

Developing a Google Classroom Training Model for Elementary School Teachers

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Abstract

Based on the need analysis, teachers had no idea on the implementation of online learning and lacked of information about choosing a proper learning platform for students during the COVID-19 pandemic. Therefore, the online learning did not run effectively since it was carried out using whatsapp application only to interact. Regarding this issue, this study aimed to improve teachers' skills in the implementation of online learning using a google classroom platform with the ADDIE training model. Obviously, the design was an ADDIE Research and Development. Findings revealed that the google classroom training was able to improve teachers' competency confirmed by the good validation results, namely 97% or very viable from a media expert, 94% or very viable from a material expert, and 86% of the respondents considered it very viable, so it can be concluded that the google classroom training model is effective to improve teachers' competency. Besides, the ADDIE model can increase teachers' performance and competency in designing interesting learning contents.

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INTRODUCTION

COVID-19 pandemic has struck the whole world and caused great effects resulting in some limitations for society activities in the fields of social, economy, tourism, and education. To avoid the spread of this virus, the government through the Ministry of Education, Culture and Higher Education has attempted to solve this problem optimally by issuing a regulation number 4 year 2020 on March 24 2020 concerning the implementation of online and study-from-home teaching and learning process. (Dewi, 2020).

It is a must for students to study at home using a learning platform as an alternative for offline learning. At the same time, teachers also prepare online learning materials to be accessible by students so that the learning can take place digitally (Syamsuriza et al., 2021). One example of the online learning process is by use of video conferencing and a learning management system (Widyanto et al., 2021). However, online learning also has a negative impact, namely students can only understand and assess the knowledge component without direct feedback from the teacher, besides that the teacher cannot assess student understanding during online learning due to the need for face-to-face learning.

Some positive things about online learning are students learning independence and the increase in finding learning sources and learning style. Oppositely, the negative effect was greatly experienced by elementary school students in grade I, II, III because they are not yet able to operate a smart phone and fully needs parents' assistance during the learning. Besides, early age students still orient towards kinesthetic learning. (Budiman, 2021).

After the circular letter was issued by the Ministry of Education and Culture, schools started to implement the online learning. However, some problems arose, such as teachers' inability to prepare proper strategies, unfamiliar applications to conduct the learning, and unstable internet connection. In addition, online learning lacks variety because teachers

can only use WhatsApp social media without other cloud digital platforms such as the Google Classroom learning platform, Zoometing, Edmodo and others. Various variants of digital platforms available, teachers can apply learning so that students are not bored with online learning with interesting content

The above issues were similar to the need analysis results of 60 teachers at 10 elementary schools in the assisted area I in Petarukan sub-district. It was found that 63% of teachers had difficulty carrying out online learning, 90% of teachers used *whatsapp* application more often to convey material and assignments to students, 72% of teachers had difficulty designing online lesson plans, and 98% of teachers stated that there was a need for application or learning platform training to support the implementation of more effective online learning. Thus, teacher's competency in implementing online learning is inadequate, so action is needed to overcome this problem by conducting education or training to improve this competency so that the online learning can run more effectively for students.

Regarding the previously mentioned condition, there needed some efforts to enhance teachers' knowledge and skills in the field of communication and technology so that they can manage the online learning effectively (Popoi et al., 2021). In details, to meet curriculum standards, teachers must be able to utilize technology and communication using computers and gadgets for their interactions (Suni Astini, 2020).

The above findings urged the need for a training in the use of online platforms. Here, the platform to use in the training was *google classroom* because it is practical in terms of cost, use, benefits, and ease of access. Also, it can be easily used to create classrooms and conduct discussions. *Google classroom* training gives more interactive and independent learning due to its comprehensive features (Saifullah & Akbar, 2020). All these features were equipped to facilitate its users. It is also known that teachers can easily manage learning using this application or website (Sulistyorini et al., 2021). The google classroom learning platform makes

the learning process more effective and interesting and teachers can develop the creativity of the learning process for students (Kopeyev et al., 2020). Implementing the google classroom digital platform for teachers during the pandemic has increased, one of which is increasing teacher creativity in implementing google classroom and being able to design online learning effectively, however, there are obstacles experienced by teachers in implementing google classroom, lack of communication to students, and signals, so efforts that need to be made by teachers to overcome obstacles by means of parents, guardians of students, and homeroom teachers play an important role in the online learning process so that effective learning is created (Nurkhalil et al., 2021).

The online learning instruction to be implemented during the COVID-19 pandemic caused all sectors get disrupted, especially the shift to online learning in the educational field. However, this sudden regulation made some teachers get confused about the effective online learning mechanisms. Therefore, this *google classroom* training was expected to increase teachers' competency by analyzing their needs, viability and effectiveness of the training model. In the future, this training can be used as an alternative to increase teachers' performance and competency in designing an effective learning model.

METHODS

This study used a Research and Development (R&D) method. It aims at developing or perfecting a particular existing product through some stages. Here, the *google classroom* training was designed using an ADDIE model. ADDIE instructional model is the most common model adopted in educational and training development (Rusmulyani, 2020). ADDIE has 5 stages, namely analysis, design, development, implementation, and implementation. the ADDIE model is suitable and effective for developing training because it adapts to needs analysis and is dynamically centered on learning (Chen et al., 2022) . In

addition (Guevarra et al., 2021) stated that using the ADDIE model facilitates the evaluation process in making decisions in the field because using the ADDIE model the steps are easy and systematic making it easy for trainees to take part in training in the field.. Then, ADDIE model is implemented using a progressive systematic approach (Wibawa et al., 2021). In this study, the training of *google classroom* was conducted offline.

The followings are steps implemented in an ADDIE training model:

1. Analysis.

Performance analysis is realized in field observations to find out the problems teachers needed during the teaching and learning process in online learning. It was followed by needs analysis, namely the stage of determining the ability of elementary school teachers to improve the quality of competency, especially skills and knowledge of technology and communication. Based on these observations, it was found that SD N 10 Petarukan and SD N 06 Petarukan needed an online learning platform training to support effective learning for students.

2. Design.

This second stage is the follow-up to the previous analysis. It was realized in form of designing the suitable training program based on the teacher's need. What was done in this stage was: a) designing and deciding the model and its module based on the desired competency, b) determining the goals of the training, c) compiling *google classroom* materials, d) designing training tools: the *google classroom* application training module using the ADDIE training model with the demonstration method, as well as training evaluation tools, e) designing data collection instruments to be used during the *google classroom* training program using ADDIE. The instruments needed were the instruments of teacher needs analysis, expert validation, evaluation of training respondents, pretest and posttest.

3. Development.

This stage covers development and production of the determined product. It was started by considering the goals of this training,

namely: a) increasing teacher's competency in managing and operating online learning using a *google classroom* application, b) increasing teachers' competency in using creative and innovative learning media, including the ability to operate *google classroom* for online learning, the ability to develop online learning using *google classroom* with interesting contents, and the ability to manage online learning continuously and varied.

The products developed were the ADDIE training model and *google classroom* training module both printed and digital. The modules were started with compiling materials, media creation, training models design, and evaluation instruments. Following these steps, there was an expert validation stage to assess the viability of the products.

4. Implementation.

At this stage, the products were trialed. It was done offline. Prior to the implementation, training schedules were set so that it can be conducive. Here, the subjects of the training were the teachers at SD Negeri 10 Petarukan and SD N 06 Petarukan totaled 25 people. All participants were asked to give responses and evaluate the training afterwards.

5. Evaluation.

It was the final stage of the ADDIE training model and the *google classroom* application module whose aim was to improve the product. The evaluation included product improvements after the expert validation, product effectiveness, and training participants' respondents to the *google classroom* training program. Besides that, to know any changes after the training program, pre-test and post-test for training participants.

Data collection technique

In this study observations were done to obtain information and data related to the online learning and learning application used by the teachers and the way they delivered the materials to students.

The documentation covered the data of need analysis until the end of the training. Meanwhile, the instruments consisted of expert

validation and respondent instruments. All were closed-ended and designed based on the table of specifications needed for the products. In addition, a likert scale was used to score the instruments.

Two approaches were used in this study, namely qualitative and quantitative description techniques. The quantitative data were in form of product revision scores of media validation, material validation, and respondents' responses, including suggestions and comments. Following the collection, analyses were carried out to calculate the data and describe the percentages from the expert validation and respondents' responses.

RESULTS AND DISCUSSION

Teacher Needs Analysis

Teacher need analysis was carried out to find the competency to improve in the online learning implementation. Here, observation questionnaires were distributed to respondents, namely SD Negeri 10 Petarukan and SD N 06 Petarukan teachers as many as 25 teachers. Even though they already knew about online learning, they still found some issues the conducting the online learning process, such as material delivery & assignment distributions. Then the results can be seen in the bar chart below.

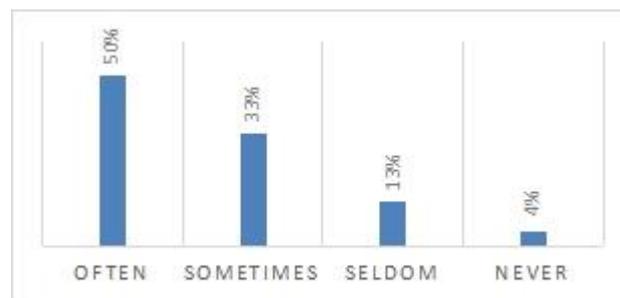


Chart 1. Implementation of Online Learning

From the results of the bar chart above, it can be explained that 50% of teachers experienced problems with online learning, 33% of teachers sometimes experienced problems with online learning, 13% of teachers seldom experienced problems, and teachers have never experienced problems as much as 4%. Based on

the results of the diagram above, it can be seen that on average teachers experienced difficulties in implementing the online learning to students although they already know about online learning before Covid-19. In terms of school facilities, the schools were good at supporting online learning.

Based on the need analysis, there needed a training for increasing elementary teachers' competency at using an online learning platform. It was known that the teachers have actually noticed some computer or smartphone programs for online learning, including *google classroom*, but they were not that good at it, whereas this platform can comprehensively support the online learning. Teachers' inability to use *google classroom* was realized by their tendency to use a *whatsapp* application as a means of online learning. Regarding this fact, there needed some emphasis on the use of a *google classroom* platform as a medium to teach elementary school students.

Google classroom is free and has no ads, so it will not disrupt the learning process. It is integrated to *google drive* for the ease of access of material and assignments management so that both teachers and students can repeatedly make

a review. In addition, the most prominent feature of it is the two-way interaction.

The above statements are supported by previous studies which conclude that *google classroom* is able to more benefit online learning than other platforms. Teacher-student or student-student collaboration to realize an effective virtual class is possible to be done on this platform.(Kurniawan & Purnomo, 2020). For more, *google classroom* is a learning application that facilitates teaching programs or learning designs for teachers (Bahri et al., 2020).

With regard to the previous descriptions, it was necessary to provide teachers understanding and competency regarding a *google classroom* application as a learning medium for elementary school students. It is supported by the fact that the teachers lacked of a learning management system training.

Google Classroom Training Model

The development of the google classroom training model to increase a teacher's competency in implementing online learning with the ADDIE training model was carried out using the following steps:

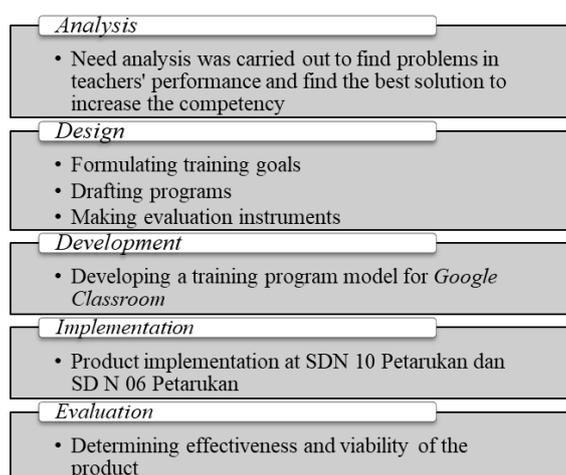


Figure 1. The Scheme of a *google classroom* Training Model

In analysis stage, the problem found after the observation was the teachers at SD N 10 Petarukan and SD N 06 Petarukan needed a *google classroom* training for increasing their online learning competency.

Based on the analysis of teacher needs, the researchers proposed to design an online training model using a *google classroom* platform as the medium to increase teachers' competency. *Google classroom* was chosen by considering

several arguments in the previous studies, such as by (Ramadhani et al., 2019) who state that a *google classroom* platform is easy to operate for a virtual class and economical. However, the most common problem is some students have no smartphone, unstable internet connection, and no internet data (Saminem, 2021). Using Google Classroom is very useful because it makes you more productive, you can access material easily and send assignments quickly and you can easily interact with teachers and other friends (Moonma, 2021). In addition (Abuzant et al., 2021) states that Google Classroom makes a contribution to the quality of online learning which has a positive impact on facilitating communication between teachers and students

In design stage, the designs of the training module are as follows:

1. Developing a teacher needs analysis instrument to find out the problems faced by teachers when providing online learning and to find out teacher's needs for online learning training using *google classroom*.
2. Writing the materials for a *google classroom* training based on steps to operate the application. It was then reviewed by experts using an instrument developed previously made based on several references. Following the review, there was a revision.
3. The training evaluation instrument functions to evaluate whether the outcome of the training has been achieved or not.

In development stage, learning media were made, starting from pre-production, production and post-production. In the pre-production stage, the researchers prepared all the tools and materials needed to create the ADDIE training model and the *google classroom* application module. For the next stage, the media were reviewed by experts in terms of content and validation.

In implementation stage, the product was implemented at SD N 10 Petarukan and SD N 06 Petarukan for two days at each school. It was started based on the plans in the ADDIE model. Once it was done, the collected data were analyzed and evaluated for then being a basis for

determining the quality and effectiveness of the training. Summative evaluation was regarded as a material for consideration and decision in stopping or continuing the training programs.

The training was assessed using formative and summative evaluations. The formative evaluation aimed to improve the quality of the product by the use of pretest and posttest. Meanwhile, the summative evaluation was done using a questionnaire to know the participants' responses to interest after the training was carried out.

The ADDIE training model implemented in this study was inspired by the previous studies, such as by (Aswandi et al., 2018) that the ADDIE training model assists trainers in designing training aimed at providing knowledge and getting to know e-learning applications and (Yulianti, 2019) who states the ADDIE model is a training program that can improve teacher skills, especially making power points. The training that has been in the program is able to create high enthusiasm for participating in training and improving teacher abilities (Wiratomo et al., 2020). A systematic and dynamic training program that can be developed and can be applied to conventional face-to-face or online training, is the ADDIE model, all components can systematically develop training programs to achieve the stated goals (Lee et al., 2021). Developing training that the ADDIE model is prepared in a systematic and continuous manner with components that are very suitable to be applied to the training program being developed because it suits the needs of the participants and the intended goals (Kusnandar et al., 2020).

To sum up, the development of this training model followed the ADDIE development model. Stage by stage has been carried out according to development needs, namely the creation of a training model and evaluation by media experts and material experts. The purpose of the evaluation by experts is to obtain input, criticism, and suggestions for improvement for the perfection of the training model being developed.

Viability and Effectiveness of the Google Classroom Training Model

This chapter discusses the viability and effectiveness of the *google classroom* training model. The results were derived from questionnaires filled out by the experts of media, material, and teachers. Another analysis was

based on test scores. In details, the media evaluation was done by the expert of media right after the media were done. It aimed to obtain feedback so that the product can get better revision prior to its implementation. Further, the media expert validation results are presented in the following table:

Table 1. Media Validation Results

Aspect	Average	Percentage	Criterion
Viability	4.8	95	Very viable
Design	4.9	98	Very viable
Product Viability	4.8	97	Very viable
Average	4.8	97	Very viable

Since media expert gave the average score of 4.8 with very viable criterion, the training model product was viable to be implemented. Another validation was from the material expert. It aimed to gain some comments and

suggestions on any gap so that the product can be revised before being implemented. The results of the questionnaire by the material expert are as follows:

Table 2. Material Validation Results

Aspect	Average	Percentage	Criterion
Relevance	4.7	93	Very viable
Viability	4.7	93	Very viable
Presentation	4.8	96	Very viable
Average	4.7	94	Very viable

The score given by the material expert averaged 4.7 with very viable criteria, so the training model product was viable to be implanted. After implementing the *google classroom*-based online learning training model,

the teacher filled out a training respondent questionnaire to evaluate the training model that has been implemented. The following are the results of filling out the training respondent's questionnaire in the following table.

Table 3. Respondents' Evaluation of the Google Classroom Training Model Results

Aspect	Average Score	Percentage	Criterion
Training Goals Information	4.3	86	Very viable
Manuals and Module	4.3	86	Very viable
Speakers	4.4	87	Very viable
Strategy and Method	4.3	86	Very viable
Facilities and infrastructure	4.2	84	Very viable
Activity Evaluation	4.3	87	Very viable
Average	4.3	86	Very viable

Based on the results in the table above, the average evaluation result from the teacher's

responses was 4.3 with a very viable category. From these results it can be concluded that

teachers as training participants assumed that the *google classroom* training model was very viable to use as online learning training.

Before conducting the training, the participants were given a pretest first to find out the teacher's competency in online learning using the *google classroom*. After carrying out the training, the posttest was held to find out whether the training model was effective or not in increasing the teacher's competency. The following is a summary of the results of the pretest and posttest.

Table 4. The Results Pretest and Posttest in the Google Classroom Training Model

Treatment	Average	Category
<i>Pretest</i>	55.38	Medium
<i>Posttest</i>	85.54	Very good

According to the results of the pretest in table 4, the participants' competency was medium, while for the posttest, they got the average score of 85.54 with a very good category. Thus, it was assumed that the *google classroom* training model has been effective to increase teachers' competency.

Based on the results of the effectiveness of the online learning training model based on Google Classroom, seen from the comparison of pretest and posttest scores, it shows that the scores of teachers as trainees have increased in posttest scores. The average teacher score in the posttest was 85.54 while the average score in the pretest was 55.38 meaning that the average increase in teacher scores after attending the training was 30.16 points. It can be concluded that the use of the Google Classroom-based training model is effectively used to increase teacher competence in online learning

CONCLUSION

Regarding the previous description of the findings, it can be concluded that the training is able to increase the teachers' competency of knowledge and understanding about the implementation of online learning using a learning management system called *google*

classroom. Then, the product developed using the ADDIE model is viable to use given its validation scores which obtained 97% from the media expert with very viable criterion, 94% from the material expert or very viable criterion, and 84% from the respondent responses or very viable criterion. For more, the product is effective to increase the teachers' competency viewed from the comparison of the pretest and posttest scored which showed an increase. Finally, the *google classroom* training model is effective to be a training medium to increase the teachers' competency in online learning

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