

# The Effect of Combining Google Classroom & WhatsApp

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## THE EFFECT OF COMBINING GOOGLE CLASSROOM AND WHATSAPP ON STUDENT ENGAGEMENT IN ENGLISH CLASS

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### Abstrak

Teknologi Informasi dan Komunikasi (TIK) telah berkembang pesat sehingga masyarakat harus menyesuaikan diri dengan perkembangan tersebut. Dalam bidang pendidikan, pemanfaatan teknologi sangat dibutuhkan di era sekarang ini. Kondisi dunia akibat Pandemi COVID-19 dalam dua tahun terakhir memaksa guru dan siswa melakukan pembelajaran jarak jauh secara virtual dengan bantuan TIK. Penelitian ini mencoba untuk mengeksplorasi pengaruh penggunaan Google Classroom yang digabungkan dengan WhatsApp dalam pengajaran bahasa Inggris di SMK Tamansiswa Mojoagung pada tiga dimensi keterlibatan siswa. Penelitian ini merupakan penelitian eksperimen semu dengan desain post-test only karena tujuan dari penelitian ini adalah untuk menguji apakah ada pengaruh yang signifikan dari penggabungan Google Classroom dan WhatsApp terhadap keterlibatan siswa. Instrumen penelitian yang digunakan adalah angket untuk mendapatkan data tentang engagement siswa dalam tiga dimensi yaitu behavioral, cognitive, dan emotional engagement berdasarkan penilaian diri. Dianalisis dengan menggunakan software SPSS, hasilnya menunjukkan bahwa ada perbedaan yang signifikan dari keterlibatan perilaku siswa antara siswa dalam dua kelompok media yang digunakan berbeda. Di sisi lain, ditemukan bahwa tidak ada perbedaan yang signifikan dari keterlibatan kognitif dan emosional.

### Abstract

Information and Communication Technology (ICT) has developed rapidly so that people should adjust themselves to the development. In education field, the use of technology is very needed in today era. The condition of the world due to the Pandemic of COVID-19 in the past two years forced teacher and students to have long-distance learning virtually with the help of ICT. This current study tries to explore the effect of using Google Classroom combining with WhatsApp in teaching English at SMK Tamansiswa Mojoagung on three dimensions of student engagement. This study is quasi-experimental with post-test only design since the purpose of the study is to examine whether there is a significant effect of combining Google Classroom and WhatsApp on student engagement. The research instrument used is questionnaire to get the data about student engagement in three dimensions: behavioral, cognitive, and emotional engagement based on their self-assessment. Analyzing by using SPSS software, the results reveal that there is a significant difference of student behavioral engagement between students

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*in two groups of different media used. On the other hand, it is found that there is no significant difference of cognitive and emotional engagement.*

**Keywords:** *Google Classroom, student engagement, WhatsApp*

## INTRODUCTION

The position of English as a compulsory subject at senior high school level for many years and also its role as one of international language have brought a challenge for English teacher. The teacher should create an environment that encourages students to actively engage in the teaching and learning process.; because the students at senior high school belong to teenagers with special characteristics. In addition, they are referred to as "digital natives" because they were born into a technologically-enabled world. (Cilliers, 2017). They have got so many exposures from technology which may influence their English through games, Youtube video, social media, and so on.

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The challenge has become bigger since the Covid-19 Pandemic in Indonesia requires teachers to hold the teaching-learning process in blended learning. Thus, the English teachers need to use ICT in their teaching since language teaching will be more exciting, but the readiness of the teacher is needed (Cahyani & Cahyono, 2012). The problem arises when the teacher cannot choose appropriate ICT as instructional media or they are not ready to use them, because the technique (how to teach) as well as the material are two key features in teaching. To overcome the problem, teacher should consider some criteria to choose the instructional media for teaching.

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Livingstone et al. (2014) mention three principles of promoting online content in media; They are helpful for kids and students because they are: a) visually appealing (of high quality, creative, enriching, representative of children's perspective and experiences; not boring, stereotypical, or representative of the norms of adults); b) straightforward to use; c) easily accessible (in terms of navigation, user experience,

accessible design, and transparency; d) provided in kids' first languages. Thus, those considerations can be used in choosing the appropriate media during the new era.

In the education, the use of Information and Communication Technology ICT is believed to be advantageous in improving students' academic performance (Chiu, 2021). To counteract the stress that comes with studying, ICT is also expected to help students relax. (Huang et al., 2021). One the ICT commonly applied at school is Google Classroom; this application is considered helpful in the pandemic era. As stated by Syakur et al. (2020), Google Classroom is a hybrid learning platform that Google developed to streamline the creation, distribution, and assignment of tasks in a paperless way.

Google Classroom offers some benefits in learning, such as it is simple and effective, time-saving, provides effective online collaboration, centralized data storage, and quick resource sharing (Syakur et al., 2020). Furthermore, Sudarsana et al. (2019) mention some advantages such as it can improve teacher's quality, help students to use the internet wisely, save time for both teacher and students, is eco-friendly, is beneficial in organizing distance learning, improve cooperation and communication without time limitation, and provide adequate document storage. Moreover, compared to other LMS, Google Classroom is more helpful because it is available as a free mobile app, is simple to use, trustworthy, and provides a platform for network community with a user interface that resembles Facebook (Jordan & Duckett, 2018). The advantages of Google Classroom may positively affect the students' performance, for example, a study conducted by Albashtawi & Al Bataineh (2020). They found that Google Classroom affects the EFL students' reading and writing performance. Another study revealed students' perception of using Google Classroom in the teaching and learning process in which the findings show that the students have a positive perception (Kumar

& Bervell, 2019). However, those findings do not reflect students' engagement in learning which is essential in supporting students' learning success.

As the condition of learning in the pandemic era requires teachers and students to have blended learning, WhatsApp is also commonly used. It is reported that 83 % of internet users were WhatsApp users in late 2019 (Kominfo, 2019). This media has been popular among Indonesian due to some advantages, such as it enables online collaboration and support between online students linked from school or home in blended learning; it is a free application which is easy to use; WhatsApp also enable the member of the group to share learning object easily, give comments, texting and messaging; students can collaborate on writing and publishing projects, and the app makes building and sharing knowledge simple. (Barhoumi, 2015).

Bere (2012) mentions some features of WhatsApp messenger involving: (a) multimedia, which means that it enables users to send and receive videos, text messages, photos, and voice memos; (b) Group Chat; (c) unlimited messaging; (d) cross-platform engagements, interactants using various gadgets can communicate with one another using a variety of mediums; (e) offline messaging, messages are automatically preserved when the device is turned off or when it is outside of the coverage area; (f) no charges involved. Those features potentially support teaching and learning, especially in the COVID-19 pandemic era. Furthermore, some studies (Barhoumi, 2015; Gon & Rawekar, 2017; Minalla, 2018) have used WhatsApp in educational research. For example, Barhoumi (2015) explored the effect of using WhatsApp guided by activity theory on students' knowledge management; Gon & Rawekar (2017) compared the knowledge between students who learnt through WhatsApp and didactic lecturers, while Minalla (2018) examined the impact of using WhatsApp in EFL learners' verbal communication. Recently, a study by Tragan, et al. (2021) applied WhatsApp to encourage student-teacher interaction and student-student

interaction in the extended language learning program. In Indonesia, Mulyono et al. (2021) assess university students' technological acceptance and connectivity to online learning with the use of WhatsApp. This study reveals that most students welcomed using social media to promote learning and felt connected to the learning. Thus, applying WhatsApp to learning is expected to benefit teachers and students.

The success of learning is frequently measured by the success of students, which is indicated by the students' grades, student retention, or their completion rate. While student engagement is widely acknowledged to be important, students who are involved in their studies are more likely to succeed (Kahu & Nelson, 2018). Many experts have proposed the definition of student engagement; Bond (2020) describes student involvement as the time, attention, and enthusiasm students devote to their academic community over the course of a given learning experience.

There are three domains of student involvement mentioned by Bond (2020): behavioral engagement, emotional engagement, and cognitive engagement. Behavioral involvement refers to a student's positive behavior, for example, following the rules at school, obeying the norms in class, or not taking the opposite action, such as causing trouble at school or not attending school. In contrast, emotional engagement is defined as a student's emotional reaction at school. This refers to the interests and values possessed by students so that students have feelings of boredom, happiness, sadness or anxiety, including to friends, teachers or lessons given. Lastly, cognitive engagement refers to specific involvement related to psychological investment in learning, such as trying to understand learning, being flexible in problem-solving, having positive coping in the face of failure and emphasizing learning strategies.

Undoubtedly, Google Classroom as one of the Learning Management System (LMS) and WhatsApp make it easy for teachers and students in the new normal era to experience long-distance learning.

Previous research has confirmed that those media positively impact students' achievement, knowledge and interaction (Abd. Syakur et al., 2020; Albashtawi & Al Bataineh, 2020; Barhoumi, 2015; Chiao & Chiu, 2018; Minalla, 2018). However, few studies focus on the relationship between Google Classroom or WhatsApp and student engagement, such as those done by Teng & Wang (2021) and Chiu (2021). Student engagement plays a significant role in blended learning since it is necessary for successful learning (Lam et al., 2018). Furthermore, student engagement is considered a key factor influencing the achievement in school, intellectual growth, and the standard of education (Kahu & Nelson, 2018; Zhoc et al., 2019). This current research will combine Google Classroom and WhatsApp as instructional media in teaching and learning English at SMK Tamansiswa Mojoagung. Thus, this research aimed to investigate (1) the difference of student behavioral engagement who learnt English using the combination of Google Classroom and WhatsApp and those who did not; (2) the difference of student cognitive engagement who learnt English using the combination of Google Classroom and WhatsApp and those who do not; and, (3) the difference of student emotional engagement who learnt English using the combination of Google Classroom and WhatsApp and those who do not.

## METHODS

Since the current study aimed to examine the effect of Google Classroom plus WhatsApp on the sample population without random assignment, a quasi-experimental design with a post-test was adopted. As Rogers & Revesz (2019) stated, quasi-experiment checks if there is a causal connection between independent and dependent variables. In this research, the use of Google Classroom and WhatsApp is the independent variable, while the dependent variable is student engagement.

The population of this study is the Twelve Grade students of SMK Tamansiswa Mojoagung who experienced flipped learning during the COVID-19 Pandemic. There

are six classes in the study population, while the samples are XII TKJ 1 and XII TKJ 2, consisting of 35 students for each class. Purposive sampling is used to select the sample; this is the procedure of choosing respondents who are most likely to provide useful and relevant data. (Campbell et al., 2020). In this case, the two groups of students are chosen because they are assumed to have equal English competence. Therefore, the students of XII TKJ 1 were taught using Google Classroom combined with WhatsApp, while XII TKJ 2 was taught using Google Classroom.

The researchers used a closed-ended questionnaire to measure the students' learning engagement based on their self-assessment to get the data. The questionnaire involves three dimensions of student engagement: behavioural, cognitive, and emotional. It is based on work by Teng and Wang (2021), with some modifications made to fit the current study's aims. The instrument was distributed to the sample in the google form using Bahasa Indonesia to ease the analysis process. The detailed instrument can be seen in the appendix.

In obtaining the data, there were several steps needed to be done. Firstly, the researchers ensured that both classes were taught using different media, one using Google Classroom and WhatsApp as the media for teaching English and the other only using Google Classroom. Secondly, I provided a questionnaire about student engagement to the students. After that, conversed the response of student engagement into the score. Finally, analyzed the data by using appropriate statistical analysis.

The data from the questionnaire was converted into the total score of each dimension of student engagement. And then, those scores were analyzed using an independent sample t-test with the help of the SPSS program 25 version. An independent sample t-test is used in this research because the research aimed at comparing the mean score of two independent and unrelated groups. Before the



independent sample t-test was applied, homogeneity and normality tests were conducted as the pre-required assumption test.

## FINDING AND DISCUSSION

### *Findings*

The result of the data analysis is presented based on the research questions. Firstly, the result of data analysis of student engagement in English class using the combination of Google Classroom and WhatsApp and those who are not are presented. After that, the analysis result in each type of student engagement involving the student behavioral engagement, cognitive engagement and emotional engagement who learnt English by using two different media are also elaborated.

#### 1. Student behavioral engagement

Behavioural engagement is considered the first type among three types of student engagement examined in this research. Normality and homogeneity tests were conducted as the precondition before testing the hypothesis. The researchers propose hypotheses related to student behavioral engagement, namely:

**Table 1 – Independent Sample t-test**

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Behavioral_engagement	Equal variances assumed	5.553	.052	6.181	68	.000	2.914	.472	1.973	3.855

	Equal variances no assumed			6.181	59.020	.000	2.914	.472	1.971	3.858
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Based on the table 1, the analysis independent sample t-test demonstrates the significant value of t-test in 2-tailed achieves 0.000. The result is less than the critical value of 0.05 which can reject the H0. To sum up, there is a significant difference of student behavioral engagement between students who learnt English using the combination of Google Classroom and WhatsApp and those who are not.

### Student Cognitive Engagement

Since the data failed to meet the requirements of the homogeneity and normality tests, the non-parametric Mann Whitney U test was used for analysis.

### 2. Table 2 - Test of Mann Whitney U

Test Statistics <sup>a</sup>	
	Cognitive_engagement
Mann-Whitney U	599.000
Wilcoxon W	1229.000
Z	-.159
Asymp. Sig. (2-tailed)	.873
a. Grouping Variable: Media	

Based on the output "Test Statistics" of the Mann-Whitney test, it is gotten that the value of Asymp. sig. (2-tailed) is 0.873. This value is more than 0.05; thus, H<sub>0</sub> is accepted. It can be concluded that there is no significant difference in student cognitive engagement between students who learnt English using the combination of Google Classroom and WhatsApp and those who are not.

### 3. Student emotional engagement

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Emotional engagement	Equal variances assumed	7.858	.071	.199	68	.843	.114	.573	-1.029	1.258
	Equal variances not assumed			.199	59.565	.843	.114	.573	-1.032	1.261

Table 3 informs the result of the significant value (2-tailed) is 0.843. This result is higher than the critical value of 0.05. Thus, the basis of hypothesis testing indicates

that the H0 is accepted. In conclusion, there is no significant difference in emotional engagement between students who learnt English using the combination of Google Classroom and WhatsApp and those who are not.

### *Discussion*

Technology in teaching-learning cannot be avoided in this era, especially at the senior high school level. It is because the students belong to Generation Z who are accustomed to dealing with the internet and technology. One of the findings in this study shows a difference in student behavioral engagement between students who learnt English through the combination of Google Classroom and WhatsApp and those who only use Google Classroom. Therefore, it can be assumed that using WhatsApp may contribute to the distinction of student behavioral engagement in learning English. The result supports the study by Tragan, et al (2021) who found that in an extended language learning program, WhatsApp promotes student-teacher and student-student interaction. It is also in line with the result of the study by Barhoumi (2015), in which the students feel more encouraged to discuss the classroom lectures through social interaction by using WhatsApp messaging.

The use of Google Classroom combined with WhatsApp can promote higher student behavioral engagement probably because WhatsApp may support the interaction between students and teachers or students with other students. This social media has a feature of direct notification that can be noticed by the users quicker than the notification of Google Classroom only so that the students can respond faster. It strengthens Bere's argument (2012) about the features of WhatsApp, one of them is that Cross-platform interactions were included in WhatsApp, allowing users to communicate with one another using various devices.

The finding of student cognitive and emotional engagement indicates a similar result between the two groups with different media used. This is likely due to educators not being adequately prepared to use ICT as an instructional medium (Cahyani & Cahyono, 2012), which prevents ICT from being applied effectively and has little to no discernible impact on either type of participation. The other possibility may have come from the content of the online media. It is in line with the statement proposed by Livingstone (2014) that one of the principles of supporting online content in media is the attractiveness involving quality, creativity, and not being boring. So, if the content is not interesting for the students, it may affect their emotional engagement since emotional engagement refers to students' interests and values, resulting in feelings of boredom, happiness, sadness, or anxiety, including friends, teachers, or lessons given (Bond, 2020).

## **CONCLUSION**

In conclusion, the analysis of the three types of student engagement indicates a slight difference. Among those three student engagements examined in this study, only in terms of student behavioral engagement were revealed to be different between the two groups. In contrast, there is no difference in student cognitive and emotional engagement between students who learnt English using the combination of Google Classroom and WhatsApp and those who learnt using Google Classroom only. Thus, the results may indicate that combining two media, Google Classroom and WhatsApp, in teaching English affects student behavioral engagement.

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