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## Efforts to Improve Teacher Professional Competence in Preparing HOTS Questions Through Workshop Techniques at SDN 22 Mataram

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**Abstract:** The background of this research is the lack of teacher ability in planning, compiling and presenting HOTS (High Order Thinking Skill) questions to students at Mataram 22 Public Elementary School. This certainly has an impact on the low ability of students in analyzing questions with high-level thinking skills or solving HOTS-level questions which results in low scores on student learning outcomes. Efforts to increase the ability to compose HOTS questions are carried out by completing 10 (ten) elements of HOTS item preparation including analyzing Basic Competencies and Indicators, making question level distributions, determining operational verbs, making question grids, creating questions, creating stimuli, determining variations of questions, make distribution of answer keys, make scoring guidelines, make a review of the questions and analyze the validity of the questions. The data collected is data in the form of planning documents for preparing HOTS questions as well as the activities of teachers and students in developing critical thinking skills. Based on the analysis of the data obtained into 77 HOTS questions preparation documents and HOTS-based teaching and learning activities that have been carried out, the result is that there has been an increase in the teacher's HOTS questions preparation ability from pre-cycle activities 63% to 72% in cycle I and increased again to 85 % in cycle II. In addition, the increase in teaching and learning activities according to the level of high-level thinking (HOTS) compiled by the teacher also increased from an average of 71.00 to 77.00 in cycle I and increased to 84.00 in cycle II. Based on the data obtained.

**Keywords:** about HOTS, PTS, Workshop Techniques.

### Introduction

The real conditions that occurred at SDN 22 Mataram for the 2022/2023 academic year, out of 6 (six) class teachers, only 2 (two) class teachers were able to carry out the preparation of HOTS questions. This is due to the teacher's lack of understanding of the preparation of HOTS questions. In addition, there is a lack of training, literacy or reading resources regarding a complete evaluation of learning related to techniques for making grids, distribution. This of course had an impact on the learning outcomes of students who experienced a decrease due to the lack of students' ability to answer HOTS questions during the assessment.

Based on the explanation above, the researcher is interested in conducting research with the title "Efforts to Improve Teacher Professional Competence in Preparing HOTS

Questions through Workshop Techniques at SDN 22 Mataram"

Based on the background of the problem, in general the problem can be formulated "How are Efforts to Improve Teacher Professional Competence in Preparing HOTS Questions Through Workshop Techniques at SDN 22 Mataram?"

Based on the formulation of the problem above, the purpose of this study in general is to describe efforts to improve teacher professional competence in preparing HOTS questions through technical workshops at SDN 22 Mataram. Theoretically, this research can add insight or understanding of teachers to improve professional competence in preparing HOTS questions.

## Literature Review

### Theoretical review

In accordance with Government Regulation No. 19 of 2005 concerning National Education Standards article 28 (3) Professional competence is the ability to master learning material broadly and in depth which allows guiding students to meet competency standards set by national education standards.

According to Saputra (2016: 91) Higher Order Thinking Skills is a thinking process of students at a higher cognitive level developed from various cognitive concepts and methods and learning taxonomies such as problem solving methods, bloom taxonomy, and learning, teaching, and assessment taxonomy. . So HOTS questions are questions that contain a stimulus to improve high-level thinking skills. According to Umar (2009) Workshop is an activity or event where several people who have expertise in a particular field gather to solve certain problems.

In carrying out a workshop, the executor must be guided by the implementation steps, the following are the steps for implementing the workshop according to Hendri Aksara (2012: 34), including:

- 1) Stages of workshop preparation, consisting of: determining the schedule, resource persons, materials and committee.
- 2) Stages of the workshop implementation, consisting of delivering material, making invoices, group discussions.
- 3) Stages of evaluating workshop activities, such as analyzing the success rate of activities
- 4) Stages of taking follow-up workshop activities whether declared successful or not.

### Research Methods

The type of research carried out was school action research (PTS). School action research (PTS) aims to solve real problems experienced by teachers using the 2013 curriculum, namely compiling HOTS questions at school. The

research design used is a spiral model. The design is described in the form of a spiral loop where one round is a cycle/meeting consisting of four stages, namely: planning, action, observation, reflection. This research was conducted at SDN 22 Mataram with the following considerations: The researcher is the principal of the school itself. In addition, SDN 22 Mataram is also a school that implements the 2013 Curriculum. And it was found that,

This school action research was conducted at SDN 22 Mataram. As subjects in this study were 6 (six) class teachers and 2 subject teachers (Teachers of Islamic Religious Education and Physical and Sports Education) SDN 22 Mataram who this year have taught with the 2013 curriculum.

The research data were collected using field notes, observations, interviews and tests. While the quantitative data analysis model is the development of the teacher's ability in preparing HOTS questions using the percentage approach proposed by Dhydiet (2008: 1). The success criterion for each action is 75%. So it is expected that the success achieved is 75%. If it is not successful then the cycle is continued until it is successful at 75%.

## Results and Discussion

Preliminary data on teacher abilities were obtained from the results of preparing HOTS questions which are usually used by teachers as daily assessments which are carried out after carrying out one theme of the 2013 curriculum.

The process of preparing HOTS questions in the pre-cycle was carried out by the teacher personally without any guidance from the researcher. The Question and Question bank documents used for the Daily Assessment are submitted to the school principal or researcher as a form of supervision of the learning administration.

After the researcher carried out observations and recorded lesson plans values through instruments made per component of

lesson plans, there were three components of lesson plans that had not been mastered by the teacher, namely making a level distribution of 20% questions, determining operational verbs 58%, making questions 56% and filling in the study questions with an achievement of 44%. .

In addition, the fact of field observation based on learning carried out based on higher-order thinking skills (HOTS) in the question preparation component and presenting HOTS learning has not been well mastered. The following is the average value of teacher achievement in pre-cycle conditions:

**Table 1. Average Pre-Cycle Teacher Ability Score**

Master's ability	
Compile HOTS Questions	Presenting HOTS-Based learning
63	71

### Cycle I

Cycle I was carried out as a reflection of pre-cycle activities. Each obstacle was in the form of a component that the teacher had not mastered in the form of making level distribution of questions, determining operational verbs, making questions and filling out HOTS questions discussed in the workshop. After that, the teacher was given an assignment to make HOTS questions independently based on the components that had been guided.

After the stages of planning, implementation and observation were carried out, an increase in the average score was obtained from the pre-cycle to cycle I activities. The following is data on teacher capacity building from pre-cycle to cycle I.

**Table 2. Increase in Average Teacher Ability Score from Pre-Cycle to Cycle I**

Compile HOTS Questions			Presenting HOTS Learning		
Pre cycle	Cycle I	Enhancement	Pre Cycle	Cycle I	Enhancement
63%	72%	9%	71	77	6

Based on the table above, it can be concluded that there was an increase in the mean value of the teacher's ability from pre-cycle activities to cycle I activities. The ability to compose HOTS questions has reached a score of 72%, while for the ability to present HOTS learning it has reached 77. Even though there has been an increase, the research continues for cycle II because there are still components of HOTS questions that have not been completely mastered by the teacher.

### Cycle II

Cycle II research was carried out to further strengthen the teacher's ability to understand and apply the components of HOTS questions in learning. The components that have not been mastered by the researcher explain with guidance in the form of workshops, independent assignments and individual guidance for the HOTS assignment questions that have been collected by the teacher.

After carrying out a series of actions, cycle II activities have yielded good results because there has been a significant increase in the ability to compose HOTS questions and present HOTS-based learning by the teacher. The following is data on improving the ability of teachers from cycle I to cycle II.

**Table 3. Increase in average score in the ability to compose HOTS questions for teachers from cycle I to cycle II**

Compile HOTS Questions			Presenting HOTS Learning		
Cycle I	Cycle II	Enhancement	Cycle I	Cycle II	Enhancement
72%	85%	13%	77	84	7

### Improving Teacher Professional Competence in Preparing HOTS Questions through Workshop Techniques at SDN 22 Mataram

Based on the results of observations on the HOTS Question Preparation document and the teaching and learning activities carried out, there was an increase in the teacher's HOTS question preparation ability from 63% to 72% in the first cycle and 85% in the second cycle.

In addition, the increase in teaching and learning activities according to the high level thinking level (HOTS) compiled by the teacher also increased from an average of 71 to 77 in cycle I and increased to 84 in cycle II.

Based on the data obtained, it can be concluded that clinical supervision techniques are appropriate to be applied in elementary schools to improve teachers' abilities in preparing HOTS questions, especially at SDN 22 Mataram.

### Closing

#### Conclusion

Based on the explanation of the results of the school development activities above, conclusions can be drawn, namely: Efforts to increase the ability to compose HOTS questions are carried out by completing the 10 (ten) elements of preparing HOTS questions including analyzing Basic Competencies and Indicators, making level distribution of questions, determining operational verbs, making grid of questions, create questions, create stimuli, determine variations of questions, make distribution of answer keys, make scoring guidelines, make a review of questions and make an analysis of the validity of the questions. increasing the ability to compose teacher HOTS

questions from 63% pre-cycle activities to 72% in cycle I and 85% in cycle II. In addition, the increase in teaching and learning activities according to the high level thinking level (HOTS) compiled by the teacher also increased from an average of 71 to 77 in cycle I and increased to 84 in cycle II. Based on the data obtained, it can be concluded that the workshop technique is appropriate to be applied in elementary schools to improve teachers' abilities in compiling HOTS questions, especially at SDN 22 Mataram.

### Suggestion

Based on the conclusions above, the suggestions that researchers can give are as follows:

- For teachers, in order to be able to design and compile quality HOTS questions in accordance with the demands of Ministerial Regulation No. 02 of 2018 concerning Assessment Standards. and in order to be able to develop question-composing skills and present learning based on high-level thinking levels.
- For school principals, in order to be able to guide teachers in improving their skills in planning learning assessments and skills in presenting HOTS lessons in class so as to improve school quality.

For the education office, it is advisable to provide guidance and training regarding improving teacher teaching skills, especially in the field of assessment so that they are in line with the qualification demands of elementary school teachers.

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