TEACHER ABILITY IN DESIGNING LEARNING DEVICES

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Introduction

"Education is a struggle". This sentence is part of Ki Hadjar Dewantara's statement in his phenomenal work, the first part of education (Dewantara, 1961:165-166). When analyzed in depth, the term "struggle" which is used as the meaning of education departs from the position of the human being himself. Inherently, a human being is said to be a human being if the "facultative dimension" he has, which consists of reason, senses, and feelings is developed (see Ferguson, 1768). Ferguson's thesis gives us an understanding that the only thing that differentiates and elevates human status from other creatures is in the aspect of the development of the optional dimension or can be interpreted as education.

The importance of education in life was also realized by the founding fathers of our nation, so that aspects of education at the national and state level were made one of the main goals to be achieved through independence. Educating the life of the nation as the goal of independence contained in the preamble to the 1945 Constitution of the Republic of Indonesia, which was then set forth in Article 31, became the starting point for this. Based on this understanding of the constitution, the importance of education is even interpreted as a citizen's right and an obligation for the government to strive for it, especially basic education.

Ironically, the world of contemporary basic education, especially in Indonesia, is still decorated with a number of polemics, especially from the aspect of teachers as educators who incidentally are directly involved in providing education. First, the professional education system, especially for teachers as educators, is still in the pioneering stage, even though since the issuance of Law Number 14 of 2005 concerning Teachers and Lecturers, teachers have been recognized as a type of profession. This in turn has implications for the low quality of teachers. Second, the distribution of teachers is not evenly distributed. Even though the national teacher comparison ratio is at a good level, the phenomenon of excess teachers in one place with a shortage of teachers in other places is still a thorny problem. This is basically caused by a number of things, including efforts to equalize the distribution of teachers due to regional autonomy policies that place educational authority in local governments and a teacher recruitment system that has not been based on needs and is still riddled with KKN polemics. The first and second problems above also have implications for the third problem, namely the competence and career development of educators who are still far from what was expected. Competence especially for teaching staff tends to decrease after graduating from educational institutions; The career development of teaching staff often experiences ambiguity as a result of dealing with strong local political infiltration in education, such as the rampant phenomenon of mutation of teaching staff due to incompatibilities with political officials both personally and in terms of policy. The above problems are basically also openly acknowledged by the Chairperson of PGRI (in kompas.com, 26 November 2012) and the Minister of Education and Culture (in okezone.com, 22 November 2013).

The problem of low quality or competence/ability of teachers at the basic education level (especially elementary school) as stated above, unfortunately also occurs in Bumi

Serambi Madinah, Gorontalo. Researchers and other education experts in Gorontalo Province have conducted a series of observations and studies related to the competency/ability of elementary school teachers, which revealed the fact that in general the ability of elementary school teachers in Gorontalo Province is still low/lack in designing learning tools. This is significant considering that matters related to the teaching and learning process, especially in elementary school, are very much determined by the learning tools that have been designed by the teacher. If in a cruise the captain acts as a determinant of the direction of the rudder, then in education the teacher acts as a director of the teaching and learning process. Observing this fact, the researcher concluded that there is a need for concrete action to be taken to improve/upgrade *the* teacher's ability to design learning tools. This is in line with the results of research conducted by Mawardi (2019: 80) that the low competence of teachers is caused by the teacher's low understanding of the development of lesson plans components. So to meet the demands of the teaching profession, that it is mandatory for all teachers to have lesson plans as a guide in managing learning, there are teachers who take shortcuts by duplicating them from the internet or buying ready-made lesson plans. In terms of research conducted by Kayamuddin (2018: 270) that through guidance with lesson study can increase teacher competence in preparing learning tools (RPP). This can be reinforced by the results of research from Krina Marlina Sari Hutagaol, Siti Quratul Ain (2021: 42) that the teacher has demonstrated his ability to design a syllabus by following all the stages and components of designing a syllabus. It's just that of the 8 components of designing a syllabus, there are still teachers who miss one or two components. The examples do not include the identity of the subjects and core competencies, but a review of the documentation shows that these results do not affect the quality of the syllabus that has been produced by the teacher or the syllabus that has been designed by the teacher.

Based on the above study, researchers and other education experts in Gorontalo Province agreed to be involved in an activity/workshop aimed at increasing the ability of elementary school teachers in designing learning tools. Elementary school teachers are the focus of this activity because inherently they are the main part of the stakeholders whose role is to determine the direction and quality of our basic education. In another language Kasali (in Husain, et al., 2014), argues that education can produce *good passengers* (good citizens) and *good drivers* (good leaders), but can also give birth to *bad passenggers* and *bad drivers* . Herein lies the significance of the role of educators as actors in organizing education through the design of learning tools that are in accordance with the expected characteristics and needs. In addition, if the learning process is seen as a program, the implementation of the program can only be successful if the program implementers have competence or at least have a good understanding of the tasks required by the program (Korten, 1980; Albrecht and Zemke in JICA, 2008). Based on all of the above, the research aims to improve the ability of elementary school teachers in Gorontalo Province in designing learning tools.

RESEARCH METHODS

Location and Time of Research

This research was conducted at SMP Negeri 2 Telaga, in this case the research was carried out in conjunction with the PPLPG workshop. Basically, the determination of the location of this research is not intended for generalization purposes because it is only one of the venues for holding workshops focused on Gorontalo District.

Research design

This research was conducted using the classroom action method in the form of a cycle, which is one of the research methods familiar to students/prospective teachers in conducting research for final studies. As is generally the case in a class action cycle,

the research/workshop carried out still consists of planning, implementation, monitoring and evaluation, as well as analysis and reflection activities.

Informants/Respondents

Purposively, the informants/respondents in this study were elementary school teachers who were specifically responsible for developing learning tools, as well as acting as participants in PPPLG workshop activities. Specifically, the selection of informants/respondents was carried out randomly , which resulted in 30 teachers as informants/respondents who were placed in one class. Even though the informants/respondents who were used as the basis consisted of only one class with 30 teachers, this was considered to be able to provide the expected information/data because the characteristics of the informants/respondents were teachers from a number of elementary schools spread across Gorontalo Province.

Data collection technique

Data was collected by combining a number of techniques, namely observation, interviews, document review, and tests, in order to obtain objective and accurate data. Specifically for the tests carried out, a format for compiling learning tools has been provided which then the results of the preparation by the participants become material for assessment.

Data analysis technique

The data that has been collected is then analyzed using the development of the Miles and Huberman (1992) analytical model, which consists of *data reduction, data display* , and *conclusion drawing/verification* . In order to make it easier to draw conclusions (*conclusion drawing*), percentage statistics are used for the tests carried out in the form of:

Value = Score obtained / Maximum Score x 100

The criteria/categories for determining grades use benchmarks that are generally used in determining grades in elementary schools, in this case (86 – 100 = Very good; 71 – 85 = Good; 56 – 70 = Fair; 41 – 55 = Poor; 0 – 40 = Very less). Basically, these statistics are applied to assess the process and results of workshops related to the preparation of learning tools.

RESEARCH RESULT

Elementary Teachers' Ability in Designing Learning Devices

In the workshop activities as well as the research conducted, there are two main assessment aspects, namely the workshop process and workshop results, in this case the second is the main focus of this research, namely the preparation of learning tools. However, in order to gain a thorough understanding of the research, it is necessary to present research results related to the workshop process attended by informants/respondents, as follows.

In the process of evaluating the workshop process, there are eight assessment items consisting of responsibility, independence, honesty, discipline, work ethic, innovation and creativity, communication skills, and the ability to work together, all of which also determine/support the ability to design/compile learning tools . In this regard, the results of tracing research data show that the informants/respondents (workshop participants) have shown what is expected during the process/implementation of activities, in this case have shown attitudes/abilities that support the ability to design learning tools, as previously stated. This was obtained from the total average value of the workshop process (8 items) which reached 92.61 which was in the "very good" category.

Furthermore, related to the results of the workshop, namely the ability of elementary school teachers to design learning tools. In this aspect, there are five indicators that

form the basis for assessing the teacher's ability to design learning tools, which consist of preparing lesson plans (RPP), preparing teaching materials, preparing student worksheets (LKPD), making learning media, and preparing assessments of learning outcomes. . In this regard, the results of tracing research data show that in general the informants/respondents (workshop participants) have the expected skills in designing learning tools, which consist of lesson plans, teaching materials, LKPD, instructional media, and assessment of learning outcomes. This was obtained from the total average evaluation of the results of the workshop which was able to reach 89.89 which was in the very good assessment category.

DISCUSSION

This research shows that in general, elementary school teachers who have attended the training/workshop process have the expected skills in designing learning tools, which consist of lesson plans, teaching materials, worksheets, instructional media, and assessment of learning outcomes. This is something that is encouraging, considering the results of observations and preliminary studies which actually show the lack of ability of elementary school teachers in Gorontalo Province in designing learning tools. Of course, matters related to the implementation/process followed during the workshop helped/supported the improvement of the ability to design these learning tools. Related to these results there are a number of things that need to be elaborated further as follows.

The research/workshop activities carried out were able to achieve success in improving the ability of elementary school teachers in Gorontalo Province, especially regarding the design of learning tools, more or less due to a number of factors. One of them is in the research/workshop conducted, researchers along with other education experts combine a number of learning techniques/methods, including *discovery learning methods, learning cycles, and lesson study* .

The first *is discovery learning* . According to Bruner (in Dahalar, 1989), discovery *learning* or what is commonly called discovery learning is learning for the cognitive development of students which focuses more on what students think and what students get to add to the treasury of knowledge. The general concept of the *discovery learning method* is how students find concepts through three steps including identifying problems, solving problems, and concluding. *Discovery learning* learning methods can be realized through an approach that also focuses on student activity. One of them is the process skills approach. The process skills approach contains principles ranging from the simplest activities to more complex activities including activities of observing, classifying, predicting, analyzing variables, and concluding. This activity is very helpful and makes it easier for students to find the desired concept through systematic activities. In other words, the principles of the process skills approach in the form of the above activities are used as tools in action research/workshops based on the *discovery learning method* .

Second, *the learning cycle* . This method was developed in 1967 by Karplus and Thier for *the Science Curriculum Improvement Study (SCIS)* . *The Learning Cycle* (LC) is a series of activity phases that are organized in such a way that students can master the competencies that must be achieved in learning by playing an active role (Lee et al., 2007). The stages of the LC model are finally growing, namely from the three phases originally developed by Robert Karplus into five stages through development and refinement as proposed by Lorsbach, which consist of management, exploration, explanation, elaboration, *and evaluation* (Lorsbach, 2002). In action research/workshop activities, teachers/participants are required and conditioned in such a way as to be actively involved in designing learning tools, so that the knowledge gained is more internalized.

Third, *lesson study* . Historically, *lesson study* is a process used by teachers in Japan to systematically review the effectiveness of their teaching methods to achieve the desired learning objectives (Garfield, 2002). Practically, *lesson study* is understood by educational *scholars* as a continuous professional development practice in which teachers collaborate to plan, observe and revise learning; or in other words, *lesson study* is a practice-oriented activity to improve teaching skills by the teachers themselves (SISTEMS, 2006). In action research/workshops, teachers/participants are required to collaborate in planning *,* observing *,* and improving/revising *learning* tools, so as to create a better understanding of how teachers teach and of course build a pedagogical knowledge, in this case a teacher can gain knowledge from other teachers (Cerbin and Kopp).

Based on the above study, it can be understood that there was an increase in the ability of elementary school teachers in Gorontalo Province in designing learning tools through research/workshop actions, because teachers/participants become subjects who find an understanding of the material provided systematically, with an active role as the main focus of learning activities. supported by collaborative mechanisms among fellow teachers. Thus, the collaboration of learning methods used in action research/workshops plays an effective role in increasing the teacher's ability to design learning tools, as evidenced by the rating score of 89.89 which is in the very good category.

Furthermore. The existence of the ability of elementary school teachers in designing learning tools as indicated by the value of 89.89 with the very good category is certainly a positive thing in the development of basic education, especially in the Province of Gorontalo. Improving/increasing the ability to design learning tools based on characteristics and needs shows that elementary school teachers in Gorontalo Province are able to overcome the challenges of improving the quality of education through efforts to increase the abilities/competence of students, as well as demonstrate the ability to cope with dynamic changes in the educational environment. This is as we all know, that one of the challenges of our national education system is the dynamic (mutual) educational curriculum, which will directly or indirectly impact the teachers themselves, so curriculum changes can be a psychological burden for teachers, and possibly will also be able to frustrate teachers due to these changes. This is greatly felt by teachers who have minimal abilities, and this is not the case for professional/high ability teachers (Fathurrohman and Suryana, 2012:29-30). Therefore, with the good skills of elementary school teachers in Gorontalo Province in designing learning tools that suit their characteristics and needs, the challenges and changes referred to are no longer a matter of concern.

Based on the description above, it is known and understood to what extent the ability of elementary school teachers in Gorontalo Province in designing learning tools, which of course has been successfully improved through systematic research/workshop action efforts that collaborate various learning methods.

In conclusion

From a series of descriptions of the results of the research and discussion above, it can be concluded that in general, elementary school teachers in Gorontalo Province already have the expected skills in designing learning tools. This is shown by the 89.89 score in designing learning tools, which consist of lesson plans, LKPD teaching materials, learning media, and assessment of learning outcomes.

Based on these conclusions, it is suggested that there is a need for similar actions/activities on an ongoing basis, for continuous evaluation and improvement/improvement related to the teacher's ability to design learning devices. In addition, there is a need for collaborative *sharing efforts* for teachers who have

participated in similar activities/have the expected abilities with other teachers in order to improve the quality/quality of basic education.

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