

# Effectiveness of Online Scientific Publication Training Approach for Teacher's Professional Competence Development at Religious Training Centre in Padang

Agusrida<sup>1,\*</sup>, Atmazaki<sup>2</sup>, Syahrul R<sup>3</sup>, Ermanto<sup>4</sup>

<sup>1</sup>Widyaiswara Balai Diklat Keagamaan Padang, Kementerian Agama RI-Padang, Indonesia

<sup>2,3,4</sup> Faculty of Language and Art Universitas Negeri Padang, Indonesia

\*Corresponding author. Email: [agusrida70@gmail.com](mailto:agusrida70@gmail.com)

## ABSTRACT

Scientific publication training for teachers is one of the priority training activities at the Religious Training Center (BDK) in the Padang program. It relates this to the need for teachers to fulfill the demands of professional development for promotion and the position in question. It transferred previously classical training activities to non-classical online. This is done so that it meets teacher needs, and can respond to massive and comprehensive advances in digital technology. The purpose of this study was to determine the effectiveness of online scientific publication training. The method used is descriptive qualitative analysis. The results showed that the effectiveness of online scientific publication BDK in Padang was very effective in terms of three components, namely participants, widyaiswara, and the organizing committee.

**Keywords:** *Online Scientific Publication Training Approach, Teacher's Professional Competence, Religious Training Centre.*

## 1. INTRODUCTION

The Padang Religious Education and Training Centre is a Technical Implementation Unit which is based and responsible for the Research Development and Training Agency for the Ministry of Religion of the Republic of Indonesia [1-3]. Based on this position, BDK in Padang has carried out education and training for administrative and technical education and religious personnel with a working area of 4 provinces, namely West Sumatra, Riau, Jambi and Riau Islands. With the coronavirus disease 2019 (Covid-19) pandemic at the beginning of the year, face-to-face (classical) training is not possible. In response to this, BDK in Padang diverted activities in a non-classic form online through Distance Training.

It is under existing regulations [4-6] that distance training (online) by utilizing technology is one solution for training institutions in carrying out their roles and functions to provide services to stakeholders, especially in increasing the competence of the State Civil Service. To respond and heed government regulations by limiting activities are in direct contact to expect the

spread of Covid-19. One training programmed to be carried out online through Distance Training is Scientific Publication Training. This training is annually a priority program at BDK in Padang because of the demands and needs of ASN, especially teachers in professional development as a form of professional teachers [7]. The demands of professional teachers are one competency that teachers must have [8].

The professional competence of a teacher by having competencies, among others, can develop professionalism sustainably by taking reflective action, and use ICT to communicate and develop themselves. This means that scientific publication training for teachers is in professional development in the form of work as a reflective action for professional teachers. Besides, online scientific publication training through distance training carried out by BDK in Padang is an embodiment of professional teachers in mastering information communication technology.

Professional teachers must be able to adapt to increasingly

sophisticated technological developments. It will test the existence of professional teachers with their ability to use digital-based media and learning resources. With the training that uses ICT in the internet network (online), it is not new and complicated for teachers because mastery of ICT is a must as an indicator of professional teacher competence. In its implementation, there are still teachers who have not used digital technology as a learning resource, learning media, and training facility [9-11]. This information is also supported by information got from instructors who carry out learning in ICT and Multi-Media training at BDK Padang, that there are still some teachers who have low competence in mastering digital technology in learning.

The results of the study show that teachers in learning by utilizing the development of digital technology as a learning resource have a significant impact on the satisfaction of student learning outcomes [12, 13]. The

technology revolution provides changes in the online learning process and also affects the professional development of teachers in training [14].

Awaluddin's research comparing online and traditional learning show that online learning is more successful than face-to-face [15]. Another opinion states that online training does not interfere with the teaching activities of teachers in schools, because it can carry learning out outside of teaching hours. Then, learning activities have a longer duration, and teachers can learn to accord with their respective opportunities and learning styles [16]. Online training sometimes experiences obstacles from participants or outside interference, which affects the effectiveness of the training process [17-19].

Referring to the results of research by experts, online scientific publication training carried out by BDK Padang is under the Decree of the Head of the Agency [20], that the training activity has a duration of 60 hours of learning face to face (classical) time of 6 days. Online training activities through distance training with the same duration (60 days) with 30 days [21]. Given these differences in the period, it is necessary to study the effectiveness of online scientific publication training at BDK Padang.

The purpose of this study was to determine the implementation of online scientific publication training and the effectiveness of online scientific publication training at BDK in Padang. The formulation of the problem in this study is the effectiveness of online scientific publication training at BDK in Padang. The method used is descriptive qualitative using test instruments, interviews, and questionnaires.

### ***1.1. Effectiveness of Training***

Training is a process of increasing one's competence in the knowledge, skills, and attitudes to be achieved according to the performance demands of someone who participates in the training. Training is a process or method carried out to improve one's competence or competence in the aspects of knowledge, skills, and attitudes that must be effective and efficient in increasing the performance of training participants [20]. Training is a process designed so that the training carried out can achieve the expected goals [22].

Training is specific, practical, and immediate [23]. It relates specific means that training to the field of work being carried out. Practical and immediately means that what it has trained can be put into practice. Especially in increasing the competence of Civil Servants, it can carry training out both classical and non-classical.

Classical training through face-to-face learning in the classroom. Non-classical training can be carried out through e-learning, workplace guidance, distance training, internships, and exchanges between civil servants and private employees [24].

The effectiveness of the training can be seen from the implementation of the training in achieving the expected goals. The effectiveness of training is also related to human resources in achieving the expected training objectives, and the competence of resource persons in implementing training [20]. Jackson in Charismi et al stated, four things can affect the effectiveness of training. First, it is the readiness of the training participants. Second, the learning style must be adapted to the learner. Third, the application of material learned during the training by participants in their work and lasts a long time. Fourth, the delivery of training materials tailored to the needs of training participants [22]. Measuring the effectiveness of training can also be done by comparing training participants in groups that did not receive similar training interventions [22]. According to Agusrida, to find out whether or not training is effective it can be done in five ways, namely the reaction of the training participants, implementing learning in the training, the attitudes or behavior of the participants, the results for the organization, and the number of costs used [20].

### ***1.2. Scientific Publication Training***

Scientific publication training is a training program implemented by BDK Padang in meeting the needs of teachers in the aspect of professional development as a condition for promotion or position. Teachers experience stagnant promotion because of a lack of competence and a pessimistic attitude to produce professional development work to be assessed as a credit score. For this reason, this training aims to improve the competence of training participants in writing scientific papers so it can publish them in standardized print and electronic media or the official website of an institution. Scientific publications are

scientific papers that have been published to the public. Scientific writing is very important for teachers in improving the quality of their learning to improve their professionalism [25]. Mastery of writing trained scientific papers also affect the quality of education and the institutions in which it devotes the teacher [26].

The form of publications that teachers can do, namely presentations at scientific forums, the publication of research results or innovative ideas informal education, and publication of textbooks, enrichment books, and/or teacher manuals [7, 27]. In scientific publication training, these types of scientific publications are categorized into five core training courses, namely (1) Basic Concepts of Scientific Publications, (2) Scientific Publications in the Form of Research Reports, (3) Scientific Publications as Scientific Review Papers, (4) Scientific Publications in Book Form, and (5) Scientific Publications as Popular Scientific Writing. By dividing each type of scientific publication in the training subject, it is hoped that participants can master the concepts and practice them according to the concepts being learned.

### **1.3. Online Training**

Online training is an activity that uses the internet in the training process. It carries training activities out in a virtual non-classical manner. Online training solves meets stakeholder needs in increasing the required competencies.

Especially the Religious Education and Training Center as a training institution must be able to provide services to the State Civil Apparatus within the Ministry of Religion in increasing their competence. Meanwhile, the limitations of time, budget, and personnel do not allow it to serve the needs of the ASN.

Conventional training practices cannot provide the required training. This occurs because of limited time, space, the number of instructors, facilities, and others [28]. The effectiveness of online training has been tested by many researchers in terms of distance, cost, time, and the increase in self-confidence and self-image of participants in exposing opinions and content through technological tools [12]. However, not all training participants can take part in online learning due to isolated places and difficult internet access. Online learning provides a significant positive effect than face-to-face learning [14]. This is seen in the test results, participant involvement, a stronger sense of community among participants, and the lack of failure of participants in learning.

The principles of learning are carried out online, namely, the Distance Training learning process is not limited to space and time, the implementation of Distance Training Learning is carried out by self-paced learning according to the guidelines, the training is

carried out in full e-Learning through the main application Moodle version 3.8 plus Other communication media, the implementation of distance training is carried out for 1 month and is equivalent to 60 lesson hours [29].

Moodle is an application of learning concepts and mechanisms that utilize information technology known as electronic learning or e-learning [30]. Moodle is better known for its function as the Course Management System or Learning Management System (LMS) [31]. Moodle display is like a web page in general, has a feature to present classes (courses), so that instructors can upload teaching materials, questions, and assignments. Trainees can enter the moodle and then select the class provided or registered (enroll) for him. The progress of the training participants in Moodle will always be monitored for the progress and value they get.

## **2. METHOD**

The effectiveness of training activities can be seen based on the readiness of participants to take part in training, participant reactions in training, participant needs for training materials, learning methods used, the impact of training results on participant and organizational performance, and costs used [13-16, 20]. In this study, it reviewed the effectiveness of online scientific publication training in three aspects, namely the activity of 39 training participants, two instructor activities, and two-person organizing committee activities inputted in the LMS Moodle BDK in Padang server. These activities are written in the Guidebook using learning methods, namely video conferencing (Zoom Meeting), discussion forums, assignments, live chat, upload videos, upload teaching materials, and viewing materials. The effectiveness of the training is seen based on the scores for the training participants, instructors, and the organizing committee. The acquisition of participant values is seen in the results of attitudes, knowledge, and skills. Specifically, for the skills aspect, it can be seen from implementing the Follow-up Plan designed by the participants as the output of the training that was followed. As for the instructor and committee based on the assessment given by the participants through a given questionnaire. The range of values used is [23], namely 92 - 100 Very Competent, 84 - 91 Competent, 76 - 83 Quite Competent, and <76 Less Competent. For the assessment of the process on participant activities using ranges and categories, namely 30 - 39 very high (ST), 20 - 29 high (T), 10 -19 low (R), and <10 very low (SR). Qualification of the assessment by using a percentage.

### **2.1. Online Training Participant Activities**

The participant's activities that were observed were (1) Discussion Forum / FD, (2) Live Chat / LC, (3) Assignment / As, (4) Upload Video / UV, (5) Upload Live Materials / UBT, (6) Upload Teaching Materials / UBA, (7) Upload Live Materials, and (8) Feedback on each of the core materials in scientific publication training. On average, the participants' activities in participating in online training are in a very high category. For the mean on the form of activity, discussion forums have the lowest activity, and Assignments have the highest activity. Online training has a positive impact on participants in their activities. Based on the data above, the effectiveness of the training was seen in the very high activity of the participants [12, 13]. Graph 1 Acquisition of Knowledge Test Score of Participants in Online Scientific Publication Training.

**3. RESULTS AND DISCUSSION**

To measure the level of participants' knowledge of the five core materials presented online, participants were given 40ty questions in the multiple-choice form with a score of 2.5 for each question. The acquisition of the participant's knowledge test scores can be seen in the following graph.



**Graph 1** Acquisition of Knowledge Test Score of Participants in Online Scientific Publication Training.  
source: LMS Moodle BDK Padang Portal

Based on the chart above, there are 39 training participants, but 35 people can take the test according to the schedule. The highest test results in the range of values 95-100 were 2 people, 85 - 90 were 6 people, 75 - 85 were 2 people, 70 - 75 were 4 people, 65 - 70 were 8 people, 60 - 65 were 6 people, 50 - 55 as many as 3 people, 45 - 50 as many as 1 people, and get a score of 2.5 one. The mean test results of online scientific publication training participants were 63, 88. The positive effect on test results in online learning has not been realized [14]. This is because signal interference and time limit restrictions affect the concentration of participants taking the exam. Four participants could not take the exam, due to signal interference during the exam.

**3.1. Follow-up Results of Participants in Scientific Publication Training**

The follow-up activity is an act of planning training participants as a form of increasing the competence of participants' skills during online training. Action Follow-up planning for 1 month starting after the training. Especially for scientific publication in book form, the result of the action is a book manuscript that has been made and is already in the process of publishing. Participants' follow-up implementation is shown in the following table.

**Table 1** Result of the Implementation of the Follow Up Plan for Scientific Publication Training Approach

No	Generated Forms of Scientific Publications	Publication	Total
1	Best Practice Paper	Library	2
2	Scientific Review Papers	-	-
3	Research Result Report	Library	9
4	Textbooks of Study	-	-
5	Enrichment Book	Society	12
6	Manual Book of Teacher	Library	8
7	Popular Scientific Articles	Print / Electronic Media	8
Total			39

Based on the data above, the training participants are more likely to implement the form of scientific publications in the form of books. While scientific publications in the form of scientific review papers and textbooks, there were no participants who implemented them. Some of the work produced by the training participants can be seen in the following picture.



**Figure 1** Example of Scientific Publication Work in Online Training

With the output of online scientific publication training participants, this indicates that participants have increased skills competencies in producing scientific publication work in the very competent category. A total of 39 participants can produce

scientific publications. This is when compared to the face-to-face scientific publication activities carried out at BDK Padang, participants are limited to making a training output plan without any physical evidence produced. Meanwhile, online training makes participants optimistic about being able to realize the form of scientific publication they want. According to the opinion of Wasserman and Ruth Migdal [12], the effectiveness of online training can increase the confidence and self-image of participants in exposing opinions and content through technological tools. Participants' self confidence increases with the motivation given through virtual. Participants without any doubts convey the constraints in writing to the instructor and every opportunity they ask for guidance.

### **3.2. Responses of Online Scientific Publication Training Participants to Instructors**

The instructor in training has an impact on the success of the training. The ability of the instructor to carry out his duties as a trainer by applying andragogy learning is part of the student's performance in serving training participants. To find out the instructor's performance which has an impact on the effectiveness of the training, participants are given a questionnaire that has been prepared in the form as feedback. Assessment in the form of a range of values 0 - 100 with the categories Very Competent / SK ( $90 \leq NA < 100$ ), Competent / K ( $80 \leq NA < 90$ ), Moderately Competent / CK ( $70 \leq NA < 80$ ), Not Competent / TK ( $< 70$ ). The statements in the questionnaire include aspects of attitude, knowledge and skills which are translated into 12 indicators, namely; (1) mastery of the material, (2) knowledge and teaching skills, (3) presentation systematics, (4) ability to present, (5) goal achievement, (6) ethics, (7) attitudes towards participants, (8) how to answer questions participants, (9) use of language, (10) giving motivation, (11) time discipline, and (12) neatness in dress. The assessment is focused on 5 core training materials by taking the mean value of each instructor, namely symbols A and B. The results of the participant's assessment can be seen in the following table.

## **4. CONCLUSION**

Scalar *variables* and *physical constants* should be italicized, and a bold (non-italics) font should be used for **vectors** and **matrices**. Do not italicize subscripts unless they are variables. Equations should be either display (with a number in parentheses) or inline. Use the built-in Equation Editor or Math Type to insert complex equations.

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