

FACTORS INFLUENCING THE USE OF GOOGLE CLASSROOM FOR LESSONS DURING COVID-19 PANDEMIC AMONG SECONDARY ESL INSTRUCTORS

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Abstract: Due to COVID-19, the education has transformed its mean of delivery from face to face to online lessons. This study evaluates the factors influencing Google Classroom (GC) use for lessons during COVID-19 pandemic among secondary ESL instructors in four northern states located in Peninsula Malaysia. A non-experimental research design was employed. Primary data collected from a self-administered online survey questionnaire are analysed descriptively in a general survey of trends, involving 103 survey respondents (i.e., teachers). The results of this study will help the stakeholders in Malaysian education to understand the factors affecting the use of GC at schools to make relevant decisions on its use among teachers. Besides, it will assist the Ministry of Education Malaysia to formulate policies related to the use of GC and assist secondary school administrators to make decisions on the type of infrastructure and technical support needed. A longitudinal study which included training programmes is recommended to assess the factors affecting GC used for instructions as such study will indicate whether longer instructions period results in better use of GC or not. This research extends value in the field of teachers' instructions because it can be used to carry out further investigations in improving the use of GC among teachers. A possible global extension of this study should be conducted to further determine the power of GC instructions or other virtual instruction platforms in advancing virtual instruction prowess.

Keywords: COVID-19 pandemic, ESL instructors, Google classroom, lessons, secondary instructors

1. Introduction

The Covid-19 Pandemic has eternally altered the way Malaysians from all strides of life are living. Adjustments are needed to be made, and new norms are established and adhered to. This includes the way education is delivered. On March 18, 2020, in line with the nation's first phase of Movement Control Order (MCO), schools in Malaysia were closed disrupting learning for almost 5 million students. Google Classroom is one of the top LMS in the world, with Schaffhauser (2020) reporting that it is the number one education application during the initial weeks of the Malaysian MCO. It is an integrated LMS where it offers a cost-effective learning platform that is scalable to mobile and smartphone platforms, accompanied by an easy interface. It also facilitates interaction and discussion among its members, video lectures, students messaging, and linking and inclusion of third-party materials such as from YouTube (Elkington, 2020). However, the implementation of LMS like Google

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Classroom is still considered to be very late. Educators seem to use direct communication channels more, such as through short messaging services (SMS) and social messaging applications like WhatsApp to disseminate information, announcements, homework, lectures, and contents rather than using as a more organized and comprehensive platform like Google Classroom (Adnan, Ya Shak, Karim, Tahir, & Shah, 2020; Karim, Adnan, Tahir, Adam, Idris, & Ismail, 2020). Hence, this study aims to assess factors affecting Google Classroom (GC) use in delivering learning during the Covid-19 pandemic among secondary English teachers in the northern states of Peninsula Malaysia namely Perlis, Kedah, Penang and Perak. It is hoped that the results of this study could play a role in the formulation of approaches and guidelines to enhance the adoption of educational technologies in a developing country like Malaysia (Adnan, Karim, Tahir, Mustafa Kamal, & Yusof, 2019).

2. Research Objectives and Questions

2.1 Research objectives

- a) To examine the effects of technical support towards the use of Google Classroom among teachers during Covid-19 pandemic.
- b) To assess the ESL teachers' attitudes towards the use of Google Classroom during Covid-19 pandemic.
- c) To determine the significant factors affecting the use of Google Classroom among teachers during Covid-19 pandemic.

2.2 Research questions

- a) How does technical support affect the use of Google Classroom among teachers during Covid-19 pandemic?
- b) What are the ESL teachers' attitudes towards the use of Google Classroom during Covid-19 pandemic?
- c) What are the significant factors affecting the use of Google Classroom among teachers during Covid-19 pandemic?

3. Literature Review

3.1 Factors in Adopting a Learning Management System among Educators

Many factors could affect the adoption of an LMS among educators. These factors must be given ample considerations since the teachers themselves are a significant contributing factor for the effective application of any educational technology initiative (Schaffhauser, 2020; Karim, Adnan, Tahir, Adam, Idris, & Ismail, 2020). Not only that, the factors affecting instructors' use and adoption of LMS must also be explained and unearthed to ensure the successful performance and continuous results of these systems in higher education institutions (Coskuncay & Ozkan, 2013).

In talking about institutional support, Alhardy and Lally (2017) noted that these educators mentioned that a lack of technical and administrative support could deter them from adopting ICT education solutions in their teaching (Adnan & Zamari, 2012). Moreover, meagre institutional incentives in utilizing ICT were also cited as another factor that could stop ICT adoption by these educators (Adnan & Zamari, 2012). In the context of an LMS, a similar finding was also disclosed by Asamoah (2018), where it was found that institutional support and ICT policy had a positive and significant influence to the actual use of an LMS. He further recommended that universities must make sure that the LMS is made simple to use "by ensuring that power, Internet connectivity, appropriate software and technical staff are always available" (p. xi).

Meanwhile, Asiri, Mahmud, Bakar, and Ayub (2012) and Alghamdi and Bayaga (2016) who also studied Saudi Arabian educators' use and attitudes towards LMS concluded that the educators' attitudes could prove to be a barrier in the successful implementation of an LMS. As stated by Alghamdi and Bayaga (2016), they were found to entertain their fear of using technology in general and an LMS specifically too far. Even though these educators showed a positive attitude towards the LMS usage

among their students as they have greater chance to prepare and interact with the materials before attending classes, these educators also revealed a negative attitude towards its usage, where they were highly suspicious or caution about using an LMS as a tool for online assessment. They also viewed their colleagues who adopted LMS earlier than them not in a favourable light. Hence, it is imperative that these educators “tune their attitude towards wider LMS usage in most of their teaching activities to tap into all the benefits of LMS in their various institutions for students’ benefit” (p. 2324). What is more, one’s attitude determines his or her intention, which further shapes the actual behaviour (in using an LMS) (Fathema, Shannon, & Ross, 2015).

3.2 Factors that affect the use of Google Classroom among educators

Interestingly, Iftakhar (2016) disclosed one of the major factors that led teachers in Bangladesh to use Google Classroom in their instructions was for their career advancement, where all teachers must prove their participation in virtual classrooms as part of the requirements to be promoted. On the other hand, these teachers also employed the use of Google Classroom due to its flexibility in which classes can be conducted anytime and anywhere, especially if the classes had to be postponed due to national holidays or other academic commitments that the teachers needed to commit to. This flexibility has also helped them to complete the assigned syllabus. Moreover, another factor is the opportunity for collaborative learning that is offered by Google Classroom. The students, for instance, can submit their group assignment and upload it to the platform, and their performance can easily be assessed, and grade can be objectively justified by the teachers. Google Classroom use is also free of charge, so utilization can be performed as needed and also through multiple platforms for example through computers and mobile phones (Alim, Linda & Shamsuri, 2019).

Ballew (2017) underlined that teachers’ inclination to use Google Classroom could be determined by three factors which were their years of experiences, the grade or the level of students they were assigned to, and the subject matter or the content that they were teaching. First, in terms of experiences, Ballew reported that younger teachers were more likely to use Google Classroom since they were deemed to be more familiar with technology, especially having recently attended college and pre-service training. Besides, teachers who were least exposed to technology and educational technologies approach naturally will feel uncomfortable to use Google Classroom in their instruction. Second, with regard to the grade of students these teachers were teaching, Ballew (2017) revealed that the higher the grade of students that these teachers were assigned to, the more likely these teachers were going to adopt Google Classroom in their instruction. This means that teachers who teach the Upper Secondary students will utilize Google Classroom more than their counterparts who teach the Lower Secondary level. Third, it was also acknowledged that the subject matter or content that is taught by these teachers could be a deciding factor whether they will employ the use of Google Classroom or not. Mathematics teachers, for instance, showed more resistance towards the use of this platform as they believed that Google Classroom did not necessarily lend itself to the teaching of mathematical equations and number sequencing. Nevertheless, English and Science-related teachers seemed to be content with the use of Google Classroom, as they felt that the teaching of these subjects could be enhanced by using this platform.

4. Research Methodology

This study utilized the survey research design involving quantitative approach (Al-Adwan & Smedley, 2013). The fieldwork was divided into two different inter-connected phases based on the objectives of the study. For the first phase, the data were collected through the administration of the online questionnaire. The distribution of the questionnaire involved 100+ secondary ESL teachers in the northern states of Peninsula Malaysia namely Perlis, Kedah, Penang and Perak. The items in the questionnaires are adapted from Al Qudah (2014) who carried out a somewhat similar empirical study related to factors affecting the acceptance of Moodle among lecturers at Jordan University. The questionnaires were modified to suit the milieu of this current study. The second phase involving qualitative data collection will not be covered in this paper.

This study also employed convenience sampling, which is one of the non-probability sampling methods to select respondents (or survey takers). An electronic cover letter was attached to the survey

questionnaire to introduce the respondents to the research topic and also to avoid any suspicions or mistrust the respondents might have with regard to the study. Other than explaining the purpose and importance of this study, the cover letter also motivated and guided respondents to answer the online questionnaire, as they were given assurance in terms of their anonymity and confidentiality in the part of their responses. Personal data of the research team in the form of e-mail addresses and mobile phone numbers were also given out to prepare for further clarification about the questionnaire as and when needed. Items in the online questionnaire were measured using a six-point Likert Scale, with 1 representing “Strongly disagree” and 6 representing “Strongly agree”; they responses are clustered into ‘negative’ and ‘positive’ sides respectively.

The items are in the form of ‘I-statements’, and respondents are required to indicate to what extent they agree or disagree with each statement provided (Zikmund, Carr, & Griffin, 2013). According to Mohd Tahir and Tunku Mohtar (2016), a pilot test is always useful for testing the wording, sequencing and layout of any questionnaire, estimating the response rate and time needed to complete the questionnaire, testing the analysis procedure, and gaining familiarity with respondents. Due to these factors, the original instrument was initially distributed to 30 teachers in an urban area in the state of Perak. These teachers did not participate in the actual study but they provided useful input in terms of the questionnaire as they were able to identify difficulties in terms of the wording as well as to answer the research team’s queries about the relevance and usefulness of the original survey questionnaire. The data collected are presented and analysed in the next section.

5. Data Presentation and Analysis

As mentioned in the previous section, an online survey questionnaire was deployed to collect useful and useable data from secondary ESL teachers in the northern states of Peninsula Malaysia namely Perlis, Kedah, Penang, and Perak. A total of 103 teachers ($n = 103$) responded and completed a 21-item survey questionnaire. 59 of the respondents are female teachers with another 44 male teachers. About half of the teachers are of Malay ethnicity while the others are Chinese, Indians and other ethnicities, respectively. All the teachers who responded have at least three years of teaching experience and they are all working in permanent contract positions in government-funded secondary schools (or ‘*Sekolah Menengah Kebangsaan*’) in the four states, focusing primarily on the teaching of English as a Second Language.

Other than demographic data, the online questionnaire also sought to understand three major areas related to Google Classroom use: first, technical knowledge that impacts upon the adoption of Google Classroom and other LMSs in teaching and learning; second, the attitudes and behaviours shown by teachers with reference to Google Classroom and other LMSs; third, wider factors that influence the use of Google Classroom and other LMSs during this global pandemic period but limited to the Malaysian context.

5.1 Technical knowledge that impact upon the adoption of Google Classroom and other LMSs in teaching and learning

Table 1 shows the findings for item number 1 in the online survey: ‘I have enough technical knowledge to use Google Classroom and other LMSs’ (data are presented in this paper in the form of ordinal numbers and percentages).

Table 1: Survey Item Number
“I have enough technical knowledge to use Google Classroom and other LMSs”

<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
5 4.85%	26 25.24%	18 17.48%	17 16.50%	29 28.16%	8 7.77%

The data in Table 1 show that the survey respondents are about similarly divided between those who feel that they possess the technical knowledge to use Learning Management Systems like Google Classroom and those who feel that they do not possess that knowledge. This should be a cause for

concern in terms of planning for a future where technology will be more prominent in the teaching of English and other humanities and social sciences subjects. The mean for the survey item number one is $M=3.612$. Table 2 illustrates the data in relation to survey item number 3: ‘I am able to quickly learn about using Google Classroom and other LMSs’.

Table 2: Survey Item Number 3
“I am able to quickly learn about using Google Classroom and other LMSs”

<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
5	20	19	15	34	10
4.85%	19.42%	18.45%	14.56%	33.01%	9.71%

Again, it is possible to argue that although there are Malaysian teachers who are confident in terms of acquiring new knowledge in relation to the use of Learning Management Systems like Google Classroom especially, there are also local educators who are not confident that they can learn about new technological tools that can help them in the process of teaching and learning. This is clearly a cause for concern for an upper middle-income nation like Malaysia that is striving actively to become a fully developed nation in the truest sense of the term. The mean for this survey item is $M=3.524$.

5.2 Attitudes and behaviours shown by teachers with reference to Google Classroom and other LMSs

In Table 3, the data show that in general, Malaysian English language teachers harbour positive attitudes toward the teaching and learning of English with the aid of Learning Management Systems like Google Classroom. Still, the numbers should indeed be higher to reflect the strong economic state of the nation and the heavy focus put on technologies of learning in the Malaysian context by the Ministry of Education.

Table 3: Survey Item Number 8
“I feel positively about using Google Classroom and other LMSs for ELT”

<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
4	17	17	12	40	13
3.88%	16.50%	16.50%	11.65%	38.83%	12.62%

Only slightly more than 60% of the respondents seem to feel ‘positive’ with reference to using Google Classroom and related Learning Management Systems for delivery of educational materials to their secondary students. Although this number is not low by any standard, again this does not reflect the educational policies related to secondary education that are currently in force in Malaysia that place heavy emphasis on the notion of 21st century learning experiences. The mean for this survey item is $M=4.029$.

5.3 Wider factors that influence the use of Google Classroom and other LMSs during global pandemic period (in the Malaysian context)

Malaysia, like other countries in the world, has suffered due to the viral pandemic. At the same time, many Malaysian teachers have been taking positive steps to ensure that their technical knowledge is increased in line with the attitudes that they show toward Learning Management Systems like Google Classroom for the teaching and learning of English. Nevertheless, there are also wider factors to be considered in terms of the deployment of technological tools, as Table 4 exemplifies.

Table 4: Survey Item Number 15

“I don’t mind using Google Classroom, but the problem is my Internet connection”					
<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
0	4	2	21	45	31
-	3.88%	1.94%	20.39%	43.69%	30.10%

Table 4 shows that the problem of weak or bad Internet infrastructure makes it really difficult for Malaysian teachers of English, or indeed in any other subjects, to accept the wider use of Google Classroom or any other Learning Management Systems. When 94% of Malaysian teachers reported that they have a problem with their Internet connectivity, this means that something is quite not right with the standard of information and communication technologies in this rapidly developing country that will make it difficult for 21st century technologies to be employed widely during this pandemic period and in the years ahead. This same sentiment is somewhat reflected in Table 5 that depicts the hardware that Malaysian English language teachers possess to help them educate students through technologies.

Table 5: Survey Item Number 17

“I can use Google Classroom because I have the right equipment (e.g., PCs and modems)”					
<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
0	14	11	14	41	23
-	13.59%	10.68%	13.59%	39.81%	22.33%

Table 5 suggests that roughly one in four Malaysian teachers of English do not have the correct equipment to manage teaching and learning processes using updated technologies like Google Classroom and other Learning Management Systems. The mean for survey item number 17 and 18 are M=4.942 and M=4.466. Again, whilst this is not a large number, it does not align with the aspirations of the Malaysian government that want to move the Malaysian education system into the 21st century, in the nearest future.

6. Conclusion

This pandemic has radically changed education for the better. The education sphere has been conservative and resistant to changes throughout history. However, the pandemic has driven schools, colleges, higher education institutions and online training providers to ensure that successful learning continues through technology. Technology turns a laptop screen into a classroom where students and teachers can see each other and question each other in a truly collaborative online learning environment. Hence, now the students are only a finger-click away from Google’s immense knowledge base.

At the same time, there are teething problems that need to be handled and solved, as quickly as possible, as shown in the previous section. If not, then the aspirations of the Malaysian government to take Malaysian education to the next level will never become real. What is worse, Malaysian students will not benefit from rapid changes in technologies of teaching and learning that have been sweeping richer nations of the world.

A longitudinal research involving training systems is advised to determine the variables impacting GC used for advice since this study would show whether or not longer length of instructions results in improved use of GC. This study adds importance in the field of classroom instruction, as it can be used to carry out further investigations to enhance the use of GC by teachers. A potential global expansion of this study should be pursued to further assess the influence of GC instructions or other virtual instruction channels to advance virtual instruction skills.

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