



The Role of Google Classroom and Google Meeting on Learning Effectiveness

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Abstract: This study discusses the role of google classroom and google meeting on learning effectiveness. The purpose of writing this article is to find out the role of Google Classroom and Google Meeting on learning effectiveness, within the scope of technology education. The method of writing articles is quantitative descriptive. The population in this study amounted to 173 people with a research sample of 50 respondents. The sampling technique used is accidental sampling. The tests carried out are t-tests, f-tests and determination coefficient tests. The results of this study include: 1) Google classroom contributes to partial learning effectiveness; 2) Google meetings contribute to the effectiveness of learning partially; and 3) Google classroom and google meeting contribute to the effectiveness of learning simultaneously. Apart from these 2 exogenous variables that affect endogenous variables of learning effectiveness, there are still other factors including the implementation of learning, communicative processes, student responses and learning outcomes.

Keyword: Learning effectiveness, Google Classroom, Google Meeting

INTRODUCTION

Learning is one of the behavioral changes related to experience and practice. Learning is an effort made by a person to acquire intelligence and knowledge, practice and change behavior. Learn the obligations that must be done for each individual human being. By learning, a person will gain knowledge and skills that can support every current and future activity. In learning there is no age limit, everyone has the right to learn and there is no age limit to learn. Everyone can learn until the end of his life and apply the knowledge he has gained to many people. To obtain maximum knowledge and skills, in learning it is necessary to achieve effectiveness. Learning effectiveness is the level of success achieved in accordance with the objectives, namely from the application of a learning model or media, in this case measured from student learning outcomes, if student learning outcomes increase then the learning model or media can be said to be effective, otherwise if student learning outcomes decrease then the model or media The learning is considered ineffective. The application of effective learning can be done in various ways, for example through brainstorming, discussion,

through online media such as google classroom and google meeting. Supported by the current era of disruption and the era of endemic covid-19, learning through google classroom and google meeting

Based on the background, problems can be formulated that will be discussed in order to build hypotheses for further research, namely:

1. Does Google Classroom contribute to partial learning effectiveness?
2. Does google meeting contribute to partial learning effectiveness?
3. Do Google Classroom and Google Meeting contribute to the effectiveness of learning simultaneously?

LITERATURE REVIEW

Learning Effectiveness

Learning effectiveness is learning both mental, physical, and social dimensions (Priambodo, 2013). Effective learning makes it easier for students to learn something useful. Learning effectiveness is the level of success achieved in accordance with the objectives, namely from the application of a learning model or media, in this case measured from student learning outcomes, if student learning outcomes increase, the learning model or media can be said to be effective, otherwise if student learning outcomes decrease, the model or learning media is considered ineffective. Factors affecting learning effectiveness include: 1) Quality; 2) Accuracy; 3) Intensive; and 4) Time (Farell et al., 2021).

Indicators in learning effectiveness include: 1) Management of learning implementation; 2) Communicative process; 3) Student response; 4) Learning activities; and) Learning outcomes (Rahayu et al., 2022).

Google Classroom

Google classroom is one of the blended learning models intended for every scope of education. Google Classroom is an application in the form of a classroom that is connected via an internet connection and occurs in cyberspace. Google classroom is an internet-based service provided and developed by Google for e-learning activities (online learning), making it easier for teachers to manage classes, and improve communication with students without using paper and face-to-face (Nirfayanti & Nurbaeti, 2019) . Google Classroom is an application that allows the creation of classrooms in cyberspace. This application helps make it easier for teachers and students to carry out the learning process more deeply and without direct physical contact and is more friendly to the environment because they no longer use paper in collecting their assignments (Yusuf et al., 2020).

Features included in Google Classroom include: 1) Assignments: Assignments are saved and graded on Google's suite of productivity apps that enable collaboration between teachers and students or students to students; 2) Measurement: Google classroom supports many different grading schemes. Teachers have the option to attach files to assignments where students can view, edit, or get individual copies. Students can create a file and then paste it into an assignment if a copy of the file was not made by the teacher; 3) Communication: Announcements can be posted by teachers to the class stream which can be commented on by students allowing two-way communication between teachers and students; 4) Save time: Teachers can also share writings across multiple classes and 8th grade archives for future classes. Student work, assignments, questions, grades, comments can all be organized by one or all classes, or sorted by what needs to be reviewed; 5) Program archives: Classes allow instructors to archive courses at the end of term or year; 6) Privacy: Unlike google consumer services, google classroom, as part of G Suite for Education, it does not display any ads in the interface for students, faculty, and teachers, and user data is not scanned or used for advertising purposes; and 7) Mobile application: The application allows

users to take photos and paste them into their tasks, share files from other applications, and supports offline access (Rikizaputra & Sulastris, 2020).

Google Meeting

Google meeting is a video conferencing service / online meeting developed by Google. The Google Meet service is a combination of Google Chat and Google Hangouts with a more specialized development of online meetings. October 2019, Google Hangouts discontinued the classic version and users can switch to using Hangouts for a more modern version (Pratama & Pitriani, 2021).

Indicators contained in google meetings include: 1) Real time video: is a feature that allows google meet participants to interact or carry out learning in real time; 2) Participant camera: where participants can enable or disable the camera in google meeting; 3) Microphone: where participants can turn their microphones on and off to communicate between Google Meet participants; and 4) Share screen: where participants can share their work screens such as power point, excel, word and so on to other participants (Astuti & Purwanto, 2021).

Table 1: Relevant Previous Research

No	Author (year)	Previous Research Results	Similarities with this article	Differences with this article
1	(Thahir, 2021)	The Effect of Google Classroom-Based Online Learning on the Learning Outcomes of Biology Education Students	Talking about Google Classroom	Discusses the learning outcomes of biology education students
2	(Primary & Pitriani, 2021)	The Effect of Using Google Meet Learning Media on the Learning Motivation of Tsanawiyah Madrasah Students	Discuss google meetings	Discussing student motivation in Madrasah Tsanawiyah
3	(Prisuna, 2021)	How Using the Google Meet App on Learning Outcomes	Talking about google meet	Discuss learning outcomes
4	(Yusuf et al., 2020)	The influence of the PBL model with Google Classroom media on student activities and learning outcomes	Talking about Google Classroom	Discusses learning models and activities as well as student learning outcomes
5	(Priambo do, 2013)	The effect of the application of e-learning on increasing motivation and learning effectiveness according to the diversity of	Discusses learning effectiveness	Discusses e-learning and learning motivation

		students and parents: a case study of Smalb Pangudi Luhur Jakarta		
6	(Astriawati, 2016)	Application of multiple linear regression analysis to determine the effect of educational services on the learning effectiveness of cadets at the Yogyakarta maritime academy	Discusses learning effectiveness	Discussing education services

METHOD

This study used the descriptive quantitative method. The purpose of writing this article is to find out the role of Google Classroom and Google Meeting on learning effectiveness, within the scope of technology education. The method of writing articles is quantitative descriptive. The population in this study amounted to 173 people with a research sample of 50 respondents. The sampling technique used is accidental sampling. Data was obtained from questionnaires submitted to respondents through google form with a likert scale of one to five (1-5). The tests carried out were t-tests, f-tests, and determination coefficient tests (Ali, H., & Limakrisna, 2013).

RESULTS AND DISCUSSION

Result

T Test

Table 1. Coefficient

Type	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	12,024	3,002		3.973	,000
G.C	,241	.089	,246	2,476	,029
G.M	.577	.077	,721	7,401	,000

a. Dependent Variable: Learning Effectiveness

b. Source: SPSS 27 Output

The T test uses a significance value of alpha (α) = 5%. The measurement results are based on the output of SPSS version 27, obtained the value of t-table = $(0.05/2) = 0.025$ and $df = n-k-1 = (n-2-1) = (50-2-1)$, so the result of t-table is 2.011. The result of t-count > t-table ($2.476 > 2.011$) and alpha significance value (α) which is $0.029 (<) 0.05$. So Google Classroom contributes to the effectiveness of learning partially (**H1 Accepted**). The result of t-count > t-table ($7.401 > 2.011$) and the alpha significance value (α) is $0.000 (<) 0.05$. So google meetings contribute to the effectiveness of learning partially (**H2 Accepted**).

F-Test

Table 2. Anova

Type	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	4 19,771	2	2 09.1 17	27,493	,000 ^b
Residuals	3 12,804	47	7,423		
Total	7 23,621	49			

a. Dependent Variable: Learning Effectiveness

b. Predictors: (Constant), Google Classroom, Google Meeting

If the significant value < 0.05 , the independent variable is significant to the dependent variable. Based on the results of the table above, the significance value is obtained at $0.000 < 0.05$. So the independent variable has a significant effect on the dependent variable simultaneously. This means that Google Classroom and Google Meeting contribute to the effectiveness of learning simultaneously (**H3 accepted**). Based on the results of SPSS 27 output above, an F value of $27.493 > 10.00$ was obtained. So Google Classroom and Google Meeting have a positive and significant impact on the effectiveness of simultaneous learning.

Coefficient of Determination

Table 3. Model Summary

Type	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,745 ^A	,596	.588	2,701

a. Predictors: (Constant), G.C,G.M.

b. Dependent Variable: Learning Effectiveness

Based on the model summary table above, an r-square value of 0.596 or (59.6%) is obtained. This shows the percentage of independent variables, namely google classroom and google meeting against dependent variables, namely learning effectiveness is 59.6%. This means $1 - 0.596 = 0.404$ or 40.4% were influenced by other variables not studied in this study.

Discussion

Based on the relevant literature review and previous research, the results and discussion of this literature review article are as follows:

1. The role of Google Classroom on partial learning effectiveness

Google classroom is one of the blended learning models intended for every scope of education. Google Classroom is an application in the form of a classroom that is connected via an internet connection and occurs in cyberspace. Google classroom is a platform widely used by educators, students and students in conducting asynchronous or distance learning. In Google Classroom teachers, lecturers or educators in providing information are documents, learning videos and recordings that can be viewed by participants who are members of classes that have previously been created in Google Classroom.

In Google Classroom there is a feature that provides a time limit for submitting assignments, and provides direct assessment of the tasks that have been done. There is a comment menu on each material or learning sent to Google Classroom, so participants can discuss each other in the comments column. The use of Google Classroom is increasingly effective because participants only need to join the class using the invitation code, given by the class owner. Security and privacy in Google Classroom is also good because only those

who have an invitation code are eligible to join, besides that class admins can remove participants who are considered not eligible to join.

Based on hasil t-calculate $>$ t-table ($2.476 > 2.011$) and alpha significance value (α) which is $0.029 (<) 0.05$. So Google Classroom contributes to the effectiveness of learning partially (**H1 Accepted**).

Google classroom plays a role in learning effectiveness, this is in line with research conducted by: (Nurfayanti & Nurbaeti, 2019), (Putri & Dewi, 2019), (Rikizaputra & Sulastri, 2020)

2. The role of google meetings on partial learning effectiveness

Google meeting is a video conferencing service / online meeting developed by Google. The Google Meet service is a combination of Google Chat and Google Hangouts with a more specialized development of online meetings. Google meetings become a platform that provides live video-based applications. In Google Meeting, participants who join can communicate in real time and each participant can share his work screen. Google meetings are designed to make it easy for everyone to make presentations and share their screens.

Based on hasil t-calculate $>$ t-table ($7.401 > 2.011$) and the alpha significance value (α) is $0.000 (<) 0.05$. So google meeting plays a role in the effectiveness of learning partially (**H2 Accepted**).

Google meetings contribute to the effectiveness of learning partially, this is in line with research conducted by: (Hermawan & Arifin, 2021), (Prisuna, 2021), (Astuti & Purwanto, 2021)

3. The role of Google Classroom and Google Meeting on the effectiveness of simultaneous learning

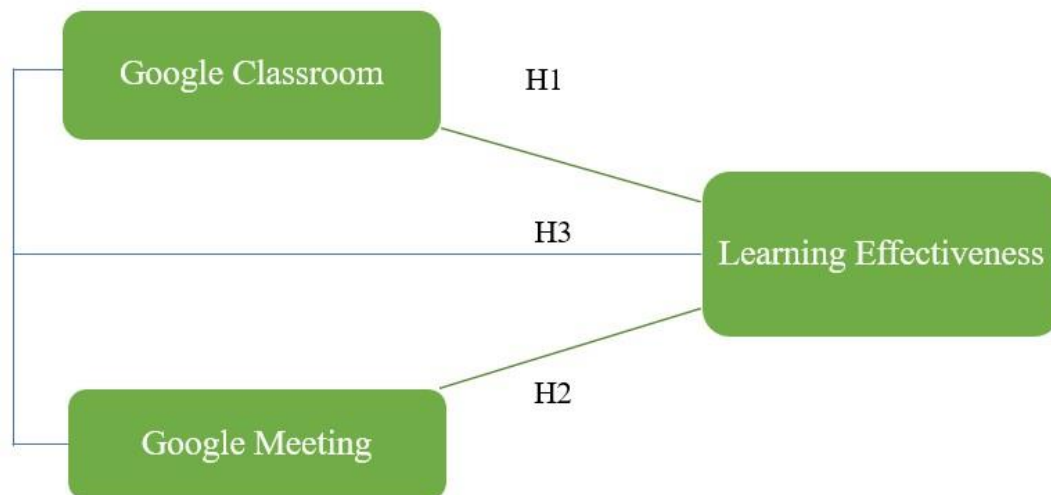
Google classroom is one of the blended learning models intended for every scope of education. Google Classroom is an application in the form of a classroom that is connected via an internet connection and occurs in cyberspace. Google meeting is a video conferencing service / online meeting developed by Google. The Google Meet service is a combination of Google Chat and Google Hangouts with a more specialized development of online meetings. If both platforms are applied and carried out by every education staff and every individual, then the achievement of learning effectiveness which includes: 1) Student response: where students will be free and confident in learning; 2) Communicative process: the occurrence of discussions between individuals easily; and 3) Learning outcomes: tend to be easier to understand learning, because it is technology-based.

If the significant value < 0.05 , the independent variable is significant to the dependent variable. Based on the results of the table above, the significance value is obtained at $0.000 < 0.05$. So the independent variable has a significant effect on the dependent variable simultaneously. This means that Google Classroom and Google Meeting contribute to the effectiveness of learning simultaneously. Based on the results of SPSS 27 output above, an F value of $27.493 > 10.00$ was obtained. So Google Classroom and Google Meeting play a positive and significant role in the effectiveness of simultaneous learning (**H3 Accepted**).

Google classroom and google meeting contribute to the effectiveness of learning simultaneously, this is in line with research conducted by: (Astuti & Purwanto, 2021), (Prisuna, 2021), (Yusuf et al., 2020), (Sudiantini et al., 2023).

Conceptual Framework

Based on the literature review and discussion above, the researcher determines the following frame of mind:



Picture 3. Conceptual framework

This study discusses the role of google classroom and google meeting on learning effectiveness. There are other factors that contribute to the effectiveness of learning, including:

- 1) Implementation of learning: (Kholisoh & Ali, 2020), (Havidz et al., 2020), (Mukhtar et al., 2016).
- 2) Communicative process: (Iryani et al., 2021), (Putri Primawanti & Ali, 2022), (Saputra et al., 2023), (Ismail et al., 2022).
- 3) Student responses: (Saputra & Sumantyo, 2022), (Setyawati et al., 2018), (Nofrialdi et al., 2023).

CONCLUSION

Conclusion

Based on the literature review and discussion above, the researcher determined the following conclusions:

1. Google classroom contributes to the effectiveness of learning partially.
2. Google meetings contribute to the effectiveness of learning partially.
3. Google classroom and google meeting contribute to the effectiveness of learning simultaneously.

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