

Application of Online Mode Professional Development in Enhancing Pedagogical and Professional Competencies in Early Grade Primary School Teacher

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Abstract: The purpose of this study is to explain the online mode of professional development application in improving teacher competency of learners. The competencies intended in this study are pedagogic competence and professional competence. The research design was carried out in quantitative and qualitative forms. The number of research samples is 30 people. Data collection method used is online media validation and performance tests. Data analysis used descriptive statistics. The results showed validation in the online mode of continuing professional development of the learning teacher had an average value of total validity = 3.5. Thus, this value is included in the category "Very Valid" ($3,5 \leq \bar{V} \leq 4,0$). Thus, online learning media teachers are declared to meet the validity criteria. Then there are four online modal coaching categories, namely (a) Knowing online features, (b) Writing down learning features, (c) Writing out the names of activities, and (d) Describing the use of features in each learning activity.

Keywords: Application, Online Mode, Pedagogic, Professional

The teacher has a position as an educator which is one of the factors in the implementation of complete education, in addition to facilities and infrastructure, curriculum, costs, management systems and students themselves. In addition, teachers have a major role in the administration of education. It is shown that teachers are teaching staff or educators who are responsible for the implementation of the learning process for students. According to Hasbullah (2015: 165) that teachers are the main actors of change in society, teachers are also creators of future cadres who will color human civilization.

The ideal teacher is a teacher who can present a learning process that is interesting, motivating, and inspires teacher knowledge and experience that is constantly updated with a variety of positive inputs from various kinds of learning resources. So, the learning teacher as an ideal teacher competency improvement program by encouraging teachers to continue to learn and develop themselves at any time and anywhere, because the teacher is actually a learner.

The learning teacher competency improvement program is the process of organizing teaching and learning activities in order to improve the ability and competence of teachers in carrying out their professional duties. The increase in capability includes activities that aim to improve and grow abilities, attitudes, and skills. From this activity, it is hoped that this will result in a change in teacher behavior that significantly changes in behavior has an impact on improving teacher performance in the teaching and learning process in the classroom.

According to Surapranata (2016) that modes in networks (online) are learning teacher programs implemented by utilizing computer and internet network technology. Online mode can be implemented by preparing a learning system that independently provides instruction and learning services to participants without directly involving the instructors in the implementation process. The instructional system in question includes the registration process, the implementation of learning, the final test, and determining the graduation of participants and the issuance of certificates.

The learning approach in the online mode of Sustainable Professional Development program has the following characteristics:

- a. Demanding learners to build and create knowledge independently (constructivism);
- b. Learners will collaborate with other learners in building their knowledge and solving problems together (social constructivism);
- c. Establish an inclusive community of learners;
- d. Use website media that can be accessed via the internet, computer-based learning, virtual classes, and or digital classes;
- e. Interactivity, independence, accessibility, and enrichment.

Through online mode, participants have the freedom to study. Participants can learn whenever and wherever, so there is no need to leave their obligations as teachers in educating. Participants can interact with the mentor in a synchronous manner - learning interactions at the same time as using video convergence, telephone or live chat, or asynchronous - learning interactions at the same time not simultaneously through learning activities provided electronically (Sary, 2017).

The online mode learning teacher system empties from participant data and will be exported to the Learning Management System (LMS) to be registered as an online learning teacher participant. Online mode learning provided in LMS uses a learning teacher module that is developed into learning activities in the form of module text, images, videos, and audio stored on the repository server. Data on all activities of online learner teacher users will be evaluated using analytic tool / reporting. Portfolios of learning outcomes for each participant will be recorded and stored in the participant database (Isjoni, 2007). The online mode learning teacher architecture can be illustrated in online applications that are accessed anytime and anywhere.

Learning on online learning teachers involves instructors, mentors and participants. Online learning applications of teacher learning will combine interactions between participants and

mentors and / or supervisors, which are only done online. Guidance model as shown in the following picture:

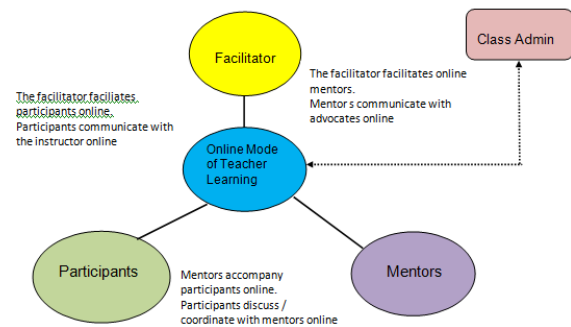


Figure 1 Model Learning Application Online Teacher Mode

The application of online mode applications in improving pedagogical and professional competence for teachers is a new innovation in the development of human resources in the world of education. However, the online mode application of learning teachers is not the only model for increasing teacher competency (Syahrudin, 2015). But online mode can be used as a solution in developing learning models in schools. Thus, this article describes the application of online learning applications for teacher learners to improve teacher pedagogical and professional competencies.

METHODS

This research is a development research that will examine the content of online learning teachers according to the needs of a continuous professional development system for early grade elementary school teachers. System content control is carried out with a centralized system in an online LMS learning teacher. Furthermore, the data from the research instruments are analyzed to provide a quantitative and qualitative description of the improvement of pedagogical and professional competencies of learning teachers through the application of online mode continuous professional development programs.

The variable in this study is the application of online mode continuous professional development in improving the competence of learner teachers. The competencies intended in this study are pedagogic competence and professional

competence. Data supporting the above variables are (1) the application of online mode continuous professional development, (2) online mode guidance model, (3) mechanism for implementing online mode activities, (4) online mode role in improving learner teacher competence, (5) activity online mode learning; and (6) enhancement of pedagogical and professional competencies of learning teachers through online mode applications.

The instruments used in this study are:

- a. Observation notes about the application of online mode continuous professional development programs. The observation record in this study is the result of validation of online mode features.
- b. Test performance of teacher learners. Performance tests based on the activity sheet of the pedagogical and professional competency teacher learning module.

The research method is carried out through applied research based on research development methods. Applied research is carried out with the aim of applying, testing, and evaluating the ability of a theory applied in solving practical problems. In addition, applied research is used to develop or validate products developed in education and learning (Sugiyono, 2009: 9).

Research activities are carried out through six stages, namely: (1) conducting needs analysis, (2) reviewing online mode features, (3) developing online mode program applications, (4) conducting expert validation, (5) observing learning teacher activities online, and (6) study / analysis of primary and secondary data. In addition, the focus of this research is the application of online mode continuous professional development, online teacher learning activities, and improvement of pedagogical and professional learning teacher competencies.

The data obtained in this study are of two types, namely primary data and secondary data. Primary data in the form of scores or values obtained through the results of media validation and secondary data is a test of performance through examination of tasks in the learner's teacher portfolio.

All collected data are recorded and tabulations are made based on the aspects that are used as variables. Then the data is given their respective scores to facilitate interpretation. Data obtained through the application of online professional development of continuous learning teachers was analyzed using descriptive statistical techniques.

RESULTS AND DISCUSSION

Results

The online application learning program for teacher teachers is a webside account regarding the learning process and increasing teacher competency online (in the network). The teacher as a participant learns online and can interact with the instructor and / or mentor, as well as other online modal learning teacher participants. Learning interactions of online learning teachers both online and face-to-face will form learning communities (community of learners).

The results of data analysis are explained as follows:

- a. The average value of validity for the preliminary session aspect in online mode learning is $\bar{V} = 3,4$. Thus, it can be concluded that this value belongs to the "Valid" category ($2,5 \leq \bar{V} \leq 3,5$). So, in terms of the aspects of the preliminary session in online learning, the learning teacher is declared to meet the validity criteria.
- b. The average value of validity for the aspects of the learning session presented through the online mode of the learning teacher is $\bar{V} = 3,5$. Thus, it can be concluded that this value belongs to the "Very Valid" category ($3,5 \leq \bar{V} < 4,0$). So, in terms of the aspects of the learning session that are presented through online learning learners, this media is stated to fulfill the validity criteria.
- c. The average value of validity for the closing session aspects presented through the learner's online mode is $\bar{V} = 3,6$. Thus, it can be concluded that this value belongs to the "Very

Valid" category ($3,5 \leq \bar{V} \leq 4,0$). So, in terms of the closing session aspects which are presented through online learning of teacher, this media is stated to fulfill the validity criteria.

- d. The average value of the total validity and online mode of continuous professional development of learning teachers is $\bar{V} = 3,5$. Thus, it can be concluded that this value belongs to the "Very Valid" category ($3,5 \leq \bar{V} \leq 4,0$). So, in terms of the overall aspects of online professional development of early grade elementary school teachers, this media is stated to meet the validity criteria.

The online mode guidance model of teacher learning is shown in the ability to understand the features of the online learning teacher system. Understanding these features is applied to the ability to practice the use of page, book, lesson, file, folder, message, forum, blog, e-portfolio, chat, quiz features on the Moodle LMS.

Furthermore, it analyzes the ability of participants to operate the online mode features through the guidance model. There are four activities in the application of online mode features of the learning teacher, namely (a) Knowing the features used in online mode learning, (b) Writing the learning features used in each session correctly, (c) Writing down the name of the activity on each session, and (d) Describe the use of features in each learning activity.

- a. Get to know the features of the online mode application

The value of the participant's ability to recognize the features of online learning can be seen in table 1 below.

Table 1 Results of Capability Analysis Understanding Online Mode Learning Features

Class Interval	Frequency	Percentage (%)	Category
90 – 100	14	46.7	Very Good
80 – 89	10	33.3	Well
70 – 79	5	16.7	Enough
< 70	1	3.3	Less

Total	30	100
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Table 1 above shows that the total value of understanding the online modal features of the early learning elementary school teacher is 14 respondents (46.7%) obtained very good category scores, 10 respondents (33.3%) got good grades, there were 5 respondents (16.7%) obtained sufficient category values, and only 1 respondent (3.3%) received less scores. The results of the descriptive statistical analysis showed that the respondents' understanding of online modal features of the learning teacher was very good. Because the application of online mode applications can be implemented well.

- b. Write down learning features in each mode session online

The value of the participants' ability to write the learning features that are used in each session correctly can be seen in table 2 below.

Table 2 Results of Analysis of the Writing Ability of the online application features

Class Interval	Frequency	Percentage (%)	Category
90 – 100	12	40.0	Very Good
80 – 89	15	50.0	Well
70 – 79	3	10.0	Enough
< 70	0	0	Less
Total	30	100	

Table 2 above shows that the total value of the ability to write online application features for elementary school teacher in the early grades is 12 respondents (40%) get very good category scores, 15 respondents (50%) get good grades, there are 3 respondents (10%) get enough category value, and no respondent (0%) gets less value. The results of the descriptive statistical analysis show that the respondent's writing ability to online mode features of the learning teacher is good. Because online mode applications can be used by learner teacher participants well.

- c. Write down the name of the activity at each session in online mode

The value of the participant's ability to write the name of the activity in each session correctly

according to the learning features in the application online learning mode can be seen in table 3 below.

Table 3 Results of the Analysis of the Ability to Write down the Activity Names in each Session in Online Mode

Class Interval	Frequency	Percentage (%)	Category
90 – 100	7	30,0	Very Good
80 – 89	14	40.0	Well
70 – 79	5	20.0	Enough
< 70	4	10.0	Less
Total	30	100	

Table 3 above shows that the total value of the participant's ability to write the name of the activity in each session correctly according to learning features in the online application. Early learning elementary school teachers were 9 respondents (30%) obtained very good category scores, 12 respondents (40%) get good grades, there are 6 respondents (20%) get enough category values, and there are only 3 respondents (10%) who get less grades. The results of descriptive statistical analysis show that the ability of the respondent to write the name of the activity in each session correctly in accordance with the learning features in online mode elementary school teacher early grades are good. Because online mode applications can be used by learner teacher participants well.

d. Describe the use of online mode application features

The value of the participant's ability to describe the use of features in each online learning activity learner teacher can be seen in table 4 below.

Table 4 Results of Analysis of Description of Use of Features in Each Learning Activity in Online Mode

Class Interval	Frequency	Percentage (%)	Category
90 – 100	7	23.3	Very Good
80 – 89	14	46.7	Well
70 – 79	5	16.7	Enough
< 70	4	13.3	Less
Total	30	100	

Based on table 4 above shows that the total value of participants' abilities in describing the benefits of features in each learning activity in the online application in elementary school teacher learning in the early grades is 7 respondents (23.3%) obtain very good category scores, 14 respondents (46,7%) get good grades, there are 5 respondents (16.7%) get enough category values, and there are only 4 respondents (13.3%) who get less grades. The results of descriptive statistical analysis show that the ability of the respondent to describe the benefits of features in each learning activity in the application of the online of elementary school teachers in the early grades is good. Therefore, online mode applications can be used by learner teacher participants well.

Thus, the application of online mode continuous professional development applications for early grade elementary school teachers can be carried out through a method of coaching on four activities. The four activities are the application of online mode features of the learning teacher, namely (a) Get to know the features used in online mode learning, (b) Write down learning features in online mode applications, (c) Write down the names of activities in each session with right, and (d) Describe the use of features in each learning activity.

Based on analysis, it can be illustrated the results of online tutoring of teacher learning four activities in the following graph

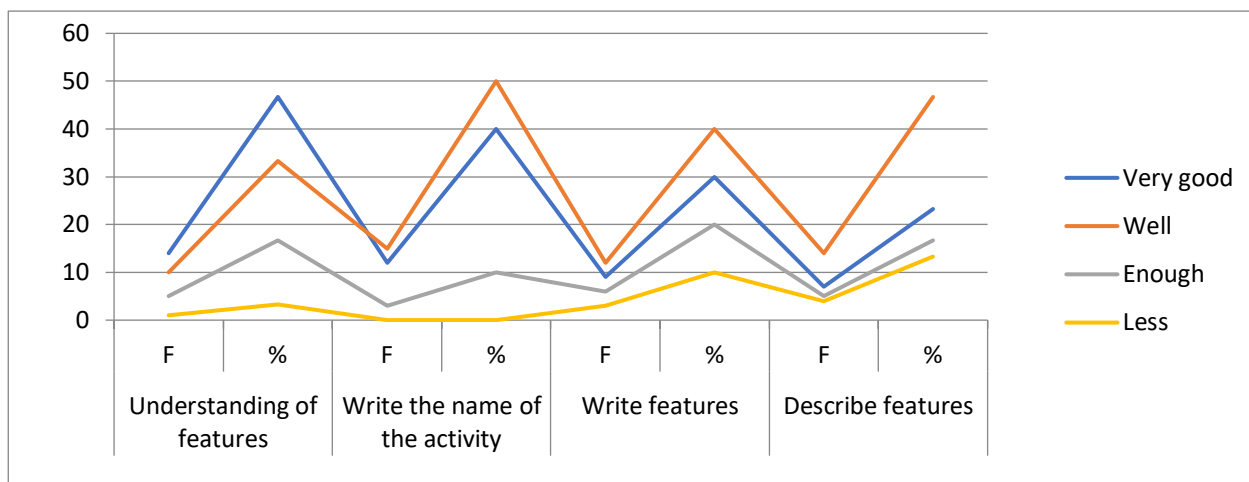


Figure 2 Online Moda Guidance Data Graph

Based on figure 2, the understanding of features shows that 24 respondents (80%) have obtained very good and good category values, only 6 respondents (20%) who get enough and less categories. The ability to write the name of the activity showed 27 respondents (90%) who obtained a very good and good category value, only 3 respondents (10%) who received sufficient category scores, and no one respondent who received less grades. The ability to write features shows 21 respondents (70%) who got very good and good category scores, there were 9 respondents (30%) who obtained sufficient and less category values. The ability to describe features shows 21 respondents (70%) who got very good and good category values, there were 9 respondents (30%) who obtained sufficient and less category values.

DISCUSSION

The learning approach to online mode learners has the following characteristics: (1) Demanding learners to build and create knowledge independently (constructivism); (2) Learners will collaborate with other learners in building their knowledge and solving problems together (social constructivism); (3) Establish an inclusive community of learners; (4) Using website media that can be accessed via the internet, computer-based learning, virtual classes, and or digital classes; (5) Interactivity, independence, accessibility, and enrichment.

General description of each learning model in online learning instructors, participants have the freedom to study. Participants can learn whenever and wherever, so there is no need to leave their obligations as teachers in educating. Participants can interact with the mentor in a synchronous manner - learning interactions at the same time as using video convergence, telephone or live chat, or asynchronous - learning interactions at the same time not simultaneously through learning activities that have been provided electronically.

Expert validation data, namely the data obtained based on the assessment of material experts and media experts through the format of validation of online learning design design instruments professional development based on early elementary school teacher learning. Validated online mode learning design consists of preliminary sessions, learning sessions, and closing sessions.

Preliminary sessions are about the introduction and demonstration of the system, development policies and teacher professional development, a general explanation of the activities of online learning teachers, advice and how to use the module, and the learning flow.

Learning sessions contain material that must be mastered in accordance with the demands of learning outcomes as evidenced by bills. Learning activities carried out in learning sessions are introductory sessions, learning activities, forum sessions, reflection, uploading assignments and

feedback, participant reactions, self-assessment, and summative test sessions.

Furthermore, the closing session is the last session in the online mode learning teacher learning process where participants will carry out activities such as: conclusions and feedback, evaluation of organizing online learning teachers, and final tests.

Based on the results of validation on online mode, continuous professional development of learning teachers that the average value of total validity obtained is $\bar{V} = 3,5$. Thus, this value is included in the "Very Valid" category ($3,5 \leq \bar{V} \leq 4,0$). So, in terms of the overall aspects of online professional development of early grade elementary school teachers, this media is stated to meet the validity criteria. Furthermore, the application of online mode continuous professional development applications for early grade elementary school teachers can be carried out through a method of coaching on four activities. The four activities are (a) Get to know the features used in online mode learning, (b) Write down the learning features used in each session correctly, (c) Write down the names of activities in each session, and (d) Describe the utilization features in each learning activity.

CONCLUSION

The application of the online mode continuous professional development application for elementary school teachers in the early grades can be carried out through a method of coaching on four activities. The four activities are the application of online mode features of the learning teacher, namely (a) Get to know the features used in online mode learning, (b) Write down the learning features used in each session correctly, (c) Write down the name of the activity on each session, and (d) Describe the use of features in each learning activity.

Based on the results of the study, the advice to early grade elementary school learning teachers is to utilize online learning media in improving pedagogical and professional competence. Online mode continuous professional development applications can improve early pedagogical and professional elementary school teacher competencies. Furthermore, it is suggested to the education manager to always encourage the teachers, to familiarize themselves in utilizing ICT media through the online application of continuous professional development.

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