Training Science Teacher Understanding in Creating Science Learning Assessments Using the Quizalize Application

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Abstract: Based on the questionnaire results filled out by the MGMP Natural Science teachers of Batola District, it was obtained that 44.44% stated they were sufficiently skilled in using technology when preparing science teaching materials, one of which is assessment. Therefore, the Mandatory Community Service Program team attempted to address the issue through training activities on creating technology-based science learning assessments using the Quizalize application. This training aims to enhance the knowledge and skills of MGMP Natural Science teachers in creating technology-based science learning assessments. The training will be conducted in 3 sessions hybridly, consisting of 1 session via Zoom on July 21, 2023, and 2 sessions in person at SMPN 2 Alalak School on July 29 & August 5, 2023. The methods used in this training consist of 4 stages, including planning, action, observation/evaluation, and reflection. Based on the evaluation questionnaire, it can be concluded that the participants understand and can create learning media by achieving a score of 75.08% and receiving positive responses.
Keywords: assessment; quizalize; science

INTRODUCTION

Assessment is a series of activities that include data collection, data analysis, and data interpretation aimed at determining students' level of understanding and performance during the learning process. Assessment in the independent curriculum has been regulated in several regulations that have the principles of the independent curriculum, such as student center, contextual, essential, accountable, and involving stakeholders (Haris et al., 2023; Sukarni et al., 2023). Technological advancements have prompted various developments,

including in the field of teaching media and assessment. If previously conventional teaching media and assessment still used paper, they can now utilize technology (Baitinniza et al., 2024; Barlian & Solekah, 2022; Rosnaeni, 2021).

Based on the questionnaire results completed by the MGMP Natural Science teachers of Batola District, 44.44% stated they were sufficiently skilled, and 33.33% stated they were less skilled in using technology when preparing science teaching materials. Therefore, the Mandatory Community Service Program team attempted to address the partner's issues through training activities on creating technology-based science learning assessments, in this case, using Quizalize.

Quizalize is a gamified formative assessment application that provides a fun and engaging way for teachers to collect data on student progress. It allows teachers to see results immediately and easily identify the strengths and weaknesses of students (España-Delgado, 2023; Onasanya et al., 2020). Quizalize is suitable for online assessment (Boon & Ibrahim, 2021). The use of Quizalize in education significantly affects activity performance (Hafizha et al., 2023) and student learning outcomes (Wulandari & Hartono, 2021).

Teachers as educators need to know more about this Quizalize application; thus, there is a need for training for MGMP Natural Science teachers of Batola District to understand how to use the application. It is hoped that teachers can use this training to create assessments that support the classroom learning process and the Independent Curriculum's implementation.

Based on situational analysis, problems faced by MGMP Natural Science teachers in Batola District are identified, namely the lack of knowledge and skills of teachers in creating technology-based science learning assessments in wetland environments, therefore training on creating technology-based science learning assessments in wetland environments for MGMP Natural Science teachers in Barito Kuala District is held. This training aims to train the understanding of MGMP Natural Science teachers in Batola District in creating learning assessments using Quizalize.

METHOD

Implementing this activity is carried out by adopting action research steps consisting of planning, action, observation and evaluation, and reflection. This activity is conducted 3 times, namely online on July 21, 2023, and offline on July 29 & August 5, 2023, at SMPN 2 Alalak. The activities of each stage are presented in Table 1.

Table 1 Activity phases of the present community service

Stage	Description
Planning Stage	– Analysis of partner problems and partner needs
	– Preparation of training programs for media creation
	– Coordination with partners regarding implementation technicalities
Action Stage	– Implementation of training in 3 sessions, both online and offline, attended by MGMP Natural Science teachers of Batola District (group B)
	– Delivery of materials on creating science learning assessments using Quizalize, direct practice, and presentation of products by participants
Observation/ Evaluation Stage	– Observation of the process of creating science learning assessments in wetland environments
	– Evaluation both in terms of quantity and quality of products made by participants

Stage		Description
Reflection	-	Program success: (1) 60% of science teacher participants can create science learning assessments in wetland environments, and (2) an improvement in science teacher understanding of assessment creation falls into the category of minimally good.
	–	Comprehensive evaluation of activities and implementation of sustainable programs through continuous mentoring processes

RESULTS AND DISCUSSION

The first stage of planning activity initially involved coordination with relevant parties, such as the chairman or representative of the MGMP Natural Science in Barito Kuala District. The lack of knowledge and skills of MGMP Natural Science teachers in Batola District in creating technology-based science learning assessments in wetland environments became an issue that needed to be addressed.

The next activity is the action stage. In this activity, training on creating science learning assessments using Quizalize was conducted in 3 online and offline sessions. The first online meeting was held on July 21, 2023, and was attended by MGMP Natural Science teachers from Batola District. The documentation of the community service team with MGMP Natural Science teachers in Barito Kuala District is shown in Figure 1.
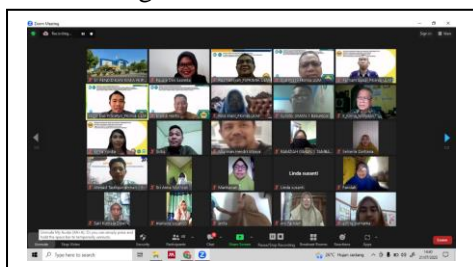

Figure 1 Documentation of the first meeting activity

The first meeting was conducted online via Zoom meeting. Before delivering the material, there were several speeches to be delivered by Mr. Muhammad Sidiq Oktaviandi, S.Pd., Gr., the Chairman of MGMP Natural Science in Barito Kuala District, followed by speeches from the Head of the Community Service Team, Mr. Drs. Parham Saadi, M.Si, and the Head of Curriculum and Students of SMP Education Office in Batola District, Mr. A. Budiansyah, S.E., who also officially opened the event.

This meeting discussed the advantages of Quizalize as a teaching aid for enjoyable student evaluation. Quizalize, which supports gamification to increase student engagement in the classroom learning process, is also equipped with student assessment analysis features to help teachers be more effective in teaching activities in the classroom, as explained by Mr. Drs. H. Mahdian, M.Si. 13 people attended this activity.

The second meeting took place in person on Saturday, July 29, 2023, and was attended by 13 science teachers. The second meeting explained the steps to log in to the Quizalize application website, the features available in the application, and the practice of creating science learning assessments. In this meeting, participants followed the instructions of the resource person to practice creating science learning assessments. The documentation of the community service team with the Chemistry MGMP in Banjar District at the second meeting is shown in Figure 2.

Figure 2 Documentation of the second meeting activity

The third meeting was held in person on August 5, 2023. In this meeting, a follow-up was conducted from the previous meetings, explaining the practice material of creating science learning assessments. In this meeting, participants created science learning assessments using Quizalize directly guided by the resource person and committee.

The training on technology-based assessment creation using Quizalize features was delivered by Mr. Drs. H. Mahdian, M.Si. In the initial session, participants were given a simulation to answer questions on Quizalize directly from the team. This aims to introduce Quizalize directly to the participants (teachers). The concept of formative assessment and how to register or create a teacher account using Quizalize were also discussed in this session. In this session, Mr. Drs. H. Mahdian and M. Si also discussed the types of questions that can be used in formative assessments on Quizalize, such as multiple-choice,

essay, true/false, and matching questions. Participants directly practiced the stages/processes of question creation. Discussions occurred spontaneously; participants who did not understand or experienced difficulties could immediately ask questions and seek assistance from the Community Service Team. The activity continued to demonstrate how to share the quizzes that have been created and analyze the results of student work using the Liveboard Quizalize feature. Documentation of the third meeting activity is shown in Figure 4.

Figure 3 Documentation of the third meeting activity

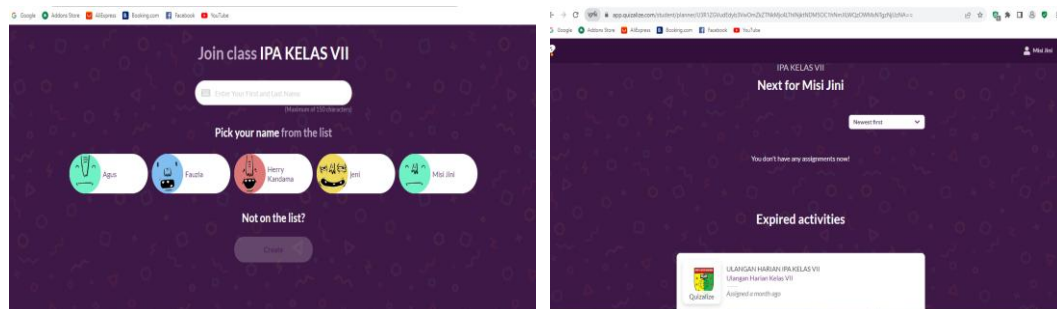Some products that the participants have developed are depicted in Figure 4.

Figure 4 The participant products in creating science learning assessments using quizalize

The next activity is the observation or evaluation stage, which involves assessing this activity's strengths and weaknesses to depict the implementation

quality using a questionnaire. The percentage achievement values are presented in Figure 5.
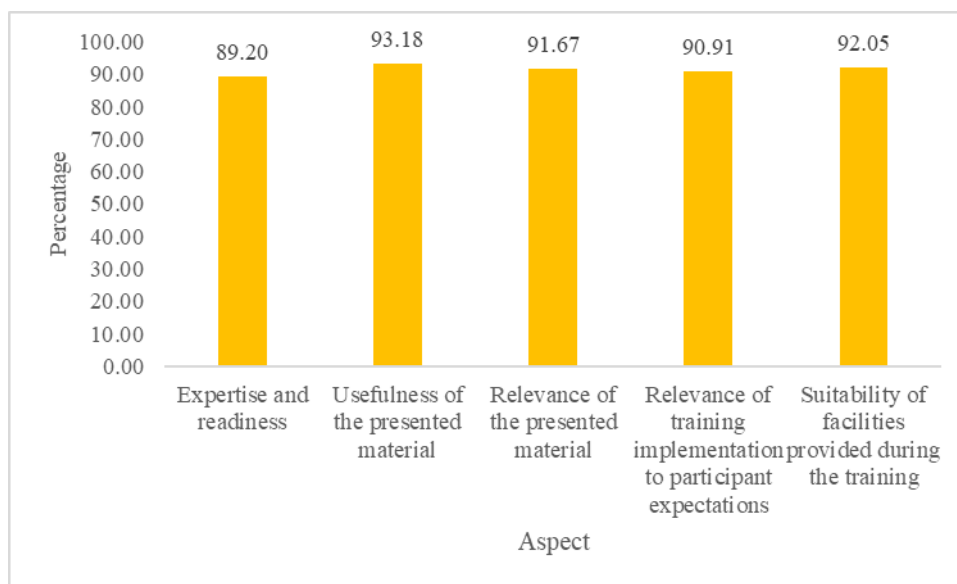
Figure 5 Evaluation of activity implementation

Based on Figure 5, it is known that according to the participants, the expertise and readiness of the community service team in this activity were very good, the usefulness of the material presented was very good, the suitability of the material presented was also very good, the alignment of the training implementation with participant expectations was very good, and the adequacy of the facilities provided during the training implementation was good or satisfactory.

In addition to the satisfaction questionnaire used to depict the quality of implementation, an evaluation of participants' understanding after attending this activity was also conducted. The evaluation was done using a questionnaire. The results of the comprehension questionnaire concluded that participants understand the creation of learning media using Canva, scoring 75.08 with a category of understanding.

This training on creating science learning assessments can increase insight, innovation, and abilities for teachers. Furthermore, participants also learned about applications that can be used in assessment creation, one of which is Quizalize. Assessment creation

should be tailored to the characteristics of the learning material and learners, as well as supportive facilities and infrastructure such as adequate computers/laptops.

Creating science learning assessments using Quizalize is very interesting because this application has many features, including quizzes, surveys, games, and discussion spaces (Kusuma, 2020). Moreover, the features available on the Quizalize application are easy to use, from creating content and tasks to assessments, which means Quizalize provides a space for teachers to analyze data or access students' abilities through more innovative assessments, thus capturing students' attention in learning (Nurjannah et al., 2023). This is in line with Kustian, Julaeha and Parulian (2021), where the Quizalize application can be used as a media for evaluating students after the learning process.

The advantages of the Quizalize application, according to Fadhilawati & Sari (2018), include: 1) improving students' understanding, 2) creating assessments that improve students' memory, 3) students can learn at home or on the go, 4) students can produce flashcards or games, 5) students can

change to different sets of cards as desired, and 6) teachers can create classes for students and monitor the learning process. The use of quizizz media is effective in the learning process (Kusuma, 2020; Tohiroh, 2022), and practical to use in the learning process (Syaifulloh, 2020). The disadvantages of the Quizalize application, according to Miller (2016), are when access is limited and cannot be opened, and it is not conducive to complex questions. Quizalize features games such as automatic environments, memes, avatars, and music that bring joy to the learning process (Junior, 2020).

CONCLUSION

Training on creating science learning assessments using the Quizalize application can enhance the understanding of MGMP Natural Science teachers in Barito Kuala District, achieving 75.08% and receiving positive feedback. The products produced can be used to assist the science learning process.

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