

Model of Pedagogical Competence Improvement in Lesson Plan

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Abstract—The research aims to develop a model for improving pedagogical competence of teachers in physical education, sport, and health based on teaching materials. This development design generally has four stages namely; define, design, develop, and disseminate. Data source were taken from filling out questionnaire by respondents. Research subjects were teachers and MGMP supervisors of physical education, sport, and health. Data analysis was obtained by alpha test to determine expert validation, and beta test to find out product assessment data from user candidates. Alpha test results show that the average score of material expert judgment is 3.38 and included in decent category, the average score of media expert judgment is 3.78 and categorized in very decent category, while the average score of linguist assessment is 3.83 and included in very decent category. Rating of the beta test shows average score 3.85 and indicates very decent category. This developmental research can be concluded that the model of pedagogical competence improvement of physical education, sport, and health teachers based on teaching materials can be used by physical education, sport, and health teachers in improving their pedagogical competence in terms of preparing lesson plans.

Keywords: *pedagogical competence, physical education, sport, health, lesson plans*

I. INTRODUCTION

Competence that must be possessed by teachers according to those listed in Government Regulation No.19 of 2005 concerning National Education Standards are; pedagogical competence, personal competence, professional competence, and social competence. Several studies have been done related to the relevance of competence and performance. As stated by Wasilezuk (2002) that entrepreneurial competence can affect business growth. Likewise, it is found by Welsa (2006) stating that business capability has significant impact on business performance. Other studies have found that personal competence of teachers is very influential on his/her performance (Angmalisang, 2011), as well as pedagogical competence affect teacher performance, but does not affect teacher professional competence (Hamidi and Indrastuti, 2012).

Pedagogic competence is the ability possessed by a teacher in managing teaching and learning process from the planning process to the process of evaluating learning outcomes consisting of the teacher's understanding of: 1) educational foundation, 2) learner characteristics, 3) curriculum development, 4) lesson plan, 5) implementation of educational learning, 6) use of information technology, 7) evaluation of learning outcomes, 9) evaluation of the potential of students (Mulyasa, 2007: 75), and 10) increasing reflective actions (Minister of National Education Regulation No. 16 of 2007). Meanwhile Voss, *et al* (2011) and Konig, *et al* (2011) state that the main components of pedagogical competence consist of classroom management knowledge, knowledge of teaching methods, knowledge of assessment, learning objectives structure and learning process, planning and evaluation of learning, and adapting ability to heterogeneous groups in class.

Pedagogical competence owned by teachers tends to be used in classroom lesson plans, because learning plans are used as a basis for implementing the learning process as well as assessment and evaluation. After the lesson plan has been implemented, then the teacher reflects on it to improve the quality of student learning processes (Kumalasari *et al*, 2017).

Preparing lesson plan implementation is one of the most challenging problems faced by teachers and prospective teachers at higher education when they are asked to write lesson plans (Bullock, 2011: 2., Bin-Hady, 2018). Therefore, a teacher must be able to make a good and mature lesson plan developed from the existing curriculum, and integrated with learning material in order to produce interesting learning and can solve problems in learning for a number of students who take part in learning with different characteristics (Darling Hammond, 2006).

Dickson *et al* (2014) found that problems faced by teachers were not only problems in classroom management, but also in implications of lesson plans. The same thing was reinforced by Hastuti *et al* (2015: 732) claiming that the ability of Physical Education, Sport and Health (PJKR)

students in compiling lesson plan (RPP) was less satisfying, where only 58.4% of students could make lesson plans. This indicated that not all PJKR graduates can prepare lesson plans well.

Some of Physical Education, Sport, and Health teachers who are graduates from non- sport education study program has an impact on teacher professionalism and pedagogical competence. Many evidences show that the quality of teacher education has an impact on the knowledge and skills of a teacher, the quality of teacher competence (Blomeke et al, 2012; Boyd et al, 2009; Tatto et al, 2012), as well as student achievement (Hanushek and Rivkin , 2010). Teachers from graduates other than educational study programs do not get “learning” courses while pursuing education, that means they rely on training or workshops held as a medium to improve pedagogical competence, especially in preparing lesson plans. This has a significant impact on the quality of teaching and student achievement (Baumert et al, 2010; Kersting et al, 2012).

Regarding the reality above, researchers need to conduct research and development of systematic model of preparing lesson plans to improve the pedagogical competence of Physical Education, Sport, and Health (PJOK) Teachers based on textbook. With this systematic model for preparing lesson plans, the researchers hope that teachers will be able to understand how to develop a lesson plan (RPP) in accordance with curriculum 2013 so that the teacher can implement the learning process according to the curriculum 2013.

A. Methods

This research was conducted using research and development (R&D) research method. Research and development aims to develop a product, in which in this research the product developed is a model to improve pedagogical competence of PJOK teachers based on textbook. Development research design used by researchers adopts the development design steps of Thiagarajan et al (1974: 5). This development design generally has four stages namely; define, design, develop, and disseminate. At the define stage, researchers make definition and analyze the needs required in conducting research development. In the design phase, researchers have made a prototype (initial product) or product design. This stage is done to make the conceptual framework of the module or teacher's textbook for the preparation of lesson plan (RPP) in accordance with the framework of the contents of the curriculum analysis, analysis of the development of the lesson plan, and systematic analysis of the preparation of the lesson plan. The next stage is develop, which at this stage is divided into two activities, namely expert appraisal and developmental testing.

Expert appraisal is a technique to validate or assess the feasibility of product design. Whereas developmental testing is an initial product design trial that has been validated by experts to the actual target subject. The final step is to disseminate which is done by the packaging method by printing textbooks for preparing lesson plans.

Data sources were from respondents consisting of material experts, linguists, media experts, PJOK teachers and MGMP supervisors. Data analysis was performed with the Alpha test and Beta test. Alpha test was done to see the results of the assessment of experts (material experts, linguists, and media experts) of the product being developed. While the beta test was done to determine the product evaluation of potential users.

II. RESULTS AND DISCUSSION

A. Define

The define process aims to determine the scope of the pedagogical competence improvement model of physical education, sport, and health teachers. The scope is determined based on the juridical basis and the scope of the guide to be developed. This lesson plan development model is developed based on the juridical foundation (legal basis) below:

- Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System.
- Law of the Republic of Indonesia Number 14 of 2005 concerning Teachers and Lecturers.
- Law of the Republic of Indonesia Number 17 of 2007 concerning the National Development Plan 2005-2025.
- Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 61 of 2014 concerning Education Unit Level Curriculum in Basic Education and Secondary Education.
- Government Regulation of the Republic of Indonesia Number 13 Year 2015 concerning Second Amendment to Government Regulation Number 19 Year 2005 concerning National Education Standards.
- Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 103 of 2014 concerning Learning in Primary and Secondary Education.
- Minister of Education and Culture Regulation Number 20 Year 2016 concerning Competency Standards for Primary and Secondary Education Graduates.
- Minister of Education and Culture Regulation No. 21 of 2016 concerning Basic and Secondary Education Content Standards.

- Regulation of the Minister of Education and Culture No. 22 of 2016 concerning the Standard and Secondary Education Process Standards.
- Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 23 Year 2016 concerning Education Assessment Standards.
- Government Regulation of the Republic of Indonesia Number 19 of 2017 concerning Amendment to Government Regulation Number 74 of 2008 concerning Teachers.
- Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 37 of 2018 concerning amendments to the Regulation of the Minister of Education and Culture Number 24 of 2016 concerning Core Competencies and Basic Learning Competencies in the 2013 Curriculum on Basic Education and Secondary Education.

While the scope of model of preparing lesson plan implementation covers the following substances:

- Nature of learning lesson plan.
- Principles for preparing lesson plans.
- Components and systematic implementation of lesson plan.
- Process of preparing learning implementation plan.
- Parties involved in developing the learning implementation plan.

B. Design

Design or plan is done by developing the initial content idea of a model for improving the pedagogical competence of textbooks, physical education and sport teachers.

CHAPTER I. Introduction

- Background
- Juridical Basis
- Objective and Area of Guide

CHAPTER II. Learning Implementation Plan

- Definition of Lesson Plan (RPP)
- Principles of Making Lesson Plan (RPP)
- Component and Systematic of Lesson Plan (RPP)

CHAPTER III. Closing

Develop

A. Expert Appraisal

Table 1. Alpha Test Result (Material Expert)

Indicator	Score	Category
Appropriateness of Material	3.50	Decent
Accuracy of Material	3.50	Decent
Support of Material	3.50	Decent
Up to Date Material	3.00	Decent
Average Score	3.38	Decent

Overall, assessment of material experts in table 1 produces an assessment score 3.38. After obtaining the next assessment score, the score is converted to the alpha test grading rubric and get decent category.

Table 2. Alpha Test Result (Media Expert)

Indicator	Score	Category
Format	3.85	Very Decent
Attractiveness	3.70	Very Decent
Average Score	3.78	Very Decent

Average score obtained in alpha test process for media experts as described in table 2 is 3.78. Furthermore, the scores obtained are converted to the alpha test grading rubric and get very decent category.

Table 3. Alpha Test Result (Linguist)

Indicator	Score	Category
Straightforward	4.00	Very Decent
Communicative	3.75	Very Decent
Dialogic dan interactive	3.85	Very Decent
Mindset Integrity	3.50	Very Decent
Use of Term	4.00	Very Decent
Average Score	3.82	Very Decent

Table 3 shows that the scoring level of linguists is 3.82. Further, the score is converted to the alpha test grading rubric and get very decent category.

The overall results of the alpha test can be used as a reference so that the model for improving the pedagogical competence of physical education, sports, and health teachers can go further to beta test stage.

B. Developmental Testing

Results of beta test assessment obtained from the data sources of MGMP teachers and supervisors in physical education, sports and health in table 4 show that the average rating is 3.85. After the assessment scores converted to the beta test assessment rubric, the product model for improving the pedagogical competence of physical education, sports, and health teachers obtain very decent category.

Disseminate

The results of physical education, sport, and health pedagogical competence improvement model of teachers are applied in the "teacher learner" model. Learner teacher activities are done based on teacher competence maps which can be seen from the results of Teacher Performance Assessment (PKG) and Teacher Competence Test (UKG) and supported by the results of self-evaluation. Teachers whose

competence is still in the Minimum Achievement Criteria (KCM) will follow the improvement in competence of teacher learners that are oriented towards achieving minimum competency standards. However, due to the limitations of researchers, the activities of teacher learning are not oriented into the form of credit figures. Learner teacher activities carried out are only oriented towards efforts to improve teacher competence, especially teacher pedagogical competence in developing lesson plans (RPP).

Table 4. Beta Test Result

Aspect	Indicator	Score	Category
Appearance	Text Clarity	3.60	Very Decent
	Media Clarity	3.70	Very Decent
	Media Suitability	3.90	Very Decent
Material Presentation	Material Presentation	3,73	Very Decent
	Ease of Understanding	4,00	Very Decent
	Material Systematic accuracy of presentation	4,00	Very Decent
	Sentence Clarity	3,85	Very Decent
	Symbol Clarity	3,97	Very Decent
	Term Clarity	3,70	Very Decent
	Suitability of the example with the material	3,83	Very Decent
Benefit	Ease of Studying	3.95	Very Decent
	Interest in Teaching	3.80	Very Decent
	Material Motivation Improvement	3.97	Very Decent
Average Score		3.85	Very Decent

III. CONCLUSION

Development of pedagogical competence model for physical education, sport, and health teachers can be used as a guideline for making and developing lesson plans. The development of this model is adjusted to the juridical basis for the preparation and development of a lesson plan. Implementation of learning based on the learning implementation plan that has been made previously can help teachers in the learning process so that learning can be well organized. If the learning process is good, then learning outcomes sourced from students will also get better.

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