## The Effectiveness of Distance Learning Using the Google Classroom Learning Management System During the Covid-19 Pandemic

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- The problem of the COVID-19 pandemic growth is highly influential in various aspects. Abstract: including education. It is necessary to conduct learning using a distance learning model due to the development of COVID-19 numerical data and government policies prohibiting face-to-face learning in response to the COVID-19 pandemic. It forces teachers to conduct efficient instruction to boost student learning activities. This study thus aims to determine the effectiveness of distance learning using the Google Classroom Learning Management System (LMS), which includes planning, implementation, and evaluation and ends by making conclusions about the effective use of the Google Classroom Learning Management System. This study employed a qualitative approach with data collection techniques in the form of interviews, observation, and documentation studies. From the research results, it was found that 46% stated that they strongly agreed. 27% agreed, and 27% guite agreed that the application of Google Classroom influenced the teaching and learning process in distance learning. In addition, 58% admitted that they strongly agreed, 30% agreed, and 13% quite agreed that the design and production of learning materials on Google Classroom had been effective. Further, all teachers had uploaded the documents needed for learning evaluation. and students responded that Google Classroom could be a learning medium, helped in collecting assignments and guizzes, had easy-to-understand features, and they did not feel given many assignments because learning in Google Classroom became more effective and did not take a long time. Nonetheless, the results of interviews with students revealed that there were student obstacles in the distance learning implementation, i.e., the availability of internet quota and mobile phone specifications, which were slow in accessing Google Classroom, and some students did not have mobile phones, which was related to the financial ability of the student's parents. Hence, it can be concluded that using the Google Classroom Learning Management System has been effective in distance learning.
- Keywords: Effectiveness, Distance Learning, Learning Management System, Google Classroom
- Masalah berkembangnya pandemi Covid-19 sangat berpengaruh terhadap berbagai aspek, Abstrak: termasuk dalam aspek pendidikan. Perkembangan data angka Covid-19 dan kebijakan pemerintah dalam menyikapi pandemik Covid -19 dengan tidak mengizinkan pembelajaran tatap muka sehingga mengharuskan pembelajaran dilaksanakan dengan model Pembelajaran Jarak Jauh (PJJ) yang menuntut guru dapat melaksanakan pembelajaran vang efektif sehingga dapat meningkatkan aktivitas belajar peserta didik. Penelitian ini bertujuan untuk mengetahui efektivitas Pembelajaran Jarak Jauh menggunakan Learning Management System Google Classroom yang meliputi perencanaan, pelaksanaan, evaluasi, dan diakhiri dengan membuat kesimpulan penggunaan Learning Manajemen System Google Classroom yang efektif. Penelitian ini menggunakan pendekatan kualitatif dengan teknik pengumpulan data berupa metode wawancara, observasi, dan studi dokumentasi. Dari hasil penelitian didapatkan bahwa sebanyak 46% menyatakan sangat setuju, 27% setuju dan 27% cukup setuju bahwa penerapan google classroom memberikan pengaruh pada proses belajar mengajar dalam pembelajaran jarak jauh, sebanyak 58% menyatakan sangat setuju, 30% setuju dan 13% cukup setuju bahwa perancangan dan



pembuatan materi pembelajaran pada Google Classroom telah berjalan efektif, semua guru telah mengupload dokumen-dokumen yang diperlukan dalam evaluasi pembelajaran, dan peserta didik memberikan respon bahwa google classroom dapat menjadi media pembelajaran, membantu dalam mengumpulkan tugas dan kuis, penggunaan fitur dalam google classroom mudah dipahami, serta tidak merasa diberikan tugas yang banyak karena dalam google classroom pembelajaran jadi lebih efektif dan tidak membutuhkan waktu yang lama. Meskipun dari hasil wawancara dengan peserta didik bahwa dalam pelaksanaan pembelajaran jarak jauh terdapat hambatan peserta didik dalam mengikuti pembelajaran jarak jauh, yaitu ketersediaan kuota internet dan spesifikasi handphone yang lambat dalam mengakses google classroom, serta terdapat peserta didik yang tidak memiliki handphone, hal ini terkait kemampuan ekonomi orang tua peserta didik. Sehingga dapat disimpulkan penggunaan Learning Management System Google Classroom sudah efektif dalam Pembelajaran Jarak Jauh.

Kata Kunci: Efektifitas, Pembelajaran Jarak Jauh, Learning Manajemen System, Google Classroom

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## INTRODUCTION

The problem of the development of the COVID-19 pandemic is highly influential in various aspects, including in the aspect of education. The development of COVID-19 numerical data and government policies regulated in the Ministry of Education and Culture Circular Letter Number 15 of 2020 concerning Guidelines for Organizing Learning from Home during the Spread of Corona Virus Disease (COVID-19) in response to the COVID-19 pandemic does not allow face-to-face learning so that it requires learning carried out from home with a distance learning mode (Priyastuti & Suhadi, 2020)I. It is to ensure the fulfillment of the right to education services, protect against the adverse effects of COVID-19, prevent spread and transmission, and ensure the fulfillment of psychosocial support (Tanto et al., 2022). Considering that the distance learning model is new for most teachers in Indonesia, including at SMKN 9 Surakarta, it requires teachers to carry out effective online learning to increase student learning activities and achievements, which are no different from face-to-face learning models.

On the one hand, the distance learning model is an educational solution during a pandemic, but on the other hand, it can be a big challenge for the nation's education that must be faced together (Thach et al., 2021). It denotes that the application of online learning certainly requires readiness from various parties, both the school, including the role of teachers, officials, and the students themselves, and the role of parents. Another challenge is the limited facilities and infrastructure, especially technology and internet access. Research stated that the most common obstacles to implementing online learning are the lack of student packages, limited internet access by lecturers and students, and ignorance of online learning (Toquero, 2020). The internet for online learning is like the heart of the human body; if the heart does not beat, humans will die. Similarly, if there is no internet, no e-learning will take place (Laksana, 2020). It is feared that it will affect the quality of the educational process, and students will not get optimal learning. However, the distance learning process can still accommodate students' learning needs to develop skills and interests according to their level of education (Churi et al., 2022).

To prepare for distance learning at school, SMK 9 Surakarta has conducted training to improve teacher competence in distance learning using Google Classroom media. All teachers in distance learning have implemented the training results according to the subjects taught. However, the implementation of distance learning using the Google Classroom LMS at SMKN 9 Surakarta has not





run optimally. Based on a preliminary study conducted by the researchers at SMKN 9 Surakarta through observation, interviews, and documentation studies, problems were uncovered related to the implementation of distance learning using Google Classroom LMS. They included not optimal student learning activities, not uniform teacher administration systems in the Google Classroom LMS, monitoring student learning activities that have not been communicated with students optimally, the features in the Google Classroom LMS that have not been used optimally by teachers in distance learning, the unstable internet network, the limited availability of internet quota owned by teachers or students, and the evaluation of the distance learning implementation using the Google Classroom LMS that is not yet specific and measurable (Mershad & Wakim, 2018). In addition, the effectiveness of the Google Classroom LMS distance learning that has been implemented so far has not been measured because there is no quality guarantee that the use of the Google Classroom LMS in distance learning can really be implemented optimally (Shurygin et al., 2021).

Regarding these conditions, through this research, the distance learning implementation using the Google Classroom LMS needs to be comprehensively evaluated to find out the factors causing it not to be implemented following the needs and learning objectives and has not been able to change the habits of the teacher's perspective on work so far (Rugube & Govender, 2022; Alturki et al., 2016). Data and information from research findings would also be used by the researchers to develop alternative hypothetical models to create an effective distance learning model.

In this case, effectiveness is how well the work is done and to know the extent to which people produce output as expected (Mohd Kasim & Khalid, 2016). Effectiveness is also an assessment made concerning an individual, group, and organizational achievements. By knowing the effectiveness of the process or activity carried out, it is hoped that it can be seen how well the work is done and to know the extent to which people produce output as expected.

Meanwhile, learning is the whole process of education in schools. Specifically, distance learning is a form of self-directed learning systematically organized, in which counseling, presentation of learning materials, and provision and monitoring of student learning success are carried out by a group of teaching staff with different responsibilities. Learning is conducted remotely using media assistance. The opposite of the distance education system is direct or face-to-face education, a learning system that occurs due to direct contact between teaching staff and students (Baragash & Al-Samarraie, 2018). Distance learning is also an education system that does not require teaching staff where a person studies but allows for meetings between teaching staff and students at certain times (Kusmaryono et al., 2021). In addition, distance learning is a method for conveying knowledge, skills, and attitudes managed based on the application of the 'conveyor belt' concept (a division of labor), organizational principles, and extensive use of media, especially in the reproduction of teaching materials, thus enabling the learning process to occur in large numbers of students at the same time wherever they are. It is an industrial form of learning and teaching (Mulyanti et al., 2020). From some opinions above regarding distance learning, it can be concluded that it is a form of systematically organized independent learning carried out remotely using media assistance that does not require teaching staff at the place where one is studying, thus enabling the learning process to occur in large numbers of students at the same time wherever they are. With such a concept, a teacher does not need to meet face-to-face with students in a room using tools and media to help communicate remotely by utilizing the internet network.

Furthermore, a learning management system is software useful for several online activities. The activities are administration, documentation, activity reports, e-learning teaching and learning, and



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training materials, all of which are online (Mudau, 2022). On the other side, Juhary (2014) defined a Learning Management System (LMS) as software useful for creating web-based online learning materials and managing the results of learning activities. The opinions above regarding the learning management system show that it is useful software for managing online learning activities.

Quoting from the official Google website, the Google Classroom application as a productivity tool to make it easier and save time for an educator or teacher to manage classes and improve communication with students (Ulum et al., 2019). The existence of the Google Classroom application can make it easier for students and educators to connect, both inside and outside of school. Google Classroom application is an internet-based service owned by Google as an e-learning system (Ali & Maksum, 2020). Meanwhile, Google Classroom application a blended learning platform intended for every scope of education as a way out of the difficulties of creating, distributing, and grouping each paperless assignment (Astuti & Hikmah, 2021). This application is one of the best platforms to improve teacher workflow. From some opinions above regarding Google Classroom, it can be inferred that Google Classroom is an internet-based service belonging to Google used as an e-learning system to simplify and save time for an educator or teacher in managing classes and improving communication with students as a way out of the difficulty of creating, sharing, and grouping each paperless assignment.

For this reason, the research conducted aims to determine the effectiveness of distance learning using the Google Classroom LMS at SMKN 9 Surakarta:

- a. Knowing the effect of implementing Google Classroom on the teaching and learning process in distance learning
- b. Identifying the effectiveness of designing and making learning materials in Google Classroom
- c. Identifying the effectiveness of evaluating the learning implementation with Google Classroom
- d. Knowing students' responses to learn using Google Classroom, which is applied to the distance learning process

#### **RESEARCH METHODS**

This qualitative research type describes a descriptive study, i.e., making a systematic, factual, and accurate description of the facts, characteristics, and relationships between the phenomena studied. Symptomatic states are examined through natural (as opposed to experimental) qualitative observation structures. In this method, the researcher acts as the main tool. The way to collect facts is through triangulation (combination). Also, obtaining qualitative research emphasizes meaning rather than abstraction. Informative descriptions are inductive (Sugiyono, 2016). Furthermore, the research design used was ethnographic research methodology. Ethnography is a research methodology that is more often used in research related to a person's social behavior or actions. This research targeted students of multimedia skills competency at SMKN 9 Surakarta in multimedia productive subjects. The reason for choosing students and productive multimedia subjects was because student interaction with the media was quite high in this subject. Assignments were balanced knowledge and skills, so they required media that could be used as a class to do assignments and answer questions posed by the teacher through the Google Classroom media.

The technique of collecting data in this research used interview techniques, observation, and documentation studies. The main research tool when conducting qualitative research is the researcher himself, who carries out all stages of the investigation from start to finish. The researchers used





interview guides, observations, documentation studies, and questionnaires in research tools designed to collect information from consistent sources with the problems faced to help achieve research objectives. The collection of qualitative data is interactive and has interrelated steps. Syaodih (2011) described five stages in data collection and analysis activities: planning, initiating data collection, basic data collection, final data collection, and finalizing the collected data.

To determine the validity (trustworthiness) of the data, inspection techniques are needed (Miles et al., 2016). The implementation of inspection techniques is based on several criteria: the degree of trust (credibility), transferability, dependability, and confirmability. The application of the degree of trust (credibility) has a function of a.) carrying out the inquiry in such a way that the confidence level of the findings can be achieved and b.) demonstrating the degree of confidence in the results by way of proof by researchers on the multiple facts being studied. Then, the transferability criteria in qualitative research differ from the external validity of non-qualitative. The concept of validity states that the generalization of an invention can apply or be applied to all contexts within the same population based on the findings obtained in a representative sample of the population. Also, the dependability criteria indicate that reliability will be achieved if a study is repeated two or more times under the same conditions and the results are essentially the same. In addition, the confirmability criterion comes from the concept of "objectivity" in non-qualitative research. Confirmability here means that something is objective or not objective, depending on the agreement of several people on a person's views, opinions, and findings. Hence, something that many people agree on is said to be objective, while what many people do not agree on is subjective.

Moreover, triangulation is a data validity-checking technique that takes advantage of something else. Triangulation data collection techniques can be interpreted as data collection techniques by combining various techniques with existing data sources. The researchers used this data triangulation technique to test the reliability of the data. It aimed to validate the reliability of the data using different data collection techniques and sources. The instrument outline used to collect data can be seen in Table 1.

Table 1. Research Instruments Outline										
Objectives	Data Collection Technique	Question Form								
Knowing the effect of implementing Google Classroom on the teaching and learning process in distance learning	<ul> <li>Observation</li> <li>Interview</li> <li>Documentation Study</li> </ul>	<ul> <li>The rubric of questions with five choices</li> <li>Essays</li> </ul>								
Identifying the effectiveness of designing and making learning materials in Google Classroom	<ul> <li>Observation</li> <li>Interview</li> <li>Documentation Study</li> </ul>	<ul> <li>The rubric of questions with five choices</li> <li>Essays</li> </ul>								
Identifying the effectiveness of evaluating the implementation of learning with Google Classroom	<ul> <li>Observation</li> <li>Interview</li> <li>Documentation Study</li> </ul>	<ul> <li>The rubric of questions with five choices</li> <li>Essays</li> </ul>								
Knowing students' responses to learn using Google Classroom, which is applied to the distance learning process	<ul> <li>Observation</li> <li>Interview</li> <li>Documentation Study</li> </ul>	<ul> <li>The rubric of questions with five choices</li> <li>Essays</li> </ul>								



Therefore, data analysis is immediately carried out with data reduction (Miles et al., 2016). Data reduction starts when data is collected by making summaries, coding, tracing themes, making groups, and making memos to set aside irrelevant data and information. The data selection process is focused on data that leads to problem-solving, meaning, or answering research questions. When it comes to data reduction, every researcher is guided by the goal to be achieved.

Moreover, the main goal of qualitative research is to develop important knowledge and theory. The data collected from the results of observations, interviews, and documentation studies are then reduced to choose which ones are appropriate to present. The most common way to present qualitative research data is with narrative text. The presentation of data will make it easier to understand what happened, plan what to do next based on what happened, and plan what to do next based on what is understood. Furthermore, the final data analysis activity is concluding research results with triangulation. Triangulation activities are carried out by asking the same questions to other respondents. It can also be done in two ways: a.) reviewing field notes and b.) discussing or exchanging ideas with experts, colleagues, and similar teachers. Drawing conclusions is in the form of interpretation, i.e., finding the meaning of the data that has been presented. In qualitative research, initial conclusions are still tentative and subject to change unless strong evidence supports the next data collection stage.

Nevertheless, if the conclusions drawn at the initial stage are supported by valid and consistent evidence when the researcher returns to the field and collects data, the conclusions presented are credible. In qualitative research, the expected conclusions are not always in accordance with the formulated problem description. It is because, in qualitative research, the problem description is still temporary and develops after the research is in the field.

#### **RESULTS AND DISCUSSION**

From the research that has been done, the results on the effect of implementing Google Classroom on the teaching and learning process in distance learning can be presented in Table 2.

INDIKATOR	sangat setuju		setuju		cukup		tidak setuju		sangat tidak setuju	
Penggunaan google classroom dapat menjadi media penunjang pembelajaran	28	85%	2	6%	3	9%		0%		0%
Membantu dalam mengumpulkan tugas dan kuis	23	70%	5	15%	5	15%		0%		0%
Penggunaan fitur dalam google classroom mudah dipahami	5	15%	15	45%	13	39%		0%		0%
Penggunaan google classroom siswa tidak merasa diberikan tugas yang banyak karena dalam google classroom pembelajaran jadi efektif tidak membuang waktu lama	5	15%	13	39%	15	45%		0%		0%
Rata-Rata		46%		27%		27%		0%		0%

Table 2. The Application of Google Classroom in Distance Learning





The findings of the questionnaire, which was distributed via a Google Form, are shown in Table 2: 46% stated that they strongly agreed, 27% agreed, and 27% were sufficient. It suggests that using Google Classroom affected how distant learning was taught and learned. It aligns with the findings of interviews and the triangulation of sources, which revealed that the vice principal for curriculum stated that it was anticipated that the Google Classroom media would assist instructors and students in the distance learning process.

Furthermore, the research results on the effectiveness of designing and producing learning materials on Google Classroom can be displayed in Table 3.

INDIKATOR	sangat setuju		setuju		cukup		tidak setuju		sangat tidak setuju	
Pembelajaran yang dilaksanakan sesuai dengan kurikulum dan silabus	5	15%	25	76%	3	9%		0%		0%
Guru dan siswa memiliki akses ke google classroom atau memiliki akun google	33	100%		0%		0%		0%		0%
Guru memiliki akses terhadap fasilitas pengembangan pembelajaran berbasis e-learning	33	100%		0%		0%		0%		0%
Tersedia kurikulum, silabus,dan rencana pelaksanaan pembelajaran dalam perencanaan model pembelajaran menggunakan media google classroom	30	91%		0%	3	9%		0%		0%
Tersedia akses terhadap fasilitas pelatihan penyelenggaraan pembelajaran dengan media google classroom	33	100%		0%		0%		0%		0%
Materi sesuai dengan kurikulum dan silabus	13	39%	25	76%		0%		0%		0%
Materi disiapkan guru sesuai mata pelajaran yang diampu	10	30%	10	30%	13	39%		0%		0%
Perancangan dan pembuatan materi sesuai dengan karakteristik e-learning	15	45%	10	30%	8	24%		0%		0%
Materi tersedia dan dapat diakses siswa tanpa terikat tempat dan waktu	7	21%	18	55%	8	24%		0%		0%
Menjalankan penyelenggarakan e- learning sesuai kode etik dan peraturan yang berlaku	14	42%	10	30%	9	27%		0%		0%
Rata-Rata		58%		<b>30</b> %		13%		0%		0%

Table 3. Designing and Making Learning Materials in Google Classroom

Table 3 presents the results from the questionnaire distributed using Google Forms. The results showed that 58% of respondents strongly agreed, 30% agreed, and 13% thought it was sufficient, indicating that Google Classroom's efforts to create instructional resources have been successful. It corroborates with the findings of interviews and the triangulation of sources, which showed that teachers of effective multimedia claimed that the curriculum, syllabus, and lesson plans



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were considered while designing and producing the learning resources. According to the findings of the documentation study, learning was implemented in line with the curriculum and syllabus. Then, from the results of interviews with the vice principal of the curriculum field, it was stated that teachers and students created a belajar.id account by the Indonesian Ministry of Education and Culture through the school admin applying to create an account at https://belajar.id. The results of this study are also relevant to Sabran, who examined The effectiveness of Google Classroom as a learning medium—proceedings of the National Seminar on the Research Institute of the University of Makassar.

Regarding the research results on the effectiveness of evaluating the implementation of learning with Google Classroom, interviews with the vice principal in the curriculum sector uncovered that evaluation of learning implementation was carried out online by uploading learning planning documents, implementing learning, evaluating learning outcomes, and analyzing learning outcomes and their follow-ups (Ulum et al., 2019). According to the evaluation's findings, all teachers had uploaded the files required for the learning evaluation. The findings of the documentation study also demonstrated that the vice principal conducted the learning evaluation report in the curricular area (Mohd Kasim & Khalid, 2016).

Furthermore, the research results on students' responses to learning using Google Classroom applied to the distance learning process can also be seen in Table 2. It is where students responded that Google Classroom could be a learning medium, assisting in collecting assignments and quizzes, having easy-to-understand features in Google Classroom, and they did not feel given many assignments because learning was more effective and did not take a long time in Google Classroom. Nonetheless, the results of interviews with students showed that in the distance learning implementation (Alqahtani, 2019), there were obstacles for students in participating in distance learning, i.e., the availability of internet quota and mobile phone specifications, which are slow in accessing Google Classroom, and some students did not have mobile phones, which are related the economic ability of parents of students. It

## CONCLUSIONS AND RECOMMENDATIONS

According to the analysis's findings, employing Google Classroom as a learning management system for distance learning during the COVID-19 pandemic has been successful and may provide solutions to current issues. The use of Google Classroom had an impact on the teaching and learning process in distance learning; the design and creation of the learning resources on Google Classroom were successful; the evaluation of the implementation of learning with Google Classroom was operating successfully; and the responses of the students to learning with Google Classroom applied to the distance learning process were generally very positive. The study's findings also align with its goals: to evaluate the efficiency of distance education at SMKN 9 Surakarta utilizing the Google Classroom LMS.

The researchers recommend fostering dialogue between instructors, students, and parents of students utilizing popular social media platforms to identify existing problems and find solutions.

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