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Exploring EFL Students' Perceptions of *Google Classroom* as Learning Management System

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Abstract

The employment of Information Technology (IT) for the online teaching and learning process is unavoidable nowadays. One of the popular online teaching platforms currently used in ELT is Google Classroom. However, the literature indicates that there is a limited number of research investigating the perceived usefulness and effectiveness of Google Classroom viewed by the students as its end-users. Thus, the current study aims at investigating the perceptions of secondary students in using Google Classroom (GC) as a Learning Management System (LMS) in English Language Teaching (ELT0. The study focuses on three variables: perceived usefulness (PU), perceived ease of use (PEOU), and actual system use (AU). The study employed a mixed-method research design for data collection and analysis. Quantitative data was collected using a questionnaire and analyzed using IBM SPSS 25.0. The qualitative data was obtained through in-depth interviews with nine respondents. The findings suggest that most participants have positive views on GC with some reservations. Students seem to have more expectations before using GC; yet, they experienced dissatisfaction afterward. It was revealed that GC provides various features to support English learning, but it depends on the users to maximize them. It is suggested that more digital technology training and workshops for students and teachers be adequately fluent in using the GC. Schools need to establish policies to enforce the use of GC within schools, conduct preparation for teachers and students, provide technical support, and collaborate with other institutions for capacity building.

Keywords: EFL Students; Perceptions; Google Classroom; Learning Management System

INTRODUCTION

Due to the COVID-19 global pandemic, teachers are forced to teach from home using internet-based technology to conduct online classes. Most teachers, and students alike, should have their classes and other related activities digitally using advanced technology

(Sheelavant, 2020), using e-learning, blended learning, hybrid learning, or the like (Whittaker, 2013 as cited in Hockley, 2015, p. 308). E-learning has been found effective in improving learning outcomes (Means et al., 2010), but it needs proper preparation by conducting in-service training for the teachers (Pallof and Pratt cited in Hockly, 2015, p. 310). One of the media used by teachers for E-learning is the Learning Management System (LMS), a web-based platform that enables its users to manage their online teachings (Chaw & Tang, 2018). According to Cavus (2013), LMS has six features: pedagogical factors (e.g., goal learning), student/learner environment (e.g., discussion rooms and chat rooms), facilities instructor (e.g., subject editor), course and curriculum design (e.g., grade book), administrator tools (e.g., course registration), and technical specifications (e.g., support technical for the user). Students can also participate in various online activities available in the LMS (Abazi-Bexheti et al., 2018; Baron, 2020; Hussein et al., 2021). Furthermore, studies worldwide have supported that LMS is a must in the education sector (see Abazi-Bexheti et al., 2018; Browne et al., 2006; Cavus, 2013; Chaw & Tang, 2018; Falvo & Johnson, 2007). However, all LMS have challenges, including a lack of human resources and reluctance in developing proper systems to support online learning (Unwin et al., 2010), unfamiliarity, late response, and limited engagement (Nugroho et al., 2021). This encourages the developers to develop more competitive LMSs.

One of the LMSs that has gained much attention lately is Google Classroom, which is freely available for anyone with a Google account. Google Classroom is useful in increasing students' virtual participation, better interaction, giving announcements, assignment submissions, and collaborative learning (Iftakhar, 2016). Previous studies (e.g. Amro et al., 2013; Ansong-Gyimah, 2020; Back et al., 2016; Dash, 2019; Kopeyev et al., 2020; Ventayen et al., 2018) found the efficacy of LMS and GC in non-ELT instruction. For example, Dash (2019) found that medical-school students with limited learning resources in India have greater learning access, facilitating learning efficiency and promoting better interaction patterns (Back et al. (2016). The most recent study by Kopeyev et al. (2020) found that GC was suitable to bridge the computer science students' knowledge gap due to individual differences, making the learning process more effective and interesting. GC also has a positive effect on increasing the number of enrolling students (Abazi-Bexheti et al., 2018).

In the ELT context, the studies by Alizadeh (2012) and Sa'dyah and Nabhan (2021) indicated that email and voice chat used as e-learning platforms are effective in boosting the students' writing skills but no significant improvement in listening skills. The writing process becomes more focused, efficient, effective, and successful compared to the traditional class. Milthorpe et al. (2018) demonstrated that the use of GC in a blended English program enhances disciplinary learning and accessibility for students in remote and regional areas. It also facilitates deeper scholarly inquiry and encourages staff to develop innovative, collaborative, and flexible teaching and learning practices. When used in flipped classroom

model, GC has the power to make the students more involved in speaking conversational class that eventually increasing their speaking (Abdullah et al., 2019).

Furthermore, studies in the Indonesian EFL context (Deiniatur, 2019; Sukmawati & Nensia, 2019; Sujannah et al., 2020) found that GC improves articulation and pronunciation (Deiniatur, 2019), plays an important role in enhancing the EFL higher education students' observational skills and mastery of materials (Sukmawati & Nensia, 2019), and enhances students' writing ability when it is used in blended learning mode, especially for the students with high autonomous learning style (Jumadi et al., 2021; Sujannah et al., 2020). In addition, GC also plays a crucial role in ELT as it allowed students to keep track of assignment deadlines and get easy access to learning material (Sukmawati & Nensia, 2019).

To elicit the EFL students' perceptions of the effectiveness of Google classroom as an LMS, the current study adopted the Technology Acceptance Model (TAM) proposed by Davis (1989) which was initially designed to model the information system user adoption. TAM has two determinant variables: Perceived usefulness (PU) and perceived ease of use (PEOU). Perceived usefulness is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p. 320). While perceived ease of use (PEOU) is defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p. 320). It means that by using a certain application, the user would not allocate too many resources to perform various activities under his/her responsibility. Davis (1989) claims that "an application perceived to be easier to use than another is more likely to be accepted by users" (p. 320).

Then, the model was applied in an educational setting by Al-Maroof and Al-Emran (2018) to investigate the acceptance of Google Classroom as an LMS by university students. In addition, PU and PEOU, expanded the model by adding two more factors, i.e., intention to use and actual use. The current research, then, takes the framework of Al-Maroof and Al-Emran (2018) to investigate the EFL students' perception of the implementation of Google Classroom in learning English, with three variables: 1) perceived usefulness (PU); 2) perceived ease to use (PEOU); 3) actual use (AU).

As the previous studies were mostly conducted at higher education institutions, for example, English Department Students (Iftakhar, 2016; Baron, 2020), Medical University Students (Back et al., 2016), studies on the use of GC as LSM with high school students are still limited. In addition, most of the previous studies took the instructors' perspectives to determine GC's efficacy, either in an experimental setting or in a survey. Therefore, the current research attempts to fill this gap by using a larger sample size, emphasizing the high school students' attitudes toward the use of the platform, with three research questions (RQs). The first RQ is whether GC as LMS is perceived useful by EFL learners in learning English. The second RQ is whether GC as LMS is perceived as easy to use by EFL learners in learning English and the third RQ is whether the high school students use GC as an LMS.

METHOD

The current study employed a mixed-method research design (Dörnyei, 2007) for data collection and analysis. The quantitative data was collected using a questionnaire to elicit the students' perception of GC's implementation in their EFL learning. The qualitative data were obtained from in-depth interviews with nine selected participants to find more information on their perceptions and challenges in using GC.

Three hundred fifty (211 females, 135 males, four prefer not to say) students from three middle schools and six high schools in Kupang participated in this study. Most participants (n = 257) have been using GC for one to six months by the time the data was collected. The participants were taken from the schools whose teachers attended the Digital Technology Training previously held by Universitas Katolik Widya Mandira. The teachers acted as the gatekeepers for this study and agreed to assist with the questionnaire distribution. Participation was voluntary, and the potential respondents have the right to decline to submit any responses or withdraw from the project at any time.

Since the focus of the study concerned the respondent perceptions, a questionnaire and interview were considered the most appropriate research instruments (Brown, 2009; Dörnyei, 2010). The questionnaire items were adapted from Al-Maroof and Al-Emran (2018). It consists of 30 five-point Likert-scale items to assess the perceived usefulness (PU), perceived ease of use (PEOU), and the actual system use (AU) of GC. It also collected demographic data (e.g., gender, school level, etc.). The participant information sheet, consent form, and submission deadline were available in the first section of the questionnaire. The questionnaire was written in Bahasa Indonesia to ensure comprehension, mainly because the respondents are EFL learners (Brown, 2009). The questionnaire was created in Google Form, and the teachers distributed the link via the social media platforms of their choice. Before distributing the questionnaire, it was piloted to ensure that the wordings are clear and comprehensible as intended. Moreover, the questionnaire link was tested using different internet browsers (e.g., Google Chrome, Firefox, etc.), devices (e.g., laptop, PC, and smartphone), and service providers (e.g., Telkomsel, Indosat, etc.), to ensure accessibility.

The purposeful sampling technique was used to recruit the interviewees based on their respondents on the questionnaire (Brown, 2009). The technical matters regarding the interview were discussed with the potential respondents, including the app to be used for the interview (e.g., WhatsApp, Google Meet, Skype, etc.). The semi-structured interview with open-ended was recorded and later transcribed. The transcriptions were then summarized and simplified to make them easily read as written text. The interview questions focused on the emerging themes from the questionnaire data regarding the three variables being investigated. The main objective of the interview was to "elaborate on the respondent responses and the trend of the questionnaire data in general to gain a better understanding of the data" (Dörnyei, 2010, p. 137).

The data were analyzed by, firstly, coding the data generated from the questionnaire (e.g., participant 1 are coded as P001, participant 2 as P002, etc.), and removing all the participants' identity. The data was then analyzed using IBM SPSS 25.0 to find the frequency of each item, the descriptive statistics necessary for the study, and to conduct a Spearman's rho test. Next, content analysis was implemented to analyze the interview data to determine the trend and developed well-grounded interpretations (Friedman, 2012). The data from the questionnaire and the interview were triangulated to strengthen the validity of the results.

FINDINGS

The current study investigates secondary school students' perception of the use of Google Classroom as the learning management system in EFL classrooms using three variables adapted by Al-Maroof dan Al-Emran (2018) from Davis (1989). The results of descriptive statistical analysis of students' responses to the questionnaire show that in terms of PU, the participants have a high group mean score for efficiency (M = 3.68, SD = 0.884), suggesting that they view GC as efficient in use. Similarly, they view GC as a media to facilitate English learning (M = 3.60, SD = 0.912) and is applicable for English classroom (M = 3.72, SD = 0.895). As for PEOU, the majority of participants agreed that GC is accessible to use (M = 4.26, SD = 0.610) and aids for communication (M = 3.86, SD = 0.848). The data concerning the AU shows most participants are likely to use GC (M = 3.92, SD = 0.665).

It is worth noting that PEOU, the variable that is related to "the degree to which a person believes that using a particular system would enhance their job performance" (Al-Maroof & Al-Emran, 2018), has a slightly higher mean score (M = 4.15, SD = 0.612) than the actual system use (M = 3.92, SD = 0.665). This may indicate that the participants had higher expectations of GC before using it.

A Spearman's rho correlation was performed to test the strength of association between participants' perception of GC ease of use (PU) and usefulness (PEOU) and its actual use (AU). All data is ordinal measures for all comparisons (N = 350). Perceived usefulness correlated with perceived ease of use, r_s = .663, and p < .001; perceived usefulness correlated with the actual use, r_s = .668, and p < .001; and perceived ease of use correlated with the actual use, rs = .741, and p < .001. All correlations are statistically significant.

In the sections that follow, we would like to present the results of the statistical analysis and the interview protocols of the respective variables of the study.

Students' perception of Google Classroom usefulness (PU)

Perceived usefulness covers three aspects, efficiency, facilitating English learning, and application. Table 1 presents the result of a descriptive statistical analysis of GC's perceived usefulness, followed by students' interview responses.

Table 1. Descriptive statistics of the students' perception of Google Classroom usefulness

Variable	*M (SD)*	95% CI
Perceived Usefulness	3.66 (0.817)	[3.58, 3.75]
Efficiency	3.68 (0.884)	[3.58, 3.77]
Facilitating English learning	3.60 (0.912)	[3.50, 3.69]
Application	3.72 (0.895)	[3.63, 3.81]

Note. N = 350

The majority of the participants have a high group mean score for efficiency, suggesting that they view GC as efficient in use. Similarly, the majority of participants view GC enabled to facilitate English learning and is applicable to the English classroom.

The interview data analysis provides varied results of the students' perception of the efficiency of using GC. Some students found that GC is an efficient online learning system but others saw it as less effective compared to face-to-face conventional classroom interaction. The students who perceived it as effective expressed that "GC has made the learning process effective because even beginners can use GC without much difficulty and without requiring IT skills." (P240). Furthermore, participant P240 added that GC could be conveniently accessed using a smartphone. It was also ascertained by participant P319, saying that GC was effective to send assignments to the teachers.

However, the students also raised the issue of poor internet signal that makes GC ineffective to send something to the teacher. Participant P174 mentioned that "There is some issue in GC's networks that cause students to resort to using the Telegram application to submit their video files." Participant P157 opined that GC was inefficient because it did not have a live-screen feature for virtual classroom meetings. Participant P157 expected that he could "see the teacher writes on a board without the need to use any other applications, such as Zoom, Google Meet, and others."

GC has been reported to be useful and suitable to teach reading and writing and, to a minor degree, listening and speaking skills. For the teaching of reading, the teacher used video media to explain the text, which was then sent to the students. Participant P319 explained that the teacher read and video-recorded the text and then sent it with the reading questions to be answered by the students. The teacher then provided feedback in the form of appreciation or correction. In addition, participants P157 and P240 reported that teaching reading was usually combined with the teaching of writing where they could type or hand-write their answers to the reading questions.

Although listening was not commonly taught using GC, one participant said that the teacher sent out the slides with a voice recording in teaching listening. The students were instructed to listen to the recording and take notes to answer the given questions. The low preference for using GC in teaching listening (and speaking) was raised by participant P005

because there was no direct interaction between the students and the teacher, which may lower the students' speaking and listening skills.

As for its applicability, generally, the students found that GC is useful but not without reservation. The students mentioned that they have fewer difficulties in using GC to submit assignments or fill out the attendance list. P268 said that GC was a very good application to submit assignments, take class attendance, or fill out quiz forms, especially during the COVID-19 pandemic where all the students were obliged to learn online.

However, while it may help the students to submit their assignments or the teachers to take the students' attendance and send homework, the application requires the teachers' expert competence to use it. P319 mentioned that "there are some issues caused by the teachers. Sometimes GC cannot be used to send assignments or even be opened" (P319). Participant P157 added that she found no difficulty in using GC, but she got problems following the English lesson when the teacher did not present the materials well.

Students' perception of Google Classroom ease of use (PEOU)

Perceived ease of use covers two aspects, accessibility, and communication. Table 2 presents the result of a descriptive statistical analysis of Google Classroom's perceived ease of use, followed by students' responses to the interview questions.

Table 2. Descriptive statistics of the students' perception of Google Classroom ease of use

Variable	*M (SD)*	95% CI
Perceived ease of use	4.15 (0.612)	[4.08, 4.21]
Accessibility	4.26 (0.610)	[4.19, 4.32]
Communication	3.86 (0.848)	[3.77, 3.95]

Note. N = 350

For PEOU, most participants agreed that GC is accessible to use for communication because it has the most straightforward features, even for those who have limited digital literacy. In addition, the students' learning of English may also be enhanced because all the features are written in English. The students also mentioned that GC is easy to operate, especially the Google Form for assignments, quizzes, and tests since it is uncomplicated and can immediately provide students with their marks. Other features that the students found easy to operate are a tracking system for monitoring progress, the 'classwork' tab to access the course content, and the submission page for assignments. The 'Feed' feature was reported less used because students may copy other students' answers (P174). Only one participant (P157) experienced a problem when submitting her assignment as her submitted assignment was marked unsubmitted.

As a medium of communication between the teacher and students, GC has several strengths and weaknesses. Participants P268 and P240 expressed that compared to the WhatsApp application, GC was advantageous since it provides a quick notification that can be accessed by the students when new information about attendance lists or quizzes are uploaded. However, since there is no direct communication feature (i.e., live chat), the

students could not talk to the teachers when they have problems understanding the materials (P005). Students also appeared unaware of GC's embedded email feature on the 'people' tab and said they could not directly email the teacher about the files or attendance list they just uploaded. Participant P157 mentioned the teacher's tardiness in uploading the new materials, assignments, or announcements has caused them to search for information from their friends during breaks between the classes.

Students' actual system use of Google Classroom (AU)

Table 3 presents the result of a descriptive statistical analysis of students' uses of Google Classroom for their online learning.

Table 3. Students' actual system use of Google Classroom (AU)

Variable	*M (SD)*	95% CI
Actual system use	3.92 (0.665)	[3.85, 3.99]

Note. N = 350

The interview reveals that most students used GC daily for all the lessons for 5 to 36 hours a week, especially during the COVID-19 pandemic. Participant P157 considered GC an essential learning tool that cannot be separated from her school life. They were confident to reuse the LMS in the future when the schools make it compulsory to use but the students think it might be unnecessary to keep using GC beyond the pandemic when teaching and learning are back to the conventional face-to-face classroom.

DISCUSSION

The current study attempted to explicate the perceived effectiveness of Google Classroom by EFL students regarding its usefulness, ease of use, and actual use. Results of the questionnaire and interview data analysis are discussed in this section.

In terms of Google Classroom's perceived usefulness, most participants agreed that the LMS was valuable. This finding is in line with those of Back et al. (2016), Alizadeh (2012), and Deiniatur (2019). The biggest concern, however, is regarding teacher preparedness and the lack of ability in using the LMS. It means that GC may be helpful in the teaching and learning process but the success of using it will depend on the teachers' skill and knowledge. Looking more closely into the three categories that emerged from the questionnaire data, a similar affirmation was canvassed. CG was considered efficient, able to facilitate English learning, and viewed as highly applicable in English classrooms.

However, the interview data yields diverse views. While some participants noted that GC as an effective and easy-to-use platform. other reported common problematic issues, such as internet connection and teacher readiness. Despite the disparate perceptions in regards to its efficiency, GC was still believed to facilitate English learning to some extent. However, the participants seemed to have different opinions when asked which language skills they think can be improved with GC assistance. Several participants believe their

speaking and reading skills were improving, while saw some improvement in their writing and reading skills. Nevertheless, it is apparent that the majority favor the notion of GC helping them enhance their observational skills, as also found in Sukmawati and Nensia (2019).

Concerning the PEOU, more than half of the participants considered GC as a practical learning platform. Some interviewees, such as participants P157, P005, and P174, especially mentioned that the progress tracking system within the system, the Google Suite features, accessibility of multiple devices, and clean and simple environment are some of the characteristics that make GC outstanding. A similar view also appears in the studies such as Al-Maroof and Al-Emran (2018), Sukmawati and Nensia (2019), Dash (2019), and Kopeyev et al. (2020).

However, there were dispersed views on how much GC aids communication in actuality. While the questionnaire data shows that most participants supported the notion that GC allows them to communicate, the interview data shows that this is not always the case. The issue is more concerning the students' and teachers' ability in operating GC and their communication skills. Some teachers may have provided feedback on students' assignments but sometimes they find it hard to understand the learning material due to the absence of face-to-face communication with the teacher. The participants also complained about the missing email notification, an issue that can be fixed by turning on the email notification from their account. This confirms that even though GC looks easy to operate, some aspects still need to be taught. This finding regarding communication contradicts found in Back et al. (2016) that found that LMS helps to promote better interaction patterns and provision of learning materials. However, this does not add into account the characteristics of the teachers and students who use the platform. Teachers' and students' differences may play an essential role in the matter.

As for the actual use, when an LSM application is perceived as useful and easy to use, it will affect the users' positive attitude to use it (Al-Maroof and Al-Emran, 2018). The current study shows that most participants were likely to use GC. This shows that the participants have positive attitudes towards GC. A Spearman's rho correlation test confirms that all correlations are statistically significant. The interview data resembles a similar tone, in terms of the frequency of use and the intention of use. The majority of the participants have been using GC for one to six months. The interview data confirms that GC has been being used regularly, especially during the Covid-19 pandemic for every subject, including English. GC is reported to become an inseparable aspect of school life. Overall, the interviewees spent five to 36 hours/week using GC. They also seemed to be ready to use CG beyond the current circumstances related to the COVID-19 pandemic. However, the participants believed that the schools are responsible for deciding whether they will keep using the platform.

The current study is different from the previous studies, specifically in terms of the research design, in which a mixed-method design was employed, and the participants' schooling level. The former studies took place in higher education (Abazi-Bexheti et al., 2018; Abdullah et al., 2019; Alizadeh, 2012; Amro et al., 2013; Back et al., 2016; Dash, 2019; Deiniatur, 2019; Kopeyev et al., 2020; Milthorpe et al., 2018); meanwhile, the current study involved students from the secondary level. The present study confirms the prior studies that, in general, the participants have positive attitudes towards LMS use, such as GC. Interestingly, the present study also discovered that the participants may view GC as easy to use but may not fully utilize the LMS, suggesting that they may have higher confidence before using GC as LMS.

The results of the study address the research questions it attempted to answer. First, it shows that GC as LMS is perceived as useful by EFL learners in learning English. GC is also considered easy to use, and the participants use GC daily. The findings of the present study suggest that educators are in dire need of teacher professional development on digital technology to support them in operating the LMS. This finding is aligned with that of the previous studies (Abazi-Bexheti et al., 2018; Browne et al., 2006; Cavus, 201 3; Chaw & Tang, 2018; Falvo & Johnson, 2007; Iftakhar, 2016). Therefore, more digital technology training and workshops should be conducted for students and teachers to help them be adequately fluent in using any LMS, including GC.

Next, considering the current study's location, further studies should target the participants in suburban areas as well. Since, the participants involved in this study were in the capital city of the province, it may be easier for them to access various resources, such as the internet, web-based technologies, and smartphones. The study conducted in more rural areas may generate different findings. Next, schools and stakeholders are encouraged to establish policies to enforce the use of GC within schools, conduct preparation for teachers and students, provide technical support, and collaborate with other institutions for capacity building.

CONCLUSION

The current study shows that GC is perceived positively by the students. Although some issues related to human error still appear they did not hinder the students from using the LMS. For perceived usefulness (PU), four themes are drawn: general experience, efficiency, and enhancing language learning. As for perceived ease of use (PEOU), GC is considered easy and a medium of communication. The actual system use (AU) observed two themes of frequency and the future intention to use. GC provides all features for assignment submission, learning material attachments from other online learning resources; therefore, it depends on the users to optimize the platform.

However, the study is limited in several ways. First, the access to the questionnaire was limited because the respondents can only access it with internet access on their

smartphone or computer. No printed-out form was made available since the researchers intended to minimize physical contact, following the health protocol in place at the time of the data collection. This may lead to the second limitation: an imbalance number of participants based on the demographic data. For instance, more female students participated than males, and middle schoolers showed less interest in filling the form. This may lead to an impartial conclusion. Therefore, the findings of this study should be treated with caution and future studies should take into account the limitations appearing in this current study.

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