Utilization of Google Apps for Education (GAFE) as a Learning Medium for Early Childhood

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Abstract— **Many children have not been able to develop and share the work obtained during learning activities. This is due to the lack of media utilized by teachers that can help students in developing the works made during learning. Therefore, teachers need to make an innovation in the provision and utilization of learning media that can help students in developing competencies and the work they achieve. the purpose of this study is to determine the utilization of Google Apps For Education (GAFE) as a learning media for early childhood. The method used by researchers in conducting this research is a quantitative method, which is done through distributing online questionnaires to correspondents involved in this study. The results of this study indicate that the utilization of Google Apps For Education can be utilized as a means of learning media that can assist students in learning. The conclusion of this research is that Google Apps For Education can be used as a learning media that can be utilized for early childhood.**
Keywords—**Childhood, GAFE, Learning**

I. INTRODUCTION

Learning can help learners to develop their potentials (Gaur et al., 2021; Pigoni et al., 2019; Pritchett & Moeller, 2022). Learning can be done through methods that are organized, designed, and sustainable (Poole, 2022; Teng & Zhang, 2022; Young & Young, 2018). Teaching and learning activities should be able to generate reciprocal reactions between teachers and students (Derrington et al., 2021; Huang & Hew, 2018; Norwood et al., 2022). Learning activities are needed by a learner to actively develop his ability to gain religious strength, intelligence, and self-control (Al Machot et al., 2019; Hu et al., 2018; Smith et al., 2020). Learning is needed when students go out into the field, when they go out into the field students can develop mindsets, control education to produce educational theories (Keck et al., 2021; Wang & Lee, 2022; Xu & Mishra, 2022). When students go out in the field, they must have the courage to express their opinions (Mansfield et al., 2020;

Mejia et al., 2019; Singh, 2020). If a learner already has the courage to express his opinion, it will be easy for him to speak in front of many people (Malcolm, 2018; Santilli et al., 2021). The learning process cannot be separated from the important role of an educator, because only educators can convey the material with unique learning methods and easy for students to understand (Chen et al., 2022; Mora et al., 2020; Sun et al., 2022). This is where the creativity of educators will be seen when an educator makes the material that will be given to students.

In this day and age, science is increasingly showing its development from the past to the present (Basisty et al., 2020; Bebbington & Unerman, 2018; Mateo et al., 2019). The development shown from time to time can be seen from the advancement of science that produces new technologies, which indicates that the era continues to develop (Malazita & Resetar, 2019; Nguyen et al., 2019; Specht & Crowston, 2022). In this modern era the development of technology is growing rapidly because in all schools and colleges (Chandio et al., 2021; Vedachalam et al., 2019; Xiao et al., 2020). Almost all people have utilized technology in their daily lives. In modern times, technology is now at the digital stage, including the country of Indonesia (Black et al., 2019; Hissong et al., 2018; Hue et al., 2021). It can be seen from several fields, namely agriculture, industry, and marketing. Technology created from the development of science is the result of human creation that occurs in the world (Esfandiari et al., 2023; Lampé et al., 2019). Therefore, it is only natural that technology also has a positive impact and a negative impact. Humans also depend on technology, even becoming a basic necessity in everyday life.

Nowadays, technological advances have gone global and have influenced human life today, such as in the fields of culture, politics, education, industry, and art (Oubibi et al., 2022; Soukoulis & Bohn, 2018; Uddin & Wright, 2022). Humans cannot avoid the development of technology that continues to develop every era, if we do not keep up with technological developments, we will be left behind by others who have implemented technological developments today (Adebayo et al., 2023; Zhou & Du, 2021). This technological advancement greatly affects various aspects, for example in the field of education, with technological advances affecting science where in this case students will receive knowledge about natural symptoms and facts, and with technology humans can apply science (Aamir Khan et al., 2022; Awasthi et al., 2019; Tang, 2022). Humans can also innovate with advanced technology and make it easier for humans to complete activities that humans do.

Google Apps For Education (GAFE) is a google application implemented in primary education, secondary education, higher education by prioritizing the use of technology and collaboration (Husnayain et al., 2020). The advantage of Google Apps For Education is that it is a tool that makes it easier for educators and learners if, when using it. Google Apps For Education creates a contextualized, constructive and open-ended approach to learning (Alizadeh et al., 2021; Safarnejad et al., 2021; Sandström et al., 2022). With this advantage, Google Apps For Education can facilitate educators in conducting learning in online learning schools by using google applications that can help teaching and learning activities. Google Apps For Education has other advantages, so that everyone can apply without having to pay and make an ideal tool for everyone on a budget, if you already have an account you can access it for free.

Research conducted by Setiahati et al (2022) utilization of Googlr Apps For Education (GAFE) as primary school learning media. There are several digital technologies that are in demand today. One that is well-known, proficient, and straightforward enough for students to understand is Google. Humans are familiar with the name google along with all forms of applications provided by google itself such as google classroom which can help the

teaching and learning process occur. There is one google application that is no less good than the google classroom application is google meet, this application can help educators and students as a second alternative if the educator cannot do face-to-face learning directly then the google meet application can be used as a substitute for learning, through online face-to-face learning through the google meet application without paying anything in accessing it.

Based on previous research statements, it can be concluded that there are differences as well as novelty in the current research. When conducting research, researchers say that innovations are designed in the form of a teaching and learning system which can be done through what is called the Google Apps For Education (GAFE) utilization system as an elementary school learning media. Utilization can be done as a means to facilitate the problems that are being faced by students, both students in conducting lecture learning, students in using media in learning. In this study, researchers will also prepare the results of filling out questionnaires in tabular form with analysis as well which describes how students, teachers, and students think about understanding the benefits of Google Apps For Education (GAFE) as a learning medium..

This research has a purpose and is important to do because with this educators and students can find out what are the benefits in using Google Apps For Education (GAFE) in helping the learning process. The purpose of this research is (1) to tell how to use Google Apps For Education (GAFE) in learning media (2) to make educators and participants can know the positive and negative impacts of using Google Apps For Education in learning media. While the importance of this research is that educators and students can understand the benefits of using Google Apps For Education and can increase the knowledge and intelligence of students in conducting online learning. And this research wants students to be able to show their activity in using Google Apps For Education (GAFE) which continues to grow.

Based on the explanation above, researchers are very interested in taking a research title, namely the utilization of Google Apps For Education (GAFE) in early childhood learning media. This research was conducted to find out the extent to which the utilization of Google applications is used by educators and students in early childhood. With this research, researchers know that Google applications are very helpful for an effective and interesting learning process. Especially the extent of utilization of the use of google applications that provide many applications for learning media. Dampat with this google application makes all learning processes become unsaturated because of the various variations of learning media provided by google applications. Therefore, educators should be able to understand the utilization of Google Apps For Education (GAFE) in this early childhood learning media.

II. RESEARCH METHODS

The quantitative method is to investigate a case with accurate accuracy in order to get the truth facts through a phenomenon and problem (Hosseini et al., 2019). The reason for conducting this research is to easily collect some information about the use of Google Apps For Education (GAFE) in early childhood education during the learning process. Researchers use the application of quantitative methods, because this problem can be said to be difficult because for everyone this is not something that can be done but is still new to them (Hair et al., 2021). The method used when researching is through collecting data, and distributing questionnaires using google form and sending to respondents who fill out the questionnaire. The intended respondents are teachers, students, students and parents of early school students. Researchers want to know more about the use of Google Apps For Education (GAFE).

Making a questionnaire is made to be able to find out what the responses of the research subjects are related to the benefits of using online learning media (Rossier et al., 2022). Before making a questionnaire, the researcher conducted a search by collecting various kinds of cases whose truth could be trusted, so the researcher prepared several questions that could explain the results of this study. Next, the researcher creates data or questions using the google application, namely google form. The intended research subject then fills in the google form provided by the researcher by filling in with the right answer and according to the existing reality so that the researcher can get the right and accurate information (Zygmunt Kaczmarczyk, 2021). Researchers can distribute questionnaires directly to respondents and can also be distributed through online media such as whatsapp and others google applications that can be utilized in distributing questionnaires.

The distribution of questionnaires can also be done by directly asking respondents to help researchers by filling out questionnaires that have been made by researchers by explaining the purpose of filling out the questionnaires provided by researchers (Kurazono et al., 2022). This method is done so that respondents can fill out the questionnaire correctly and researchers get accurate information and data that can be trusted and can be justified to many people so that this research runs smoothly. After the questionnaire has been distributed, many have filled in the next researcher to collect data. Data collection is a method used by researchers to obtain accurate data, information from research subjects. The use of this data collection technique is so necessary for researchers in conducting their research in order to facilitate the processing of research. Using how to fill out a questionnaire by explaining to the respondent including filling out a directed questionnaire. The technical analysis used in this study can be seen in chart 1 below. ability.

III. RESULT DISCUSION

Utilization of Google Apps For Education (GAFE)

The benefit of using Google Apps is as a means of assisting educators to carry out the learning process. The use of Google Apps For Education is very helpful for educators in the world of education, which has been widely applied by educators, the use of Google Apps For Education began to be widely used by educators when the covid-19 disaster hit the world of education in April 2019. From here, Google Apps For Education has such important benefits, at this time there are many applications that can help learning which at that time was done online. Some applications from Google Apps For Education that can be used when educators cannot do learning directly, then Google Apps For Education applications can be used, such as using google meet to do online learning, google classroom as a place to collect assignments and other applications.

Utilization of Google Apps For Education for early childhood

The utilization of Google Apps For Education in early childhood learning media has good benefits. In this case students can understand learning more easily, because in early childhood it is easier to understand what is shown and with lessons that are practiced directly in front of early childhood students. Children at an early age if educators cannot foster a sense of pleasure, comfortable students will make students bored, especially at an early age children prefer a learning process that is not focused on studying books, occasionally in lessons they want to create learning materials in which there are animated images and in the form of video learning. Therefore Google Apps For Education provides google applications that can be used for learning that uses videos and images, namely applications such as canva and power point.

Table 1. 1 questionnaire distribution results

No	Question	Sangat setuju	Setuju	Tidak setuju	Sangat tidak

No	Statement				setuju
1	Learners should know how to use Google apps for learning	61,2 %	40,3%	1,5 %	0
2	Google apps have a positive impact on children's learning	26,9%	68,7%	4,5%	0
3	Google apps is a challenge for educators in helping the success of online learning media	28,4%	68,7%	2%	0
4	Young early childhood in understanding learning through Google applications	17,9%	49,3%	31,3%	1,5%
5	Through Google apps early childhood easy to understand the material provided by the teacher	16,4%	53,7%	31,3%	1,5%
6	Using Google apps in early childhood learning is very effective	14,9%	43,3%	41,8%	1,5%
7	The use of Google applications in the learning process can increase the enthusiasm for early childhood learning	14,9%	67,2%	16,4%	3%
8	Early childhood tends to get bored with the Google application learning system	16,4%	38,8%	46,3%	3%
9	With the Google app, you can see the activeness of students and teachers.	20,9%	52,2%	26,9%	3%
10	With the Google application the teacher can make learning interesting	40,3%	49,3%	11,9%	0
11	With the Google app, it is easier to see students' intelligence.	16,4%	50,7%	29,9%	3%
12	With the use of Google applications can make students familiar with online learning applications	23,9%	70,1%	6%	0
13	With learning	20,9%	56,7%	22,4%	1,5%

No	Statement				
	through Google apps teachers can make it not saturated				
14	Google applications create many applications that can be used in learning	25,5%	73,1%	1,5%	0
15	With the Google application can make students keep up with the times	41,8%	53,7%	4,5%	0
16	Google apps can help students complete group assignments	25,4%	62,7%	11,9%	0
17	Teachers can provide material through viewing such as PPT	31,3%	64,2%	3%	1,5%
18	Students feel that learning using Google applications is difficult to understand	13,4%	46,3%	40,3%	3%
19	Students are happy with learning using Google apps	19,4%	64,2%	16,4%	0
20	Google apps makes it a	28,4%	52,2%	20,9%	1,5%

little difficult for teachers because of limited understanding of Google apps				

In the data table above, it can be seen that there are several statements about the utilization of Google Apps For Education in early childhood. The table above has produced several questions which researchers easily find out how the utilization of Google Apps For Education in the early childhood learning process. In the table above there are several questions totaling 20 questions which discuss the benefits of Google Apps For Education in the teaching and learning process of early childhood students. The statement that students can find out the use of Google Apps For Education in learning media is 61.2% with a strongly agreed category. Furthermore, the statement of the positive impact of Google applications on learning 68.7% with the category agree. Google applications are a challenge for educators in helping the success of online learning media 68.7% with the category agree. Early childhood is easy to understand learning through google applications 49.3% with the category agree. Through the google application, children easily understand the material provided by the teacher 53.7% with the category agree. The use of google applications in early childhood learning is very effective 41.8% disagree. The use of google applications can increase the enthusiasm for early childhood learning 67.2% with the category agree. Early childhood tends to get bored with the google application learning system 46.3% disagree. With the google application can see the activeness of students and teachers 52.2% with the category agree. With the google application the teacher can make learning interesting 49.3% with the category agree.

With the Google application, students can see their intelligence more cheaply 50.7% with the

agreed category. The use of Google applications can make students familiar with online learning applications 70.1% with the agreed category. Learning through the teacher's google application can make online learning unsaturated 56.7% with the category agree. Google applications have many applications that can be used in learning 73.1% with the category agree. With the google application can make students keep up with the times 53.7% with the category agree. Google apps can help students in completing group assignments 62.7% agreed. Teachers can provide material through displays such as power point 64.2% with the category agree. Students feel that learning by using google applications is difficult to understand 46.3% with the category agree. Students become happy with learning using google apps 64.2% with agreed category. Google applications can make it difficult for teachers due to limited understanding of google applications 52.2%.

In the graph above, it can be seen that there are several statements about the utilization of Google Apps For Education (GAFE) as a learning media in early childhood. In this study, researchers made several statements to be able to see how the utilization of Google Apps in early childhood learning media. Some of the results obtained by the highest researcher was 73.1% in the agree category. In the second highest research result, 70.1% was obtained in the agree category. In the third highest research result, 68.7%, which is included in the agreed category. The results of this study which stated the highest disagreement was 46.3%. From this research also got the lowest result from the presentation of the 0% statement from the strongly disagree category statement. The data that can be taken from the study shows that the statement with the most agree.

The results of this research show that the highest category of statements of strongly agree, agree, disagree and strongly disagree is the statement of agree, namely the highest presentation is 73.1%. The results in the agree category are included in the best and highest categories in this research. The second highest number of agreeers received a presentation that was only slightly different from the highest presentation, namely the presentation was 70.1%, which was only 2% different from the highest presentation, namely 73.1%, while the lowest presentation from those who agreed was 38. 8%. From the results of the research conducted, researchers also received a presentation of statements from respondents who disagreed, namely 46.3%, with a statement stating that young children are more likely to be bored with using Google applications as a learning medium. In the results category, the lowest percentage of disagreeing statements was 1.5%. Researchers also obtained the highest presentation results from the strongly disagree statement, which was 3%, while in the strongly disagree category the use of Google applications was 3% with the disagree statement.
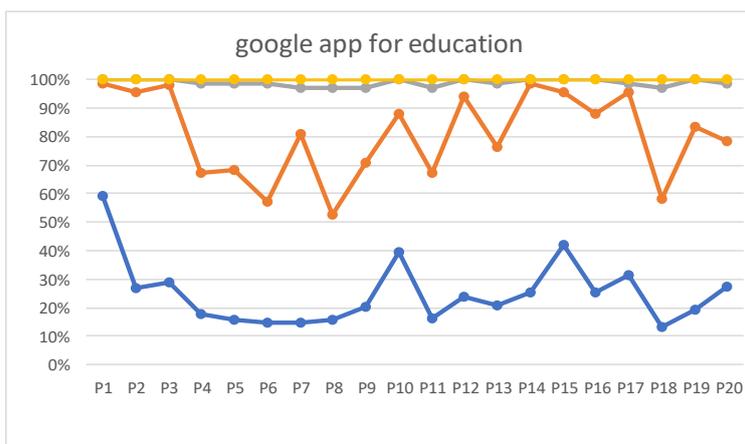
Figure 3. Google Apps For Education

From figure 3 above are several applications including Google Apps For Education (GAFE). This Google application has the benefit of making it easier for educators and students to carry out learning media in the world of education. This Google application has very influential benefits in the world of education at the moment, because now we have entered a world where technology is widely used as an aid to daily activities, especially in the world of education. Because the Google application can influence the way students learn by using the Google application as a way for students to understand the material provided by educators. Using the Google application can make it easier for an educator to deliver materials. The Google application will enable students to know that they can present material with animation, video and images simultaneously. The Google application can also help students if an educator cannot enter and be replaced via online lessons. Here you can use Google applications such as Google Meet, where here we can meet face to face online.

The characteristic of using Google Apps For Education (GAFE) in early childhood learning media is that it presents accurate and reliable information. To make it easier for educational institutions when providing material. Next, efforts can be made to facilitate the delivery of material to students. The use of this Google application has had a positive and negative impact on the world of education. especially in learning media, its positive impact can make it easier for students to convey learning material in a unique way, while the

negative impact is the limitations of educators in understanding the use of Google applications. If educators already understand the use of the Google application then it will be easier for them to provide material, send assignments and so on. If educators already understand the use of the Google application then applying it to students will not be difficult.

The results of this research are the impact of using Google Apps For Education (GAFE) in early childhood learning media. Utilizing this Google application makes world education easier, especially the world of education in Indonesia. This Google application began to be widely used in education, namely when Covid-19 hit the world, at which time all face-to-face learning processes were stopped and learning was shifted independently, and educators gave assignments via WhatsApp. At that time, we saw a lot of use of Google applications, such as the Google Meet application, we could learn face to face, even if only through the application. From what is explained above, the use of Google Apps for Education (GAFE) has helped and made it easier for educators to deliver material and collect assignments indirectly. These steps are taken so that students continue to learn online.

Researchers conducted this research to determine the extent of use of Google Apps For Education (GAFE) in early childhood learning media. Because in the current era of globalization, Google has provided many applications to make it easier for teachers to assign assignments and collect assignments. But there are several teachers who have problems implementing the application provided by Google. Many teachers now have implemented it and some have not implemented it at all. Teachers who have not implemented the use of Google applications in learning media may have limited knowledge about using Google applications. These obstacles that are a problem for teachers in implementing the use of Google applications may be due to obstacles in implementing the use of Google applications, due to the limited facilities

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they have and limited mastery of technological knowledge.

The aim of this research is to find out the benefits of using Google Apps For Education (GAFE) in early childhood learning media. The use of Google applications really helps educational institutions in carrying out online teaching activities. Difficulties in implementing the online learning process can be overcome by using Google applications, because Google Apps For Education is a service that helps the world of education, especially early childhood education. The use of Google Apps For Education for early childhood learning is to provide solutions for communicating and provide a form of teaching system such as several applications that can be used Google Meet, Google Talk, Google Drive which can be used to easily send and provide material online.

IV. CONCLUCION

Based on the research discussion above, researchers can conclude that the use of Google Apps For Education (GAFE) in early childhood learning media has many benefits. Learning will become more interesting and less boring. With the existence of Google Apps For Education (GAFE), it becomes easier for educators to explain the material because applications are available that increase students' interest and abilities. It becomes easier for students to understand learning material. The learning material provided by the application is shorter and more precise so that students are enthusiastic about learning. The Google Apps For Education (GAFE) application provides learning features that are interesting and not boring. The learning features are easy for students to understand. Google Apps For Education (GAFE) not only provides learning features but there is also a quiz feature to train students' ability to understand the material explained by the teacher. There are various forms of Google Apps For Education (GAFE) that educators can apply to students. So that learning is not just

that, but can be varied. So that students can also apply learning with this application to other friends.

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