hands-on modules that integrate educational tools such as Kahoot and Quizizz within platforms like Google Classroom.

VI. Conclusion

This study provides new insights into the perceived benefits and issues of Google Classroom that can be further enhanced in the future, specifically focusing on the schools in West Coast of Malaysia, comprising Kuala Lumpur, Selangor, Perak, Johor, and Negeri Sembilan. Issues such as teachers' IT skills, lack of training, and awareness of online teaching methods have hindered the effective use of Google Classroom, even in developed regions like the West Coast. Additionally, unstable network connections and students' attitudes towards online lessons also affected the delivery of the lessons. Therefore, educational stakeholders need to take action to conduct comprehensive training to equip both students and teachers with the knowledge and skills to utilise technology efficiently anytime and anywhere. Advanced training for teachers on the latest technologies and the integration of gamified learning tools can significantly enhance the lessons to be more engaging and effective. Apart from training, there is also a need to improve the Internet connections, especially in rural areas. Hence, this study provides a better understanding from the teachers' perspective on Google Classroom for the government and policymakers, with the invaluable suggestions given by the teachers as the actual implementers of the educational technologies and platforms. Addressing the issues and recommendations from teachers could help create a more conducive learning environment and reduce the digital gap between rural and urban areas.

This research, however, may be biased as we have only gathered data from 11 school teachers' points of view. Furthermore, employing only a qualitative approach may be insufficient in providing generalisable and comprehensive data that accurately describes the phenomenon being investigated due to the subjective interpretation of data by the participants. To address these limitations and enhance the quality of studies in Google Classroom, future studies could consider employing a rigorous method in conducting the research, where mixed methods and longitudinal studies (pre- and post-pandemic) are

encouraged with triangulation to strengthen the validity and reliability of data. It can also include more than one data collection method to describe the phenomenon vividly. Researchers can continuously reflect on the research process and make necessary adjustments to designs, data collection procedures, interview questions, or data collection instruments based on the emerging insights and issues encountered from Google Classroom studies.

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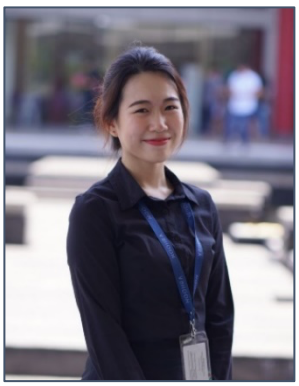
Appendix A: Interview Questions

Questions
Benefits
1. Does Google Classroom offer any benefits to you?
2. What are the benefits that Google Classroom brings to you?
3. Do you think the students also get the benefits of using Google Classroom? (If yes, what are the benefits?)
4. Among all the benefits that you have mentioned, what is the most significant benefit in your opinion? Why?
Issues
1. Do you encounter any issues (challenges/difficulties) while using Google Classroom?
2. What kind of issues have you encountered during online teaching using Google Classroom?
3. Apart from Google Classroom, did you encounter any issues from other aspects of your teaching routine? (e.g., from colleagues, parents, or students)
4. Among all the issues that you have mentioned, what is the most difficult challenge (or the primary challenge) in your opinion? Why?
Recommendations
1. Do you think Google Classroom is improving throughout the time you are using it as an online teaching and learning platform?
2. What are the improvements that you have observed?
3. Do you have any suggestions on improving the teaching and learning experience using Google Classroom?
4. In your opinion, what can the government do to improve the current situation of online teaching and learning in our country?

Appendix B: Word Cloud of the Findings



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