"Analysis and Reflection of STAR-Based Learning Assessment at SMP Negeri 32 Padang: Building Communication and Collaboration Skills"

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Abstract: This paper analyzes and reflects on the implementation of STAR (skills, tasks, applications, and relationships)-based assessments in teaching and learning activities at SMP Negeri 32 Padang. The assessments aim to develop students' communication and collaboration skills as required in the Merdeka Curriculum. The paper highlights that effective assessments should holistically measure competencies in attitudes, knowledge, and skills. They should also allow students to reflect on their learning process. The STAR-based assessments applied during the teaching practicum enable students to provide feedback on the learning that has taken place. For example, through short quizzes students can demonstrate their understanding of key concepts taught in previous sessions. The assessments promote an interactive and inspirational learning process where teachers act as facilitators. Appreciation is given to high-performing students to increase motivation. The paper discusses challenges in developing valid and reliable quiz items and finding time for assessments among teaching duties. It provides suggestions such as teacher collaborations, use of technology, item analysis, and rewards to address these challenges. Overall, routine implementation of STAR-based assessments as a best practice positively impacts students' learning process and outcomes. Assessments and learning become unified to produce competent graduates as targeted in the Merdeka Curriculum.

Keywords— Education, Learning, Assessment, Field Experience Practice (PPL), Feedback, Independent Curriculum, Learning achievement, Best practice

1. INTRODUCTION

Education is one of the important pillars in building the nation's character and intellect. Through education, young people are equipped with the knowledge, skills, and values necessary to become good and productive citizens. In the educational process, learning plays a crucial role as a medium for transferring knowledge and experience between teachers and students. According to Arsad (2017), learning is a process of interaction between students and educators and learning resources in a supportive environment, which includes communicative and interactive information exchange. This confirms that learning does not only occur in one direction, but rather involves a two-way dialogue between teachers and students. In the context of classroom learning, interaction between teachers and students is essential to ensure effective transfer of knowledge and skills. The teacher acts as a facilitator who creates a conducive learning environment, provides scaffolding to students in understanding the subject matter, and stimulates students to actively ask, discuss, and express ideas. Meanwhile, students are expected to be actively involved in the learning process through activities such as asking questions, collaborating with peers, conducting independent or group investigations and explorations, and reflecting on their understanding and learning experiences. Thus, learning becomes an active and interactive process, rather than passive and one-way. In the context of learning, assessment or assessment becomes one of the inseparable components. Assessment serves to measure the achievement of learning that has been set in the curriculum. A good assessment measures not only the end result of learning, but also the learning process itself, including how students understand the material, apply concepts, and develop critical thinking skills. Therefore, teachers need to conduct assessments to ensure that learning objectives are achieved and to identify areas that require improvement. One of the challenges in assessment is how to measure learning achievement that not only focuses on results, but also processes. Effective assessment should provide space for students to reflect on their learning and provide constructive feedback. This feedback is important to help students understand their strengths and weaknesses, as well as to motivate them in an ongoing learning process. In the Field Experience Practice (PPL) activity, I observed the implementation of one of the assessments in class that provided an opportunity for students to provide feedback on their learning process. This assessment assesses not only students' knowledge, but also their skills in critical thinking, cooperation, and communication. This is in line with the principles of the Independent Curriculum that I studied, which emphasizes the importance of developing students' competencies holistically. The Independent Curriculum is a new policy from the Ministry of Education and Culture that aims to provide flexibility for education units and teachers to develop students' full potential. There are several main principles in the Merdeka Curriculum, including:

1. Focus on core competencies, grades and levels

The Merdeka curriculum focuses on developing core competencies at each grade level, not just delivering subject matter. Core competencies include aspects of attitudes, knowledge, and skills to be achieved.

2. Interactive and inspiring learning process

The learning process is designed to enable students to engage actively through observing, questioning, trying/gathering information, reasoning, and communicating. Learning is inspirational to motivate students' curiosity and creativity.

3. Authentic assessment

Assessment uses a variety of techniques to measure all aspects of student competence as a whole. Assessment measures not only knowledge, but also skills, and attitudes/behaviors of students.

4. Educators as facilitators

Teachers act as facilitators who create a pleasant learning atmosphere, provide opportunities for students to think critically and act creatively, and encourage students to learn for life.

The application of assessment that I observed during PPL reflects some of the principles of the Independent Curriculum. The assessment measures the achievement of student competencies holistically, which includes aspects of attitudes, knowledge, and skills. In addition, assessment is also designed as part of an interactive learning process, where students are given the opportunity to reflect on their understanding and learning experience. Thus, this assessment is authentic because it measures student learning as a whole. I see teachers acting as facilitators by providing scaffolding and constructive feedback to encourage students to improve their learning.

The purpose of writing this article is to analyze and reflect on learning assessments that have been used during PPL activities in schools, as well as to show that these assessments are best practices in the context of classroom learning that I observe and as UAS for the Understanding of Students (PPDP) course. This article is expected to provide benefits as a reference for prospective teachers and education practitioners in designing and implementing effective assessments and providing space for students to be active in their learning process.

2. RESULT

Situation

2.1 What we got

Irfan Ananda, 23345296 observed learning in class VIII B SMP Negeri 32 Padang. The science subject teacher, Mrs. Qadriati M.Pd, uses formative assessment in the form of a short quiz at the end of the lesson to measure students' understanding of the material just delivered. The quiz contains 5 multiplechoice questions that ask important concepts from the material taught in the session.

In my opinion, this short quiz assessment is quite appropriate for the cognitive development stage of junior high school students who are still at the concrete operational stage. The questions given are contextual and related to concrete examples discussed in learning. The characteristics of the class VIII B environment that tends to be active and energetic also seem to match the application of this short quiz, because it is interesting and not boring.

This short quiz provides an opportunity for students to provide feedback on learning that has just taken place. If many students answer incorrectly on a particular question, it is a sign to the teacher that the material may not be well understood by most students. The teacher can then repeat the explanation or provide additional exercises to make the concept better understood. Conversely, if most of the students can answer correctly, it indicates that the material is sufficiently understood and the teacher can move on to the next topic.

Thus, this short quiz gives the teacher quick and accurate feedback on the extent to which students understand the material just presented. This feedback is very beneficial for teachers to evaluate the effectiveness of their teaching and make adjustments if needed.

At this point, we can conclude based on my previous explanation that formative assessment in the form of short quizzes applied in the class that I observed was effective enough to provide space for students to provide feedback on the learning process. Short quizzes are contextual and interesting according to the stage of development of junior high school students, and provide quick and accurate information for teachers to evaluate and improve the quality of their teaching.

However, there are several things that I think can still be improved from the application of this short quiz to be more optimal, including:

- Number and variety of questions Currently the quiz only contains 5 multiple-choice questions. In my opinion, this number is too small to measure really students' understanding of the entire material taught. We recommend that the number of questions be increased to at least 10 or 15 questions so that the scope of the material tested is wider. In addition, in addition to multiple choice, short fill-in questions or essays can also be added so that the variety of questions is more diverse so that it can measure students' understanding from various sides.
- Providing feedback to students
 - Currently, quizzes are directly drawn by teachers after students have finished working, without any special sessions to provide feedback on quiz results to students. Though this feedback is important so that students also know which concepts have and have not been well understood. My suggestion is that at the end of the quiz the teacher should spend 5-10 minutes together discussing the quiz answers, showing the correct answer key, and giving students the opportunity to ask questions related to the wrong questions.
- Question point analysis

This short quiz does not take advantage of question point analysis, which is analyzing the pattern of students' answers to each question item to identify which questions are too easy, medium, or too difficult. This analysis is important so that the teacher can perfect the questions in the next quiz so that the level of difficulty is more proportional. For example, if a question 95% of students answer correctly, it means that the question is too easy. Conversely, if only 25% of students are correct, then the question is too difficult. By analyzing patterns like this, teachers can continue to improve the quality of quiz questions.

• Reward

Currently student quiz results only serve as feedback for teachers, with no incentives or rewards for students who excel in the quiz. I think it would be better if the quiz scores obtained by students also contributed to their final grades, for example 5-10% of the total scores. Or it could also be by providing non-academic rewards such as stickers or points for the 3 students with the highest scores, so that they are more motivated to take the quiz seriously.

Well, those are some recommendations from me to improve the application of short quizzes as formative assessments in class VIII B. The point is to maximize the benefits of quizzes for both teachers and students, so that they really have an impact on improving the quality of learning. Quizzes are not just a formality, but should be utilized as optimally as possible to provide constructive feedback for all parties.

I think the recommendations above are quite comprehensive and can be implemented immediately without requiring complicated preparation. Of course, its application must still be adjusted to the situation and conditions in the field, especially related to the availability of time and other supporting resources. But at least, some main points such as increasing the number and variety of questions, giving feedback on quiz results to students, and conducting item analysis can be started in future quizzes.

I believe that if these recommendations are implemented properly, short quizzes that have been running quite effectively can be even more optimal in measuring and increasing students' understanding of the material taught. Quizzes will also be more useful for teachers to continue to evaluate and improve the quality of learning in the classroom, in line with the demands of an independent curriculum that prioritizes strengthening the assessment process. In addition to the recommendations above, there are several other alternative formative assessment methods that can be considered to be applied alternately or complete short quizzes, in order to provide variety for students. Some of these alternatives include:

• Performance assessment

This assessment measures students' understanding of concepts through assignments to make certain products/works according to the subject matter, for example:

- Science subjects: making posters about the respiratory system - Mathematics: make a room

build out of cardboard - Indonesian: writing poems

- Indonesian: writing poems about the environment

The advantage of performance assessment is that it can measure students' understanding of concepts and skills more authentically.

• Project assessment

Students are given the task of a group project to solve a problem related to the subject matter, for example designing a water-saving campaign. This task trains cooperation, creativity, and real problem-solving skills. Project results can be presented in class.

• Study portfolio / journal

Students are encouraged to create portfolios of their work as well as study journals to reflect on learning. Teachers can give feedback on this portfolio periodically. This method effectively fosters students' selfreflection skills.

• Peer assessment

Students are asked to give feedback or assessment of their friends' learning, for example friends' work/performance. It trains objectivity and the ability to give constructive feedback to students.

Well, by combining short quizzes with various other formative assessment alternatives as above, I believe learning in

class VIII B can be more interactive, inspiring, fun, and of course effective in increasing students' understanding and abilities. The main principle remains to provide meaningful feedback for students to improve themselves, not just pursue grades or academic orientation targets.

This is the result of my observation of the situation related to the formative assessment of the short quiz that I observed in class VIII B SMP Negeri 32 Padang along with my concrete recommendations for improvement. I hope this can be useful input for Mrs. Qadriati as the teacher of science subjects in the class to continue to improve the quality of learning, in line with the demands of an independent curriculum in today's education era. Apologies if there are shortcomings in this series of my presentations.

Challenge

In developing this formative assessment in the form of a short quiz, Ms. Qadriati faced several challenges, including:

- Build valid and reliable guizzes The first challenge is how to compile a short quiz that is truly valid and reliable in measuring students' understanding of the material taught. The quiz should ask key concepts and key learning indicators so that they can be used as a measure of achievement of learning objectives. Compiling valid and reliable question items requires the ability and in-depth understanding of the subject matter and measurement theory. Without adequate understanding, it will be difficult for teachers to determine indicators and write question points that are truly able to measure students' understanding accurately.
- Time constraints

The second challenge is limited time to develop, administrate, and analyze quizzes in the midst of busy teaching. Time to compile, implement, and follow up on quiz results is very limited on the sidelines of the teaching and learning process. Teachers are required to complete the target curriculum material within а predetermined time. Plus various administrative tasks to be

completed. With this time Attend question preparation training To improve the ability to compile constraint, optimal development, implementation, and analysis of valid and reliable quizzes, teachers quizzes is a challenge. need to attend special training related to the principles and techniques of writing good question Student interest and motivation items. Through training, teachers The third challenge is how to can understand the criteria for maintain student interest and quality question items and are skilled in applying them in motivation in doing quizzes. Sometimes students take it lightly compiling quizzes. and are less motivated to really do the quiz so that the results are not Mechanisms and instruments of analysis of the details of the optimal. Given that guizzes only carry a small weight in assessment, question some students tend to just do it Teachers need to apply without really understanding each quantitative (such as difficulty. question item. This certainly has an differentiation, distraction) and impact on the validity of quiz results qualitative analysis mechanisms and as а measure of student instruments to the question items understanding. Fostering student used. Thus, the quality and motivation weaknesses of each question item interest and in can be identified for further assessment is a challenge for improvement. teachers. Analysis and follow-up of quiz Technology utilization The use of technology (such as results google forms, e-learning) can help The fourth challenge is to conduct a quick analysis of the quiz results efficiency in developing, immediately administrating, and analyzing quiz and provide appropriate feedback and follow-up results so as to save teachers time. to students so that the next learning is more effective. Teachers are Cooperation with peers required to be able to process quiz Collaborate with fellow teachers result data. identify of one subject to share tasks in concepts/material that students do compiling quizzes and jointly not understand, and immediately analyze the results. This can reduce provide feedback and treatment the burden on teachers. (remidial/enrichment) to improve student understanding. The capacity Provision of feedback and follow-up of teachers in the analysis and use of Providing feedback on quiz results assessment results is the key to the to students and following up with implementation remedial/enrichment programs can successful of increase student motivation and quizzes as a measuring tool. interest to actually take the quiz. In facing these challenges, Ms. Qadriati seeks to involve other science teacher colleagues to By implementing the alternative solutions discuss and collaborate to develop better above, it is hoped that various challenges assessments. Hopefully, this assessment can faced in the development and implementation provide valuable information for teachers and of formative assessment of this short quiz can students to continue to improve the quality of be overcome gradually. Thus, short quizzes can really provide maximum benefits for learning. teachers and students in improving the Some alternative solutions that can be quality of learning, in line with the demands considered to overcome the above challenges of the implementation of the current independent curriculum. include:

Action	To overcome the challenges of conducting a		analy
	short quiz as a form of authentic assessment,		cond
	Ms. Qadriati took the following steps:		feedł
			of ea
	First, Ms. Qadriati collaborated with her		are s
			Crite
	fellow teachers to compile a valid and		
	reliable quiz. Valid means that the quiz		remie
	actually measures the achievement of the		assig
	competency that should be measured. While		Thus
	reliable means consistent measurement		stude
	results over time. To ensure this, Ms. Qadriati		stude
	discussed competency achievement		
	indicators and question grids with her fellow		Thro
	teachers before compiling the quiz questions.		provi
	By collaborating, the quiz questions		feedt
	produced become more qualified because		been
			stude
	they involve the perspectives and experiences		
	of several teachers.		skills
			are st
	Second, Ms. Qadriati optimizes time by		ask t
	utilizing online quiz applications. If using		mate
	paper, the time needed to prepare, execute,		next
	check, and analyze students' answers is quite		quizz
	a lot. With the help of digital quiz apps like		asses
	Google Forms, Kahoot, or Quizizz, and the		stude
	support of Chromebook assets owned by		learn
	schools, the process becomes much more		icum
	efficient. Questions can also be randomized		From
	so that each student gets a different question		concl
	to reduce the possibility of cheating. In		Qadr
	addition, scores and statistical analysis of		authe
	quiz results are automatically available so		Qadr
	that Mrs. Qadriati can immediately provide		teach
	feedback to students about their learning		utiliz
	outcomes.		motiv
			const
	Third, Mrs. Qadriati gives rewards or gifts to		cond
	students so that they are motivated to do the		asses
	quiz earnestly and try to show their best		towa
	understanding. The rewards given do not		stude
	have to be expensive, just in the form of		Stude
	1 5		In o
	books, stationery, or other objects that are		In o
	useful for student learning activities. The		Curri
	provision of this prize is expected to spur		teach
	student motivation to learn. In addition to the		proce
	prizes, Ms. Qadriati also gave verbal praise to		exam
	the outstanding students in the quiz to boost		pract
	their confidence.		teach
			pract
	Fourth, after the quiz is conducted, Mrs.		-
	Qadriati analyzes the results of the quiz and		
	provides feedback to students immediately, at		
	the latest at the next meeting. This feedback		
	is important so that students know which		
	-		
	concepts or skills are already well understood		

and which are still confusing based on the

quiz answers. In addition to the overall

nalysis of the class, Mrs. Qadriati also conducts analysis for each individual, so that eedback can be adjusted to the achievements of each student. For students whose scores are still below the Minimum Completeness Criteria (KKM), Mrs. Qadriati provides emidials in the form of special guidance, assignments, or other appropriate strategies. Chus, quizzes are not only a tool to measure tudent understanding, but also a tool to help tudents learn.

Through this short quiz, Ibu Qadriati also provides space for students to provide feedback on the learning process that has been carried out. After taking the quiz, students can reflect on which concepts or skills are already well understood and which are still confusing. Quizzes allow students to ask further questions to the teacher about material that is not yet understood so that the next learning can be more effective. Thus, quizzes are not only useful for teachers to assess student understanding, but also for students to assess the effectiveness of the learning process and make improvements.

From the description above, it can be concluded that the steps taken by Mrs. Qadriati in carrying out a short quiz as an authentic assessment are appropriate. Ms. Qadriati involves collaborating with fellow teachers to ensure the quality of quizzes, utilize technology for efficiency, provide motivation to students, and conduct constructive analysis and feedback. The quiz conducted by Ibu Qadriati is not just an assessment formality, but really geared towards helping the learning process of students.

In order to implement the Independent Curriculum which gives education units and eachers the flexibility to develop the learning process, this short quiz ala Ibu Qadriati is an example of authentic assessment best practices that should be exemplified by other reachers. Some reasons why this is a best practice, among others:

• Valid and reliable

A valid and reliable quiz shows that Ms. Qadriati developed a quality assessment instrument according to standards. This is important so that the quiz results truly reflect student learning outcomes.

• Efficient

The use of technology for efficiency is very much in line with the demands of the 21st century so that teachers are able to take advantage of technological advances in learning.

• Empowering students

The provision of feedback and reflection opportunities encourages students to be actively involved in monitoring and evaluating their own learning process. This is in line with the student-based learning approach.

• Holistic

Quizzes are not only a measuring tool, but also a learning aid through feedback and remediation. Assessment and learning become a whole.

• Data-driven

Analysis of the results of the quiz conducted by Mrs. Qadriati allows decision making for learning improvement based on student achievement data, not just intuition or estimates.

With these advantages, other teachers need to emulate and adapt what Ibu Qadriati has done in conducting short quizzes as part of authentic assessments. Of course, each teacher and education unit needs to adjust to their respective contexts. However, the principles of validity, efficiency, student empowerment, integrity, and use of data by Mrs. Qadriati should be exemplified and further developed.

By applying best practices like Ms. Qadriati, it is hoped that other teachers can develop quizzes or other forms of authentic assessment that are of higher quality. This will have a positive impact on improving student learning processes and outcomes holistically, which is the main objective of the Merdeka Curriculum. It is important for these practices to continue to be disseminated and replicated so that more teachers and students can benefit.

Refleksi	 The development and application of formative assessment in the form of this short quiz has several positive impacts, including: Increased understanding of student concepts Based on the results of the quiz score analysis conducted by Mrs. Qadriati, there was an increase in the average score and percentage of student completeness in mastering important concepts in the material taught. This indicates that short quizzes are effective enough to measure and improve student understanding. These short quizzes given periodically allow students to routinely evaluate their understanding of important concepts in the subject matter. With direct feedback in the form of quiz scores, students can find out how familiar they are with certain concepts. If the quiz scores show that their understanding is still lacking, then students are motivated to relearn the concept that is not well understood. This pattern then increases the average student's understanding gradually over time.
	In addition to feedback in the form of grades, this short quiz also allows teachers to provide qualitative feedback to students. For example, by providing additional explanations of concepts that the majority of students find difficult based on quiz scores. These additional explanations are very beneficial for increasing students' understanding of a particular topic. Teachers can also give appreciation to students who get good grades in quizzes to motivate other students. With this kind of feedback pattern, short quizzes can be an effective formative assessment tool to

• Increased student activeness This short quiz encourages students to pay more attention to the teacher's explanation and record important points during the lesson. They

enhance student learning.

realize that quizzes can be an "alarm" to study harder. Students become more motivated to focus and not miss the teacher's explanation because they know there will be a quiz afterwards. For students who tend to be passive and unfocused during learning, the existence of this short quiz forces them to change the behavior. This focus ultimately increased encourages students to better understand the subject matter in depth.

In addition, short quizzes also encourage students to actively ask the teacher if there are concepts that are not well understood. Because they are aware that lack of understanding will have an impact on poor quiz scores. So students will try to clarify any doubts that arise during learning. This active questioning is very positive because it can increase student understanding and the quality of discussion in class. The two-way interaction between teachers and students has become more lively.

Improvement of learning quality The results of the quiz analysis provide valuable information for teachers to improve the quality of learning. Teachers can find out which concepts are still difficult for students to understand so they need re-explanation or more effective delivery methods. Ouiz result data allows teachers to evaluate and reflect on the quality of teaching that has been done. For example, if the majority of students score poorly on a quiz, then the teacher can conclude that the method of delivering the concept needs to be improved again to make it easier for students to understand.

Another valuable piece of information gained from the quiz is the level of diversity of understanding between students. If there is a very high variation in quiz scores among students, it means that additional learning strategies are needed that can accommodate differences in student learning speed. For example, by providing enrichment learning materials for students who already understand and re-teaching sessions for students whose understanding is still lacking.

Thus, the results of quiz analysis can be used by teachers to make continuous improvements to the method and quality of learning to be more effective and in accordance with the needs of diverse students. Short quizzes act as a very valuable assessment instrument in efforts to improve the quality of education in the classroom.

There are several factors that are key to success in developing this assessment, including:

Collaboration with fellow teachers:

development Ouiz should involve cooperation between teachers, both teachers of similar subjects and class teachers. This collaboration is important for exchanging ideas in compiling quality quizzes, starting from stimulus selection, writing question items, to scoring techniques. Discussions between teachers can also result in richer and varied question banks for each subject. In addition, this collaboration also allows teachers to learn from each other in conducting analysis and follow-up on quiz results.

Optimization of technology utilization:

The development of technology provides a lot of convenience in developing and managing quizzes. Online applications such as Google Forms, for example, can be used to create digital quizzes so that they are more practical in working and scoring. Technology also makes it easier to store historical student quiz results data so that the development of student understanding can be monitored properly. Therefore, the use of technology needs to be optimized in quiz development in order to obtain maximum efficiency and benefits.

Giving appreciation to students:

Another important factor is to reward students who excel in quizzes, for example with praise, badges or achievement stars. This appreciation is important to increase student motivation. Students who receive

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appreciation will be increasingly motivated to maintain and improve their achievements. While for other students, the appreciation encourages them to study harder in order to achieve similar achievements. Thus, giving appreciation wisely can be one of the keys to the successful implementation of quizzes as part of formative assessment.

While the main inhibiting factors in the implementation of quizzes are:

Time limitations:

The development of quality and useful quizzes requires a lot of preparation time. Starting from material planning, preparation of question items, trials, analysis of results, to follow-up requires a separate allocation of time outside of teaching hours. Without good time management, this can be an excessive burden for teachers. Therefore, support from schools in terms of time allocation and redistribution of teacher workload is important so that the implementation of quizzes remains optimally managed.

Lack of student interest if there is no reward: Formative assessments such as quizzes are not yet fully acceptable and considered important by some students. So, students' motivation and interest to do quizzes seriously still need to be improved. One way that can be done is to give rewards to outstanding students. But the obstacle is, rewards such as prizes or additional value cannot always be given at any time. Therefore, socialization and education related to the purpose and benefits of quizzes need to continue so that student interest can increase naturally.

Overall, the development of formative assessment is quite successful in providing benefits for improving the quality of learning although it still needs to be improved. Some notes for future improvements include:

- Increase collaboration between teachers to share the best question banks and experiences.

- Further optimize the use of technology for the efficiency and effectiveness of quiz management.

- Standardize the technique and frequency of quizzes in each subject.

- Conduct classroom action research to evaluate the effectiveness of quiz

implementation on achieving learning objectives.

- Provide regular appreciation to outstanding students to increase motivation.

- Increase socialization to school residents regarding the purpose and benefits of quizzes as part of formative assessment.

With continuous improvement and development, it is hoped that the application of short quizzes as a form of formative assessment can make a significant contribution in improving the quality of education and learning in schools.

3. CONCLUSION

From the action plan that has been carried out through PPL 1 activities, it can be concluded that formative assessment in the form of short quizzes can increase student learning motivation. This can be seen from several important indicators. First, there is an increase in student activity in the learning process after the implementation of short quizzes regularly. Students become more enthusiastic to engage in discussions and Q&A during learning. They are also more enthusiastic in doing assignments and practice questions.

Second, there was an increase in students' average quiz scores over time. This shows that giving short quizzes periodically can spur students to study harder and understand the material taught. Students feel challenged to continue to improve their understanding and mastery of the material in order to do the quiz well.

Third, this short quiz also provides space for students to provide feedback on the learning process that has taken place. Through quizzes, teachers can find out the extent of students' understanding of certain material, difficulties or weaknesses experienced by students, and things that need to be improved in further learning. Thus, teachers can make continuous improvements to the quality of learning in the classroom.

In addition to having a positive impact on student learning motivation, the application of short quizzes as part of this formative assessment also provides several additional benefits, including:

• Increase learning time efficiency

With the provision of short quizzes regularly, students are encouraged to use learning time as effectively as possible in order to master the material and pass the quiz. Students become more disciplined in learning and focus on paying attention to the teacher's explanation in class. This certainly increases the overall efficiency of the learning process.

• Encourage the use of technology in assessment

Teachers can take advantage of various applications and digital platforms in making, implementing, and assessing quizzes so that the process becomes more practical, fast, and accurate. The use of this technology is certainly a valuable provision for the development of 21st century skills for both teachers and students.

• Improve the quality and variety of practice questions

Through cooperation between teachers in the preparation of quiz questions that are carried out regularly, the question bank owned by the school can continue to be updated and improved in quality. The practice questions given to students also become more varied so that students get new challenges every time.

However, the application of quizzes as part of this formative assessment also faces several challenges, including:

• Time constraints

Teachers often feel short of time if they have to hold short quizzes at every face-to-face. Especially if you have to assess and analyze quiz results carefully for further learning improvement. Good time management is needed so that this process continues to run optimally.

• Lack of student interest if there is no reward

Some students are often less enthusiastic about taking quizzes if there is no form of award or prize for those who excel. In fact, quizzes aim to spur students to learn, not because of prizes. Special strategies are needed to instill intrinsic motivation in students.

• Difficulties for less IT-proficient teachers

Some teachers complained about the difficulty in utilizing technology and digital applications in the process of organizing quizzes. Training and mentoring are needed so that teachers' IT skills can improve.

To overcome these challenges, some strategies that can be done include:

• Conduct a comprehensive time requirement analysis

With careful analysis, teachers can map the duration of time needed for quiz preparation, implementation, and followup of quiz results. So, the time allocation can be optimized.

Giving appreciation without prizes of money/goods

Teachers can give praise, badges or certificates to outstanding students without material rewards. This can foster students' intrinsic motivation to study and quiz well for personal pride.

Conduct IT training for teachers regularly

Schools need to organize IT utilization training and assessment applications for teachers so that their digital skills can continue to be honed and improved.

With the various steps above, it is hoped that the challenges that arise in the implementation of quizzes as part of this formative assessment can be overcome so that the benefits and objectives can be achieved.

Overall, based on observations and impact measurements, formative assessment in the form of short quizzes has proven to provide positive benefits in improving student motivation and learning outcomes. Short quizzes can even be said to be one of the best practices in the learning process in the classroom that is in line with the concept of independent learning.

Through short quizzes, students are free to explore knowledge and practice skills according to their individual interests and pace. The teacher acts as a facilitator who motivates and guides the learning process. Assessment is carried out to determine the achievements and weaknesses of each student for continuous improvement.

This concept is in line with the independent curriculum where students are given the freedom to control their learning processes and activities according to their respective interests and speed without pressure, while the teacher acts as a facilitator and companion.

Regular application of short quizzes can train students to be disciplined, honest, confident, and responsible for their own learning. The quiz also shows students where their weaknesses and strengths lie in order to continue to improve and improve.

With these positive impacts, the application of formative assessment in the form of short quizzes can be said to be one of the best practices in classroom learning that is innovative and in line with the concept of 21st century learning.

However, to be able to provide optimal results, the implementation of quizzes as part of formative assessment needs to be supported by careful preparation, quality instruments, and comprehensive analysis and follow-up by teachers. Without it, quizzes will only become mere routines that have less significant impact in improving the quality of learning.

Therefore, efforts to improve and improve need to be carried out on an ongoing basis by teachers and schools so that the application of this formative assessment model can make a maximum contribution in realizing effective and meaningful learning that can produce superior and global graduates

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