

Clinical Assistance Model: Providing an Ongoing Professional Teacher Program

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This study aims to firstly determine the design of effective mentoring programs in the self-development of teachers at the primary and secondary education levels; secondly, to determine the design of effective training programs to improve the writing competence and scientific publications for teachers at the primary and secondary education levels; thirdly, to determine the design of effective training programs for teachers, so they can develop innovative work; and fourthly, to determine the effectiveness of the Sustainable Professional Program, the results of the development are shown through the active role of the teacher in the strategic activities supporting teacher professionalism. The research was conducted to support the development of teacher competencies in improving professionalism. This study is a development study using the design development model R2D2 from Willis. This model consists of three components: determination, design and development, and dissemination. The subjects of this study were elementary school teachers, junior high school teachers, and teachers who participated in PPG. The data was obtained through the implementation of an online application with an Android platform and documentation of the products produced by the respondents. The data was analysed using a descriptive-qualitative method. The findings showed that: firstly, the offline and online mentoring system, in the form of the Klipengproberu application, has helped the self-development of the elementary and junior high school teachers; secondly, the writing assistance program, which is utilised by developing reports on the results of the implementation of the class action research (CAR) into scientific articles, is effective to train the writing skills of the teachers; thirdly, making innovative work to improve the quality of learning in CAR settings is effectively used as a means of training the development of learning innovation for teachers; and fourthly, the mentoring program has helped teachers to create innovative work to achieve the standard criteria of a teacher. The applications and models that have been developed can be applied in the MGMP, and KKG forums.

Keywords: *Clinic, Mentoring, Ongoing professionalism, Teacher.*



Introduction

The pattern of the education system and goals improvement in each country, as a whole, boils down to the problem of the level of the quality and professionalism of teachers (Groothuijsen, et al., 2018; Rhodes & Beneicke., 2006) The improvement in the professional and pedagogic quality of teachers is influenced by many factors, especially the factors related to policy patterns developed by the Government during the era of on-going government leadership. The legal basis, the main objectives of the program, the determination of the parties involved as a strategic target audience, and the determination of the budget amount are some of the components that often determine the direction of policy and the pattern of improving the quality of teacher professionalism in every country, including in Indonesia.

Geographically, as an archipelago, Indonesia has a problem related to determining the distribution pattern of teacher availability at all levels of education. This problem is followed by several accompanying problems, namely the teacher recruitment model (opportunity to serve the local youth), learning model in the frontier, outer and disadvantaged areas (3T), the fulfilment of learning support facilities, the standard of graduation criteria, and the quality of learning and coaching patterns for teachers. All these problems are not only problems for the Government, especially the Directorate of Education and Education (P2TK) but become the problems of all the supporting components of the implementation of education, including the Institute of Teacher Education (LPTK).

The Government has been working on a series of strategic programs to improve the quality of education at all levels of education, including improving the quality of teacher professionalism. The program of teacher certification is a form of standardisation of the eligibility criteria of a teacher to have teaching authority in accordance with the competencies that are owned according to the authority and rights attached to the educator's certificate. Nevertheless, the teacher certification program introduced in 2007 has not reached all teachers. According to the Director-General of primary education, currently, there are only about 3.1 million teachers in Indonesia who have an educator certification, while about 570,000 teachers have not been certified (www.merdeka.com). The Government is working to reduce the problem of teacher equality in 3T areas with the Bachelor of Education program in the 3T (SM3T) district, followed by the teacher professional education program (PPG SM3T). Teachers in special areas are also facilitated through the SPECIAL Regional Teacher PPG program (PPG Gurdasus) which was previously preceded by a pre-PPG Gurdasus provision called 'Special Regional Teacher Training' (PGDK).

This PGDK program is followed by the Substitute Teacher program (Jarti), as a solution to meet the needs of teachers, as long as the teacher is authorised to participate in PPG Gurdasus. The teachers who are active in the office are facilitated through PPG in positions and online programs. The Government has also opened a subsidised PPG program to accommodate potential professional teachers who have not been netted among the several PPG programs that



have been conducted. Nevertheless, these programs have not effectively improved the professional competence of teachers. One of these was shown by the participation of teachers in the learning innovation development program (Inobel) in 2018, which was still very low in terms of the number of registrants. Inobel is a prestigious national event for teachers to show each other their learning innovations through competition, and interaction with other teachers, as well as education experts.

Academic activities in the form of seminars and conferences at regional, national, and international levels are also limited, therefore teachers use as a means of publication and scientific gathering in the nuances of the academic atmosphere that are conducive to broadening insight and increasing teacher professionalism.

Based on the findings of the above problems, it is necessary to make innovation efforts in the form of the Sustainable Professional Program (PKB), which can have a direct impact on improving teacher professionalism, both in the aspects of pedagogical competency, and professional competency. The PKB is the development of the teacher competencies program, which is carried out in accordance with the needs of a gradual, sustainable way to increase professionalism (Permennegpan and Bureaucratic Reform No. 16 of 2009). The PKB area was developed in Scotland, and internationally (Kennedy, 2005). Eraut (1994) identified three main contexts of acquired professional knowledge, namely: academic context, institutional discussion of policy, and the practice itself.

Literature Review

Education is considered a process of obtaining information or knowledge to change for the better. The educational process includes the transfer of knowledge and skills from one person to another, with or without intermediary media. Recent technological advances have affected almost every area of life. The development of technology determines how communication systems function, how to communicate with others, how to work together, how to use learning and teaching systems, and strategies for managing an unlimited learning space and time.

Learning in the twenty-first century has a different perspective from the previous era. Learning can happen anywhere, any time, and on any topic or theme that is realised or not will affect the formation of learning styles. Great learners are the result of the hard work of great teachers. Student achievement is influenced by many factors. The most important influencers are inspiring teachers who have unlimited access to information. Such conditions are one of the characteristics required of teachers in the twenty-first century.

Teachers in the twenty-first century should be able to consider the types of needs of students and equip and prepare students for future challenges. Some teachers find this task or job very complicated and many claim responsibility. The existence of a high-quality professional teacher development program is one of the means that teachers can use to prepare for the



challenges of the job. Development programs should incorporate the use of technology integration in teaching (Jan, 2017).

The demands of the industrial revolution 4.0 and twenty-first century skills are considered by teachers in determining their strategic patterns, methods, and/or learning models inside and outside the classroom. Students are facilitated to explore their abilities and competencies by accessing as much information as possible. The teacher, as a facilitator, directs students to determine learning styles according to their intrinsic motivation, so that information or knowledge is found by themselves through a series of learning activities that have been designed by the teacher.

The era of the industrial revolution 4.0 allows students to host technologies and produce digital content. Students are more friendly and familiar with the development of new and best technologies, although they rarely use them for communication purposes with friends, family members, and their communities. Each learner has a technological device or gadget that can be used to produce blogs, as a medium of communication with the outside world. Nevertheless, when learning in the classroom does not require the help of gadgets, teachers are required to condition that all students turn off all types of gadgets and focus on critical thinking skills through peer discussion forums. The activity can be continued with the strategy of creating a creative blog that reviews stories and opinions on the topic being discussed, so that it fosters a sense of pride in the learners when they are able to share information with others. These conditions allow professional teachers of the twenty-first century, and the era of the industrial revolution 4.0, to act as agents of change (Badley, 2006).

The Government policy and breakthrough efforts to improve the quality of teacher professionalism are constantly developing every year. The era of governance from one leader to the next underwent various changes, enhancements, and a review of the results of programs that have been implemented in the previous government era. The transitional phase of the leadership period often results (either directly or indirectly) in changes to coaching patterns, the number of budget allocations, and the main targets that become the goal for improving the quality of teacher professionalism at all levels of education.

The enactment of the law on Teacher and Lecturer No. 14 of 2015 is intended to improve the quality of education through a review of the teacher quality criteria. This brings an effect that teaching is a profession, so that only teachers who meet professional qualifications have the right to teach, as evidenced by the possession of government-issued educator certificates (authorised institutions). Teachers who do not meet the qualifications are encouraged to participate in structured training activities or teachers' professional education, the implementation of which is regulated by law.

The paradigm of improving the quality of education began with the introduction and implementation of the 1975 Curriculum in 1976. The initial stage of implementation of this



curriculum involves 90,000 primary school teachers through a three-week training program and the introduction of textbooks in support of curriculum implementation. This training program involves 12,000 expert resource persons, who have competences according to their respective fields. The program is carried out in 120 provinces alternately by using landline transportation facilities. This training program was disseminated through a radio socialisation program that reached 100,000 teachers in Central Java and was continued by nine amateur radio stations off the island with a delay of 20 minutes (Sumintono & Nanang, 2014).

The program to improve the quality of professionalism of secondary school teachers during the implementation of the curriculum 1975 was carried out through the implementation of B-II equivalent courses and the introduction of learning approaches by the Institute of Teacher Development Development Centre or PPPG. In 1979, the institution developed marked by the establishment of a professional language development centre in Jakarta, professional mathematics in Yogyakarta, and science in Bandung. These development centres invited 18,000 teachers and involved 150 resource experts in their field (Thair & Treagust, 2003). In the next development, the Government established a Teacher Education Centre (BPG) in 14 provinces and subsequently followed the establishment of BPG in 13 provinces. The Institute develops a program to strengthen teacher performance (PKG) to improve the professional quality of teachers in each province. The result of the PKG is the selection of teachers who will become training instructors in their respective regions through activities. A special training program for science teachers was held in Penang Malaysia (Thair & Treagust, 2003). In its development, the instructors pioneered the establishment of a Teacher Working Group (KKG) for primary school teachers and a Subject Teacher Conference (MGMP).

The era of increasing teacher professionalism then developed rapidly through the opening of the Diploma Two (D-II) program for elementary school teachers who previously graduated from the Teacher Education School (SPG). The program for secondary school teachers is facilitated by the opening of the Diploma Three (D-III) program or youth scholars (Thair & Treagust, 2003). In the nineteen-nineties, the continuation program was implemented from the diploma to undergraduate program.

The recruitment process for competent teachers is determined by the imposition of teacher recruitment prerequisites, namely scholars who have a teacher diploma (UU IV). These graduates are graduates of institutions that produce professional teacher candidates in the form of Teaching and Education Institutions (IKIP). However, in the current era of progress, deed IV is not the main requirement for teacher recruitment. This program has even been eliminated and replaced with Teacher Professional Education (PPG).

Professional teacher coaching can be organised by adopting several models that are tailored to the characteristics of participants and coaching objectives. The coaching models that can be adopted include the training model, degree coaching model, coaching and/or mentoring, standard-based coaching, class action research (PTK), and practical community-based



coaching (Kennedy, 2005). The training model is one of the most widely adopted models for teacher professionalism coaching. This type of training involves the resource person as an expert determined based on the field of expertise or competency.

This type of teachers' professionalism coaching, with a degree coaching model, involves the role of validation of authorised institutions. This model applies a preliminary criteria determination or knowledge prequalification, so that the type of training needs or material from the title to be selected can be determined. The approval of the guidance program through this model is determined by the standard of the graduation criteria, which considers the aspects of the development program achievement assessment (Kennedy, 2005).

The teacher's professionalism training or coaching program should fully instill in the teacher the idea that coaching is a need and not just an administrative program (Osamwonyi, 2016). Efforts to foster the need of teacher professionalism improvement can be socialised through seminar, conference, and other teachers meetings.

Methodology

This research is classified as development research. In this study, the development design used was the R2D2 model from Willis (1995). This model consists of three components: designation, design and development, and deployment. The entitlement activities are focussed on creating teamwork, progressive problem solutions, and the contextual understanding of problems. The design and development activities are focussed on the learning context, selecting formats and media, determining evaluation strategies, and designing products and their development. The deployment activities are focussed on authentic evaluation, creating a final product according to the context, diffusion, and adoption.

The procedure is carried out through three focusses or steps, namely definition, planning and development, and dissemination. The focus of planning and development includes teacher-planned professional continuation programs, teacher work plans, and learning tools; prototype model development design selection; determination of model evaluation procedures; and product development. Meanwhile, the dissemination focus includes product socialisation, and product model trials.

The subjects of this study were elementary school teachers, junior high school teachers, and teachers who attended the PPG. All research subjects were taken from research target areas, namely all districts in DIY, one district in Makasar, and one in Padang. The product tests were conducted in three groups: elementary school teachers; junior high school teachers; and teachers who participate in PPG programs and policymakers from the district and/or city education office. To determine the effectiveness of the product, the next stage is field testing.

The data analysis techniques used in this study were qualitative analysis and descriptive statistical analysis. Qualitative analysis was used to analyse the qualitative data, namely poll results, observations, and interviews in the expert testing and field-testing processes. Meanwhile, a descriptive statistical analysis was used to analyse the quantitative data, which is a score of professional and pedagogical competency test results.

Results and Discussion

The PKB Clinic is directed to several skills that focus on the ability to prepare scientific work, the implementation of improving the quality of learning through CAR, and the creation of learning innovation work (Inobel). The overall skills are presented per aspect, which becomes the main problem by the PKB clinic users (especially teachers) in developing their competencies in the three aspects offered by the PKB clinics. This model can be procedurally described as follows.



Figure 1. IT-based PKB Clinical Model Design

The basis for implementing the mentoring program used by the development team refers to the applicable guidelines in the current year. Guidelines for CAR implementation, guidelines for the preparation of scientific journals, and guidelines for organising learning innovation work competitions (Inobel) become the target criteria that must be achieved by all users of the PKB clinics. This is done by considering that three guidelines have been used by teachers at every level of education to compile work that was expected to be used as a product of achievement performance, which has been made according to their professional competencies. Furthermore, the guidelines are constantly undergoing improvements every year, so that the PKB Clinical Development Team adjusts the development of the user's needs. Nevertheless, the basis for the consideration of providing mentoring programs is still based on the needs of users who experience problems in developing their professional competence.

The level of need for teachers (PKB clinic users) to obtain the most complete information and services on the three components (scientific work, CAR, and Inobel) is widely diverse. The more information needed shows that clinic users still have inadequate understanding and skills

in developing the three competencies offered by the PKB clinics. However, the level of users' curiosity towards the development of competencies can also be identified based on how much information and the needs of the mentoring program they require.

The PKB's clinical development team considered that the spread of the PKB clinic users was very wide, with different fields and an academic atmosphere. This consideration underlied the selection of the PKB online-based clinical model. The application developed was then named Klipengproberu, which stands for *Klinik Pengembangan Profesi Berkelanjutan bagi Guru* (Sustainable Professional Development Clinic for Teachers). This web-based application can be accessed on Android gadgets or a personal computer (PC).

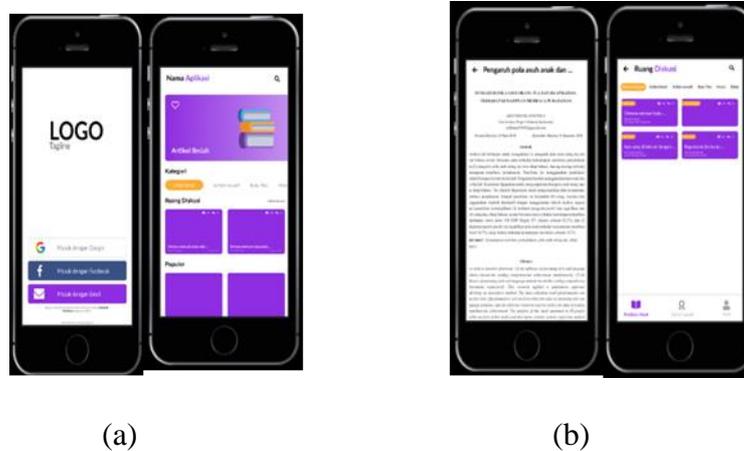


Figure 2. (a) Web and android based PKB clinical model app menu view
(b) Provide product examples of every skill offered by Klipengproberu

The users must register before accessing the PKB clinic by providing an email address or social media username account. This user identification information was required by the team to create a database of the number of users and track the progress reports during the mentoring program. This data is needed to create a map of the requirements necessary, so that the desired target can be achieved.

In general, there are three competency menus offered in the Klipengproberu application: competency in making scientific paper, compiling CAR proposals and reports, and creating learning innovation work (Inobel). Each competency is given a review of the special features of each work and stage to be able to produce the work along with the completeness of the examples of products that have been made by the teachers, who excel in each of these competencies. The availability of media for discussion helps users and the accompanying team from the PKB Clinic to discuss interactively on the topics that become the issues. The topic of discussion adjusts to the specific things that users experience when developing competencies that were trained in this sustainability professional development clinic.

New things that become public issues related to the scientific work, CAR, and Inobel are presented in a special menu.



Figure 3. Visualisation of the discussion room menu on the Klipengproberu application

The discussion room does not only facilitate interactive dialogue between users and the accompanying team of the PKB Clinic, but dialogue between users can also be conducted in the discussion room. It was designed to make it possible for users to exchange experiences on the findings of constraints and how to overcome those constraints in developing each skill being trained.

One of the efforts to determine the effectiveness of the PKB Clinic developed by the team is the assistance service of the CAR proposal making and reporting. However, service trials have not yet reached the stage of reporting the results of the PTK. The form of mentoring services remains limited to the preparation of CAR proposals for elementary school teachers. The trial involved 30 respondents who were elementary school teachers with diverse work experience. The selection of the respondents was based on the considerations to map how much work experience and teacher support contributed in developing their professional competencies.

The proposal drafts, which were made by respondents using the CAR proposals preparation worksheet, were evaluated based on the guidelines for the CAR preparation, as published by the Ministry of Education and Culture. The trial was carried out in the preparation of an introductory section with a research method in the form of a CAR proposal draft (Chapter I, Chapter II, and Chapter III). The participants were expected to be able to present the background of why CAR is conducted in their chosen class, based on logical rational considerations, and supported by accurate data. The data was obtained based on the observations they made during the learning process.



The scientific paper writing services are aimed at teachers' skills in writing research results and/or best practices into scientific articles that meet the publication requirements. Initial information is needed to determine the extent of the ability of clinical service users in compiling scientific papers. The criteria for preparing scientific papers is adjusted to the format desired by several journals, scientific seminars or publications in the proceedings of research results.

The assistance techniques for the scientific articles writing focussed on the substantive and technical aspects. The substantive aspects include the title, author affiliation, abstract, and keywords. These substantive components are focussed on the abstract of scientific articles because, in general, one of the initial selection assessments to pass scientific articles in scientific seminars is abstract selection. The technical aspects emphasised in the writing techniques and drafting of the scientific article body technique are the introduction, method, results and discussion, conclusion, and suggestion sections. The drafting techniques include how to write quotes, the presentation of tables and images, use of language, and writing the reference lists (bibliography). From the results of the trial application of the continuous professional development clinical services in scientific sub-articles, four scientific articles require assistance (three works via the klipengproberu application and one via email). The limited number of clinical users of the scientific article writing guidance services is since most clinic users place more emphasis on the preparation of CAR. The CAR results will be compiled in the form of scientific articles for publication. The following is a description of the findings of the scientific article preparations that have followed the directions of the clinical services for scientific article preparation services:

Substantive Aspects:

- The title of the articles did not pay attention to the suggested number of words and has not yet described the content of the article.
- The author's affiliation and the correspondent's address have not been included.
- The abstracts have not yet described the research methods used along with their data analysis techniques.
- The keywords chosen by the writer were not the main components of the article's subject matter.

Technical Aspects:

- The use of prepositions and conjunctions were not appropriate, both in the way of writing and position in the sentence.
- The introduction section was too long, in that it exceeds 20 per cent of the article's body.
- The quotation techniques (books, journals, and online libraries) were inconsistent.
- The images and tables were not presented according to the rules of image and table presentation in the article. Some articles did not include a title or description of the images.



- The image or table feeds were not mentioned in the discussion.
- The references to images and tables did not use numbering when they were used as data support.
- The discussion feeds only pasted the research reports and had not been adjusted to the scientific article template.

All of the obstacles experienced by the author in compiling scientific articles originating from CAR activities or best practice reports were used as the initial step in article writing assistance. The klipengproberu application has a menu that contains examples of scientific articles that have been published in journals or proceedings of seminars. The sample menu of the article is expected to be used by professional development clinic service users, especially those who are interested in writing scientific articles, so that they do not experience any problems in compiling scientific articles because of CAR or best practice.

The preparation of learning innovation work is the assistance service that has the longest mentoring process. This is because this type of innovation work must be explored based on the mindset of service users in the effort of solving the problems related to the implementation of learning. Teachers still experience difficulty in putting their innovative ideas into implementation. The Learning Innovation Work (Inobel) will be widely discussed by teachers when there is an offer of Inobel competition by the Ministry of Education. This condition triggers the difficulty of instilling innovative ideas related to the implementation of learning in schools when there is no offer of competition from any institution.

Inobel has not been considered a solution to the implementation learning problems, aside from CAR. The findings during the implementation of the learning innovation service trials were:

- Teachers still find it difficult to distinguish between the repetition of ideas that others have made and the modifications of existing works.
- The works developed by the teachers were not rooted in the learning problems that are being faced today (not up to date) and has been found solutions by others.
- The basis of the theory supporting Inobel's work was not clearly outlined.
- The supporting data that strengthens the importance of Inobel's work, which is being developed, is still lacking.
- Sustainable professional development for teachers can work well when there is personal awareness from teachers that teaching, and educating are dynamic activities.

The rapid advancement of technology and the development of strategic policies in the field of education bring new facts, especially those related to the implementation of learning in schools, which triggers several problems that must be resolved immediately. The implementation of CAR, the writing of scientific articles as a mean of publishing the findings of research results,

and the creation of learning innovation works have become part of the teachers' inherent professional activities, due to their activities in the school.

The results of identification in the early stages of the socialisation of sustainable professional development clinics for teachers showed that there were teachers who have not been able to find problems experienced from conducting learning in the classroom, including both elementary and secondary teachers. The teachers only realised that what they had experienced was part of the problem, when the learning process did not run as planned and the purpose of learning was not achieved. The function of teachers as agents of change will appear in such conditions by always improving the quality of learning (Badley, 2006). One of them is to conduct CAR. The mentoring model, in the form of sustainable professional development clinics (offline and online), is one of the alternatives to provide an overview to the teachers that finding the source of problems in the learning process can be achieved in several ways. This effort to practice this identification skill is presented in the Activity Sheet (LK).

The results of the trial for teacher assistance in the preparation of CAR shows that teachers still experience problems in finding the appropriate type of action, as a solution to improve the quality of learning. Creating online applications is not the only way to assist teachers in developing skills of CAR preparation, writing results as scientific articles, and developing innovative ideas as a form of Inobel's work. The digitisation of service forms is intended to make service coverage wider and can reach teachers in various service areas. It is also an effort to combine the use of technology and learning (Jan, 2017). Especially, for teachers who live in an area where the access to electricity and an Internet network is very limited, the service can be reached through Education and Training per sub-aspect as developed in the Clinic of the Sustainable Professional Program. The training program is designed gradually, which includes the stage of preparation of CAR proposals, which includes determining the work of the learning innovation (Inobel), as part of the process of improving the quality of learning, implementing CAR, and turning CAR reports and publications into forms of scientific work. The teachers are guided by using activity sheets that lead to the sub-skills that teachers must possess in implementing CAR. The KKG, and MGMP communities can be involved through the seminar activities of CAR results in the KKG, and MGMP member schools. If such conditions can be implemented regularly per semester, then the professionalism of teachers as educators and teachers can develop continuously, following the needs in the field of learning.

Conclusion

The PKB clinical model is designed as a program that helps teachers, especially at the primary and secondary education levels, to be able to improve their profession in the field of scientific writing, PTK implementation, and learning innovation (Inobel). Based on the results of the trials that have been carried out, it can be concluded that:



- The offline and online mentoring system developed by the team, in the form of the Klipengproberu application, has helped the development of elementary and junior high school teachers.
- The scientific article writing assistance program by developing the CAR implementation report into a scientific article is one of the effective programs to train the writing skills of teachers.
- The creation of innovative work as part of a learning quality improvement device in the CAR setting is effectively used as a means of training for the creation of the Learning Innovation (Inobel) work for teachers.
- The mentoring program has helped teachers to develop innovative work as a requirement of the criteria of being outstanding teachers.

The system developed by the team will be more useful if implemented through the following strategies:

- The socialisation of MGMP, and KKG activities in several regions, ensuring the standardisation and conformity of perceptions about scientific work, CAR, and Inobel.
- The role of policymakers is necessary to maintain the continuity of the mentoring program in the PKB clinics.

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