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THE USE OF GOOGLE CLASSROOM AMONG SECONDARY SCHOOL TEACHERS

[1]Shushma Devi Piaralal, [*2]Mohd Haniff Mohd Tahir, [3]Airil Haimi Mohd Adnan, [3]Dianna Suzieanna Mohamad Shah & [3]Mohamad Syafiq Ya Shak

[1] Department of English Language, Sekolah Menengah Kebangsaan Buntong, 30100 Ipoh, Perak, Malaysia.
[2] Faculty of Languages and Communication, Universiti Pendidikan Sultan Idris (UPSI), 35900 Tanjong Malim, Perak, Malaysia.
[3] Academy of Language Studies, Universiti Teknologi MARA (UiTM) Shah Alam, 40450 Shah Alam, Selangor, Malaysia.
[*]Corresponding author: haniff.tahir@fbk.upsi.edu.my

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ABSTRACT

Background and Purpose: Google Classroom is one of the technological innovations that has been developed to allow teachers and learners to meet virtually to promote an engaging teaching and learning experience. This paper outlines the results of a survey that was carried out to identify the factors influencing the intention to use Google Classroom among secondary school teachers in Kinta Selatan District in the State of Perak, Malaysia. The study investigated the different parameters that contribute directly to teachers' intention to use Google Classroom: technical support, attitude, perceived ease of use, perceived usefulness, and technological knowledge.

Methodology: The sample consisted of 216 government secondary schools in Kinta Selatan District. The principals of the schools assisted in distributing a self-administered questionnaire to the participants.

Findings: The study revealed that attitude, perceived usefulness, and technological knowledge significantly affect the intention to use Google Classroom. Regarding technical support and perceived ease of use, the relationship with the intention to use Google Classroom was found negative.

Contributions: This study contributes to the field of Google Classroom in education by providing a foundation for future research aimed at enhancing teachers' effectiveness in using Google Classroom for teaching.

Keywords: Google Classroom, secondary schools, teachers, technology, classroom.

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1.0 INTRODUCTION

In 2014, Google Apps for Education (GAFE) launched Google Classroom (GC). The application is free for teachers and students, making it an ideal fit for developing countries with limited budgets. It is provided without cost for schools, where the class security feature is also free for plan holders (Ventayen et al., 2018). It has been employed by teachers in the learning process (Railean, 2012) and is listed as one of the leading scaffolds for strengthening teachers' workflow (Iftakhar, 2016). GC grants permission to the teachers to invest extra time with their students and reduce their time spent on paperwork, and at present, it is even better (Martínez-Monés et al., 2017). This application service is considered a substitute way of solving problems and threats in classroom teaching (Brown & Hocutt, 2015). GC is a substitute way to increase the quality of learning (Sewang, 2017) and a medium for Improving the Attainment of Graduate Attributes (Madhavi, Mohan, & Nalla, 2018). Ventayen et al. (2018) state that GC promotes paper-free instruction for streamlining assignments and improves collaboration. Fostering seamless communication to make teaching more dynamic, meaningful, and purposeful. As it is easily deployed in the URL classroom.google.com, teachers can organize the classroom in minutes and set up suitable content for teaching the students more effectively (Ventayen et al., 2018).

Looking at the different terms used for GC, Sudarsana et al. (2019) categorized GC as LMS, while Ventayen et al. (2018) categorised it as online learning. According to Wijaya (2016), Classroom use of Google which is categorized as e–learning is expected to improve quality and provide assistance in education. In Singapore, GC is used as a virtual classroom for secondary students for all the subjects without exception, covering the language subjects too e.g. English, Indonesian, and Chinese. Since 2015, Pantai Indah Kapuk School has fully utilized GC as a part of G-Suite for Education. The data by Ashari (2015) on the benefits and

barriers of using GC is hoping to be beneficial to understand, evaluate, and reflect on the use of GC as a virtual classroom used in language classes. Rabbi, Zakaria, and Tonmoy (2017) state that GC is a present evolution of Google for academic institutions to secure a blended learning scaffolding to simplify inventing, distributing, and evaluating assignments in an environment without paper.

1.1 Research Objectives

1. To examine the relationship between technical support with the intention to use GC
2. To determine the relationship between teachers' attitudes towards technology with the intention to use GC
3. To determine the relationship between PEOU with the intention to use GC
4. To examine the relationship between PU with the intention to use GC
5. To determine the relationship of teachers' technological knowledge with the intention to use GC
6. To determine the most significance factor between all the factors with the intention to use GC

1.2 Research Questions

1. Is there any relationship between technical support with intention to use GC?
2. Is there any relationship between teachers' attitudes towards technology with the intention to use GC?
3. Is there any relationship between PEOU with the intention to use GC?
4. Is there any relationship between PU with the intention to use GC?
5. Is there any relationship between teachers' technological knowledge with intention to use GC?
6. What is the most significant factor of the intention to use GC among all the factors?

1.3 Research Hypothesis

HI Technical supports positively influence the intention to use GC

H2 Teachers' attitudes towards technology have a positive influence on the intention to use GC

H3 Perceived Ease of Use (PEOU) has a positive influence on the intention to use GC

H4 Perceived Usefulness (PU) positively influence the intention to use GC

H5 Teachers' technological knowledge has a positive influence on the intention to use GC

H6 There is a significant relationship between technical support, teachers' attitudes, PEOU, PU, and technological knowledge with the intention to use GC.

2.0 LITERATURE REVIEW

GC is a merge or blended learning of online digital media with traditional classroom methods (Rabbi et al., 2017) and supported by Iftakhar (2016), who states that GC grants teachers permission to spend extra time with their students and reduce time doing paperwork. With the latest updated functions, it provides the newest announcements and grants more than a teacher to be included in a classroom besides preparation for the classes could be ahead of time too (Iftakhar, 2016). Ventayen et al. (2018), in their research, concluded that GC plays a great role in making learning easier and is highly recommended as it saves cost and acts as a platform for E-learning tools. Rahmad et al. (2019), in a study done at Universitas Negeri Medan, Indonesia, on Meteorology and Climatology students, state that utilization of GC in learning made it effortless for lecturers and students to organize lectures, specifically in terms of task management, students learn independently, and critical thinking of students are at medium level.

As for Malaysia, from 2012 till June 2019, Frog Virtual Learning Environment (VLE) has been utilized to promote quality teaching and learning in Malaysia's government public schools. It was the main mechanism for supporting virtual learning in primary and secondary schools in Malaysia (Kaur & Hussein, 2014). It acts as an instrument to support students' learning which evolved from the 1BestariNet Project. A few studies have been done on Frog VLE as it was a platform used in Malaysian primary and secondary schools before it was abolished in Jun 2019 and replaced by GC. Restricted access to the internet, inadequate teaching time, and teachers' excessive workload are the major obstacles to Frog VLE usage (Norazilawati et al., 2013), lack of awareness of Frog VLE (Hussin, Jaafar, & Downe, 2011), lack of technology (Sailin, 2014), teachers' attitude (Van Raaij & Schepers, 2008) is among the

variables tested. Kaur and Hussien (2014) have shown that despite completing the Frog VLE training among teachers, some teachers have failed to use it in their daily teaching and learning process.

Internet connection plays an important role in LMS, as mentioned by Rani, Suradi, and Yusoff (2014), who claimed that internet connection contributes significantly to the usage of the tool. Many teachers refused to go on using the system, although they approved of the advantages provided by Frog VLE (Cheok & Wong, 2016). Second, a few studies also suggest an association between user satisfaction and the actual usage of LMS (Eom, 2012, as cited in Mohammadi, 2015). Van Raaij and Schepers (2008) state that in the Frog VLE case, teachers who decided to join the virtual teaching are motivated to help their school obtain the highest achievement usage of Frog VLE because of their (teachers) general attitude towards new technology. Auditor–General's Report 2013 (KPM, 2013) has mentioned that the Frog VLE project had not accomplished its aims of equipping high-speed 4G broadband and VLE platform to schools in the country. The report has also acknowledged that the level of VLE utilization by educators, students, and parents was very depressing, which is between 0.01% to 46.9% (Cheok, Wong, & Ayob, 2017).

Many researchers in foreign countries highlighted the benefits of GC. In the Malaysian context, the Auditor General Report 2013 related to Frog VLE in Malaysia has highlighted the problems in the implementation of Frog VLE in public schools. This has urged the Ministry of Education (MOE) to implement GC, which is believed to have the potential to fully engage students and educators to promote the teaching and learning process. By adopting GC, teachers are forecasted to promote teaching by supplying students with access to subjects closely related to information and providing complete chances to communicate with teachers and friends.

The lack of research on GC, specifically in Malaysia, as it has been introduced recently, has prompted the need to investigate the intention of teachers in secondary schools to use the tool. The intention to use the technology for the right purpose is one of the major barriers educators face when supervising a VLE. Therefore, this study is focused on assessing the factors affecting the intention to use GC. So far, to the best knowledge of the researcher, all the studies conducted on GC have indicated responses from the students and lecturers. None of the research has focused on considering the secondary school teachers in Malaysia and the factors affecting the intention to use GC among them. Besides that, most of the research has been done in a foreign context, and results cannot be generalised for Malaysia due to different cultures. As Malaysia has used Frog VLE as a virtual learning before, many studies have carried out to understand the usage and intention in various fields. Still, as far as GC is

concerned, to date, no data has been collected. Considering the importance of GC in Malaysian education system, this study would like to explore the factors that affect the intention of secondary school teachers to use it as a tool in their classrooms.

2.1 Theoretical Framework

For this study, the Technology Adoption Model (TAM) developed by (Davis, 1989) is being proposed to test the variables identified, such as technical support, attitude, perceived ease of use (PEOU), perceived usefulness (PU), and technology knowledge. The researcher has examined the direct relationship between PEOU and PU as external variables with the intention to use. At the same time, attitudes towards technology will also act as an external variable in studying the intention to use GC. As GC is recently introduced in primary and secondary public schools, it is vital to evaluate the intention of teachers to use this tool. The role of instructors, students, and schools in supporting such technology's success is important. The factors on technological knowledge, technical support, PU, PEOU, and attitudes towards technology are categorized as independent variables. Considering the parsimonious nature of TAM, this study integrates technology factors (technological knowledge, technical support, PEOU, PU and attitudes towards technology) with TAM to test a model to evaluate secondary schools' intention to use GC.

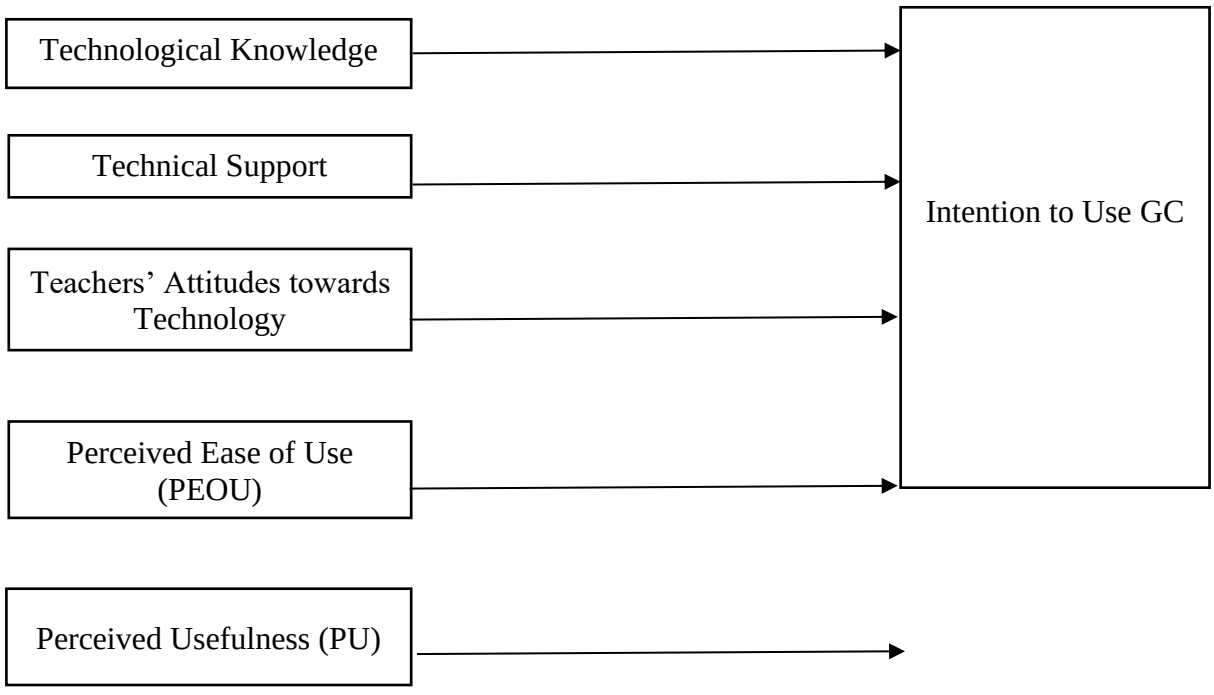

Figure 1: Research framework

3.0 RESEARCH DESIGN

The data was collected by employing the survey method. A set of questionnaires was developed for this purpose. The non-experimental method is chosen because the researcher cannot directly manipulate the independent variable or randomly assign research participants (Johnson & Christensen, 2008). It is also further explained by Creswell (2014) that a non-experimental approach does not lead to a causal relationship. It assists in providing the details of the relationships between variables and describes trends in the data. As for this investigation, self-administered questionnaires were applied as the research tool, and the survey collected data at a specific time. The aim is to describe the dependent variable of interest and examine the connection between the dependent and independent variables in the investigation. Using a self-administered questionnaire gives respondents confidentiality when completing questions. Also, it allows respondents to complete questions at times that are convenient and suitable to them, as the respondents can answer the questions without the interviewer being present (Saunders, Lewis, & Thornhill, 2011).

Specifically, a collection of questionnaires was prepared to study the factors affecting the intention to use GC among secondary school educators in the Kinta Selatan district in daily public secondary schools, and this method was ideally suitable for the descriptive and predictive goals of survey research. Therefore, this method is appropriate for this quantitative study where "the questionnaires were used to provide answers from a relatively large number of groups" (Mohd Tahir et al., 2020a, p. 162) to answer the research objectives and also to test the intention to use GC among teachers.

3.1 Participants

Mohd Tahir and Tunku Mohtar (2016) state that a sample size should be representative of the population. The size of the population should be sufficient to obtain the desired accuracy. This research investigated the factors affecting the intention to use GC among secondary school teachers in Kinta Selatan, Perak. The target population identified were the teachers of Kinta Selatan, Perak, who are teaching in government secondary schools in the district. Kinta Selatan consists of fourteen (14) secondary schools with a whole population of 1103 teachers.

Convenience sampling was utilized. It is one of the non-probability sampling methods used to select the respondents for this survey to collect the sample elements. The respondents were selected because of their availability at the right venue and time (Mohd Tahir et al., 2020b). This method is the most commonly used, uncostly and a list of population elements is not required. According to Krejcie and Morgan's (1970) table, a sample size of 278 is needed

for the total population of 1000, about 28 per cent. Based on the discussions, for this research study, a representative sample requires a certain percentage of the statistical population to replicate as closely as possible the quality or characteristic being studied or analysed (Sekaran, 2006). The 280 samples were taken to represent 28 per cent (Krejcie & Morgan, 1970) of the total number of 1103 teachers in the population, and it is an adequate sample size for the study. The questionnaires were dispersed to the educators of the Kinta Selatan District's secondary schools with the school principals' assistance. The researcher collected the questionnaires personally from each school upon receiving calls from participating schools.

3.2 Materials and Instruments

The researcher developed a questionnaire to obtain information needed for the study because this study applied a quantitative research method to explain the relationship between variables. The respondents were requested to demonstrate their level of agreement with the items listed. Items in the questionnaire were measured utilizing a five-point Likert Scale, with 1 representing "Strongly disagree" and 5 representing "Strongly agree". The respondents must indicate to what extent they agree or disagree with each statement. Overall, the questionnaire in this study contained seven sections, namely, (a) teachers' demographic characteristics, (b) technical support, (c) teachers' attitudes, (d) PU, (e) PEOU, (f) intention to use GC, and (g) technological knowledge. Part A collects the basic demographic data such as gender, age, education level, teaching experience, type of teacher, and frequency of GC usage. Section A consists of six (6) questions, and the respondents must provide their background information. Section B is aimed at getting the respondent's opinion on the support they received when they engaged themselves with GC; Section C is designed to gain some information on the respondents' opinions on GC usage. Sections D and E are projected to get information on how they find GC in their teaching and learning. Section F aims to gather information on their present and plans to continue using GC, and lastly, Section G is developed to look at the level of knowledge related to GC that they possess.

The questionnaires consist of six scales and are adapted from AlQudah (2014) for variables of demographics, technical support, attitudes towards technology, and intention to use is adapted from AlQudah (2014) and Amin (2008). As for PU and PEOU, questionnaires from Al–Ala and Alnawas (2011) were adapted. Lastly, for the variable of technological knowledge, it is adapted from Archambault and Barnett (2010). The questionnaires of these studies were retrieved and modified according to the needs of the present study.

3.3 Research Procedures

In this study, the data is collected through a survey-based approach, which is developed based on the study's objectives. A survey is a research technique in which information is gathered from a sample of people using a questionnaire (Zikmund et al., 2013). A letter of support from Open University Malaysia (OUM) was used to access the schools and teachers. A cover letter is attached to the survey questionnaire to familiarize the respondents with the research topic. It is also to avoid any suspicion or mistrust which respondents might have related to the study. The attachment letter also aims to inspire and instruct the respondents to answer the questions in the study and, at the same time, assure them of anonymity and confidentiality. The cover letter attached to the questionnaire describes the survey's aims and highlights its importance. The researcher's email address and mobile phone number are included, too, in case further explanations about the questionnaire are required. The respondents were assured of complete confidentiality, and honest opinions were encouraged, and the set of questionnaires was delivered personally to school principals of each school.

3.4 Data Analysis

The data collected from the questionnaires was analysed using the Statistical Package for Social Science (SPSS) version 26. Multiple regression analysis was used to determine the proportion of variance in the intention to use GC that can be explained by the selected independent variables and the relative significance of each in explaining the dependent variable. According to Pallant (2016), multiple regression can be used to explore the relationship between one continuous dependent variable and several independent variables. In this study, all the hypotheses were tested using the Pearson correlation to determine the relationship between independent and dependent variables.

3.4.1 Descriptive Statistics

Descriptive analysis is utilized to identify the respondents' profiles. The result of this analysis would help to identify any biases in the response. The analysis used are mean, standard deviation, maximum, and minimum values.

3.4.2 Pearson Correlation

According to Plackett (1983), the objective of the correlation coefficient is to figure out a significant relationship (i.e., correlation) between two variables. The most commonly used correlation coefficient is the one published by Karl Pearson in 1895. The correlation between

any two variables using Pearson's r will always be between –1 and +1. A correlation coefficient of 0 means no positive or negative relationship between these two variables (Plackett, 1983). All the hypothesis in this study was tested using Pearson Correlation to determine the positive or negative relationship of independent and dependent variables.

3.4.3 Multiple Regression Analysis

According to Pallant (2016), multiple regression is a family of techniques that can be used to explore the relationship between one continuous dependent variable and several independent variables. It can be used to address a variety of research questions and to tell us how well a set of variables can predict a particular outcome. This study conducted multiple regression analysis to test the hypotheses and their relationship with the dependent variable. Hierarchical regression analysis was also performed to test the hypotheses and explain the relationships between independent and dependent variables. The significance of the hypothesis was measured by referring to the P-value, where the lower the P-value is, the higher the significant level. R–Square is to determine the percentage variance of the dependent variable that can be explained by the independent variable.

4.0 ANALYSIS AND DISCUSSION

4.1 Correlation Analysis

The result of the correlation analysis displayed in Table 1 proved the existence of a correlation between dependent and independent variables. Technical support (r = 0.39), teachers' attitudes (r = 0.69), perceived ease of use (r = 0.68), perceived usefulness (r = 0.14) and technological knowledge (r = 0.60) were found to be related positively to the intention to use and are significant at 0.01. As there is no negative value, it showed only positive relationships of the variables with the intention to use GC.

Table 1: Pearson correlations of study variables (N=216)

	Technical Support	**Teachers' Attitude**	**Perceived Ease of Use**	**Perceived Usefulness**	**Technol-ogical Knowle-dge**
Technical support	1				
Teachers' attitudes	0.53	1			
Perceived ease of use	0.41	0.78	1		
Perceived usefulness	0.21	0.14	0.41	1	
Technological Knowledge	0.39	0.53	057	0.24	1
Intention to use	0.39	0.69	0.68	0.14	0.60

4.2 Descriptive Statistics

Descriptive statistics analysis was performed to determine the variables' mean scores and standard deviations. Taking 216 valid cases into account, the total was examined for five independent variables and one dependent variable; the statistics output is shown in Table 2.

Table 2: Descriptive statistics for all the principle variables (N=216)

Variables	**No of Items**	**Mean**	**Standard Deviation**
Technical support	5	3.16	0.672
Teachers' attitude	3	3.50	0.843
Perceived ease of use	5	3.24	0.755
Perceived usefulness	5	3.15	0.570
Technological knowledge	11	3.01	0.800
Intention to use	6	3.26	0.843

The mean scores for all variables are above 3.0. The mean of teachers' attitudes was the highest, 3.50, as shown in Table 2. The teachers' attitude should be right towards the intention to use GC as it is very important in carrying out their daily tasks in the teaching line. Technological knowledge is found to have the lowest mean, 3.01. It can be concluded that teachers need to upgrade their technological knowledge to promote the intention to use GC.

Standard deviations for the five independent variables and one dependent variable were 0.570 to 0.843**.** This shows the presence of significantly small variability within the data set. The variation value signifies that all the answers given by the respondents in the survey

questionnaires regarding research variables were not very diverse from one respondent to another respondent. This indicates the presence of small differences in the responses.

4.3 Hypothesis Testing

Multiple regression was used to test the hypotheses for H1, H2, H3, H4, H5 and H6. This method was applied to examine the direct relationship between independent and dependent factors and to determine the most significant factor of the intention to use GC among all the factors. The results of regressions are tabulated in Table 3. Hypotheses number one to six (H1, H2, H3, H4, H5 and H6) have been tested to look into the direct association between all the independent variables (technical support, teachers' attitudes, PEOU, PU, and technological knowledge) with a dependent variable (intention to use).

Table 3: Multiple regressions for factors affecting intention to use Google Classroom

Predictor Variable	**Intention to Use**	
	Beta	**t – value**
Technical support	-0.067	-1.421
Teachers' attitude	0.403	5.628***
Perceived ease of use (PEOU)	0.303	4.321***
Perceived usefulness (PU)	0.019	0.477
Technological knowledge	0.278	5.601***
F – value	92.461	
Durbin Watson	1.949	
R square	0.697	
Adjusted R square	0.689	

****p*<0.001

From the output of multiple regression involving all the independent variables (technical support, teachers' attitudes, PEOU, PU and technological knowledge) and dependent variable (intention to use) as tabulated in Table 3, the variables were tested with the value F = 92.461 shows that teachers' attitudes, PEOU, and technological knowledge are statistically significant with $p<0.001$. Technical support and PU are proved statistically not significant with $p>0.001$. There were nine cases of outliers which had been deleted, and the regression tests demonstrated a good inference with an R square of 0.697. Generally, 69.7 per cent differences in intention to use GC can be explained by all the variables. The adjusted R-value is 0.68. The Durbin-Watson coefficient of 1.949 was between the acceptable ranges of 1.5 to 2.5. As can be seen in Table

3, the beta value (standardised coefficients) of technical support (β=-0.067) and the value of beta for perceived usefulness (PU) is (β=0.477), showing that these independent constructs are negatively linked to the intention to use GC. Therefore, hypotheses H2 and H5 are not supported. As for teachers' attitude (β=-0.403), perceived usefulness (PEOU) (β=-0.303), and technological knowledge (β=-0.278) show that these independent constructs are positively linked to the intention to use GC, hence H1, H3 and H4 are supported.

The tolerance is above 0.1, variance inflation factor values were below 10, and the condition limit indices were below the safety limit of 30, indicating that multicollinearity problems did not exist, as shown in Table 4 below. The regression analysis showed that the following tested constructs were statistically significant at p<0.001-99.9 per cent degree of confidence.

Table 4: Collinearity statistics for factors affecting intention to use Google Classroom

Model	**Collinearity Statistics**	
	Tolerance	**VIF**
Technical support	0.680	1.471
Teachers' attitudes	0.295	3.394
Perceived ease of use (PEOU)	0.306	3.270
Perceived usefulness (PU)	0.904	1.107
Technological knowledge	0.612	1.634

The normality requirement of the samples was revealed by a bell-shaped histogram as shown in Figure 2, and P-P plots also demonstrated no sign of normality of the error.

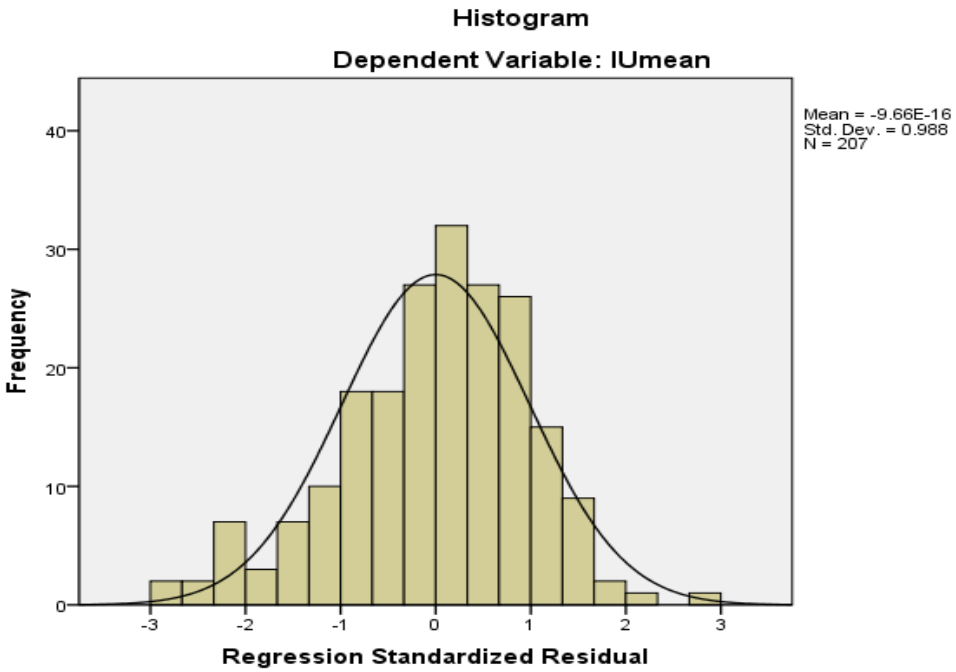

Figure 2: Histogram of factors affecting the intention to use Google Classroom

To find out the most significant factor of the intention to use GC among all the factors, a multi-regression analysis has been carried out and based on the beta value from Table 5, it shows that the most significant factor is teachers' attitudes that influence the intention to use GC with the value of β=0.369.

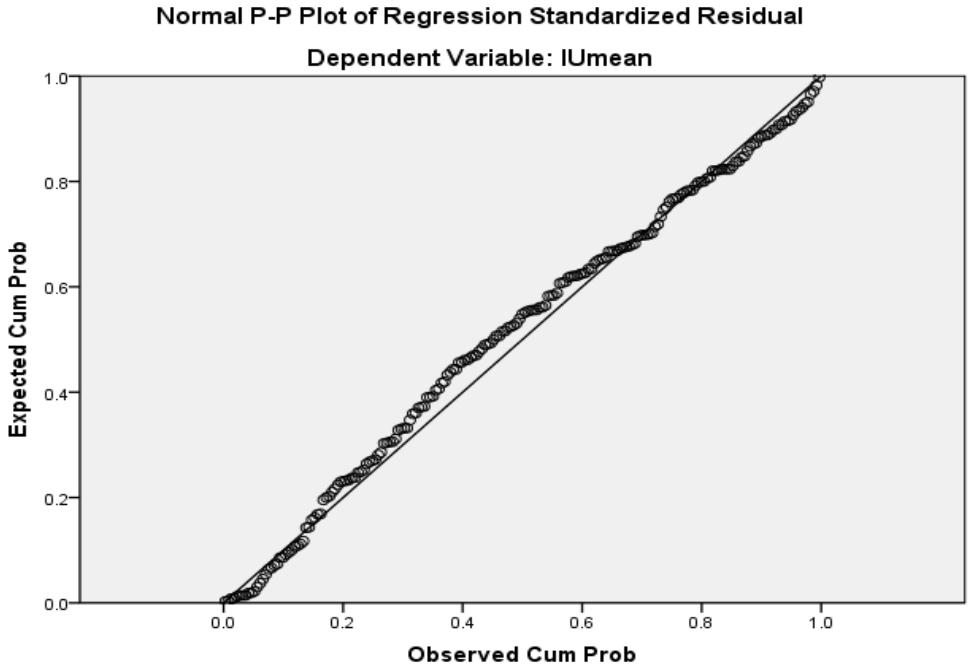

Figure 3: P–P Plot on factors affecting the intention to use Google Classroom

Table 5: Unstandardized coefficients for factors affecting the intention to use Google Classroom

Model	**Unstandardized Coefficients**	
	B	**Std. Error**
Technical support	-0.077	0.054
Teachers' attitudes	0.369	0.066
Perceived ease of use	0.314	0.073
Perceived usefulness	0.028	0.058
Technological knowledge	0.275	0.049

4.4 Hypothesis Summary

Overall, there are 6 hypotheses have been examined. Three have been accepted, and two have been rejected. For the H6, the most significant factor has been identified. The summary of the hypothesis is shown in Table 6.

Table 6: Summary of hypothesis testing

	Hypotheses	**Results**
HI	Technical supports positively influence the intention to use GC	Rejected
H2	Teachers' attitudes towards technology have positive influence on the intention to use GC	Accepted
H3	Perceived Ease of Use (PEOU) has positive influence on the intention to use GC	Rejected
H4	Perceived Usefulness (PU) positively influence the intention to use GC	Accepted
H5	Teachers' technological knowledge has positive influence on the intention to use GC	Accepted
H6	There is a significant relationship between technical supports, teachers' attitudes, PEOU, PU, and technological knowledge with the intention to use GC.	Teachers' attitudes towards technology

4.5 Discussion

Our research findings recommend several vital managerial implications to meet 21st-century educational needs. PEOU, technological knowledge, and teachers' attitudes are significant predictors of intention to use GC to encourage educators to use it in their daily teaching. This suggests that schools, districts, states, and national management levels should clearly design and focus on developing attitudes and knowledge. This step is important to create a positive utilization of GC surroundings among the teachers. So, assistance from all aspects of the stakeholders should be supplied to boost teachers' intention to use actual technology to an

advanced level. The support or assistance should consider the issues of continuously changing education policies and classroom practices. The connection between the factors that shape intention changes dynamically from time to time due to ongoing technological developments. To keep up with technology trends, administrators and policymakers should assist educators in maintaining and developing a liking for technology.

To make it happen, professional development has shown its importance in educators' lives regarding technology in teaching. Educators have to undergo tremendous professional development to build a world-class education system. O'Moore (2000) stated that professional development is about change, and renewal is another reason to show its importance. He describes it as an indispensable vehicle in our teaching routine. It is intended to strengthen our communications with children and families and to enhance our job experience and satisfaction. Besides, it also upgrades the standard of the teachers' programs as it achieves the aims of teachers at the school level up to the aims of MOE, including districts and states (O'Moore, 2000). Providing the staff development courses as an ongoing habit will surely benefit everyone as a participant. They will accomplish all of these goals in a fun, meaningful, and professional way. To equip educators with a high level of knowledge, especially technological knowledge, to meet the needs of the 21st century "technology world", teachers must attend training, professional development, and so forth.

To support this, the government must put a lot of effort into increasing educators' effectiveness, which will further enhance students learning. This step needs to be considered as the quality of school education is the government's main concern. Malaysian schools must be a good learning organisation to make it possible for educators to develop professional alliances to improve the education system. The vital ingredient for the learning organization is continuously creating a space to learn new things. Hence, that learning can be utilized to improve performance and develop new ideas. Another important element is curriculum restructuring to meet the workforce requirements in a knowledge-based economy. Thus, Malaysian schools need to learn and fulfil those demands quickly. The school acts as a learning organization, which is devoted to expanding the learning capacity of the students and teachers, as everyone should play their roles well.

Despite having positive attitudes, teachers sometimes have difficulty using technologies in their classroom teaching process. Few studies have highlighted the need for professional development to get teachers to apply that technology in their classrooms. Tautkevičienė and Bulotaitė (2009) explored teachers' attitudes towards the use of ICT among students with special needs and concluded that many special education teachers had positive

attitudes towards ICT. At the same time, the study concluded that fifty per cent of the teachers did not use ICT with their students due to difficulty in using ICT for educational purposes. In other words, they were not trained to use ICT with their students to deliver their lessons. Therefore, they needed more professional development support. This finding was supported by Ribeiro, Moreira, and Almeida (2011), who found that Portuguese teachers also had low ICT use with special needs children due to limited training despite having a very positive attitude. The need for training is also highlighted by Ndibalema (2014), who studied teachers' attitudes towards the use of ICT in secondary schools in Tanzania. The study reported that most teachers did not effectively integrate ICT into their teaching. This happens due to insufficient training in the use of ICT, even though they had a positive attitude towards the use of ICT.

Based on the result of this study, attitudes and perceived ease of use are the factors that affect the intention to use GC. Attitude also acts as a personal belief, self-motivation, and self-satisfaction for teachers when they intend to use GC. Thus, personal feelings towards the intention to use GC may motivate teachers to build an intention. The intention can be developed regardless of technical support, usefulness, infrastructure, and many more obstacles in reality. In today's educational system, it is vital to understand teachers' attitudes towards handling the needs of various students from different backgrounds, socioeconomic statuses, and abilities. Therefore, policymakers should help create a job environment where teachers maintain positive attitudes and provide excellent service to guide their students in learning. If educators experience difficulties related to the use of GC, they may assume GC is hard to use, and thus, they might develop avoidance. To positively influence teachers' beliefs and attitudes, strategies and support mechanisms that create successful experiences for teachers using GC should be devised and implemented. When teachers feel supported and have successful experiences with GC, they will likely develop positive attitudes towards GC and, in turn, reinforce their intention to use it over time.

As stated by Khan, Hasan, and Clement (2012), effective integration of ICT in educational institutions relies a lot on teachers and principals, who require in-depth professional development due to limited ICT knowledge and skills. Therefore, extra attention must be given to in-service teacher training for teachers and principals. Before joining regular classes, pre-service training for newly appointed teachers should also be carried out. This is to prepare them for the vital role of technology in the school setting and to train them on how to prepare and use ICT competently. Afshari et al. (2009) also discussed the importance of professional development. Teachers must facilitate the use of technology effectively to improve student learning. Based on faculty input and school needs, staff development should

also be collaboratively created. This will assist in preparing the teachers to use technology effectively in their teaching. Training will help to build proper knowledge and skills. Fullan (1992) suggested that training should not be a one-shot workshop but rather an ongoing experience so that learners or teachers will be updated with ever-changing technologies. During their teacher training programs, teachers must be given opportunities to practice using technology more practically to see how technology can augment their classroom activities (Rosenthal, 1999).

The educators should be provided with continuous training following the technical and functional skills needs. The skills include social skills training, problem-solving training and others related to improving their working performance, growth, and development. Venkatesh and Bala (2008) stress that implementing a complex system often needs substantial changes to organizational structure, employees' roles and jobs, control and coordination mechanisms, and work processes. Hence, educators may believe that support from educational institutions in the form of commitment and communication is vital. Besides commitment and communication, providing the required infrastructures and training related to implementing the GC system will accelerate the adoption of such a system. The availability of management support regarding GC will be an incentive to accelerate the adoption of GC. Wechsler (2003) states that individuals might experience pressure from others to discourage them from utilizing the technology. Therefore, this may result in the opposite impact compared to what was intended. The educators may receive pressure from the schools, which will de-motivate them since the concept of GC is not well conceptualized and understood within the school setting. hence, educators may resist changing their work routines since the attained benefits of the GC system may not fully be understood. So, to help educators improve the effectiveness of using GC, the policymakers should provide more training on handling GC as a priority and compulsory for all teachers.

5.0 CONCLUSION

The result of the study revealed that the variables of attitude, perceived usefulness and technological knowledge have a significant effect on the intention to use GC. Regarding technical support and perceived ease of use, the relationship with the intention to use GC was negative. The results from this research also enhance and widen our understanding of variables that affect the intention to use Google Classroom; continued study is required to enhance this research and to deal with the limitations of current research. As such, it is expected that this research will provide a preliminary insight and understanding of the factors affecting the

intention to use GC in the Malaysian context. It would be useful and suggested in future studies to obtain a broader sample of educators and randomly chosen samples, which may give a more inclusive result. It is also suggested the study be widened to all states of Malaysia, particularly Sabah and Sarawak. This will help to generalize the findings of the study better.

Finally, upcoming studies may consider moderating constructs in the correlation between factors affecting the intention to use GC. Among these constructs, the researcher suggests educators' gender and personality. At the time of writing, a Movement Control Order (MCO) has been announced due to the COVID-19 pandemic. All public and private institutions at levels, not only in Malaysia but worldwide, were required to postpone all classes and lectures. Instead, all these institutions were requested to pursue classes and learning using any suitable online platforms beginning in April 2020. Henceforth, for the first time, all educators had to conduct courses and classes online. This methodology has led to many challenges that educators face when conducting these online classes. Due to this unprecedented phenomenon, the researcher feels there is a need for special research based on the experiences these educators have acquired. The outcomes of this research finding could be shared with interested parties and educators to understand the various challenges facing online learning methodology in the education fraternity in Malaysia and how to overcome these challenges.

REFERENCES

Afshari, M., Bakar, K. A., Luan, W. S., Samah, B. A., & Fooi, F. S. (2009). Factors affecting teachers' use of information and communication technology. *International Journal of Instruction, 9*(3), 319-342.

Al-Alak, B. A., & Alnawas, I. A. (2011). Measuring the acceptance and adoption of e-learning by academic staff. *Knowledge Management & E-Learning: An International Journal, 3*(2), 201-221.

AlQudah, A. A. (2014). Accepting Moodle by academic staff at the University of Jordan: Applying and extending TAM in technical support factors. *European Scientific Journal, 10*(18), 183-200.

Amin, H. (2008). Factors affecting the intentions of customers in Malaysia to use mobile phone credit cards. *Management Research News, 31*(7), 493-503.

Archambault, L. M., & Barnett, J. H. (2010). Revisiting technological pedagogical content knowledge: Exploring the TPACK framework. *Computers & Education, 55*(4), 1656-1662.

Brown, M. E., & Hocutt, D. L. (2015). Learning to use, useful for learning: A usability study of Google apps for education. *Journal of Usability Studies*, *10*(4), 160-181.

Cheok, M. L., & Wong, S. L. (2016). Frog VLE for Malaysian schools: Exploring teachers' experience. In J. Zhang (Ed.), *ICT in education in global context* (pp. 201–209). Springer.

Cheok, M. L., Wong, S. L., & Ayub, A. F. (2017). Teachers' perceptions of e-learning in Malaysian secondary schools. *Malaysian Online Journal of Educational Technology, 5*(2), 20-33.

Creswell, J. W. (2014). *Educational research: Planning, conducting, and evaluating quantitative* (4th ed.). Pearson Education Limited.

Davis, F. D. (1989). PU, PEOU, and user acceptance of information technology. *Management Information Systems Quarterly*, *13*(3), 319–339.

Eom, S. B. (2012). Effects of LMS, self-efficacy, and self-regulated learning on LMS effectiveness in business education. *Journal of International Education in Business, 5*(2), 129-144.

Fullan, M. (1992). *Successful school improvement: The implementation perspective and beyond.* Open University Press.

Hussin, N. H., Jaafar, J., & Downe, A. G. (2011). Assessing educators' acceptance of virtual reality (VR) in the classroom using the unified theory of acceptance and use of technology (UTAUT). In *International Visual Informatics Conference* (pp. 216-225). Springer.

Iftakhar, S. (2016). Google Classroom: What works and how? *Journal of Education and Social Sciences*, *3*(1), 12-18.

Johnson, B., & Christensen, L. (2008). *Educational research: Quantitative, qualitative, and mixed approaches* (3rd ed.). Sage Publications, Inc.

Kaur, T., & Hussein, N. (2014). Teachers' readiness to utilize Frog VLE: A case study of a Malaysian secondary school. *Journal of Education, Society & Behavioral Science, 5*(1), 20-29.

Khan, S. H., Hasan, M., & Clement, C. K. (2012). Barriers to the introduction of ICT into education in developing countries: The example of Bangladesh. *International Journal of instruction, 5*(2), 1308-1470.

KPM. (2013). *Laporan awal-ringkasan eksekutif: Pelan pembangunan pendidikan Malaysia 2013-2025.* Kementerian Pendidikan Malaysia.

Krejcie, R. V, & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 38*(1), 607–610.

Madhavi, B. K., Mohan, V., & Nalla, D. (2018). Improving attainment of graduate attributes using GC. *Journal of Engineering Education Transformations, 31*(3), 200-205.

Martínez-Monés, A., Reffay, C., Torío, J. H., & Muñoz-Cristóbal, J. A. (2017). Learning analytics with GC: Exploring the possibilities. *In Proceedings of the 5th International Conference on Technological Ecosystems for Enhancing Multiculturality, 47*(1), 1-6.

Mohammadi, H. (2015). Factors affecting the e-learning outcomes: An integration of TAM and IS success model. *Telematics and Informatics, 32*(4), 701–719.

Mohd Tahir, M. H., & Tunku Mohtar, T. M. (2016). The effectiveness of using vocabulary exercises to teach vocabulary to ESL/EFL learners. *Pertanika Journal of Social Science and Humanities, 24*(4), 1651-1669.

Mohd Tahir, M. H., Albakri, I. S. M. A., Adnan, A. H. M., & Karim, R. A. (2020a). The effects of explicit vocabulary instructions on secondary ESL students' vocabulary learning. *3L: Language, Linguistics, Literature. The Southeast Asian Journal of English Language Studies, 26*(2), 158-172.

Mohd Tahir, M. H., Albakri, I. S. M. A., Adnan, A. H. M., Shah, D. S. M., & Shaq, M. S. Y. (2020b). The application of visual vocabulary for ESL students' vocabulary learning. *Arab World English Journal, 11*(2), 323-338.

Ndibalema, P. (2014). Teachers' attitudes towards the use of information communication technology (ICT) as a pedagogical tool in secondary schools in Tanzania: The case of Kondoa District. *International Journal of Education and Research, 2*(1), 1-16.

Norazilawati, A., Noraini, M. N., Nik Azmah, N. Y., & Rosnidar, M. (2013). Aplikasi persekitaran pengajaran maya (Frog VLE) dalam kalangan guru Sains. *Jurnal Pendidikan Sains dan Matematik, 3*(2), 63–76.

O'Moore, M. (2000). Critical issues for teacher training to counter bullying and victimisation in Ireland. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression, 26*(1), 99-111.

Pallant, J. (2016). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS* (6th ed.). Open University Press.

Plackett, R. L. (1983). Karl Pearson and the chi-squared test. *International Statistical Review/Revue Internationale de Statistique, 15*(9), 59-72.

Rabbi, M. M. F., Zakaria, A. K. M., & Tonmoy, M. M. (2017). Teaching listening skill through GC: A study at tertiary level in Bangladesh. *DUET Journal, 3*(1), 103-108.

Rahmad, R., Wirda, M. A., Berutu, N., Lumbantoruan, W., & Sintong, M. (2019). GC implementation in Indonesian higher education. *Journal of Physics: Conference Series, 1175*(1), 012153.

Railean, E. (2012). Google apps for education – A powerful solution for global scientific classrooms with learner centred environment. *International Journal of Computer Science Research and Application, 2*(2), 19-27.

Rani, N. S. A., Suradi, Z. U. R. I. N. A. H., & Yusoff, N. H. (2014). An analysis of technology acceptance model, LMS attributes, e-satisfaction, and e-retention. *International Review of Management and Business Research, 3*(4), 1984-1996.

Ribeiro, J. M., Moreira, A., & Almeida, A. M. P. (2011). Stakeholders' perceptions of the use of ICT in the education of students with SEN. *International Journal of Technology Enhanced Learning, 3*(3), 242-254.

Rosenthal, I. G. (1999). New teachers and technology: Are they prepared? *Technology and Learning, 19*(8), 22-24, 26-28.

Sailin, S. N. (2014). Barrier influencing teacher's technology in their practice. *Journal of Basic and Applied Sciences, 8*(23), 352-358.

Saunders, M., Lewis, P., & Thornhill, A. (2011). *Research methods for business students.* Pearson.

Sekaran, U. (2006). *Research methods for business: A skill building approach* (4th ed.). John Wiley & Sons.

Sewang, A. (2017). Keberterimaan GC sebagai alternatif peningkatan mutu di IAI DDI Polewali Mandar. *Jurnal Pendidikan Islam Pendekatan Interdisipliner, 2*(1), 35-46.

Sudarsana, I. K., Putra, I. B. M. A., Astawa, I. N. T., & Yogantara, I. W. L. (2019). The use of GC in the learning process. *Journal of Physics: Conference Series, 1175*(1), 012165.

Tautkeviciene, G., & Bulotaite, D. (2009). Teachers' attitudes towards the use of information and communication technologies and application of software to educate children with disability in Special Educational Institutions of Kaunas. *Special Education, 1*(1), 110-118.

Van Raaij, E. M., & Schepers, J. J. (2008). The acceptance and use of a VLE in China. *Computers & Education, 50*(3), 838-852.

Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision Sciences, 39*(2), 273-315.

Ventayen, R. J. M., Estira, K. L. A., De Guzman, M. J., Cabaluna, C. M., & Espinosa, N. N. (2018). Usability evaluation of GC: Basis for the adaptation of gsuite e-learning platform. *Asia Pacific Journal of Education, Arts and Sciences*, *5*(1), 47-51.

Wechsler, D. (2003). *Wechsler intelligence scale for children* (4th ed.). The Psychological Corporation.

Wijaya, A. (2016). Analysis of factors affecting the use of GC to support lectures. In *The 5th International Conference on Information Technology and Engineering Application (ICIBA2016)*. Bina Darma University.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business research methods.* CENGAGE Learning Custom Publishing.