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Participants' Perceptions of the Effectiveness of Online Continuing Professional Development for Principals in Central Java, Indonesia

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One of the education programs for principals in Indonesia is online continuing professional development or CPD. This research aims to understand the participant's perceptions of the effectiveness of online CPD for principals. This study applies the CIPP evaluation. The respondents were 69 principals of primary and secondary schools in Central Java. Quantitative and qualitative data were used in this research. The data were collected using the Likert Scale questionnaire and in-depth interview techniques. The results show that in general, the implementation of online CPD is suitable for the goal of educating the principals and fulfilling their needs. The problems that affect the effectiveness of online CPD are the recruitment system that is not based on participants' competencies in operating e-learning technology, unavailability of internet access in schools, and module determination systems. To ensure the effectiveness of the education process, recruitment of participants should be based on the principals' competencies and school self-evaluations of rather than school supervisor competencies. Furthermore, to ensure that the program is relevant to participants' needs, the sequence of learning material must be determined individually, rather than based on class and region.

Keywords: continuing professional development, online, principals, CIPP, Indonesia

INTRODUCTION

Based on the results of surveys on the quality of education, Indonesia is in an emergency. The result of tests conducted by international institutions, such as Trends in International Mathematics and Science Study in 2015, put Indonesia in 45th position out of 50 countries. The Program for International Student Assessment held in 2015 showed that of 72 participants, Indonesia was ranked 63rd. This has become the basis to improve the quality of education through various policies. One policy that must be held is training and education for teachers and principals as stated by Craft (2000) that learning for educators is the major method to make an innovation to achieve educational goals.

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A principal is a functional teacher who is tasked to manage a school where teaching and learning process occurs, or a place where interaction between the teacher who gives lessons and students who receive lessons takes place (Yuliana, Rahman & Djasmi, 2013). Results of several studies, such as those conducted by Albu (2013) and Sahenk (2010) concluded that principals function as teachers, leaders, managers, administrators, as well as supervisors. Therefore, principals have a significant role in achieving education quality standards. To ensure that the core duties and functions of principals are properly discharged, all involved competencies must be maintained and improved over time. In Indonesia, this may be done through a Continuing Professional Development (CPD) program. The program aims to improve the knowledge, skills and professional attitudes of principals (Kementerian Pendidikan dan Kebudayaan, 2015). This education and training program is carried out through three types of modes or modalities, namely direct mode, principal working group mode, and online mode.

Following the grand design of the program, CPD activities are accomplished over the course of the participant's career as a principal. Twenty-four materials are classified into three hierarchal levels based on their complexity (Kementerian Pendidikan dan Kebudayaan, 2015). Conducted continuously over a lengthy period, the CPD may be considered an effective professional development program. This can be linked to the recommendations provided by Hunzicker (2011), Lieberman and Pointer Mace (2010), Desimone (2009), Penuel et al. (2007), and Garet et al. (2001), all of whom note that educators' professional development is most effective when it is continuous. In other words, the program activities must be conducted in stages and the following stages are more multifaceted, meaning that the second stage is more complex than the first one, and so on. However, these researchers have also proposed other recommendations, one of which is that long-term professional development programs must be evaluated to redesign. According to Visser et al. (2013), regular evaluation of CPD ensures that educators' competencies are always up-to-date.

Evaluation is correspondingly important for the online CPD program. Indeed, that program is expected to be implemented more strategically using more than two modes, evaluation and redesign. As such, an integrated and comprehensive evaluation that is capable of detailing the components that promote optimal principal competencies is necessary. This will ensure that principals can improve school quality. One model for evaluating the CPD programs is the CIPP model developed by Daniel Stufflebeam. This evaluation model is basic, comprehensive, and integrated (SancarTokmak, Baturay, & Fadde, 2013). It is basic because it deals with the core elements of human resources, input that influences performance, motivation, loyalty, evaluation, and the learning process. It is comprehensive because it explores all components that contribute to service quality. Moreover, it is integrated since it encompasses all stakeholders in a single process. The evaluation focuses on participants' perceptions of online CPD for principals in Indonesia. Therefore, this research question is "What is the participant's perception of the effectiveness of the context, input, process, and product of online CPD for the principals in Indonesia?" The holistic evaluation of the principal's education program is different from those of the previous studies which only focus on one or a few elements such as the process and the process and the product.

LITERATURE REVIEW

CPD for Principals

From the study of the Educational Human Resources Development and Education Quality Assurance Agency (Kementerian Pendidikan dan Kebudayaan, 2012), the comptence of managerial, supervision, and social of principals in Indonesia only achieve an average score. In fact, as leaders they must have above average competence. This phenomenon can be attributed to the fact that in Indonesia, principals are teachers who are given additional duties as leaders in an education implementation unit (Yuliana, Rahman & Djasmi, 2013). The principals do not have the school leadership competency through formal education, so they must be given education along his duty, namely continuing professional development (CPD) programs (Bubb & Earley, 2007).

CPD for principals is formal and informal learning activity to improve the competency of principals in carrying out their main tasks and functions (Bubb & Earley, 2007). In line with that, Polly et al. (2015) state that CPD is to minimize the distance between knowledge, skills, social competence and personality that teachers currently have and the future demand is related to that profession. Therefore, CPD for principals concentrates on improving their performance, but the implementation can be carried out in the forms of individual or collective activities with cross-schools at regional and national levels (Visser et al., 2013). In Indonesia, online CPD for principals takes the form of national education.

The government arranges CPD for educators so that they can obtain effective services and learning experiences to increase their self-potentials at the maximum level. In the long run, they will have strong personalities and noble characters to play an active role in developing knowledge, technology, and art, as well as community development (Kementerian Pendidikan dan Kebudayaan, 2015). This can be attributed to the results of research by Nambiar and Thang (2016) that the training participants show a great interest in developing themselves by learning. Meanwhile, the results of the study by Akalu (2016) on the implementation of CPD in Ethiopia show that the success of professionalism of teaching staff is determined by the country's policies.

Alibakhshi and Dehvari's research (2015) found that CPD for principals is necessary for improving skills, carrying out continuous learning, maintaining updated insight, and revitalizing professionalism. Doherty's (2011) study on the CPD in the UK found that the demand to keep up the dates for teachers and principals in implementing educational innovations from the community triggered the need to implement CPD. Even the government had more tendencies to hold CPD than to increase the number of educators.

Program Evaluation with the CIPP Model

Following the categorization by Eseryel (2002), CIPP may be considered a system-based model because it includes all elements within a system. Each of the elements—context, input, process, and product—plays an important role in the greater whole. As explained by Stufflebeam (1971), each element has its own function as described below: (1) context evaluation contributes to planning by identifying unfulfilled needs, unused opportunities, and the fundamental problems that contribute to unused opportunities

attributable to unfulfilled needs; (2) input evaluation contributes to planning by projecting and analyzing alternative procedural designs; (3) process evaluation contributes to planning by ensuring project operation monitoring; and (4) product evaluation contributes to planning by determining the extent to which goals have been achieved and the reasons for current achievements.

A study by Hew et al. (2002) concluded that CIPP is a macro-level model, which works to answer important questions of education. These researchers classified evaluation models into three levels—macro, mezzo, and micro—with macro level models having the highest level of qualification. Bonk (2002) also advocated for the use of the CIPP model to evaluate learning programs within larger systems. Other researchers have found that, in both developed and developing countries, CIPP is the dominant model for evaluating programs and policymaking in the field of education (Boulmetis & Dutwin, 2005). As such, they argue that the CIPP model offers the best approach for determining necessary action.

This is relevant to the CPD program, as principals are closely encompassed in education policy. This process involves various stakeholders (principals, supervisors, advisors, and administrators), and its results may be used as the bases for advancing the effectiveness of the program. This is supported by a study by Visser et al. (2013), who find that evaluations of professional development programs can serve as reflections on potential revisions. A study by SancarTokmak, Baturay, and Fadde (2013) found that the benefits of program evaluation include the acquisition of information on shortcomings in program implementation, which may be used to improve future planning. As such, this evaluative study is intended to analyze the implementation of the online CPD program in terms of context, input, process, and product.

METHOD

Evaluated Educational Program

The implementation of online CPD combines online and offline learning activities. The implementation procedure is presented in Figure 1. Information and Communication Technology (ICT) training, which is the provision of skills to utilize computer and internet devices for participants, is applied. Online learning activities are divided into three sessions, namely introductory, core, and closing sessions. Learning begins with an introductory session, in which the initial online activities—pre-test, the introduction of online modules, and socialization of inclusion and child protection education—are conducted before the core session. The core session is a series of main activities in learning that contain online module learning activities. Each module is divided into eight to 10 parts. Each part can be accomplished within one to two weeks. The last session is the closing, which covers the post-test, self-assessment, and evaluation of the implementation of CPD. In addition to session learning, there are online communication activities through video conferencing and chatting. During the implementation of online learning, there are two review activities, including review 1 and review 2. Review 1 is an activity carried out to identify problems using technology and online systems. Review 2 is an activity that aims to gather data on the implementation of online learning and

implementation in each participant's school. At the end of learning, the participant report is reviewed and validated by the facilitator.

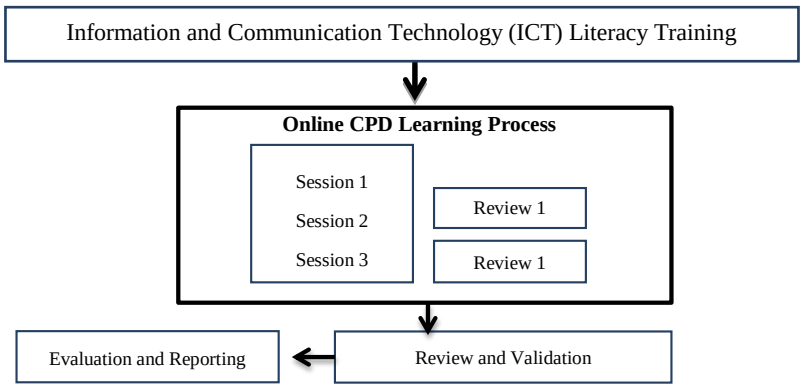

Figure 1
Procedure of Online CPD for Principals in One Module

Research Approach

This research belongs to an evaluative study to collect information on the realization and implementation of a program that has been continuously conducted to make a decision. Stufflebeam and Coryn (2014) view evaluation as a process for determining the output of certain activities to reach a goal. It may be concluded that evaluation is a process through which information on the effective functioning of something is collected to decide the potential alternatives. The evaluation in this study applied a CIPP model proposed by Stufflebeam.

Participants

The online CPD for principals at the first stage (in 2015) was implemented in four provinces, including Central Java, West Java, East Kalimantan, and North Sulawesi. The participants were principals of primary and secondary schools (Kementerian Pendidikan dan Kebudayaan, 2015). However, only Central Java was attended by primary and secondary school. The other provinces were only followed by principals from junior high schools, so the heterogeneity of the participants' characteristics is not accommodated. Therefore, we chose participants from Central Java as research subjects. Questionnaires were distributed to all participants (95 principals). They were from six regions—Sukoharjo, Sragen, Wonogiri, Magelang, Purworejo, and Purbalingga. However, only respondents from Sragen, Sukoharjo, Wonogiri, Purworejo, and Magelang, provided their responses, while the principals from Purbalingga did not respond. Thus, the participants were 69 principals, covering 16 primary school principals and 53 middle school principals. Participants were determined using a purposive sampling technique.

Data Collection Techniques

Data were collected using questionnaires and interviews. The questionnaires were developed by involving four components (context, input, process, and product) with 19

items, covering 4 items of context, 5 items of input, 5 items of process, and 5 items of product. The 19 items are statements which are considered to represent the implementation of context, input, process, and product components as indicators in CPD online. The selection of items was carried out by expert judgement and several participants from 24 items (each component represented by 6 items) provided before the questionnaire was implemented. Each item was provided with four options of responses, "strongly agree" with a score of 4, "agree" with a score of 3, "disagree" with a score of 2, and "strongly disagree" with a score of 1. Interviews were conducted after the data from the questionnaires were obtained from all participants.

Data Analyzing Techniques

The data were analyzed using quantitative and qualitative descriptive techniques. Quantitative data were obtained from the questionnaires scores. Data analysis was done by calculating the mean of each item and the percentage of participants choosing each response. The qualitative data were attained from in-depth interviews with participants. Data analysis was carried out with a qualitative descriptive model as proposed by Miles, Huberman, and Saldana (2014), comprising the stages of data collection, data reduction, data display, and conclusion drawing.

FINDINGS

The data gathered from questionnaires and interviews are presented in this chapter. The data are displayed in Table 1.

Table 1
Participants' Responses to the Questionnaires

Statement	Percentage			
	Strongly agree	Agree	Dis-agree	Strongly disagree
Online CPD is suitable for educational purposes for principals.	88%	12%	0%	0%
Online CPD is suitable forthe principals' needs.	80%	10%	10%	0%
Online CPD is based on the principals' duties.	70%	17%	9%	4%
Online CPD is in line with the school facilities.	34%	38%	23%	5%
Participants match the criteria.	27%	44%	13%	16%
Supervisors' qualifications meet the criteria.	36%	46%	18%	0%
Instructors' qualifications meet the criteria.	82%	18%	0%	0%
Quality of the module is good.	52%	48%	0%	0%
Quality of e-learning technology is good.	56%	44%	0%	0%
Learning process is effective.	22%	40%	38%	0%
Assignments can be done effectively.	20%	40%	36%	4%
Learning evaluation is carried out effectively.	42%	43%	15%	0%
Learning schedule is fulfilled effectively.	68%	19%	13%	0%
E-learning technology is used effectively.	22%	48%	30%	0%
Principals' competence is improved.	30%	44%	26%	0%
Principals' competence in managing learning increases.	30%	46%	9%	5%
Principals' competence in managing school facilities increases.	56%	44%	0%	0%
Principals' competence in managing school finance increases.	44%	56%	0%	0%
Principals' competence in managing administration increases.	75%	25%	0%	0%

The Component of Context

Evaluation of the context focuses on appropriateness of (1) the online CPD for educational purposes for principals, (2) the program for principals' need to improve their

professional knowledge, skills, and attitudes, (3) the program for the principals' duties, and (4) the program for school facilities. The mean are provided in Table 2.

Table 2
Mean Scores of the Context Component

Statement	Mean
Online CPD is suitable for educational purposes for school principals.	3.88
Online CPD is based on the principals' needs.	3.69
Online CPD is based on the principals' duties.	3.66
Online CPD is in line with school facilities.	2.98

The majority of participants (88%) confirmed that the online CPD corresponded to the objectives of their professional education. The mean score reached 3.88. From the in-depth interview, participants responded that the online CPD program was a realization of government regulation. In addition, the procurement of CPD was also considered suitable because the principal was a teacher who received an additional assignment to lead a school without receiving formal education in school leadership. One of the principals taking part in this study gave the following response.

> "Professional education is very suitable because the principal is a teacher who gets an additional assignment, meaning that he has not received any formal education about becoming a school leader (A principal of a middle school in Wonogiri)".

Regarding the suitability of the program with the participants' needs, the mean score reached 3.69. The 70% of participants stated that online CPD for principals was "very appropriate". Meanwhile, participants who declared that they desperately demanded an online CDP education program were generally those who were serving as principals when the research was performed. Through this program, the material provided in each chapter of the module was followed by practices and the participants were then tasked to make reports and send their works online. Therefore, this program was considered acceptable and applicable, as a participant's response below.

> "As a new principal, of course, I need a CPD program. The materials provided were all important because I did not get the materials during the briefing at the beginning of my duty as principal" (a principal of a middle school in Sukoharjo).

The flow of the online CPD program in terms of the principal's work is considered "very suitable", with a mean score of 3.66. Most of the participants, 48 people (70%), declared that the program was highly suitable for them. From the interview, it can be stated that all programmed activities were arranged to be implemented continuously and based on the schedule that had been set by the committee, and thus, the participants could arrange their duties as principals from the beginning. When compared to the direct mode, the flow of the CPD implementation is considered in line with the principals' activities because most of the CPD activities were carried out in distance (online), instead of face-to-face. Hence, participants did not need to leave the tasks as principals at schools. Interviews found some reasons for the positive responses, and one of them is presented below.

> "Compared to the direct mode of CPD, the flow of online CPD implementation is good and suitable for the principals' activities. What is important is that most of

> the activities are carried out remotely, not face-to-face, so we don't often leave the duty at school" (a principal of a middle school in Sragen).

Dealing with the suitability of online CPD for principals with school facilities, the data show that the mean score was 2.98. Approximately 23% of principals testified that the program was not appropriate for principals and the other 5% of principals expressed that online CPD was highly inappropriate with school facilities. Most of the principals who had a negative view on online CPD came from Wonogiri and Magelang Regencies. Situating in rural areas (far from cities), their schools did not have internet access. Moreover, several schools were not able to subscribe to internet access for they did not have adequate funds. One participant asserted, "Since the local government provides subsidy for students so they can study without any costs, we are not allowed to receive money for operating costs from students. However, in fact, the government's assistance is limited for subscribing to the internet". A similar reason was confirmed by participants who were primary school principals in rural areas in Magelang Regency. They disclosed that the number of students in their schools was not as many as those in the schools in urban areas, and thus, the funds from the central government were also limited. This was because the amount of funds from the government was calculated based on the number of students in a school.

Data from questionnaires and interviews reveal that the online CPD program is relevant to the educational goals of the principals, the flow, and the principals' workload, but is not in line with the school conditions in some regions, including rural and poor areas.

The Component of Input

The evaluation of the input of the online CPD focuses on (1) principals' qualifications, (2) supervisors' qualifications, (3) instructors' qualifications, (4) the quality of module, and (5) the quality of e-learning technology. The means are presented in Table 3.

Table 3
The Mean Scores on the Input Component

Statement	Mean
Principals' qualifications as participants match the criteria.	2.82
School supervisors' qualifications as facilitators match the criteria.	3.18
Instructors' qualifications as facilitators match the criteria.	3.80
Quality of module is good.	3.52
Quality of e-learning technology is good.	3.56

In terms of the appropriateness of the program for principals' qualifications, the mean was 2.8, and the score is considered low. Approximately 13% of respondents argued that the program was not suitable and even 16% of respondents confirmed it very inappropriate. This can be attributed to the condition that some of the participants were unfamiliar with the internet and unable to operate the technology, as reflected in the statement of a respondent below.

> "If I have the right to choose, I will choose to join the direct mode of CPD because I don't need to learn by using the internet" (a principal of a primary school in Magelang).

The results of the analysis on the questionnaires about the suitability of the program with the supervisors' qualifications indicate the mean score of 3.2. A total of 18% participants mentioned that the supervisors' qualifications did not meet the criteria as mentors for this program, particularly dealing with the ability of supervisors in using information technology and the internet. The following is a response from a participant.

> "My supervisors cannot use the internet so they cannot provide guidance according to their duties. Therefore, I often consult the problems I face with the administrators through the group discussion forum" (a principal of a primary school in Magelang).

The suitability of the program with facilitators' qualifications is high, as indicated by the mean score of 3.8. The score specifies that all of the respondents considered their facilitators well-qualified for this program. A respondent's opinion supports this evaluation.

> "The lack of supervisors' competency can be covered by the facilitators' ability because I can ask them to explain the materials that I do not understand and the technical problems of the CPD program" (a principal of a middle school in Sukoharjo).

Dealing with the quality of modules, all participants said that the materials were appropriate for their needs, as proven by the mean score of 3.5. The major advantages of the online modules were the systematic and linearity arrangement. In other words, participants had to learn and complete the first section of each module before continuing to the second section, and finish all sections until the end of the module. Furthermore, modules include examples, figures, and images, as well as videos. The following is a sample of participants' response.

> "Systematic modules are sequential and complete. We were tasked to learn carefully every part of the materials, examples, and video that are provided, and those are not available in the modules for participant who join direct mode of CPD" (a principal of a middle school in Sragen).

Principals' perceptions of e-learning technology in online CPD program expose that most participants confirmed that the technology was very good. The available e-learning features and media were complete and matched with the participants' needs. In addition, the position of these features was easy to find. However, there was a small percentage of participants (12%) who thought that the online CPD system was less practical. One of the participants explained the opinion.

> "The technology is adequate because there are materials, discussion forum, assignment submission menu, and online examinations. However, it is not practical for me because I just learned to use the internet" (a principal of a primary school in Magelang).

Process Component

Assessment of the process component of the online continuing professional development program focuses on the effectiveness of (1) learning process, (2) learning task implementation, (3) learning evaluation, (4) time use, and (5) e-learning technology use. The mean score of the 69 principals are presented in Table 4.

Table 4
The Mean Scores on the Process Component

Statement	Mean
Material presentation technique is effective.	2.84
Assignments can be done effectively.	2.73
Evaluation of learning outcomes is carried out effectively.	3.27
Learning schedule is made effectively.	3.62
E-learning technology is used effectively.	2.86

The questionnaire data of assignments resulted in a mean score of 2.73. This indicates that many participants faced difficulties or problems. A total of 36% of participants claimed that the assignments were ineffective, while the other 4% stated that the assignments were very ineffective. From the interviews, it was identified that the ineffectiveness of the assignments was caused by (1) the workload of the principals, (2) limited time, (3) lack of financial funding for the implementation, and (4) difficulty in understanding the modules. Here is a response from a participant.

> "There are so many assignments to accomplish in the online CPD assignment and we take a lot of time to finish them. In fact, there are many jobs and tasks we have to do as principals so we cannot submit the assignments on time" (a principal of a middle school in Purworejo).

With a mean score of 3.27, it can be concluded that the evaluation process was effective. However, several respondents (30%) expressed their dissatisfaction with the technique used, in which participants were judged and labeled as either "competent" or "incompetent". This opinion is obvious in the following response.

> "I think the determination of whether a participant passed or failed is based on the test. In other words, it is only based on an assessment of the authenticity of the assignment and the description of self-evaluation. Such evaluation techniques do not motivate school principals to study material seriously" (a principal of a middle school in Sragen).

In terms of the learning schedule, the mean score was 3.62, meaning that the use of time in the online CPD programs was highly effective. However, 13% of participants confirmed that the schedule was ineffective because the duration of the assignment was too short. This evaluation was emphasized by the reason below.

> "This CPD is regular and effective in its time utilization because the schedule for studying the material and submitting assignments is available on the web www.prodep.go.id clearly" (a principal of middle school in Purworejo).

The questionnaire results pinpoint that the e-learning technology employed in the online CPD was used very effectively by most participants. However, there are 30% of participants claiming that e-learning technology was not used effectively. The mean score for this evaluation was 2.86. The ineffectiveness of technology relates to the participants' lack of knowledge on the available features and the minimum use of synchronized communication, such as teleconference, and asynchronous one, such as chatting. Further, the following principal's response supports the claim.

> "We don't know that the participants must click the "send to supervisor" button and "send to the instructor", so many participant assignments are not read by the facilitators because we do not click the buttons" (a principal of a primary school in Magelang).

Product Component

Evaluation of the product component centers on improving competence in managing (1) human resources, (2) learning process, (3) school facilities, (4) school finance, and (5) school administration. The means are presented in Table 5.

Table 5
The Mean Score on the Product Component

Statement	Mean
Principals' competence in human resource management increases.	3.04
Principals' competence in managing the learning process increases.	2.92
Principals' competence in managing school facilities increases.	3.56
Principals' competence in managing school finance increases.	3.43
Principals' competence in managing school administration increases.	3.70

Most participants contended that online CPD for principals could increase the competency in managing human resources in schools, proven with a mean score of 3.04. Participants specified that human resource management in their schools remained suboptimal as they didnot receive the appropriate modules. However, they attempted to improve human resource management in their schools after working with their Academic Supervision module. This can be seen in a principal's statement below.

> "From the learning on academic supervision, I get information about how to manage the database of teachers and education staff, but I am lacking information in improving their performance, especially the performance of teachers who have heterogeneous characteristics" (a principal of a middle school in Wonogiri).

In terms of the effectiveness of the program in improving the learning process, the mean score of participants' responses was 2.92. About 19% of participants confirmed that the program was ineffective in improving the learning process and even 5% of participants testified that the program was strongly ineffective. Teachers' suboptimal performance in the learning process was related to the problems in human resource management, particularly problems in improving senior teachers' performance. This is concluded from the responses of the principals and one of which is cited below.

> "I have difficulty in improving the performance of senior teachers. Even though they have attended training, they keep applying traditional teaching methods" (a principal of a middle school in Purworejo).

In contrast with the evaluation result on the effectiveness of the program in improving the learning process, the effectiveness of the program in improving the management of school facilities and infrastructure was given a mean score of 3.56. This represents that all respondents considered the program significantly helped them manage the facilities and infrastructure in their schools. A response from a participant supported this view.

> "The materials about the Medium-Term Work Plan and School Budget Plan, Academic Supervision, and Curriculum discuss the problems dealing with infrastructures, for example, infrastructures for inclusion classes. In my school, there are some children with special needs, and therefore, rooms and several school facilities are rearranged to support their learning activities" (a principal of a middle school in Sragen).

The mean score for the perception of program effectiveness in improving school financial management was 3.43. In other words, the majority of respondents considered the online CPD program "very effective", particularly due to the materials in "School Medium-Term and Budget Planning" and "Financial Management". The following statement is an example of the responses.

> "After reading the materials and illustrations of work plans and school budget plans, I can create a school budget plan that is highly in accordance with the conditions of the school. Due to the small number of students, there is little government funding that my school receives, so we seek additional financial support from the community and block funds. This strategy imitates the similar experiences of some friends I met at the CPD program" (a principal of a middle school in Wonogiri).

The mean score for the effectiveness of the program in improving administration was 3.70, denoting that all principals assessed the online program "very effective" in improving school administration, as expressed by a participant below.

> "The assignments that must be completed during the CPD are mostly related to the school administration. The practices in the CPD assignments make us work more systematically, particularly dealing with the school administration" (a principal of the middle school in Sragen).

Participants viewed the online CPD program "very effective" in improving the management of school facilities, infrastructure, finances, and administration. The improved performance was noted in these fields as a result of the availability of sufficient materials and examples in the modules as well as participants' interactions with other school principals.

DISCUSSION

One obstacle in the implementation of the online CPD for principals is the schools' limited access to the internet; some schools, especially those in rural areas, even do not have internet access. Participants noted that their schools' limited internet access is attributable to the limited funding from the government. On the other hand, the participants have financial problems so they are unable to finance the procurement of internet access. The implementation of professional development programs for educators must be supported by sufficient funding. A lack of funding is a common cause of poor education quality, either in Indonesia or in other developing countries. Akalu (2016), for example, scrutinized that continuing professional development in Ethiopia ultimately failed because of inadequate funding. Financial problems were the obstacles and factors in the failure of CPD in Pakistan (Nasreen & Odhiambo, 2018) and in Malaysia (Ramli & Maslan, 2015). McChesney and Aldridge (2015) argued that

although professional development is broadly observed as an effective means of disseminating and promoting new teaching strategies and trends, funding limitations can result in poor program performance with a minimal effect on classroom practice.

Problems with participants and supervisor qualifications, meanwhile, appear to be closely associated with the selection system. All of the participants did not know the reasons for choosing online CPD, instead of the direct mode one. According to the Head of the Agency for Education Quality Assurance of Central Java (LPMP), the recruitment of participants is not determined by the pricipals' competency test result. In other words, the selection and participation in the direct or online mode of CPD is decided by the score from the supervisor test during the supervisor development program, instead of by the principal's qualification. When supervisors receive a high score in the professional development program they attend, principals under their guidance are included in the online CPD. Meanwhile, if supervisors obtain a lower score, principals under their guidance are included in the CPD of direct mode. This model, thus, contributes to the involvement of participants who are not qualified for the online program. As stated in the CPD online implementation manual, the recruitment of participants in online mode of CPD for principals should be based on the needs and initial conditions of the participants and schools (Kementerian Pendidikan dan Kebudayaan, 2015). Thus, CPD achievements will be more optimal (Doherty, 2011).

Online CPD is considered effective because each module includes examples. However, in its implementation, modules cannot be studied easily individually, are not systematic, and are difficult or cannot be downloaded. If it is related to the description above, the difficulty of downloading material is related to internet access limitations. As for the causes of difficulty understanding the material and unsystematic material assessment can be related to the sequence of modules studied. As stated by the majority of participants, the determination of the modules studied was based on the participants' interests in one group, even one region. This means that the selection of modules is not based on the individual needs of the participants so that the education is not contextual. This can be related to Doherty's (2011) recommendation that the material's suitability to the needs of participants is a contextual education requirement or according to the real context. In fact, online education allows accommodating the needs of participants individually and the realization of participant-based learning (Hasibuan, 2013).

Despite the limitations in the context, input, and process components, questionnaires and interviews have proven that the program has successfully improved the competencies of principals. In fact, all participants stated that they "considerably needed" the program when asked, "Do you need the online CPD?" The finding is in line with those found by Karim et al. (2019) and Abdulwali et al. (2019) that educators need training programs to improve their competence. A similar phenomenon has been noted in another study, that programs that are developed step by step, in a professional and organized manner, are more acceptable and applicable to users (Doherty, 2011). However, most of the respondents answered "strongly agree" when asked about the improvement they made after joining the online CPD program. The main rationale for this agreement is the need for the professional development program to accommodate the real conditions experienced by principals. This reflects a study by Aillo and Watson (2010), with the

conclusion that professional development programs entail proper preparation and careful implementation to guarantee they address educator necessities. Such an approach can alleviate problems in the application (Desimone, 2009).

The online model of the CPD program is even considered more systematic than the direct mode. As such, principals can communicate with their peers on a large scale, such as through "public discussion" and "group discussion" forums. The majority of participants indicated that this facility motivated them to regularly open the online CPD page. This confirms the findings of research by Wang and Zhi (2009), that feedback from colleagues and comments from other stakeholders will motivate participants in online training programs to overcome problems and remain active. Thus, the discussion forum is a positive feature that contributes to the success of online learning. In addition, the forum enables the enhancement of participant communication competencies. In fact, communication competence is one of the factors supporting the success of leadership in schools (De Villiers & Pretorius, 2012).

CONCLUSION AND RECOMMENDATION

The main problems hindering the implementation of the online CPD program in Central Java, Indonesia are participants' limited capacity to use information technology and schools' limited internet access (especially in rural areas). This may be attributed to the participant recruitment system for online professional developed that is more likely based on the supervisors' performance, rather than on the capacity of principals. Recognizing these problems, the researchers propose two recommendations for improving the implementation of the online CPD for principals.

First, to improve the participant recruitment system, the government should ensure that only principals with adequate capacity in using information technology (computer/internet) are given the opportunity to take part in the program. The recruitment system should not set the quota for specific districts based on supervisors' performance. It should also focus on the results of the evaluation of schools' performance and self-evaluation. Participants should be selected based on the results of evaluations on their competencies and performances.

Second, to ensure that the CPD program meets the needs of principals—particularly who have duties as a new principal—the sequence of materials/modules must reflect the principals' core duties and functions, rather than negotiations between principals and their supervisors (what happens in the current situation). Recognizing that the main duty of a principal is planning school activities and funding (both the medium term and the long term), priority should be given to program planning and budgeting. To make certain that principals are capable of formulating policies for their schools, materials on curricula should be distributed. We recommend sequences of materials, which include Medium-term Planning of School Activity and Budget, Curriculum Management, Management of Educators and Education Staff, Management of School Facilities and Infrastructures, Financial Management, and Academic Supervision.

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