



Higher-Order Thinking-Based Question Preparation Training for Office Administration Teacher's Group at Magetan

Novi Trisnawati¹ Bambang Suratman¹ Meylia Elizabeth Ranu¹ Triesninda Pahlevi¹ Siti Sri Wulandari

¹ State University of Surabaya

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ABSTRACT

Problems related to teachers include (1) Lack of teacher pedagogical skills in learning assessment, (2) Lack of teacher understanding of HOTS (Higher Order Thinking Skills), (3) The ability of teachers to make test questions on Office Administration with HOTS which can develop students' critical thinking. The solutions offered by the Unesa community service team are (1) Providing knowledge to teachers about learning assessment, (2) Providing theoretical knowledge to teachers about HOTS, and (3) Training teachers on arranging HOTS test questions that can develop their power. Student's critical thinking. The purpose of this HOTS question preparation training activity is to improve the teacher's ability to compile HOTS level questions according to the cognitive level that creates, analyzes, and analyzes reports the results of activities, and tracks activities in the implementation of activities. The method uses HOTS question preparation training through lectures, individual work, mentoring, presentations, discussions, and reinforcement. The results of the activity obtained were that most of the participants were able to compile HOTS-based questions on the HOTS question preparation worksheet.

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* Corresponding Author.
novitrisnawati@unesa.ac.id (Novi Trisnawati)

INTRODUCTION

Vocational High School is one level of education based on the field of expertise. One part of the management spectrum in Vocational High Schools is the office administration program. The office administration program or now better known as Office Governance Automation has several competencies, namely archiving documents. These competencies are to support and improve the abilities possessed by each student. The 2013 curriculum assessment in the office administration program is the process of gathering and processing information. In education, assessment means the process of collecting and processing information to determine the achievement of student learning outcomes. The assessment process carried out in schools has been promulgated in the form of Regulation of the Minister of Education and Culture Number 104 of 2014. Questions are needed by teachers in carrying out an assessment, both to test cognitive, affective, and psychomotor aspects. In the cognitive aspect, the assessment of student learning outcomes is used from various books and collected exam questions (Astuti, 2015).

The development of a standard instrument is needed to get a good instrument, as stated by Mardapi (2008: 108), then steps must be followed in instrument development, namely: determining instrument specifications, writing instruments, determining instrument scale, determining the scoring system, examining instruments, conduct trials, analyze instruments, assemble instruments, carry out measurements, interpret measurement results. With the preparation of the education system in the Law, all matters related to education, such as curriculum, learning, and assessment, are arranged in line with the educational functions listed in the Law (Pinilih, 2013). Multiple choice and description questions are choices in making questions and the reality in the field, more questions are still in the form of remembering, not reasoning or analyzing. There have been many books that provide instructions for active learning but what is regretted is that the evaluation questions provided do not train students to think critically. At the Vocational Secondary School level, students must be accustomed to being trained in critical thinking according to their age. The method used is that students are trained to be skilled by the teacher by providing training on questions that invite students to think in the level of analysis, evaluation, and creation.

The dimensions of students' thought processes in Bloom's Taxonomy as refined by Anderson & Krathwohl (2001) consist of the following abilities: knowing-C1, understanding-C2, applying-C3, analyzing-C4, evaluating-C5, and creating-C6. HOTS questions generally measure the ability in the realm of analyzing analyzing-C4, evaluating-C5, and creating-C6. In selecting operational verbs to formulate indicators of HOTS questions, it should not be trapped in grouping operational verbs. For example, the verb 'to determine' in Bloom's Taxonomy is in the C2 and C3 domains. In the context of writing HOTS (Higher Order Thinking Skills) questions, the verb 'to determine' could be in the realm of C5

(evaluating) if decision making was preceded by a thought process analyzing the information presented in the stimulus then students were asked to determine the best decision. . Even the verb 'to determine' can be classified as C6 (creating) if students are required to formulate strategies in solving problems. Thus, the realm of operational verbs will be influenced by the thinking process of students in answering the questions that have been given (Widana, 2017).

Based on interviews and observations conducted with several Magetan 1 Vocational High School teachers, and the head of the teacher's group (MGMP), the Magetan office administration expertise package, the preparation of teacher test questions only took from other sources that were not necessarily following the learning objectives being carried out. This is an important problem because test questions as an evaluation tool cannot measure students' abilities and cannot develop students' critical thinking power. In writing test questions, it is not only about making questions but must pay attention to the rules of writing questions. This must be considered so that the questions are made following the purpose of making them, namely as a tool to evaluate the success of learning and develop students' critical thinking. Besides, the teacher only makes test questions in multiple-choice form because the correction is easy. For the making of HOTS questions, most teachers only understand but have never tried to make HOTS office administration questions. The teacher stated that it took a long time to make HOTS questions. Therefore, in this community service, the team will conduct a HOTS-based question preparation training for Office Administration Vocational High School teachers in Magetan.

LITERATURE REVIEW

The teacher must encourage all students to improve their academics so that students in completing a task given by the teacher involve students to be skilled in critical thinking. A process for thinking at a higher cognitive level has been developed from various cognitive concepts and methods and the taxonomy of learning, teaching, and assessment (Saputra, 2016).

Higher Order Thinking Skills give students the ability to change or create the knowledge they know so that they will generate new ideas. Besides, students can clearly distinguish ideas or ideas, this is indicated by the ability of students to reason on a problem (Dinni, 2018). Besides, according to (Noprinda, 2019), HOTS is a person's high-level thinking ability which includes critical and creative thinking skills.

Alternative forms of questions in compiling HOTS questions are a) multiple choice; b) complex multiple-choice (true/false, or yes / no); c) Short entry or complete; d) short or short answers; e) description (Widana, 2017).

MATERIAL AND METHOD

Based on the problems faced by partners, namely the Subject Teacher Deliberation in the field of office administration expertise in Magetan Regency, the solutions offered can be seen in the table below:

Table 1.
Solutions offered to MGMP Partners In The field of Magetan Regency Office Administration Expertise

No.	Problem	Solution
1	Lack of teacher pedagogical skills regarding the evaluation of learning outcomes.	Providing knowledge to teachers about the evaluation of learning outcomes or assessment.
2	Lack of teacher understanding of Higher Order Thinking Skills	Providing theoretical knowledge to teachers about Higher Order Thinking Skills
3	The ability of teachers who are not yet qualified in making test questions for Vocational High School Office Administration Department is in accordance with Higher Order Thinking Skills questions that can develop students' critical thinking power	Train teachers on making Higher Order Thinking Skills test questions that can develop students' critical thinking power

The method of implementing this activity consists of three main things, namely priority issues (Pink box), work procedures (blue box), and type of output (green box) as shown in the following figure:

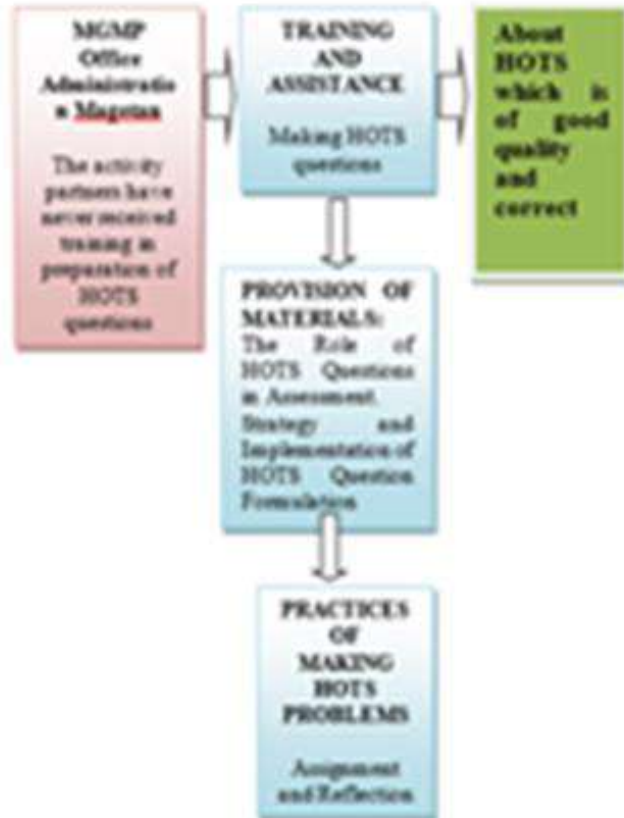


Figure 1.
Training and Assistance Implementation Methods for MGMP In the field of Office Administration Expertise In Magetan Regency

The picture above shows that this activity originated from the teacher's problem in making HOTS-based questions. Office administration teachers need to improve their knowledge and skills in the field of learning assessment by participating in question-making training on main office administration subjects according to the 2013 revised curriculum. Teachers are expected to be able to think at a high level, namely the ability to problem-solving, critical thinking skills, creative thinking, reasoning, and the ability to make decision making decisions. Teachers can compile HOTS questions based on real situations in everyday life, where students are expected to be able to apply learning concepts in class to solve problems. The teacher can make various test kits (HOTS questions) based on cognitive levels C1, C2, and C3. A variety of questions can be made such as multiple-choice, complex multiple-choice (true/false, or yes / no), short or complementary entries, short or short answers, descriptions to provide more detailed and comprehensive information about the test taker's ability for daily, semester assessments, annual and school exams.

The work procedures for this training activity are detailed in several activities as shown in the following table.

Table 2.
Details of Training Materials

No.	Activity Type	Presenter
1.	The Role of HOTS Questions in Assessment.	Prof. Dr. Bambang Suratman
2.	Strategy and Implementation of HOTS Question Formulation	Meylia elizabeth Ranu, S.Pd., M.SM
3.	Assistance in Preparation of HOTS Questions	<u>Team</u>
4.	Reflection on the Results of the Preparation of HOTS Questions	<u>Team</u>

RESULT AND DISCUSSION

Before carrying out the training activities, communication was carried out first with the representatives of the Vocational School Of Vocational School 1 Magetan. This communication was carried out to obtain the types of training materials needed by the teachers there. This communication got the result, namely the training needed by the teacher, including training in preparation of HOTS-based questions.

The community development team then coordinates with other community service teams to compile a plan for implementing community service. This coordination resulted in the distribution of materials to each member of the community service team. In the next step the community service team coordinated with the chairperson of the magenta MGMP to work together in the implementation of community service. Thus the participants were assigned by each school in the office governance automation study program so that the community service team only had to prepare training materials. The material for hots-based question preparation training is obtained from various documents of the presenters through various activities as reviewers of evaluation questions at the vocational school level and training attended by presenters.

The training took place at the meeting room of Senior High School 3 Magetan. Participants who took part in this training were Magetan 1 vocational secondary school, Panca Bhakti Magetan vocational middle school, Magetan 1 vocational middle school, Magetan 2 vocational middle school, Kawedanan vocational middle school 2, Takouderan, vocational high school 1 Huda Magetan brought together in one room.

Community service activities were conveyed to the participants and received a positive response. Furthermore, the activity is coordinated by the implementation team, namely by submitting information on the implementation of hots-based question preparation training. The training was carried out for one day, namely on August 3, 2019, then the next day continued online mentoring and review.

The first material, namely the role of hots questions in the assessment was delivered by prof. dr. Bambang Suratman. the second material was the strategy and implementation of hots question formulation which was delivered by Mrs. Meylia Elizabeth Ranu, S.Pd., M.SDM after understanding the theory, the material was continued with assistance in the preparation of hots questions by Triesninda Pahlevi, S.Pd, M.Pd., Siti Sri Wulandari, S.Pd, M.Pd., and Novi Trisnawati., S.Pd, M.Pd.

The training was closed with a question and answer session and participants were asked to compile hots-based questions from the worksheets that had been given. The community service team assisted online and the participants and the community service team met again to reflect on the results of the preparation of hots questions that had been compiled by the participants.

The implementation of community service that has been carried out can be proven by the following documentation:



Figure 2,
Implementation of Community Service

Based on the results of a review of HOTS questions made by 22 participants out of 30 people present, it can be seen that the HOTS-based questions that were compiled by participants were 92% of the questions using interesting stimuli. Then 90% of the questions made by the participants used contextual stimuli. The analysis results for questions that measure the level of cognitive reasoning by 80% and questions for the implied answers to the stimulus by 88%. When analyzed further, it can be seen that the lowest percentage of the four aspects of the HOTS question review on the question indicator measures the cognitive level of reasoning (analyzing, evaluating, creating) which in its completion is characterized by one or more stages of the following thought process: Transfer of one concept to Other concepts, Processing and applying information, Finding links from a variety of different information, Using information to solve problems, Critically examining ideas and information on questions that have been compiled by participants mostly do not meet the assessment indicators. One reason is that participants are accustomed to being used to compiling daily test questions only at levels C1 and C2 so that the questions they make do not reflect more critical thinking for students. The results of the study of HOTS-based questions compiled by the participants are shown in Figure 3.

Meanwhile, the highest percentage for studying HOTS questions was on the aspects of questions that used interesting stimuli. The questions are made more interesting and encourage students to read more. Then for the question indicators using contextual stimuli, some participants still did not meet the criteria, the obstacles encountered were the participants having difficulty finding images that match the real world so that the images provided were more illustrative. The last indicator, which is the question implied answer to the stimulus is also quite good because most of the participants because the questions tend to be monotonous because they use words that are always repeated so that the answers to the questions are arranged.

The next output is the result of the observation conducted by the community service Team. The results of these observations can be seen in the following Table 3.

All HOTS-based question preparation participants were enthusiastic in listening to the explanations of the material provided by the speakers. Some of the participants attended a series of events that had been arranged by the community service Team. A total of 30 participants took part in the activity starting from the beginning of the opening to the provision of the 2nd material at the end of 3 participants permission to leave the training venue so that the 3 people who had the permission also did not compile HOTS question worksheets but at the time of assistance in compiling HOTS-based questions OFF they made up questions and were consulted with the community service team.

The community service Team conducted interviews with the participants, there was an admission that they wanted to compile HOTS-based questions when applied in school. Some participants still do not fully understand how to properly and correctly arrange HOTS-based questions. In the future, the assis-

tance will be continued until the writing of description questions, considering that the questions are not only in the form of multiple elections.

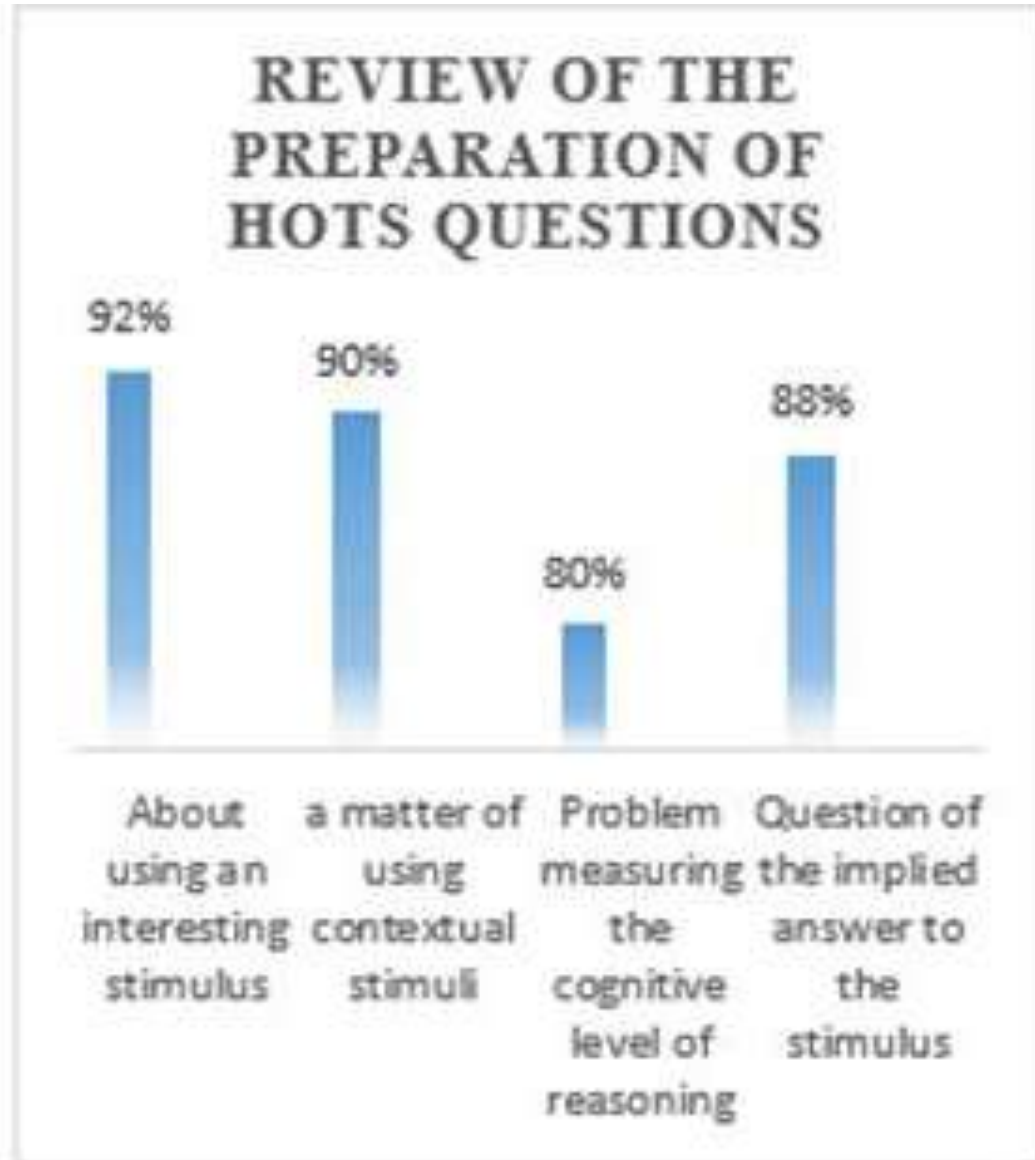


Figure 3.
Review of The Preparation of HOTS Question

Based on the results of communication with the vocational school teacher vocational school of automation of office governance who attended HOTS-based question preparation training, the results of their perception questionnaire about the training were shown in the item analysis as in Figure 4.

Table 3.
Observation Results of Training Implementation

No	Aspect	Number of Participants	Persentase (%)
1	Enthusiastic in listening to material explanations	30	100
2	Participate in HOTS-based question preparation training from the beginning to the end of the training	27	90
3	Able to compile HOTS question worksheets	27	90
4	Interest in implementing HOTS-based question preparation at school	30	100

As many as 50% of participants were very satisfied, 41% of participants were satisfied, and 9% of participants were satisfied with the academic aspects that had been provided by the community service Team. Then no participant was dissatisfied and very dissatisfied. The most significant value is on the indicator of the opportunity to get feedback. Participants felt this opportunity was lacking. This is because too many participants want feedback, so the opportunity to get it is not evenly distributed for each participant.

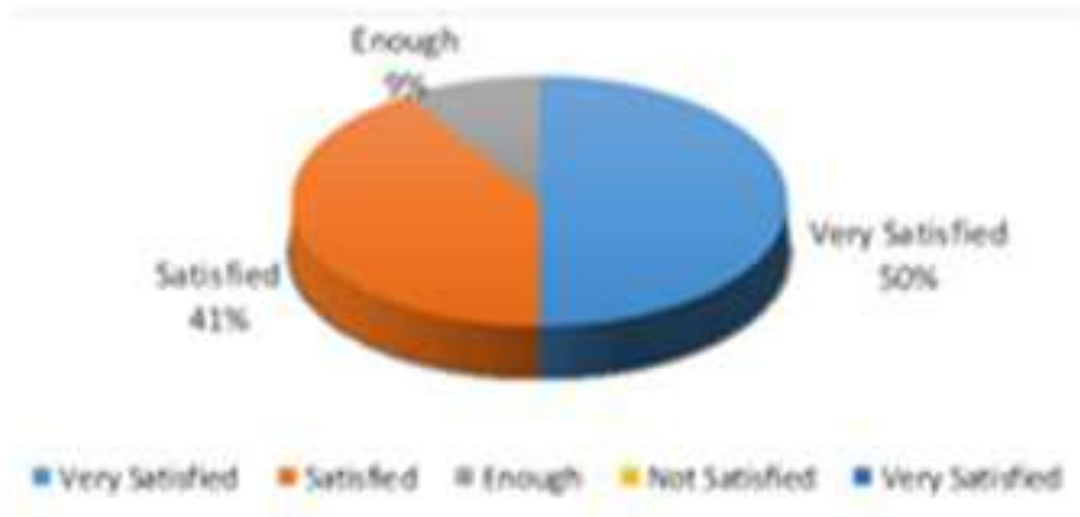


Figure 4.
Academic

The next aspect is from the training resource side which is shown in the following graph:

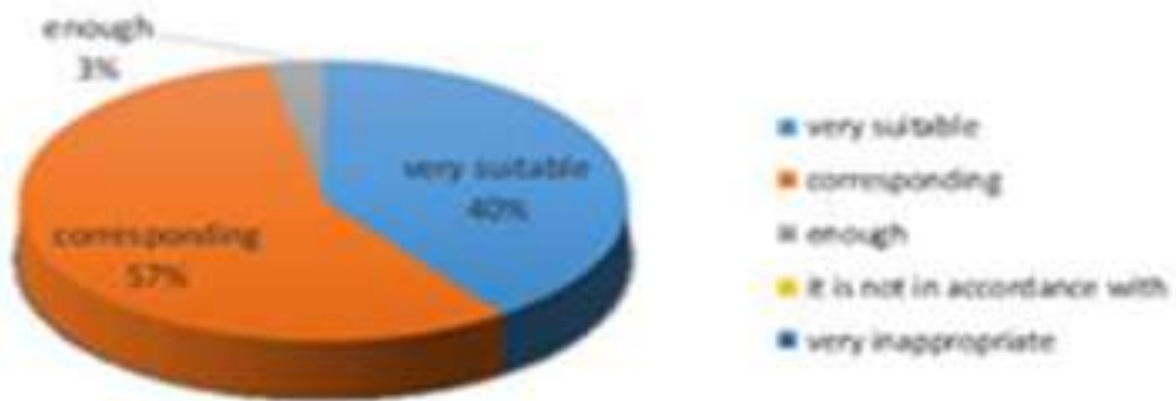


Figure 5.
Interviewees

Most of the participants felt very appropriate and appropriate about the resource persons who delivered the material in this training. However, on the other hand, 3% of participants felt quite appropriate. This sufficiently appropriate value is dominated by efficiency in explaining the concept of the training material given by the speaker. Participants felt this was insufficient because the resource person answered questions from participants about other types of research. This question is related to tricks in preparing HOTS-based questions.

The last aspect is about management/implementation. The responses of the participants are as follows:

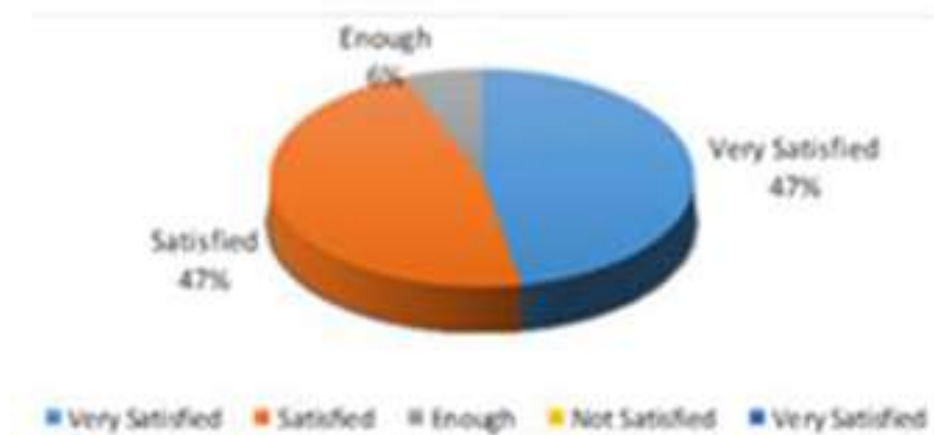


Figure 6.
Management/Implementation

The management/ implementation aspect is closely related to the place and facilities in the implementation of the training. The results of the analysis of the questionnaires that have been distributed showed that some participants were very satisfied and satisfied with the management/implementation of the training. It's just that 6% of the participants were quite satisfied. This is because of the facilities provided such as space and simple consumption. On the other hand, the community service Team prioritized the discipline of training implementation time, so that after the coffee break and *Ishoma* several participants missed out on the material and the community service team could not repeat the material presented because it was guided by the schedule of events and time constraints.

The effectiveness of the training provided by the community service team, then given a pre-test and post-test. The question consists of 10 question items that are given before and after the training is given. The time provided by the community service Team was 10 minutes. In general, the ability of the participants to understand HOTS based questioning was good. It is proven that 43% of participants have pre-test scores above 60. However, because of the participants' understanding of the preparation of good HOTS questions, they hesitate to answer them. After being given training and given a material presentation about the HOTS based question builder, the participants had an increase in scores on the post-test. The increase is quite significant, from 43% to 83%. Thus the training provided by the community service team can be said to be quite effective because it can increase participants' knowledge as evidenced by an increase in test scores by 40%.

Evaluation of the implementation of HOTS-based question preparation training, then the results of the questionnaire analysis regarding the participant responses that have been distributed by the community service team will be followed up. the follow-up was carried out with all the community development teams which were carried out on vocational school teachers, automatization of office governance in Magetan so that in the future they pay more attention to participants who want feedback. Future improvements The community development team adds time and provides equal opportunities for participants who are not yet satisfied in getting feedback from the community service Team. Then the improvement effort that needs to be given by the speaker is to be more efficient in explaining the concept of exercise material. The material presented should be more focused on the exercise of preparing questions and the moderator must provide input to the speakers if there is a discussion outside the training material. Finally, the committee's general service, although it is quite good, still needs to be improved, namely by adding time to a coffee break and *ishoma* activities so that participants do not miss the material when they carry out coffee breaks and rest, pray, and eat.

CONCLUSIONS AND RECOMMENDATIONS

The implementation of community service has been going well, but some participants felt that the explanation of the concept of the material provided by the speaker was inefficient, it was less likely that the feedback provided by the speakers, and the committee's services were generally quite satisfied. The training provided by the Community Service Team was quite efficient because it increased participants' knowledge of HOTS-based question formulation as evidenced by the comparison of the results of the pre-test and post-test scores. Time limitation was the cause that only some participants could complete the HOTS question formulation worksheets, but some participants were able to arrange them according to the criteria desired by the Community Service Team. Finally, some participants were still unable to compile questions that were more creative in thinking for students.

The next implementation of Community Service should be expected that when doing HOTS-based question formulation practice participants should be given the freedom to use writing tools, namely ballpoint pens with worksheets, or instead directly doing them on a laptop. This is done so that participants can easily change the questions that do not match the assessment indicators.

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