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DEVELOPMENT OF TEACHER ONLINE LEARNING TRAINING MODEL

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Abstract. *This research is development research that aims to (1) develop a training model that suits the needs of the teacher (2) determine the effectiveness of the online learning model for teachers based on the Zoom application and (3) produce an online learning training module based on the Zoom application. This research method refers to Borg and Gall's theory, namely the research and development (R&D) model. The design of the development of training tools in this study was adapted from the ADDIE development model which consists of five development stages, namely Analysis, Design, Development, Implementation, Evaluation, namely by using a model that is descriptive, and the work steps that must be followed which then produces a product. The result of this research is a teacher online learning training model based on the Zoom application which contains material on Zoom programming and online learning training modules based on the Zoom application. Overall, the quality of the online learning teacher training simulator based on the Zoom application is in the very good category (SB) with a presentation of 82.7%. The quality of the manual / training module is included in the very good category with a percentage of 84.5%. The quality of the online teacher learning training model Zoom application-based developed is included in the very good category (B) with a presentation of 82.9%.*

Keywords: *Development research, training model, zoom, teacher.*

Main provisions of the article. Analysis of teacher training needs was carried out by means of observation and interviews with elementary school teachers in the Mina Indah cluster, Wedung sub-district, Demak district. The results of the research on the online teacher training model based on the zoom application are in the form of modules (guide books) and simulators for using the zoom application.

Introduction. The implementation of education policies in the emergency period for the spread of the *Coronavirus* Disease 2019 (COVID-19) virus includes recommendations from the government regarding the process of learning from home. This was done to prevent and

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break the chain of the spread of the *Coronavirus* Disease 2019 (COVID-19) virus in the school community. "According to circular letter number 3 of 2020 regarding the prevention of Covid-19 in education units.

With this policy, teachers and students are not allowed to do face-to-face learning activities, learning is done online. For schools in urban areas online learning is a common thing, but for schools in rural and remote areas far from the city it is a new thing so that they experience many obstacles or problems that must be faced by both teachers and students and even parents of students [1].

The Mina Indah cluster consists of 3 adjacent public elementary schools, namely Public Primary School number 1 Wedung, Public Primary School number 3 Wedung and Public Primary School number 4 Wedung. The members consist of 38 teachers.From the results of interviews with several teachers in the Mina Indah cluster, information can be obtained that there are many problems faced by teachers during the online distance learning policy implemented by the government including: (1) Teachers in the Mina Indah cluster have not fully implemented online learning due to difficulties in mastering IT, (2) There is no training that meets the needs of teachers in online learning, (3) Teachers have difficulty in aspects of technology and network infrastructure, (4) Teachers have difficulty in using online learning content / applications, (5) Online learning only through Whatshap Group.

The problems faced by teachers in the implementation of online learning will be obstacles in achieving learning objectives. For this reason, it is necessary to have a training model that can be used to increase teacher competence. Effective training can improve job performance according to Moses [2]. In addition, González-Gil et al. [3] concluded that a survey of teacher training needs in primary schools was needed for classroom management.

Competence or expertise in knowledge, behavior, skills must be possessed by a teacher in order to achieve learning and education goals. Competence can be obtained through education, training, and independent learning by utilizing learning resources [4].

During the Covid-19 pandemic, the task and role of the teacher is very important to direct students so that they can achieve learning goals that are carried out both offline and online like now, for that teachers need to take part in training activities to increase their insight and competence in order to become professional teachers. Uno [5] state, professional competence of teachers is a set of abilities that must be possessed by teachers so that they can carry out teaching tasks.

Online learning is distance learning that uses internet sites as a liaison, but it also requires hard ware media (computer, laptop or android). There are various kinds of media including original media, namely the environment around students, imitation media or two-dimensional or three-dimensional objects and hypermedia media, namely media that can be used by students through online learning applications such as Youtube, Whatshap, Google Meet, Zoom, Google Classroom. Of the several applications above, the Zoom application is considered to have sufficient quality to be used as a medium in online learning. With the Circular of the Minister of Education No. 4 of 2020 concerning the distance education system. For this reason, teachers must master ICT and media that can be used in online learning [6].

However, in the implementation of online learning, the problems that we often encounter in the field today are difficulties in networking, teachers have difficulty in using online learning content or applications, the application of online learning is only limited to WA groups. This causes various gaps in education. Therefore, researchers explore the factors that are the main causes of these problems. Judging from the readiness of teachers in the implementation of online learning [7]. From the results of interviews with several teachers in the Mina Indah cluster, the following data were obtained:

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First, teachers have difficulty in using online learning media due to limited knowledge and age factors, most of whom are over 45 years old. Second, the limitations of facilities such as learning media and internet networks so that the implementation of online learning is only limited to using WhatsApp groups which are considered the easiest to use [8]. Third, there is no online learning training model provided by the Government as a teacher reference in implementing online learning.From these three factors, it can be concluded that the teacher as the main factor in the success of learning must continue to improve his professionalism in teaching by adding insight or attending trainings such as technical guidance, training or training in the field of technology so that there is no gap in IT. From several factors causing these problems, the researchers decided to develop a teacher online learning training model that can be used in the online learning process [9]. The training model is expected to be useful for providing knowledge and skills for teachers in carrying out online learning.

The training model developed by the researcher is online learning training based on the Zoom application in the form of training simulations and modules (guide books) in which there are materials, steps for using the Zoom application and pictures of the Zoom application icon which will make it easier for teachers or students. This training model is expected to be a solution for teachers in the Mina Indah cluster. According to Armstrong & Landers [10] that training is useful to help teachers develop the skills and ability levels of teachers.

Research by Raymond et al. [11], state that training is the systematic development of the attitude/knowledge/skills/behavior pattern required by an individual to perform adequately a given task or job. From several research results from experts, it can be concluded that training is one of the efforts of an organization to be able to improve the performance of its members so that they can work and provide good quality services.The purpose of this online learning training model based on the Zoom application is that after the training process teachers can gain knowledge and skills about online learning by using the Zoom application so that they can improve the performance for which they are already responsible. Zoom is considered effective for use in distance learning because this application provides distance conferencing services with several features including video conferencing, chat, online meetings to mobile collaboration. The use of applications in online learning is very helpful for teachers in the online learning process [12]. The use of the zoom application as an educational application is very helpful for teachers.

Method. The research used in this research is research and development. The development carried out is a training model in the form of training simulations and modules (guidebooks) based on the zoom application to meet teacher needs and improve teacher skills in teaching. The procedure that will be used in conducting this R & D research is guided by the opinion of Borg & Gall [13]. Development research is a process used to develop and validate an educational product. The design used is the ADDIE development model which consists of five stages of development (1) Analysis (2) Design (3) Development (4) Implementation (5) Evaluation. The subject of this research is an elementary school teacher in the Mina Indah cluster, Wedung sub-district, Demak Regency, Data collection techniques with observation, interviews and documentation, The development of an online learning training model based on the Zoom application was given to elementary school teachers in the Mina Indah cluster, carried out in two stages, the first stage was small scale with six teachers, the second stage was fifteen teachers. The instrument used in this research is a questionnaire.

Results and discussion. This chapter contains an explanation of research results which consist of (1) research design for developing a Zoom application-based teacher online learning training model to meet the needs of teachers developed in accordance with the steps of preparing and developing the ADDIE model (2) The training model developed is in accordance with the core of the training Zoom application-based teacher online learning so that trainees are really able to work according to the results specified in the training (3) The developed models and devices have met the criteria of validity and effectiveness (4) The effectiveness of the Zoom application-based training model is in accordance with the teacher's needs. Overall, these sections will be presented as follows.

Zoom application-based online learning training model design. The design of developing an online teacher training model based on the Zoom application contains planning, process, and evaluation in development research. In planning, preliminary studies, needs analysis and goal formulation are carried out.

In the analysis phase, it includes observing training activities, observing needs, then reviewing the theories surrounding the problem. then design the training model according to the developed objectives. The first is Material design. Then proceed with compiling the device or module as well as the steps in using the Zoom application, compiling the design of the assessment instrument. Once approved, the next step is the realization of the training design. Then the development stage in this stage the devices developed are in the form of training modules and online learning training simulators based on the zoom application [14]. Then be a product in the form of a teacher online learning training model based on the zoom application which is ready to be simulated to participants, namely teachers as research subjects.

After the product is a finished zoom application-based training module, the researcher can conduct a trial to be carried out in the field after a revision from the material expert validator. The online learning module based on the zoom application was tested in the control group and the experimental group. The research product for developing training models based on the Zoom application is in the form of simulations and modules (guidebooks) using the Zoom application as a medium in teacher online learning.

Application of the zoom application-based teacher online learning training model. The product in the form of a module is tested in the field, then after the steps or systematics are made in creating a training module based on the Zoom application. The implementation of the zoom application-based training module development design starts with the preparation of materials that are adapted to learning activities during training using the module (guidebook), After the product is validated then it is then tested in the field to determine the effectiveness of the product being developed. evaluation of training activities.

The next stage is testing, field testing and product revision and implementation of training. The steps taken are conducting training at the agreed time and place, filling out material and simulation practice on the use of the zoom application in online learning, ending with filling out questionnaires by training participants. In the next stage of evaluation, namely the stage of analyzing the data obtained later used to find out the shortcomings of the training model created.

Data analysis validity and validation of the zoom app-based teacher online learning training model perangkat. The data analysis of the validation module or guidebook in this study obtained a score from the average to a final score of 3.3 with very good qualitative criteria. Aspects of the assessment points are stated in the following Table.

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Table 1 - Results of Validity Analysis of Training Modules/Guidebooks

No	Assessment Aspect	Average	Qualitative Criteria
1	Material/ content	3.3	Very good
2	Ease of use	3.3	Very good
3	Grammar	3.3	Very good
4	Physical presentation and display	3.2	Very good

The criteria for the validity of the module (guidebook) are obtained by converting the total score of each aspect in the feasibility conversion table. Judging from the feasibility, every aspect assessed in the developed product has met the eligibility criteria.

Data Analysis Validation Module obtained a total average score of 3.3 with qualitative criteria both aspects of the assessment items are stated in the following table:

Table 2 - Results of Module Validation Analysis

No	Assessment Aspect	Average	Qualitative Criteria
1	Material suitability	3.7	Very good
2	Utility	3.7	Very good
3	Completeness	3.2	Very good
4	Ease of understanding	3.3	Very good
5	Confusion of presentation	3.2	Very good
6	Display presentation	3.3	Very good
Total		3.3	Very good

The eligibility criteria for the module are obtained by converting qualitative data in the form of scores for each validation aspect into a conversion table, so that qualitative results are obtained in the table.

The effectiveness of the zoom application-based teacher online learning training model. The effectiveness of the teacher's online learning training model was measured using an analysis of the trainees' responses at the end of the training activity through a questionnaire. Participants' response questionnaires were distributed after the training activities were completed. Participants' response questionnaires were in the form of a list of statements composed of 8 positive statements with 4 alternative answers, namely "very good", "Good", "Medium", and "Poor". This participant's response questionnaire is the aspect of the goal or outcome, the analysis of filling out the response questionnaire of 9 participants after the training activities, obtained an average of all aspects of the assessment items, namely 3.1 which is in very good qualitative criteria, with details as follows:

Table 3 - Results of Participant Response Questionnaire Analysis

No	Assessment Aspect	Average	Qualitative Criteria
1	Mastery of the facilitator in delivering the material	3.1	Very good
2	Mastery of the facilitator in answering problems	3.2	Very good
3	Clarity of the material presented by the facilitator	3.2	Very good
4	Materials presented by the facilitator	3.1	Very good
5	Use of media and tools	3.1	Very good
6	Facilitator skills guide discussion	3.2	Very good
7	Material benefits for participants	3.1	Very good
8	Availability of materials/modules	3.1	Very good

It can be concluded that the training model developed has a very good response from the trainees, except for the assessment aspect. The results of the complete participant response analysis can be seen in Appendix 4. From the results of the participant response questionnaire, the following comments and suggestions were also obtained:

1) The training has been quite good and we are waiting for the next stage of training.
2) The training is very beneficial for the participants.

From several studies that are similar to the Research on Online Learning Training Models for Elementary School Teachers, including:

The results of research from Shahzadi et al. [15], reveal the results that peer training can improve the ability of teachers to carry out scientific learning. In this study, it is recommended that peer training be carried out according to the time allocated for the activities of the teacher working group.

Research from Hashim et al. [16], revealed that developing a participatory-based training management model to improve teacher professionalism in order to utilize e-learning Rumah Belajar. The purpose of this study was to improve teacher skills in implementing e-learning at home learning with a participatory-based training management model. Another research also obtained a positive result in using digital technology in the educational process [17]. A similar study from Utomo et al. [18] with the title "What Kind of Learning Media do You Want? Need Analysis on Elementary School Online Learning" with the results of the study concluded that the factors that affect the effectiveness of online-based learning methods for students greatly affect learning outcomes for that we need methods that are in accordance with online learning.

Conclusion. Analysis of teacher training needs was carried out by means of observation and interviews with elementary school teachers in the Mina Indah cluster, Wedung sub-district, Demak district.The results of the research on the online teacher training model based on the zoom application are in the form of modules (guide books) and simulators for using the zoom application. The application of teacher online learning training is limited to the zoom application programming material for online learning media. The resulting online learning training model set as a whole has a very good quality category (SB) with an ideal percentage reaching 85.9% based on an assessment by reviewers. The quality of each product in the online learning training model set is as follows: a. The training module (guide book) of the teacher's online learning training model is included in the very good quality category with an average score of 3.3 and an ideal percentage of 83.1%.b. The simulation of the application of

the zoom application-based teacher online learning training model is included in the very good quality category with an average score of 3.7 and an ideal percentage of 91.7%. The effectiveness of the online learning training model developed can be seen from the questionnaire response results of the trainees, the results of the questionnaire show an average score of 3.1 and an effectiveness presentation of 78% so that the online learning training model developed is effective.

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МҰҒАЛІМДЕРДІ ОНЛАЙН ОҚЫТУДЫҢ МОДЕЛІН ӘЗІРЛЕУ

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Түйін. *Бұл зерттеу (1) мұғалімнің қажеттіліктеріне сәйкес келетін оқыту үлгісін әзірлеуге (2) Zoom қолданбасы негізінде мұғалімдерге арналған онлайн оқыту моделінің тиімділігін анықтауға бағытталған әзірлемелерді зерттеу және (3) Zoom қолданбасы негізінде онлайн оқыту оқу модулін жасау болып табылады. Бұл зерттеу әдісі Борг пен Галл теориясына, атап айтқанда зерттеу және әзірлеу (R&D) моделіне жатады. Осы зерттеудегі оқыту құралдарын әзірлеу дизайны бес даму кезеңінен тұратын ADDIE әзірлеу үлгісіне бейімделген, атап айтқанда, талдау, жобалау, әзірлеу, енгізу, бағалауды сипаттайтын үлгіні пайдалану арқылы жүзеге асты. Бұл зерттеудің нәтижесі Zoom бағдарламасына негізделген мұғалімнің онлайн оқыту моделі болып табылады, онда Zoom бағдарламалау туралы материал және Zoom қолданбасына негізделген онлайн оқыту модульдері бар. Тұтастай алғанда, Zoom қосымшасы негізіндегі мұғалімдерді онлайн оқытудың сапасы өте жақсы санатта (SB) 82,7% болды. Нұсқаулық/оқу модулінің сапасы 84,5% пайызбен өте жақсы деген көрсеткішке ие болды. Zoom қосымшасы негізінде жасалған мұғалімдерді онлайн оқыту моделінің сапасы 82,9% пайызымен өте жақсы (B) санатына кірді.*

Түйін сөздер*: Дамытушылық зерттеулер, оқыту моделі, масштабтау, мұғалім.*

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РАЗРАБОТКА МОДЕЛИ ОБУЧЕНИЯ УЧИТЕЛЕЙ ОНЛАЙН-ОБУЧЕНИЮ

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Резюме. *Это исследование является исследованием развития, которое направлено на (1) разработку модели обучения, которая соответствует потребностям учителя, (2) определение эффективности модели онлайн-обучения для учителей на основе приложения Zoom и (3) создание учебного модуля онлайн-обучения на основе приложения Zoom. Этот метод исследования относится к теории Борга и Галла, а именно к модели исследований и разработок (НИОКР). Схема разработки средств обучения в этом исследовании была адаптирована из модели разработки ADDIE, которая состоит из пяти этапов разработки, а именно анализа, проектирования, разработки, реализации, именно с использованием описательной модели и рабочих этапов, которые необходимо следовать, что затем производит продукт. Результатом этого исследования является модель онлайн-обучения учителей на основе приложения Zoom, которая содержит материалы по программированию Zoom и учебные модули онлайн-обучения на основе приложения Zoom. В целом качество онлайн-тренажера для подготовки учителей на основе приложения Zoom находится в очень хорошей категории (SB) с презентацией 82,7%. Качество руководства/обучающего модуля оценивается как очень хорошее с процентом 84,5%. Качество модели онлайн-обучения учителей, разработанной на основе приложения Zoom, входит в очень хорошую категорию (B) с презентацией 82,9%.*

Ключевые слова: *развивающее исследование, обучающая модель, зум, учитель.*

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