

Improving the Professionalism of School Teachers Through The Development of HOTS-Based Learning Models

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Article Info	Abstract
Article history: Received: May 5, 2025 Accepted: August 22, 2025 Published: December 21, 2025 Keywords: HOTS Learning model Professionalism Teacher This article is licensed under a Creative Commons Attribution- ShareAlike 4.0 International License © 2025 Bubungan Tinggi: Jurnal Pengabdian Masyarakat	Community service activities carried out by the community service team for teachers aim to share knowledge and skills about developing a Higher Order Thinking Skill (HOTS)-based learning model. The direct benefit of this community service activity is to increase the knowledge, skills, and experience of school-mobilizing teachers in developing HOTS-based learning models. This community service activity is conducted as training by providing materials and practices for developing HOTS-based learning models. The target audience for this community service activity was 30 teachers in Grobogan Regency. The methods used in this activity were lectures, question-and-answer sessions, discussions, and practice, as well as a Participatory Action Research (PAR) approach that involved teachers in problem identification and training planning, enabling them to actively contribute to their own development and improve the quality of education. The results showed significant improvements, including increased teacher participation in discussion forums, from 40% to 80%, and that 60% of teachers were able to apply new teaching methods after the training. The evaluation included aspects of knowledge, skills, activeness, and attendance, reflecting the positive impact of the training. The impact of this activity includes a significant increase in teachers' knowledge and skills in developing HOTS-based learning models, which, in turn, can support improvements in learning quality in schools and sustainably enhance teacher professionalism.
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INTRODUCTION

The school of movers program implemented in Indonesia aims to improve the quality of education through the equitable distribution of resources and the quality of human resources (Kemendikbud, 2021c). This idea is one of the strategic and innovative steps, but also a big challenge in the world of education. Syafi (2021) explained that the school of movers program is an effort to realize the vision of Indonesian education for an advanced Indonesia that is sovereign, independent, and has a personality, through the creation of Pancasila students. The school of movers program focuses on developing holistic student learning outcomes that include competence and character, starting with excellent human resources (principals and teachers).

The curriculum is dynamic, meaning it is not fixed. It must undergo shifts and changes ([Rahayu et al., 2021](#)). Several factors, both internal and external, certainly cause this. So the curriculum must be flexible and able to adjust to follow the changes and demands of the times from students. The curriculum used in the school of movers is the school operational curriculum (KOS). The philosophical basis of the school of movers is the implementation of education at each level of the education unit based on the characteristics and needs of students. The basic framework of the curriculum defines the competencies students need to master, the character traits they need to develop, and the subject matter they need to learn ([Patilima, 2022](#)). As stated in the Decree of the Minister of Education, Culture, Research, and Technology No. 162 of 2021, the basic framework of the curriculum consists of a. Curriculum structure; b. Learning outcomes; and c. Principles of learning and assessment. Educational programs require systematic planning, in which the curriculum plays a vital role as a guide to educational achievement. One of the main objectives of the curriculum is to help learners prepare for the future by developing skills, reasoning power, and the ability to think critically and creatively, which will be applied in society ([Ritonga et al., 2022](#)).

The learning tools in the school of movers are developed by teachers in the education units ([Kemendikbud, 2021b](#)). Teachers are given the opportunity to develop teaching modules according to the characteristics and needs of students. Teachers are the hope of change to change the mindset and learning strategy, initially teacher-centered, and changing to student-centered. Teachers are required to be more creative and innovative in providing subject matter. Teachers are also obliged to improve educational implementation in schools ([Bagou & Suking, 2020](#)). The realization of productive, creative, and innovative Indonesian people can be achieved through the implementation of learning carried out in various scopes by using critical and creative thinking skills. An example is the implementation of learning with the power of high-order thinking. The curriculum at the school of movers is also expected to strengthen the Pancasila learner profile, which consists of six dimensions ([Kemendikbud, 2021a](#)).

At the school of movers, the learning model is expected to improve students' critical, logical, and creative thinking skills. Higher Order of Thinking Skill (HOTS) is the ability to think critically, logically, reflectively, and metacognitively, and to think creatively, which is a high-level thinking ability. The concept of HOTS comes from Bloom's taxonomy theory ([Bloom et al., 1956](#)) in the cognitive domain, which involves the development of intellectual skills and gradually develops from concrete to abstract ways of thinking ([Rapih & Sutaryadi, 2018](#)). Stein & Lane ([Ayuningtyas, 2013](#)) suggest that higher-order thinking skills are complex, cannot be predicted, and can only be completed using an approach that is different from existing questions or tasks and from the examples that have been given. Higher Order of Thinking Skills (HOTS), or high-level thinking ability, is a thinking ability that requires not only the ability to remember but also other higher abilities, such as creative and critical thinking skills ([Kemendikbud, 2016](#)).

HOTS has even been taught to students since elementary school ([Dinni, 2018](#)). The provision of science materials is adjusted to their nature, namely as products, processes, and scientific attitudes, so that it is hoped that scientific attitudes will also be formed in students ([Kemendikbud, 2010](#)). The implementation of several learning models, such as project-based learning, problem-based learning, and discovery/inquiry learning, is a way for teachers to implement learning activities at the HOTS (Higher Order Thinking Skill) level. In practice, implementing HOTS learning is not an easy thing for teachers to do. In addition to having to master the material and learning strategies, teachers also face

challenges in the environment and in the intake of the students they teach.

The ability of teachers to develop learning models is one form of teacher professional competence. Learning models that are fun and aligned with students' needs and characteristics can be developed if teachers understand how to design HOTS-based learning models for the material to be delivered. However, field conditions indicate that teachers' ability to develop HOTS-based learning models has not been fully realized. The teachers of the school of movers in Grobogan District also experience this. Even though the government has developed HOTS-based learning development guidelines, socialization and training are still ongoing, even though teachers really need this training to be implemented immediately ([Wangid et al., 2020](#)). Thus, HOTS-oriented learning development training needs to be implemented immediately.

Based on the January 22, 2022, observation, teachers are still not optimal at developing HOTS-based learning models. Of the 122 lower- and upper-grade teachers in 62 schools of movers in Grobogan District, only 20 have been able to develop HOTS-based learning models. The limited implementation of HOTS-based learning models results in suboptimal learning quality. The suboptimal quality of learning results in suboptimal learning outcomes for students. Therefore, to overcome these problems, community service activities should be conducted as training to develop HOTS-based learning models.

The main problem is the lack of teachers' knowledge and skills in developing HOTS-based learning models. The lack of knowledge and skills of teachers in Grobogan Regency in developing HOTS-based learning models can be seen from the observation data, which shows that there are only 20 teachers out of 122 teachers of lower and upper grades in Grobogan Regency schools who have implemented HOTS-based learning models.

Therefore, to improve teachers' knowledge and skills in developing HOTS-based learning models in Grobogan Regency, community service activities, such as training, are needed. The transfer of knowledge and innovative technology is one of the strategic plans of the Institute for Research and Community Service (LP2M) at Semarang State University to make a real contribution to society and to support the vision of Semarang State University as a conservation-minded and internationally reputable university.

Community service activities for the school of movers teachers in Grobogan Regency are expected to help address the limited knowledge and skills of these teachers in developing HOTS-based learning models. The solution to this problem is to conduct training to develop HOTS-based learning models. After participating in this activity, teachers' ability to apply HOTS-based learning models will increase, which, in turn, can improve the quality of learning.

Improving teacher professionalism is one form of transformation effort to improve the quality of education through quality equalization and improving the quality of human resources ([Murwatiningsih et al., 2024](#)). Training activities are a form of knowledge and skills transfer regarding the development of HOTS-based learning models. The training activities were divided into two stages. The first stage is the provision of materials on HOTS-based learning models. The second stage is practicing lesson planning with HOTS-based learning models. The target audience of this community service activity is 30 teachers of the School of Movers in Grobogan Regency.

Community service activities carried out in the form of training on developing HOTS-based learning models for school of movers teachers in Grobogan Regency produce program outputs in the form of: (1) The knowledge of schoolteachers in Grobogan Regency in developing HOTS based learning models increases, (2) The skills of the

teachers in Grobogan Regency in developing lesson plans by applying HOTS-based learning models are improved, (3) This community service activity also produces outputs in the form of scientific articles that will be published in national journals, (4) News in local media, and (5) Activity highlight video

METHODS

Participatory Action Research (PAR) was used as a method in this community service activity. One solution to overcome these problems is to conduct community service by providing training in developing HOTS-based learning models. The method of implementing this community service activity is as follows:

1. Problem Identification

In the early stages of community service activities, in-depth discussions were held with teachers in Grobogan District to identify the challenges they face in developing HOTS-based learning models. This process involved data collection through interviews and group discussion forums, which allowed teachers to share their experiences and difficulties openly. In addition, direct classroom observations were also conducted to understand the gap between theory and practice. Once the data is collected, facilitators and teachers jointly analyze and map the problems faced and determine specific training needs. Through this collaborative approach, issues are prioritized so that subsequent training can be more targeted and relevant to teachers' real needs. A follow-up plan was developed based on the discussion results, including the training focus, participant numbers, and facilitator selection, which will form the basis for subsequent activities.

2. Preparation Stage

The preparation stage includes preparing training materials, training venues, and training participants, namely the school of movers teachers in Grobogan Regency. The number of trainees planned is 30 people from 102 upper- and lower-grade teachers who have not been able to develop HOTS-based learning models. This community service activity is planned to be carried out offline. Given that the Grobogan Regency area still limits the number of people in direct meetings, the participants were limited to 30. The 30 people are representatives from elementary schools for each sub-district. After participating in this activity, these 30 people will share the knowledge and skills gained through the community of practice, learning community, and KKG with other teachers who have not yet had the opportunity to participate. In addition, the preparation of facilitators and instructors (two lecturers and two students), the determination of training implementation time, and the preparation of facilities and infrastructure.

3. Implementation Stage

The training on HOTS-based learning model development was conducted in two stages. The first stage was a material briefing on the development of HOTS-based learning models in the first week, held in two (2x) meetings. In this material provision activity, materials related to HOTS-based learning models were given. Furthermore, in the second week, training consisted of practice for two (2x) meetings. In practical activities, participants practiced preparing lesson plans by implementing HOTS-based learning models.

4. Evaluation Stage

The evaluation stage is the last in this community service activity. At this stage, it is

carried out by: (a) Assessing the skills of trainees in preparing lesson plans by applying HOTS-based learning models, (b) Assessing the level of activeness of participants in training activities, and (c) Assessing the level of attendance of participants during community service activities.

5. Follow-up

After the evaluation stage, the training results will be shared with participants for use in their teaching practice. In addition, participants who have attended the training are expected to share the knowledge and skills gained with other teachers who have not had the opportunity to participate in this activity through communities of practice, learning communities, and KKGs. By using the PAR method, this community service activity not only provides teachers with training but also involves them in planning and evaluation, thereby increasing their sense of ownership and commitment to the development of HOTS-based learning models.

RESULTS AND DISCUSSION

Community service activities carried out by the Community Service Team from the Faculty of Economics and Business for teachers at the Elementary Level Movement School in Grobogan Regency in the form of providing material through lectures and practices, attended by 30 teachers. The activity took place in two stages. Community service training activities were conducted offline on June 25, 2022. In stage 1, the form of providing material on the development of HOTS-based learning models. The participants of this activity are teachers in primary schools in Grobogan Regency who have not had the opportunity to receive training in developing learning models. So far, they have not had a deep understanding of the development of HOTS-based learning models. Furthermore, the activities in stage 2 are practices related to developing HOTS-based learning models.

Based on the attendance list, the frequency of training participants during the training is: Community service activities were carried out on June 25, 2022, with 30 participants attending. This number is in accordance with the number invited. This means that the participants' attendance frequency reached 100%. In stage 2 on June 26, 2022, 30 participants attended. This means that the participants' attendance on day 2 reached 100%.

During the training, participants were very responsive and actively participated in the activities. They earnestly and attentively paid attention to the material presented by the presenters. During the practice, the participants' enthusiasm was also relatively high; when they did not understand something, they immediately asked about it. For teachers, training in HOTS-based learning model development is very useful for improving teacher professionalism. Activities during the training are shown in Figure 1.



Figure 1 Activities during the training

Based on the service team's observations, participants in the community service

activities can practice the material quite well. The participants warmly welcomed this training activity and expect it to be followed up with assistance in developing learning models. After the training, the participants admitted that they had increased their knowledge and skills in developing HOTS-based learning models. Group photo and prize giving are shown in Figure 2.



Figure 2 Group photo and gift giving

The description of the implementation of community service activities as presented in Table 1.

Table 1 The description of the implementation of community service act

Activity Objectives	Methods	Participant Response or Participation
Provide participants with an understanding of the development of HOTS-based learning models.	Lecture	1) Participants are actively involved in discussions on the development of HOTS-based learning models. 2) Participants are interested in preparing lesson plans by implementing HOTS-based learning models.
Provide understanding of the steps in preparing lesson plans by implementing HOTS-based learning models.	Lecture	1) Participants were active in the discussion, especially related to the steps of preparing lesson plans by applying HOTS-based learning models. 2) Most participants are interested in starting to prepare lesson plans by applying HOTS-based learning models to improve their skills. 3) Participants are attentive and really pay attention to the material presented by the presenter.
Ensure participants' understanding of the development of HOTS-based learning models to improve teachers' professionalism.	Discussion	1) All participants were actively involved and responsive in the discussion related to their understanding of lesson planning by applying HOTS-based learning models. 2) Some participants conveyed their understanding of problems in lesson planning by applying HOTS-based learning models.
Conduct training on the preparation of lesson plans by applying HOTS-based learning models.	Practice	1) Participants were very responsive and active following the activities during the training. 2) During the practice, participants were very enthusiastic, they immediately asked questions about things they did not understand. 3) Participants were able to practice the material quite well. 4) Participants who participated in this training are very welcoming and hope to implement HOTS-based learning models. After the training, participants acknowledged that their knowledge and skills in developing HOTS-based learning models had improved.

Based on Table 1, in the first stage, which is the presentation of materials on lesson planning using HOTS-based learning models, the lecture and discussion methods carried out show that participants' understanding and interest in developing lesson plans using HOTS-based learning models have begun to form. This aligns with Vygotsky (1980), who emphasizes the importance of social interaction in learning (scaffolding). The lecture-and-discussion method proved effective in building a foundation of understanding, as revealed by Tubagus et al. (2024), who found that combining expository and collaborative methods improved knowledge retention.

In the second stage, the training implementation stage, which involves lesson planning practice using HOTS-based learning models, participants' understanding and ability are further improved through direct practice, in accordance with [Kolb & Kolb \(2003\)](#). This is supported by research by [Girvan et al. \(2016\)](#), which proves that practice-based training improves teachers' pedagogical skills by 25%. At this stage, primary school teachers in the Grobogan district have been equipped with various knowledge related to efforts to improve the quality of their human resources, thereby increasing their professionalism. The use of lecture, discussion, and practice methods allowed most participants to be actively involved in this activity, so these two stages have met the indicators of the activity's success.

The community service activities carried out by the community service team from the Faculty of Economics and Business, UNNES, have succeeded in increasing teachers' knowledge and ability to develop HOTS-based learning models. This can be seen in the participants' 100% attendance during the training and in the training results. The participants' ability to practice the material related to the development of HOTS-based learning models was 87%. This outcome is relevant to [Fery et al. \(2020\)](#), who concluded that practice-based training and continuous evaluation improve teacher competence. The participants can understand the material presented by the presenters and apply it well.

The participants' practice in developing learning models, based on the community service team's evaluation results, is good. The teachers at the elementary school in Grobogan Regency welcomed the activity very well. It is hoped that the ability to develop HOTS-based learning models will improve the quality of learning and ultimately improve school quality. The success of this service activity is supported by the following factors: (1) The support from the Grobogan Regency Education Office, (2) There is support from SDIT Darut Tauhid as the place for the implementation, (3) There is support from the community of elementary school principals in Grobogan Regency, and (4) All participants fully realized the importance and benefits of this training to improve their skills in developing HOTS-based learning models.

CONCLUSION

Based on the objectives of the community service activities, the problem-solving model, through training in the development of Higher Order Thinking Skills (HOTS)-based learning models, proved effective in improving teachers' knowledge and skills. To ensure the sustainability of this improvement, it is recommended to hold regular follow-up training sessions and form a learning community among teachers to share experiences and best practices. In addition, periodic evaluations are needed to measure the impact of the training on classroom learning practices and to develop more comprehensive training modules based on teachers' real needs. To support the application of the acquired skills, direct field mentoring by facilitators is essential, which can be done through visits to

schools to provide guidance and feedback on the implementation of HOTS-based learning models. With these steps, it is expected that the objectives of community service in improving the quality of education can be achieved optimally.

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest.

AUTHOR CONTRIBUTIONS STATEMENT

JK, DFP, and NO designed and prepared grant proposal writing and scientific article writing training for lecturers. JK, DFP, NO, DW, and AF organized the face-to-face training, and SM provided online article writing assistance. NO conducted monitoring and evaluation. SM prepares and publishes the report

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