Developing Android Based Continuing Professional Development (CPD) Integrated Program for Primary School Teachers

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Abstrak

Guru memiliki tugas untuk terus belajar dalam mengembangkan profesinya sebagai tenaga pendidik. Penelitian ini bertujuan untuk mengembangan aplikasi Program Terpadu Pengembangan Keprofesian Berkelanjutan Guru (PT PKB Guru) berbasis Android guna memberikan motivasi dan kemudahan guru dalam menjalankan kegiatan Pengembangan Keprofesian Berkelanjutan: Pengembangan Diri, Publikasi Ilmiah, dan Karya Inovatif. Penelitian ini menggunakan metode *Research and Development* untuk mengembangkan aplikasi PT PKB Guru yang valid dan menggambarkan hasil penggunaan aplikasi PT PKB Guru tersebut. Hasil penelitian menunjukkan bahwa Aplikasi PT PKB Guru Valid dan dapat digunakan sebagai aplikasi terpadu yang memandu kegiatan PKB guru. Dengan adanya aplikasi PT PKB Guru, guru sangat terbantu dalam pelatihan yang teratur dan terkoordinir sehingga dapat meningkatkan kemampuan menulis karya tulis ilmiah mereka.
Kata Kunci: Pengembangan Keprofesian Berkelanjutan, Guru Sekolah Dasar

Abstract

Teachers have a duty to continue to learn in developing their profession as educators. This study aimed to develop an Android-based application for the Integrated Teacher Continuous Professional Development Program (PT PKB Guru) to provide motivation and convenience for teachers in carrying out Continuous Professional Development activities: Self-Development, Scientific Publications, and Innovative Work. This study used the Research and Development method to develop a valid PT PKB Guru application and described the results of using the PT PKB Guru application. The results of this study indicated that the PT PKB Guru application was valid and could be used as an integrated application that guided teachers' PKB activities. With the PT PKB Guru application, teachers were greatly helped in scheduled and coordinated training so that they can improve their scientific writing skills.
Keywords: Continuing Professional Development, Primary School Teacher

INTRODUCTION

Teachers are professional educators who have an important task in the intellectual life of the nation. Professional teachers can participate in sustainable national development, especially in achieving the education vision 2025, which is to create intelligent and competitive Indonesian people. Therefore, it is not an exaggeration to say that the future of society, nation, and state is largely determined by teachers. Therefore, as mandated in Law Number 14 of 2005 concerning Teachers and Lecturers / Undang-Undang Guru dan Dosen (UUGD) (Dewan Perwakilan Rakyat Indonesia, 2005), the teaching profession must be respected and developed as a dignified profession.

To be able to carry out the mandate of the law, teachers are required to have good pedagogic, professional, social, and personality competencies. The UUGD also emphasizes that teachers must have academic qualifications, competencies, educator certificates, be physically and mentally healthy, and can realize national education goals. However, the reality on the ground shows that the facts are still very far from what was expected (Suryana, 2017; Lailatussaadah, 2015; Handoyo, 2019). There are four causes of the low quality of teachers. First, the incompatibility of scientific disciplines with the teaching field, there are still teachers at school who teaches subjects, not in the field of study from his/her educational background. This happens due to a lack of teachers in a particular field of study. Second, the qualifications of teachers who are not equivalent to a bachelor's degree. Consequently, the scientific standards possessed by the teacher are inadequate to teach the field of study that be his job. Fourth, ineffective teacher recruitment (Tari, 2020; Leonard, 2016; Hoesny & Darmayanti, 2021; Elvira, 2021).

In 2013 the Ministry of Education and Culture first conducted a teacher competency test (UKG), especially for certified teachers. In addition to mapping teacher competence, the purpose of the competency test is also to measure the effect of certification on teacher competence. Based on the (Lubuklinggau Education Regional Development Balance, 2019), the UKG results achieved by educators, especially Primary School (SD) educators in Lubuklinggau in 2019 were 55.19 with the average UKG score in Lubuklinggau was 51.85. Based on these results, it can be concluded that the UKG value of 3.34 primary school educators in Lubuklinggau exceeded the UKG average limit in Lubuklinggau and was still far from the expected national UKG average of 80.00.

Efforts to improve teacher competence continue to be developed to continue to encourage better quality educators in the future. Continuous Professional Development (CPD) is one of the efforts made by the Ministry of Education and Culture to continue to accommodate teachers in carrying out professional development activities. CPD includes self-development activities, scientific publications, and innovative works. (Kastawi & Yuliejantiningsih, 2019) showed that only 5% of teachers were actively participating in CPD activities and only 4% of teachers set aside teacher certification to participate in teacher CPD activities. This is in line with (Agusta & Kristiawan, 2021) showing that only 12.5% of teachers are always active in CPD participation in participating in scientific publications and innovative works.

The problems that underlie the low motivation of teachers in participating in CPD activities include finance. In self-development activities, teachers take part in seminars and workshops which are conducted online, especially in this era of the Covid-19 pandemic. Some seminars and workshops are not free but are paid so that teachers find it difficult to participate in these activities. Furthermore, teachers are not active in CPD activities with the division of time for their families and schedules for their PKB activities. Teachers feel they also need to spend time with their families despite the demands of their busy teaching hours at school. Lack of ability in academic writing is also another factor that makes teachers unmotivated in writing scientific papers and scientific publications.

Based on the description of the ability and motivation of teachers above, innovation was needed in encouraging teacher CPD activities. The study conducted by Karim (Karim & S, 2018) in engaging teachers'

motivation in following CPD activities, teachers needed detail information, workshop, and guidance. Teachers needed an integrated program which was arranged in regional scope in facilitating teachers' CPD activities with school scope. Through the Application of Continuing Professional Development Program Integrated Program (PT PKB Guru), that was more organized and planned. Therefore, it will be continuously improving the quality of teachers as educators in welcoming the era of society 5.0.

METHODOLOGY

This study used Research and development (R&D) that comes from two words, namely research and development that are used to develop and validate a product (Silalahi, 2018). R&D contributed as answers to the need analysis result. The procedure of this study was:

Table 1
Procedure of This Study

No	Stage(s)	Instruments	Descriptions
1	Research Collection & Pliminary	Guiding Book of PKB Kemdikbud	Getting & analyzing PKB activities that have been prepared by the Ministry of Education and Culture
2	Research Planning	-	Developing a program in paper-based form which will be uploaded into the PT PKB Guru application with an Android-based layout
3	Early Product Development	Inventor Android Aplication	Developing the layout of the CPD Teacher activities integrated with the Android application
4	Expert Validation	-	This validation is content validation by representatives of the Ministry of Education and validation of Android-based applications by representatives of Android application experts
5	Product Revision	-	Product revision based on Validation
6	Early test	Observation	Field trial with 3 teachers
7	Product revision	-	Revision based on field trial
8	Field Test	Observation	Field trial with all teachers
7	Final Product Revision	-	Final revision after implementation
8	Desemination	Observation & Interview	Providing an overview from the results of implementation in using PT PKB Guru application

To obtain the development process, the techniques used in the PT PKB Guru application development process from stage 1 to stage 7 are Content-Review and Observation techniques. Meanwhile, to obtain the results of the implementation of the PT PKB teacher application, the techniques used were observation and in-depth interviews from teachers who had used PT PKB Guru Application.

RESULT AND DISCUSSION

1. Research Collection & Pliminary

At this stage, the PKB guiding book published by the Ministry of Education and Culture (2015) was carefully analyzed about what activities are part of the Teachers' PKB activities. In this PKB guidance book, it was concluded:

Table 2
CPD Activities

No	Components of CPD	Activities
1	Self-Development	PPG
		KKG (Teacher Group)
		In House Training (IHT)
		A participant in scientific activities (online/offline)
2	Scientific Publications	Becoming a transmitter/interviewee in seminar
		Publishing written research results, scientific review papers, scientific articles in education
		Publishing textbook, module/dictate of learning in a semester, books in education, translation works, and/or teacher manual
3	Innovative Works	Inventing of efficient technology
		Inventing/developing artworks
		Creating/modifiying of lessons tool
		Drafting standards, guidelines, questions in national/province level

2. Research Planning

At this stage, planning of PKB Guru integrated program to encourage motivation and convenience for teachers in carrying out PKB teacher activities as followed:

Table 3
Developed Integrated Program

No	CPD Activities	Activity Details
1	Self Development	1. Preparation of a fixed monthly training or workshop schedule 2. Preparation of speakers (stakeholders) in providing training or workshops in schools
2	Scientific Publications	1. Preparation of schedule and guidance team for writing PTK 2. Cooperation in scientific publications through journals and publishers
3	Innovative Works	1. Preparation of the mentoring agenda for the creation of innovative works by teachers, both learning applications, media, and standard preparation

3. Early Product Development

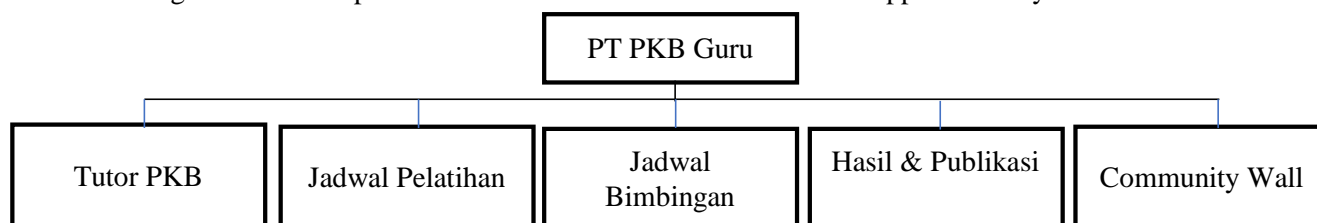This stage is the development of the Android-based PT PKB Guru Application layout:

Diagram 1. The Android-based PT PKB Guru Application layout

Table 4
Application Layout

No	Menu	Descriptions
1	Tutor PKB	It is a feature to view and select tutors who will guide in scientific publications and innovative works that have been collaborated through educational units.
2	Jadwal Pelatihan	This is a feature to view the training schedule that has been and will be carried out at the education unit level.
3	Jadwal Bimbingan	It is a feature to view and select schedule scientific writing guidance with tutors

| 4 | Hasil & Publikasi | This is a feature to view the results of scientific writings that are currently being published and will be published. |
| 5 | Community Wall | An open message feature for discussion by all users of the PT PKB Guru application. |

4. Expert Validation

At the expert validation stage, it is divided into 2 parts: 1) content validation, namely validation of whether the activity program contained in PT PKB Guru is following the PKB manual from the Ministry of Education and Culture, 2) application validation, namely validation carried out by technology experts in the feasibility of this application being used. Based on content validation, the application has been declared Valid with a value of 3.5 in the very high category. Meanwhile, the application validation is declared valid with a value of 3.3 in the very high category.

5. Product Revision

This stage makes product revisions based on suggestions from both content validators and application validators.

6. Early Test

The PT PKB application was tested by 3 teachers in carrying out CPD activities and this application was tested for 1 week to determine whether there were any problems in using this application.

7. Product Revision

At this stage, improvements were made based on the results of trials by 3 teachers for 1 week.

8. Field Test

At this stage a trial for all teachers to download and use this application.

9. Final Product Revision

At this stage, a final revision is made of all suggestions given by the teacher so that the PT PKB Guru application is much better and easier to use.

10. Desemination

This stage is the stage of monitoring the results of using the PT PKB Guru application.

In the development of this application, several obstacles were in determining the application that wanted to use in the development of the PT PKB Guru Application layout. Application development takes a long time with some feature enhancements that must be provided to be more able to provide motivational encouragement and make it easier for teachers to carry out teacher CPD activities. Furthermore, building stakeholder collaboration as a speaker and as a supervisor for CPD activities must adjust the appropriate stakeholder schedule.

The results obtained in the development of this application are obtained through the results of teacher interviews who have attended training and workshops through the PT PKB Guru Application features:

[…] With the PT PKB Guru application provided by the school, we can arrange the right time with a detailed and scheduled schedule so that we can make preparations in advance […] (T3)

With this application using the Training Schedule feature, it makes it easier for teachers to see future training schedules that have been prepared by the school so that teachers can provide time in advance to attend the training provided.

[…] The PT PKB Guru application developed by our principal makes it easier for us to monitor the progress of our PKB activities as teachers. With this facility, we continue to learn and get new ideas in improving the quality of our learning […] (T5)

The PT PKB Guru application can be accessed through on hand of an Android-based teacher's cell phone. This application will provide training information and online tutorials to increase teacher creativity and innovation in teaching.

> […]Academic writing ability in writing CAR has now been facilitated. So far it is difficult for us to write because actually we are confused to judge it. Through applications that are free and easily accessible and costs are jointly facilitated by the school, it makes us much more productive to write and publish the results of our research in class […] (T7)

From the statement above, teachers were motivated in writing classroom action research by the school program in PT PKB Guru. Teachers' performance should be considered as the main intention of the school headmaster. Schools had to build innovation in solving teachers' low performances with many solutions. Some findings stated that the enhancement of the quality of the teacher can be solved by three solutions. First, to improve teachers' understanding of their duties and vocations In the world of education, schools must constantly remind call concept in professional activities (Professional Development), make school as a community build, and implement a mentoring system teacher at school (Utami, 2019). Community build as innovation is certainly very necessary to continue in encouraging motivation and convenience for teachers. Therefore, teachers can continue to learn to improve the quality of education. Sri haryati (2021), Lyesmaya et al., (2017), and Susanto (2016) suggested that teacher CPD activities should be guided and supervised by the principal so that it will provide a bridge in the limitations of teacher CPD activities. CPD activities that are carried out properly will certainly encourage the quality of education in schools and teachers have a better opportunity to improve their careers as educators from the number of credits obtained (Rohmah, 2016).

Agusta & Kristiawan (2021) explained that so far the biggest problems for teachers in carrying out CPD activities are costs and writing skills. The weak quality of teachers must continue to be the responsibility of the Principal in providing teaching supervision. By providing easy access and integrated programs in educational units or schools, CPD activities for teachers will be easier to coordinate properly. Siregar (2018) stated that teachers have a very large task load to prepare learning administration, teaching, PKB activities, and taking care of the family will be difficult if they have to be carried out without much better time management than their CPD activities as teachers.

CONCLUSION

This study aims to describe the process of developing the PT PKB Guru application and the results of the implementation of the PT PKB Guru Application development. So the conclusions in this study are:
1. The PT PKB Guru Android-based application is a valid application for use in the content aspect that is in accordance with the PKB teacher guidebook by the Ministry of Education and Culture and is valid for use in the Android application aspect that can be used properly and is easily accessible.
2. The results of the implementation of PT PKB Guru's Android-based application make it easier for teachers to schedule training, improve writing skills and make it easier to do scientific publications.

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