IJELR: International Journal of Education, Language and Religion
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Vol. 4, No. 1, pp. 37-46
Journal Homepage: http://jurnal.utu.ac.id/IJELR
DOI: 10.35308.v4i1.5457

Research Article

High Order Thinking Skill in Pre-Service Teachers' Lesson Plan

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Submitted: 31/03/2022 **Revised:** 26/04/2022 **Accepted:** 26/05/2022

How to cite this article: Sa'adah, L. & Anjarwati, R.(2022). High order thinking skill in pre-service teachers' lesson plan. *International Journal of Education, Language and Religion, 4*(1), 37-46. doi: 10.35308.v4i1.5457

Abstract
The preparation and implementation of the Lesson Plan reflect the preparation and process of learning activities. The success of preparing and implementing lesson plans will greatly affect student (pre-service teacher) learning outcomes. With the change in the curriculum and its approach that leads to High Order Thinking Skills, the preparation and implementation of lesson plans need to be investigated more deeply so that the quality of lesson plans can meet the expectations of learning objectives in particular and national education goals in general. This study intends to find out more clearly about the quality of the preparation of lesson plans for students who have taken Lesson Plan and Micro Teaching courses. In addition, this study will also analyze the approach used by students in the preparation of their lesson plans. Using qualitative methods, this research is content analysis that used documents as the source of data. The results indicate that some students' Lesson Plan have applied HOTS-based with good quality of completeness aspect.

Keywords
high order thinking skill; lesson plan; pre-service teacher

Introduction
Higher-Order Thinking Skill (HOTS) is a level of higher thinking skill which is one of the important skills in 21st century education. Equipping students with higher thinking skills is the task of educators as stated in the Lesson Plan. Developing a HOTS-based Lesson Plan that is oriented to the development of students' higher thinking skills is a challenge that must be faced by both teachers who have taught and prospective teachers who are taking Educational Courses.

Through the lesson plans, it is possible to know the scenarios of learning activities that will be implemented in the learning process. Trianto (2011) states that the lesson plan is a guide to the steps that will be taken by the teacher in learning activities that are arranged in the activity scenario. The planning needs to be done so that the implementation of learning becomes directed and efficient. The lesson plans must be prepared to coordinate the learning components, namely, basic competencies, learning outcomes indicators, learning objectives, materials, learning activities, and assessments.

Developing a Lesson Plan properly and correctly requires a lot of knowledge and skills, especially if the Lesson Plan is prepared based on HOTS.The teachers are not necessarily able to arrange them if they are not serious. In his research, Pratama & Istiono (2015) stated that the HOTS-based learning planning prepared by the teachers was in the moderately implemented category. Some aspects of HOTS that have not been maximally achieved are the stage of analyzing (medium), problem-solving (low), evaluating and critical thinking (very low). Maximum effort is needed so that teachers have the knowledge and skills to prepare HOTS-based lesson plans.

Making students have HOTS is not an easy job, but it is not impossible to do. HOTS (High Order Thinking Skills) is a way of thinking that no longer only memorizes verbally but also interprets the nature of what is contained, including to be able to interpret meaning, an integralists way of thinking is needed with analysis, synthesis, association and making conclusions towards the creation of ideas. creative and productive ideas (Ernawati, 2017). The application of several learning models can allow teachers to implement learning activities at the HOTS level.

In practice, to apply HOTS to the learning process, the teacher must master the material and learning strategies. According to Ariesta (2018), learning in HOTS includes focusing on questions, analyzing/assessing arguments and data, defining concepts, determining conclusions, using logical analysis, processing and applying information, and using the information to solve problems. The characteristics mentioned above should appear in the prepared lesson plans and their application in classroom learning practices.

Sometimes discrepancies are found between the activities listed in the lesson plans and their implementation in the learning process. One of the activities most teachers do not carry out, as stated in the lesson plans, is observing and asking questions (Bariyah, 2014). If the teacher does not ask questions, it is feared that it will affect the students' ability to ask questions. Teachers as role models should be able to give examples of how to ask questions to stimulate and train students to have higher-order thinking skills. The activity of asking questions in the critical thinking process plays an important role in stimulating the thinking process (Faiz, 2012). The existence of questioning activities can challenge students to think and help clarify concepts and problems related to the lesson.

The curriculum is an important component of an education system. According to RI Law no. 20 of 2003 concerning the National Education System (Muslich, n.d.), the curriculum is a set of plans and arrangements regarding the objectives, content, additional lessons, and methods used as guidelines for the implementation of learning activities to achieve certain educational goals. Based on the above understanding, it can be concluded that the curriculum is the basic framework for developing other components in the education system.

At the beginning of the implementation of the 2013 curriculum, the proposed approach was scientific. Based on an approach, it will influence the results of the preparation of learning activities. The scientific approach that includes 5M (observing, asking, trying, reasoning and communicating) is quite difficult to apply in the preparation of language lesson plans. Over time, there have been many revisions so that the approach used is not only a scientific approach. Other alternatives that can be used, especially in the preparation of language lesson plans, are the genre-based approach (GBA) and Contextual Teaching and Learning (CTL).

Several studies have explored the implementation of certain teaching methods to enhance students' HOTS, especially in Science (Khan & Masood, 2015; Magsino, 2014; Pinho-Lopes & Macedo, 2014; Vijayaratnam, 2012). This condition shows that the trend of providing a learning atmosphere that enables students to develop their HOTS was done a few years ago. In contrast, Ainin conducted a different research context (2018), Walid, et al (2019), and Maryani & Martaningsih (2020). They researched

arranging assessment and material based on HOTS which is expected to facilitate students' High Order Thinking Skill. Recently, Sianturi (2021) explored the difficulty faced by Bahasa Indonesia teachers in applying HOTS in their Lesson Plan and the teaching-learning process. The study revealed that the teachers did not understand how to prepare appropriate Lesson Plan based on HOTS and were not ready to implement it in teaching and learning.

Research that deals with HOTS in Lesson Plan have been carried out by Handayani & Amirullah (2019); they did training to elementary school teachers to arrange HOTS, literacy, and character-based Lesson Plan. Another research was about the analysis of Elementary School Pre-Service Teacher in organising and implementing the teaching and learning process based on HOTS (Kuntarto et al., 2019). The result indicated that the ability to understand HOTS-based teaching and learning as well as the implementation is still low. Another research was done by Suwarma & Apriyani (2022) who explored teachers' skill in developing Lesson Plan and assessments that are oriented to HOTS. Thus, the researchers were interested in investigating the ability of Pre-service Teacher (student) of the English Department in a college to develop their Lesson Plan with HOTS-based since there has not been any study that investigated this topic to English Department student in in Indonesia.

The lesson Plan is structured so that the implementation of learning can run as expected and meet learning objectives. However, the process of preparing the lesson plans, especially those carried out by students, did not run easily. If the HOTS-based Lesson Plan prepared by the teacher still finds weaknesses in its preparation and implementation, then this study intends to find out more clearly about the quality of the preparation and implementation of Lesson Plan for English Department students (Pre-Service Teacher) who have taken Lesson Plan and Micro Teaching courses. In addition, this study will also analyze the approach used by students in the preparation and implementation of their lesson plans.

Method

In this research design, the researcher uses content analysis. According to Ary et al. (2010), content analysis is a type of research that focuses on analyzing and interpreting recorded material to study human behaviour. Furthermore, Ary et al. (2010) also mention that content analysis is a research method applied to written or visual materials to identify the special character of the material being studied. The material can be in public records, textbooks, reports, or other documents. Content analysis is an appropriate research design for this research because this study aims to determine the quality of the preparation and implementation of student lesson plans.

Data in content analysis research can be in the form of written or visual documents. In this study, the data source is the English Department students of the Micro Teaching Program in the academic year 2020-2021. The data is the Lesson Plan document compiled by students participating in micro-teaching with thirty documents. After reducing the data related to the completeness of the document, seven documents of the Lesson Plan were used as the final data in this research. The main research instrument in this study is the human instrument, so the researcher will collect data in student lesson plans, analyze the data, and make conclusions. In addition, secondary instruments in the form of observation sheets, Lesson Plans review sheets, and assessment sheets for preparing lesson plans will be used in this study to support the data analysis process.

Data collection in this study consisted of several stages, namely: (1) Collecting lesson plans prepared by students in accordance with the criteria for preparing lesson plans based on K13; (2) Determining the specifications of the phenomenon be studied in this case, the High Order Thinking Skills in the preparation of the lesson plan and the teaching practice of the lesson plan; and (3) Selecting the media to be analyzed; The lesson plans should reflect the application of HOTS.

The process of analyzing data was adapted from Miles, et al. (2014) involving: (1) Data reduction; at this stage, the researcher selects the lesson plans prepared by students, especially in the learning steps, based on the criteria for thinking levels mentioned by Anderson & Krathwohl. After that, the observation process will also be carried out on the recording of teaching practices based on the lesson plans; (2) Presentation of data; The results of the analysis will be presented in the form of a narrative equipped with a table; (3) Decision making; This process will be carried out after the data analysis process is complete.

Results

Lesson Plan of Respondent 1

The Lesson Plan that the first practical student has prepared is included in the "enough" category based on a general Lesson Plan study. This is due to the existence of several components in the Lesson Plan that are not in accordance with what they should be; for example, respondents do not include the Main Competence (KI) and Basic Competency (KD), which are one of the important components in the preparation of the Lesson Plan. In addition, some indicators of competency achievement still do not use operational verbs that can be observed and measured, for example, the word "understanding".

In compiling Competency Achievement Indicators (IPK) in lesson plans, students still use Operational Verbs at the Low Order Thinking Skills (LOTS) level. There are two indicators designed, where the first indicator is at the cognitive stage C2 (Understanding), and the second indicator reflects the cognitive stage C1 (Knowledge). As a benchmark for achieving KD, Competency Achievement Indicators are also used as a reference for determining learning objectives. Therefore, the formulation of the IPK should be based on the KD load analysis process through the operational verbs on the KD. KD 3.2, which is the estuary of the IPK formulation, uses operational verbs in the form of "applying" part of the C3 thinking stage (application) in the cognitive realm, but the IPK written in the lesson plans is still limited to the C2 stage.

Learning activities are part of the Lesson Plans that is important for developing students' HOTS. In this case, the initial activity described in the Lesson Plan of respondent 1 begins with activities that indicate LOTS. This is evidenced by the use of operational verbs "reading" and "stating" which are some indicators of the cognitive domain at stage C1 (knowledge). In the core activity, the activities carried out by practical students have reflected the higher stages shown by the use of operational verbs at the C3 stage (application), namely conducting conversations. Furthermore, students are directed to activities that lead to the HOTS stage, namely C4 (Analysis) even though the operational verbs used does not directly lead to the analysis stage. Here, respondent 1 uses the words "observe" and "give feedback" which indirectly involves the thinking process at the analysis stage. What was applied by respondent 1 in the initial and core activities of the learning process indicated applying one of the basic principles of learning, namely learning from easy things to more difficult things. Finally, the final learning activity implies low-level thinking skills (LOTS) where the operational verbs used reflect the C1 stage (knowledge), which is marked by the verb "review/repeat."

Lesson Plan of Respondent 2

The results of the study of the Lesson Plan on respondent 2 show that the preparation is included in the very good category. In this lesson plan, the identity of the subjects, Main Competence (KI) and Basic Competency (KD), have been written in full format. The formulation of indicators is also clearly stated and uses operational verbs with the level of LOTS (Low Order Thinking Skills) according to the Basic Competence level of knowledge, namely the C3 stage (implementing), and the HOTS (High Order Thinking Skills) level according to the Basic Competence level of skills, namely the C6 stage (composing), but in the next component there is a discrepancy with what is written on the indicator. The mention of spoken and written texts, which should only be written texts, as in the next component, refers

to written texts, not to spoken texts, because the focus of this lesson plan is writing skills, not speaking skills.

Formulating indicators and learning objectives should be a reference in compiling learning steps. Although the formulation of indicators and learning objectives has been in accordance with the Basic Competence level both knowledge and skills, unfortunately, in the learning steps it has not shown taxonomic alignment from the bottom to the top (from LOTS to HOTS). Beginning with the opening activity, namely "listening" (C1), then continued with the core activity, namely "reading" (C1), followed by "summarizing" (C2), "discussing" (C2), all of which are still included in the lower level stage (LOTS), and continued with the core activities of "composing" (C6) and "identifying" (C2). The closing activity is carried out by "concluding" (C2) the learning material together between the practitioner and the student. From this, there is a discrepancy between the indicators and learning objectives with the learning steps. If the indicators and learning objectives state that the Basic Competence knowledge reaches the C3 stage, then the learning steps that should also reach the C3 stage, stop only at the C2 stage.

In addition, there is a step that is quite far from stage C2 to C6 and vice versa, from C6 back to C2. It is better if the learning activities are arranged by following the stages starting from LOTS to HOTS without any step jumps so that students get a learning experience with an easy arranged flow. This stage jump can actually be shortened if the practitioner does the C3 stage as stated in the indicators and learning objectives. So, even though the learning steps have shown the implementation of HOTS at the C6 (creating) stage, it still has a weakness because it skips 1 stage C3 (application) in LOTS and 2 stages C3 (analysis) and stage C5 (evaluation) in HOTS.

Lesson Plan of Respondent 3

The composition of the Lesson Plan for respondent 3 does not mention indicators of competency achievement and only mentions the Main Competence (KI) and Basic Competency (KD) in the form of numeric codes. Therefore, the learning reference is centered on formulating learning objectives that are written in full. Guidelines for the formulation of learning objectives to be good and correct is to use the ABCD reference (Audience, Behavior, Condition, and Degree). The formulation of the learning objectives of this lesson plan includes all components of the ABCD by mentioning that the audience (students) can achieve Behavior (indicators) through Conditions (learning models/methods) as a brief description of the activities that the teacher will carry out according to the desired degree.

From the formulation of learning objectives, it can be seen that the operational verbs used for the Basic Competence of knowledge are in Low Order Thinking Skills. However, the C2 (identifying) stage still does not meet the C3 (implementation) stage as the Basic Competence should. When viewed from the learning steps, it has indicated the existence of C3 (application) by asking students to "practice". Unfortunately, the operational verb "to practice" is not mentioned in the formulation of the learning objectives. Meanwhile, in the Basic Competence skills, the operational verb "to compose" (C6) is the stage of High Order Thinking Skills.

Based on the formulation of learning objectives, it can be seen that the operational verbs used for the Basic Competence of knowledge are in Low Order Thinking Skills. However, the C2 (identifying) stage still does not meet the C3 (implementation) stage as the Basic Competence should. When viewed from the learning steps, it has indicated the existence of C3 (application) by asking students to "practice". Unfortunately, the operational verb "to practice" is not mentioned in the formulation of the learning objectives. Meanwhile, in Basic Competence of skills, the operational verb "to compose" (C6) is the stage of High Order Thinking Skills.

Lesson Plan of Respondent 4

In the Lesson Plan prepared by respondent 4, the results of the study of the Lesson Plan are generally in the sufficient category. Although some of the component review items in the Lesson Plan were in accordance with what they should be, the respondents did not clearly state the Basic Competence (only write down the learning topics along with the code in the Basic Competence) and Competency Achievement Indicators (IPK) which are the main elements in the Lesson Plan. IPK is an essential element in Lesson Plan which functions as a benchmark for achieving a Basic Competence and provides direction for the implementation of learning.

Since the respondents did not include the formulation of the Competency Achievement Indicators, the analysis of the level of thinking starts from the Learning Objectives. The formulation of Learning Objectives clearly implies that the operational verbs used reflect HOTS, where the operational verbs "composing" which is one of the operational verbs at level C6 (Creating) has been used. This is supported by an illustration of the closing activity plan, which indicates that students must compose sentences about giving suggestions based on the situation on the Suggestion Board.

Learning activities are the next part that is developed by student practitioners based on several principles of learning from easy things to more difficult things, learning through the real to the abstract, and learning by paying attention to the scientific structure. This is reflected in the early learning activities that begin with activities that require students to identify and discuss the suggestion task. Identifying is one of the descriptions of the level of thinking knowledge (C1) while discussing is part of understanding (C2), so that in the initial activity, it is still a LOTS category. Furthermore, the core activity still implies Low Order Thinking Skills where students discuss sub-questions that indicate the C2 level (understanding). The HOTS appears at the end of the learning activity, where students analyze (C4) when given the word/condition to give suggestions and then arrange (C6) when they have to express a few sentences about giving suggestions. The preparation of a coherent learning scenario starting from LOTS and then to HOTS will greatly help students to hone their higher-order thinking skills (HOTS) and is highly recommended; This advantage appears in the learning activities designed and practised by respondent 4.

Lesson Plan of Respondent 5

Respondent 5 is one of the practical students who succeeded in compiling the lesson plans with the overall results of the study being "Very good". Of course, this result cannot be separated from the completeness and quality of the components in the Lesson Plans that are already appropriate. The lesson plans that have been prepared are lesson plans prepared for two meetings. In the Competency Achievement Indicators (IPK), aspects of knowledge and skills have been prepared using the right operational verbs. In the first Competency Achievement Indicator, respondents started by using operational verb at the LOTS level through the verb “discuss” (C2, understanding) which was then continued with operational verb “identify” (C1, knowledge). Even though both IPK are at the LOTS level, it would be better if the IPK array started from the lower level first. The third IPK still uses the operational verb at the LOTS level, namely at the C2 (understanding) level, using the word "exemplify". The new HOTS appeared on the fourth IPK with the operational verb indicator at level C6 (creation/creating) precisely by using the word “make”.

A different flow is applied to the learning activities in the lesson plans for the first meeting; in the initial activity, practical students start with the operational verb "writing" which indicates level C1 (knowledge). After that, the core activity was still focused on the LOTS where students were given the opportunity to compose announcements according to the structure in pairs which were the operational verb at the C3 level (application). In the final activity, HOTS has not been implemented because students and teachers only conclude the material, the operational verb at the C2 (understanding) level. Meanwhile, at the second meeting, the new HOTS indicator appeared in the core activity where students

made an announcement text which was an operational verb at the C6 level (creating). The LOTS indication was still found in the closing activity through the operational verb used, namely "conclusion" (C2).

Lesson Plan of Respondent 6

The weakness of respondent 6 in preparing lesson plans is the mismatch between indicators of competency achievement and learning objectives, so it is not easy to analyze the components as a whole. In the preparation of the Basic Competence indicators for written knowledge, "identify" (C1) and the Basic Competence of skills "interpret" (C2), while in the formulation of learning objectives the Basic Competence knowledge is listed as "analyzing" (C4) and the Basic Competence of skills "understanding" (C2). This is also not in accordance with the operational verbs listed in the Basic Competence, both knowledge should be "interpret" (C2) and "capture meaning" (C4). If the indicators of competency achievement are used as a reference, it can be concluded that the indicators have not met the Basic Competence stages, both knowledge and skills. Likewise, if the learning objectives are used as a reference, then it should be reversed, the Basic Competence of knowledge "understands" (C2) and the Basic Competence skills "analyzes" (C4).

Considering that there is a discrepancy between the formulation of indicators and learning objectives, it is possible to analyze learning activities by referring to one of the indicators and learning objectives. Practical students start learning activities with the LOTS stages, namely "listening" to a song (C1), "reading" vocabulary in a song (C1) and "identifying" song vocabulary (C1). After that, the activity continued with "analyzing" the song's social function and linguistic elements (C4). This activity should not be carried out considering that the Basic Competence of knowledge only reaches the C2 (LOTS) stage. Then, students are asked to “understand” the lyrics of the song (C2). The selection of this activity seems to be reversed, the Basic Competence of skills activity should be directed to the HOTS stage, not LOTS. Practical students continue the activity by asking students to “discuss” (C2) and “present” (C3) the results of their discussion. The core activity ended with giving feedback from the practitioner (C4), “repeating” (C1) and “concluding” (C2) the material. Although learning activities are dominated by the LOTS stage, there is an implied HOTS stage through the provision of feedback from the practitioner at the end of the activity.

Lesson Plan of Respondent 7

The arrangement of the Lesson Plan that has been carried out by respondent 7 is very good in terms of the completeness of the Lesson Plan components and in the thinking stage. With the number of meetings 2 times, this Lesson Plan has the flexibility to accommodate the number of indicators of competency achievement that are well structured according to the LOTS stages leading to HOTS. The indicators are “identify” (C2), “categorize” (C2), “apply” (C3), “analyze” (C4), and “make” (C6).

Learning activities are accompanied by a series of exercise attachments that will make it easier for practitioners to carry out learning activities. The practitioner starts the activity by asking students to “discuss” (C1) a picture. This activity is intended so that students have full readiness when starting lessons. In general, the activities at the first meeting still revolved around the LOTS stage to equip students to the HOTS stage, including "listening" (C1), "discussing" (C2), "practicing" (C3), "applying" (C3) and "concluding". (C2). There has not been any activity that indicates the HOTS stage at the first meeting.

The activities that showed the HOTS stages were clearly seen at the second meeting. The HOTS stages are well structured starting from "practicing" (C3) to remind students' memory of the first meeting material as well as a training ground for the next stage, namely "composing" (C6). After compiling, students were asked to “analyze” (C4) and “give feedback” (C5). The advantage of preparing this lesson

plan is properly using all stages from LOTS stages C1 to C3 to HOTS from C4 to C6 in a series of learning activities.

Discussion

Based on the study results, it can be inferred that all documents (Lesson Plan) applied HOTS-based student lesson plans although four of them compose and implement one HOTS stage, two respondents prepare and implement two and only one respondent prepares and implements all HOTS stages. In compiling the stages of activities towards HOTS, it is better to avoid skipping the stages as done by respondent 5 and especially respondent 2. It is feared that skipping several stages will make students have difficulty reaching the final stage of HOTS, namely creating. It would be better if all stages, both LOTS and HOTS, were structured and implemented as respondent 7 did, although with the consequence that more meetings were needed. This finding is in contrast with the study conducted by Kuntarto, et al. (2019) who found that the Pre-Service teacher's ability to develop Lesson Plan based on HOTS is still low.

From the results of the data analysis of seven respondents, a general description of the assessment of the preparation and implementation of the student lesson plans was also obtained. It is in line with Walid's, et al. (2019) in which the students on their study gained average score in constructing assessment covered HOTS. The assessment of the preparation and implementation of the HOTS-based student Lesson Plan begins with a study of the Lesson Plan which includes an analysis of aspects of the preparation of the Lesson Plan. These aspects are subject identity, core competencies and basic competencies, formulation of indicators, formulation of learning objectives, selection of teaching materials, selection of learning resources, selection of learning media, learning models, learning methods, learning scenarios, and learning assessment designs.

While the weakness of preparing student Lesson Plans lies in the formulation of indicators and learning objectives. It supports the results in Sianturi's study (2021) which found that the teachers still have difficulty in applying HOTS in their Lesson Plan. Indicators and learning objectives are a reference in compiling learning activities. The main difficulty in formulating indicators is determining operational verbs. Before formulating rational verbs, the practitioner should have understood the limits of the thinking stages listed in the Basic Competence. Indicators are arranged based on operational verbs in the Basic Competence of knowledge and the Basic Competence of skills. Practitioners often do not heed the verbs listed on the Basic Competence so that the operational verbs used in formulating indicators have not reached the expected stages according to the Basic Competence, for example some Basic Competence mention "apply" which means the indicator must at least reach the C3 stage.

The second weakness is the mention of learning models. Most of the mistakes in preparing student lesson plans are not clearly mentioning the learning model that will be used in learning activities. It also happened in Handayani & Amrullah's (2019) and Sianturi's (2021) study. This is a special note because in the implementation of learning, some practitioners follow a certain learning model without mentioning the learning model in the lesson plan. On the other hand, some mention the learning model that will be used, but have not implemented it properly and correctly. Others call the learning model a learning method. Based on this, it is possible that basically they do not understand well the differences in approaches, methods and learning models so that there is confusion in mentioning them.

The best achievement is in the learning media. All respondents clearly stated the media used in teaching. Most are followed by attachments used for media (e.g. images or cards) as well as audio/video links that can be accessed via the internet. It can be concluded that the media is the most complete component written by the practitioner in preparing the lesson plans.

Conclusion

The arrangement of the Lesson Plan for practical students has reached the stage of High Order Thinking Skills. The stages that are arranged and carried out vary from the most, namely the analysis stage (C4) to the creation stage (C6) to the stage that is only done once by the respondent, namely the evaluation stage (C5). The results of the assessment of the preparation and implementation of the lesson plan show that the component of the assessment of the preparation of the lesson plan that students pay the most attention to is the learning media. While the components that are still the main obstacle are the preparation of indicators of competency achievement and learning objectives.

This study indicates several difficulties and weaknesses of students in compiling and implementing lesson plans. Therefore, it is necessary to pay attention to the supervisors of related courses to emphasize the importance of knowing how to prepare and implement the Lesson Plan properly and correctly. Students, especially those who will take micro and real teaching courses, should be more careful in preparing and implementing HOTS-based lesson plans. If done seriously, it is possible to develop and implement HOTS-based Lesson Plan properly and correctly. It is hoped that future researchers will conduct similar research with different emphases in accordance with the development of research on the preparation and implementation of HOTS-based lesson plans.

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