

Integrating Quizizz and Google Classroom: A Case Study of the ASSURE Model in Science Learning for Fifth-Grade Digital Classrooms

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ARTICLE INFO

Keywords:

Assure;
Natural Sciences;
Class V Digital;
Learning Design

Article history:

Received 2025-01-02
Revised 2025-06-15
Accepted 2025-06-24

ABSTRACT

The Independent Learning Era prioritizes accommodating students' unique learning styles and characteristics. Teachers must innovatively facilitate learning by effectively integrating digital media, particularly to enhance meaningful science education. This study examines the integration of digital media into Natural Science lessons at SD Muhammadiyah Purwodiningratan, employing the ASSURE analysis model to assess its effectiveness and implementation process. A qualitative approach was adopted, with fifth-grade students and their teacher as the study's participants. Data collection utilized interviews, observations, and documentation. The analysis applied triangulation methods to enhance reliability and validity of qualitative findings. The findings demonstrate that the fifth-grade teacher at SD Muhammadiyah Purwodiningratan employs the ASSURE model steps in planning Natural Science learning. Specifically, digital media such as Quizizz and Google Classroom were integrated effectively into the curriculum. Additionally, despite digital integration, project-based learning remains preferred by the teacher due to its relevance in facilitating science comprehension. Notably, the study identified specific challenges faced by the teacher in successfully implementing digital media within classroom activities. Integration of digital media proves beneficial in addressing diverse student learning styles. However, continued preference for project-based methods indicates limitations of digital approaches alone. Recognized challenges include technical issues, time constraints, and student adaptability. Addressing these barriers is crucial for enhancing the effectiveness of digital media integration in science education. Effectively integrating digital tools with traditional teaching methods, such as project-based learning, supports meaningful scientific understanding, though careful attention to overcoming identified barriers is essential for optimal results.

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1. INTRODUCTION

Educational curriculum policy remains integral to educational progression in Indonesia. The curriculum functions fundamentally as a guide for designing effective learning processes, establishing structured guidelines that teachers should continuously evaluate and adjust for meaningful student engagement (Permendikbud, 2013). The essence of meaningful learning lies in productive reciprocal interactions between educators and students, enhancing generational insights and advancing human civilization through quality education (Tatang, 2012).

The contemporary pedagogical perspective prioritizes student-centered learning, emphasizing active engagement where students are central actors in knowledge acquisition. Learning activities encompass varied interactions and are structured around various resources available both indoors and outdoors (Daryanto, 2010a). To ensure that learning transcends mere knowledge transfer and becomes significant, educators must design experiences reflective of student needs and diversity (Uno & Lematenggo, 2011). Effective educational practices thus necessitate recognizing and addressing the unique characteristics and learning styles of students (Gafur, 2012).

Teachers, therefore, carry a profound responsibility to understand these diversities as opportunities rather than barriers. They are tasked with designing instructional strategies that accommodate student diversity and optimize educational outcomes. This challenge positions educators as essential agents capable of selecting and implementing appropriate instructional methods that significantly influence learning success (Sari, 2017). Consequently, the contemporary teacher's role evolves from mere information provider to an adaptive facilitator who creatively utilizes diverse pedagogical methods.

Recently, unprecedented global events have further accelerated the necessity for adaptability and innovation among educators. The COVID-19 pandemic notably reshaped educational practices globally, abruptly transitioning traditional classroom education to remote learning settings, prompting a rapid surge in digital learning integration (UNESCO, 2020). This global disruption highlighted educators' critical need for digital literacy and capability in deploying advanced technological tools for maintaining effective teaching practices amid uncertainty (Dhawan, 2020).

In response, numerous educational institutions in Indonesia, particularly at the elementary level, began emphasizing digital technologies to enhance teaching and learning processes, responding proactively to potential disruptions and improving overall educational quality. Digital learning media effectively enhance instructional delivery, facilitating clearer, more engaging, and interactive learning environments (El Khuluqo, 2017). The strategic deployment of digital technologies enables teachers to capture student attention more effectively, promoting active engagement and participation (Herlina & Dewi, 2017).

Science education specifically benefits greatly from integrating digital technologies due to their nature, which closely aligns with daily life applications. Science education demands critical thinking and high-level cognitive engagement to foster reasoning and analytical skills, vital for students' intellectual growth (Saido et al., 2015). Hence, science lessons must be strategically designed to stimulate interest, participation, and deeper conceptual understanding. Appropriate pedagogical designs like the ASSURE instructional model assist in structuring educational activities involving digital media to achieve this goal effectively (Djamaluddin, 2019).

The ASSURE model, introduced initially by Smaldino, comprises sequential instructional steps that facilitate teachers in efficiently integrating appropriate digital technologies into their pedagogical practices. These steps—Analyze learners, State objectives, Select methods, media, and materials, Utilize materials, Require learner participation, and Evaluate and revise—collectively contribute towards more precise and systematic lesson planning (Smaldino, Lowther, & Russell, 2012). Consequently, the ASSURE model has emerged prominently as an effective methodological approach, significantly improving the practical implementation of technology-integrated learning environments (Pribadi, 2017).

Prior studies illustrate the practical benefits of employing the ASSURE model, particularly within the context of science education in elementary settings. Research conducted by Kurniawati (2017) highlighted the model's strengths in facilitating thoughtful selection and implementation of appropriate instructional media in elementary science curricula. Particularly notable is the 'Analyze learners' phase, emphasizing an in-depth understanding of students' needs, abilities, and interests, resulting in improved instructional effectiveness (Pujiriyanto, 2017). Complementarily, Iskandar's research (2020) underscored the effectiveness of systematically structured learning designs that significantly meet diverse student requirements, transitioning beyond routine curriculum delivery towards meaningful educational experiences (Farida, 2020).

Building upon existing research, further exploration is crucial regarding how elementary educators effectively integrate digital tools within structured frameworks such as the ASSURE model. Specifically, digital tools such as Quizizz and Google Classroom, prevalent in many educational settings, offer interactive and practical avenues to enhance science instruction by encouraging greater student involvement and enthusiasm. Therefore, the present research investigates the application of the ASSURE instructional model as an analytical tool in integrating these digital platforms, particularly within the science education context of fifth-grade students at Digital Elementary School Muhammadiyah Purwodiningratan.

Ultimately, this investigation contributes practically by elucidating strategies for effectively implementing digital media through structured pedagogical approaches. It aims to identify best practices, barriers, and solutions regarding digital learning integrations, equipping educators with refined methodologies conducive to optimal science education. In doing so, it aligns instructional innovations with modern pedagogical demands, contributing positively towards future-oriented, technology-enabled education.

2. METHODS

This study employs a qualitative research approach utilizing the ASSURE model as the primary analytical framework. The focus of analysis is the implementation of learning activities conducted by a fifth-grade digital teacher at SD Muhammadiyah Purwodiningratan. Specifically, the research examines the teacher's lesson plans and classroom practices against the six structured stages of the ASSURE model—Analyze Learners, State Objectives, Select Methods, Media, and Materials, Utilize Materials, Require Learner Participation, and Evaluate and Revise. Each of these stages provides clear indicators for systematically evaluating and understanding the learning processes employed.

The primary data sources in this research include key informants, specifically the fifth-grade digital classroom teacher and students at SD Muhammadiyah Purwodiningratan. To gather relevant information, the researcher developed structured interview questions designed to deeply explore the participants' perspectives, experiences, and insights regarding the instructional practices and digital media integration utilized in science lessons. The collected qualitative data primarily consisted of narrative texts obtained directly from the informants, necessitating careful thematic analysis for comprehensive explanation and meaningful interpretation (Creswell, 2014).

Additionally, direct observation was conducted within the research setting. The researcher closely monitored classroom interactions, instructional methods, and teacher-student engagements in real-time contexts. Through observation, practical insights into actual behaviors and implementations of each ASSURE stage were obtained, providing supplementary context and reinforcing the validity of the informants' narratives (Bogdan & Biklen, 2017).

Documentation was also systematically employed to archive relevant information and validate collected data. Documents analyzed included lesson plans, instructional materials, assessment records, and digital platform usage records closely related to the instructional phenomena being studied (Creswell, 2014). These documentary sources significantly enriched the depth of analysis by providing concrete evidence to triangulate data obtained from interviews and observations.

To ensure rigor in data collection, the researcher developed detailed instruments tailored specifically to the context of this study. These instruments functioned as guides and were explicitly designed to accurately and consistently capture and document relevant information during interviews and observational activities. Research instruments, as defined by Susilawaty (2022), serve as crucial measurement indicators that help systematically record conditions, behaviors, or activities pertinent to the research objectives. Thus, these meticulously constructed instruments facilitated structured data collection, enabling a comprehensive and credible qualitative analysis.

Table 1. Instrument Grille

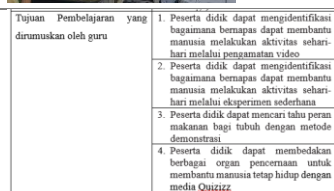
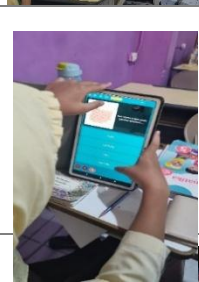
Indicator	Sub indicators	Data source
Analyze learners	Analyzing student needs	Teachers
	Delivering apperception	Students
State Objectives	Formulation of the objectives of the RPP	Teachers
	Communicate learning objectives	Teachers & Students
	Relevance of Learning Objectives to the media or methods used	Students
Select methods, media and materials	Choosing media, learning materials	Teachers
	The process of selecting media, materials and learning techniques	Teachers
Utilize materials	Preview methods, media and materials	Teachers & Students
	Prepare technology, media and materials	Teachers & Students
	Preparing students	Students
	Prepare the environment	Teachers & Students
	Provide learning experiences	Students
Require learner participation	Teacher interaction with students	Teachers & Students
	Train students' knowledge and skills	Teachers & Students
	Motivate students to study hard	Teachers
Evaluate and revise	Provide an assessment of student learning outcomes	Teachers & Students
	Evaluate the methods, media and materials used	Teachers

3. FINDINGS AND DISCUSSION

3.1 Findings

The data analysis in this research employed triangulation methods, integrating data from interviews, observations, and documentation. The findings regarding the integration of digital media—Quizizz and Google Classroom—in Grade V Digital at SD Muhammadiyah Purwodiningratan are presented in Table 2.

Table 2. Data Analysis Results

No	Indicator	Subindicator	Observation Results	Documentation Results
1	Analyze learners	Analyzing student needs	The teacher has carried out an analysis of student needs by giving a learning style test at the beginning of the semester. Apart from that, teachers have been able to identify students' learning styles and characteristics. Even though it is a digital class, teachers still accommodate students who don't like digital learning.	
		Delivering apperception	The teacher has carried out an apperception in class by explaining the objectives and learning activities that will be carried out	
2	State objectives	Formulation of the objectives of the RPP	The teacher has formulated learning objectives in the teaching module created by the teacher.	
		Communicate learning objectives	The teacher has also conveyed the learning objectives to students during apperception.	
		Relevance of Learning Objectives to the media or methods used	It has been seen that there is relevance between the learning media chosen by the teacher and the learning material, especially in science learning about the respiratory and digestive organs which cannot be seen directly by students.	
3	Select methods, media and materials	Choosing media, learning materials	The teacher has chosen the media and learning materials appropriately. Even though the media chosen by the teacher is digital, the teacher still combines learning with direct practice in making teaching aids.	
		The process of selecting media, materials and learning techniques	At this stage the teacher carries out filtering to determine the media that the teacher will use. Initially the teacher planned to only use digital media, but because it felt less contextual, the teacher still chose project learning.	

4	Utilize materials	Preview methods, media and materials	The digital classroom at Muh Purwo Elementary School already has various facilities that support digital learning, so the teacher's choice of media is appropriate.	
		Prepare technology, media and materials	Before starting learning, the teacher has made various preparations, starting from preparing learning video links, quizze links to making LKPD for project learning	
		Preparing students	The teacher has carried out this stage by provoking students with questions about the material from the previous meeting and linking them to the current material. The teacher also claps for ice breaking.	
		Prepare the environment	At this stage, the teacher prepares the learning environment by conducive to students in the classroom, then explains the flow of learning that will be carried out.	
		Provide learning experiences	The interactive game Quiziz really provides a learning experience for students because students feel very enthusiastic about learning quizzes. Apart from that, students are invited to make teaching aids that provide real learning experiences.	
5	Require learner participation	Teacher interaction with students	The teacher's interaction with students is very visible in the presence of trigger questions or during project learning.	
		Train students' knowledge and skills	By asking trigger questions, teachers can find out the extent of students' knowledge. Students are also invited to make props to hone students' skills. Demonstration of project results also trains students' speaking skills.	
		Motivate students to study hard	Providing quizzes indirectly greatly influences students' competitive spirit so that students are more motivated to learn.	

6 Evaluate and revise assessment of student learning outcomes

Provide an assessment of student learning outcomes

Teachers provide student assessments both cognitive, affective and psychomotor assessments. Teachers have also implemented digital assessments by always using Quiz results to be processed as student grades. Apart from that, the use of GC also means that assessments carried out by teachers have been carried out digitally.



No	Nama	Nilai	Waktu	Status
1	Adi	100	00:01:00	Selesai
2	Budi	85	00:01:15	Selesai
3	Cici	75	00:01:30	Selesai
4	Dani	60	00:01:45	Selesai
5	Eva	50	00:02:00	Selesai
6	Fani	40	00:02:15	Selesai
7	Gina	30	00:02:30	Selesai
8	Hani	20	00:02:45	Selesai
9	Ibu	10	00:03:00	Selesai
10	Joni	0	00:03:15	Selesai

Evaluate the methods, media and materials used

Teachers have been seen to carry out learning evaluations by involving students in writing down impressions and messages during learning.



The results of the interview show that in the process of developing teaching modules carried out by the teacher, the teacher has gone through the ASSURE stage, but in its implementation, there are still various problems encountered by the teacher. This process begins with learner analysis by identifying students based on their characteristics to learning styles. The next process is formulating standards and goals. Descriptions of knowledge, skills, and attitudes are stated in the learning objectives. Furthermore, strategies, technology, media, and teaching materials must be chosen to maximize the results that students will obtain. In using various media and strategies, teachers must pay attention to supporting and inhibiting factors for implementation. Student participation is highly prioritized to make learning more meaningful. Finally, according to ASSURE, an educator must complete the stages by revising and evaluating the learning process carried out.

3.1.1 Learner Analysis

The first step in assuring design is analyzing student needs. According to (Suyati, 1992), Fifth-grade elementary school-age students are in the range of ten to eleven years. Characteristically, students display differences between individuals in various aspects, including intelligence, cognitive and language abilities, personality, and physical characteristics. According to him, at this stage, amazement begins to emerge, and having a positive response to praise, and appreciation becomes a need that one wants to obtain. Apart from that, at this age, appreciation from a group also brings satisfaction.

Based on the results of interviews, data was obtained that the general characteristics of class V students are that they really like winning and are very hungry for a sense of pride. This was conveyed by the teacher that when Quizizz is played, the children will compete with each other and are very ambitious to reach the first podium. Apart from that, this fifth grader is also often unsure about the answer. They are very afraid if the answer they choose turns out to be wrong which causes them to fear losing to their friends. This makes them more careful individuals because they have a strong competitive spirit.

In this first stage, the teacher carries out an analysis of the students using a written test that contains the characteristics of the students and the student's learning styles. As in bold below:

Table 3. Student Characteristics Written Test

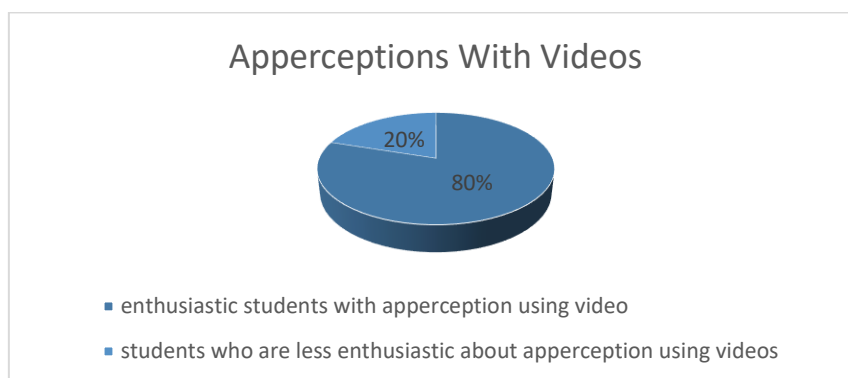
Question	Answer Choices
If I have to learn how to do something, I learn best when I am	a. Watch someone show you how b. Listening to someone telling me how c. Try to do it yourself
When I read, I often find that I;	a. Visualize what I read in my mind's eye b. Reading aloud or listening to the words in my head c. Restless and trying to "feel" the content of the reading
When asked to show directions, I;	a. Seeing the actual places in my mind when I say them or rather draw them b. Has no difficulty in giving verbal information c. Having to point or move my body when I tell

After the teacher has carried out the written test, the teacher will continue with personal interviews with students. The questions asked by the teacher were about current study habits, learning rhythms, and obstacles/obstacles when studying. After conducting interviews, the characteristics of class V Digital SD Muhammadiyah 2 Purwodiningratan students were obtained in Table 4.

Table 4. Classification of Class V Students' Learning Styles

Learning Style	Number of Students
Visual	7 students
Audio	6 students
Audio Visual	10 students
Kinesthetic	2 students

Based on the teacher's student analysis, it was found that the tendency of class V's learning style is audio-visual. Therefore, teachers must provide a learning media platform with audio and visuals to accommodate students' characteristics. Still, even so, teachers do not necessarily ignore children who have a kinesthetic learning style or only visual and audio learning styles. According to Anderson, he believes that audiovisual media is a series of images moving and packaged in shape (Anderson, 1994). A video player is a tool used to play a series of images. Audio-visual media is a learning aid that uses mechanical equipment to present audio-visual messages (Daryanto, 2010b). The audio element helps students learn through hearing and visuals, giving students a more real picture than just audio (Sanaky, AH, 2011). The homeroom teacher stated that *"using the learning video that I play at the beginning of the lesson makes students enthusiastic about learning, it is not uncommon for students' critical thinking to be awakened and various questions arise."* Based on the results of the interview, the following is a pie chart showing the ratio of 20 students who like apperception with videos and 5 students who don't like apperception with videos.

**Figure 1.** Comparison of the number of students regarding enthusiasm for the video in apperception

3.1.2 State Objective Learning

Formulating learning objectives is the second step taken by the teacher in the Assure stage. The formulation of learning objectives uses the well-known formula, namely ABCD with details A= Audience, B= Behavior, C=Condition and D+ Degree. Data was obtained regarding the learning objectives formulated by the teacher, especially in science material. Based on the analysis, the teacher has used the ABCD formula. Apart from that, the teacher also explains the cognitive, social, and psychomotor aspects that will be achieved by students. The homeroom teacher explained *"I always create learning objectives in my teaching modules, in my opinion, learning objectives are a measure of the success of the learning that I design."*

Table 6. Formulation of Learning Objectives

Formulate learning objectives	Cognitive Aspect (Students know the respiratory and digestive systems) Affective Aspect (Students can take responsibility and collaborate in groups) Psychomotor Aspect (Students can maintain healthy organs by exercising)
Learning objectives formulated by the teacher	1. Students can identify how breathing can help humans carry out daily activities through video observations 2. Students can identify how breathing can help humans carry out daily activities through simple experiments 3. Students can find out the role of food for the body using the demonstration method 4. Students can differentiate between various digestive organs to help humans stay alive using Quizizz media 5. Students explain how the human body grows through assignments in Google Classroom

The learning objectives designed by the teacher try to accommodate the learning styles of the students. This learning objective was modified by the teacher from the main handbook of the independent learning curriculum. We can see that there are five learning objectives that teachers and students want to achieve. Teachers try to accommodate students who have audio-visual characteristics by displaying learning videos. Apart from that, evaluation is also carried out using Quizizz which also contains images. Students are also invited to carry out simple experiments related to the respiratory organs. This is to provide a platform for children with visual and kinesthetic characteristics. By having appropriate learning objectives, teachers will be able to measure the extent to which students have mastered various abilities with the demands of the curriculum (Andika, 2023).

3.1.3 Select methods, media and materials

This stage is the core before entering the integration of media into learning. Choosing the method and media format to use and designing teaching materials are crucial stages in the assurance step. Teachers as educators and facilitators in the classroom must study various media to sort and choose the right media to synchronize the media with the teaching material. The results of observations in the classroom found that the Digital V classroom had indeed been designed to accommodate technology-based learning. This can be seen by the presence of an LCD and projector, then AC, Wifi, and a tablet/cellphone collection rack.

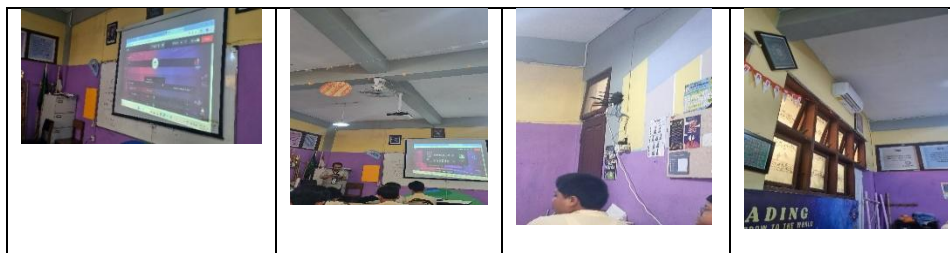


Figure 2. Use of Digital Media

The facilities in the classroom are in accordance with the media used by the teacher, so that teachers are no longer confused about finding facilities to support learning media (Anggela et al., 2025). Teachers modify teaching materials by preparing various quizzes on Quiz. Apart from teachers preparing learning devices, teachers also prepare devices for students, starting from creating a Google Classroom account, Quiz to preparing to synchronize student devices with parents' devices (Mawahdah et al., 2025). However, apart from using digital media, according to teachers, teachers still provide a platform for children who don't like taking part in digital learning. The teacher prepares simple experiments. Apart from that, the teacher also designs group learning with demonstrations. For students who are prevented from using digital learning devices, the teacher accommodates them by still maintaining the assignments written in the student's book, then photographing them and sending them to the teacher. As shown in the picture 2:

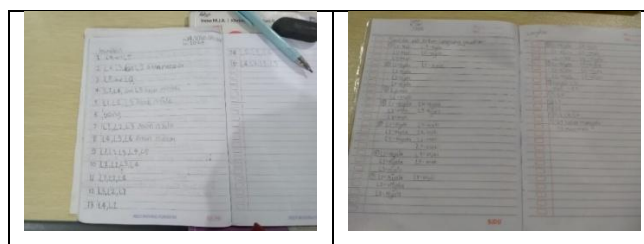


Figure 3. Forms of Teacher Accommodation for Students

3.1.4 Effectiveness of Using Quizizz and Google Classroom

During the research process, it was found that teachers use digital learning platforms almost every day, namely Google Classroom and Quizizz. Teachers assess these two platforms as highly effective in helping teachers attract students' attention during learning. According to the teacher's explanation, the digital media quiz supports students' academic abilities by presenting various quizzes in various displays, such as multiple choice, short essay, matching, word cloud, survey and rearrangement. Quizizz is a digital learning platform that helps teachers with all the complete features. Students also seemed enthusiastic about learning because they could find out their ranking in the quiz in real-time. At the end of the quiz, all students can see the podium with the highest to lowest scores. As quiz owners and creators, teachers can access and get reports of all students' scores. The results display is also very complete, starting from the number of correct and incorrect answers to the most difficult and easiest questions.

Using Google Classroom really supports learning, especially in terms of collecting assignments. Teachers and Principals have the same vision to build technology-oriented schools and students. Not only that, schools are currently promoting digital programs in learning, one of the breakthroughs is using technology-based assessments, so students and teachers have minimized the use of paper. This of course greatly increases the effectiveness of learning, with the use of Google Classroom all student grades are summarized in one place, unlike paper assessments which can be wasted by students, assessment with Google Classroom makes assessments integrated. Based on the results of interviews with homeroom teachers, there are several comparisons in the use of Quizizz and Google Classroom

media in terms of their specific advantages and limitations in supporting student learning which the author has summarised in Table 7.

Table 7. Comparison of the use of Quizizz and Google Classroom media in terms of advantages and limitations

Advantages	Google Classroom	Quizizz
	Assignments given to students can be collected into one place	There are many quiz features that teachers can choose from to create questions
	Assessment can be done directly on each student's worksheet	There is an automatic report regarding the results of quizzes that students have taken, both the number of correct and incorrect answers
	Students can directly comment on the assignments given, either in class or privately with the teacher	Students can monitor the podium live while the quiz is being taken, thereby encouraging students' competitive spirit
Limitations	At the beginning of its use. The teacher must guide students one by one in downloading media, creating an account and uploading assignments	When students take a quiz, students can still open a new tab, allowing students to search for answers on the internet
	There are no features for automatic tests or quizzes so it's just for collecting assignments and discussing	The speed in answering really influences a student's podium, so sometimes students are better off answering quickly rather than taking time to think about the correct answer

3.1.5 Utilize materials

Smalldino in his book formulates the 5 Ps at the stage of using media and teaching materials. The 5Ps are simply steps for reviewing teaching materials, preparing teaching materials, conducive to the learning environment, maximizing student concentration and determining the learning experience that will be obtained (Frاندani et al., 2025). Based on the results of interviews and observations at the utilize media and material stage, the teacher reviews the material to see whether the material to be provided is in accordance with curriculum demands (Meiantoni et al., 2025). The teacher also prepares tools and materials for tomorrow's lesson. For example, when going to do a simple practicum for making breathing aids, the teacher admitted that he had told the students well in advance to prepare the tools and materials. Then, the teacher actively provides video tutorials on how to make this breathing apparatus before students practice on their own.

Teachers also prepare the students' learning environment, ensuring that all classroom devices and facilities are normal. Teachers also prepare students. According to the interview results, the teacher said, *"I always prepare students before entering the lesson, namely when doing apperception. I never miss doing apperception, because for me apperception is a very crucial part in ongoing learning. In this apperception, I also focus students on learning today and create a bridge between the material from last meeting and today's meeting."*

The learning strategy chosen by the fifth grade teacher at SD Muhammadiyah Purwodiningratan is the student-centred (Nuhandini et al., 2025). In this science material, the teacher reviews the material to be studied and prepares learning tools, starting with a video presentation and then a demonstration. At the next meeting, students in groups created simple media about breathing. Teachers also ask for help from IT teachers at schools who have higher capabilities in the field of technology. Teachers also still maintain printed teaching materials by using worksheets as a learning companion during simple experiments.

In the student respiratory system material, the teacher creates several activities. Apperception begins with the teacher giving a narration and asking questions, *have you ever smelled the smell/fragrance of something impressive?* Then after discussion, the teacher shows an opening video related to the function of the nose. Furthermore, the teacher gives students a worksheet containing a project for making a demonstration tool for the human respiratory system. Students then demonstrate the results of their projects and discuss them among groups. Finally, the teacher provides a quiz link and then students do the quiz independently. The learning flow chart can be seen in Figure 4



Figure 4. Learning flow chart

3.1.6 Require learner participation

Fulfilling students' needs becomes a reference in designing the learning process. Sometimes students are not lazy about participating in learning, but often the learning plans made by teachers do not include activities that involve students. In fact, student involvement in learning indicates success in focusing students' attention to increase their curiosity in learning (Nelson, 2016). To facilitate student involvement, the homeroom teacher uses methods such as continuing to present learning through experiments. According to the teacher, experimental activities are very important, especially in science learning. As stated by Mr. Ardian, *"Even though we designed this class as a digital class and is the branding of SD Muhammadiyah Purwodiningratan 2, I personally as a teacher still maintain conventional learning by carrying out various experiments, yes, even though the experiments are simple because our school is in the center In urban areas, it is very difficult to dive straight into nature, for example in rice fields or gardens, but I always try to provide real experiences to students with simple experiments."*

Apart from providing experimental learning, the teacher also carries out question-and-answer activities during the lesson, students are involved in learning, although sometimes there are questions asked by students that seem odd and make the teacher confused in explaining. This was conveyed by Mr. Ardian, *"The way I get these students to want to talk, for example asking or answering my questions, is by giving them rewards. We know this reward system as 'Seize My Points'. When I ask a question, I give an offer for example 'bid 10'. When students are brave and able to answer my question, the 10 points will belong to them and every week, there will be a star of the week, namely the student who has the highest points in 'Seize My Points' This step has proven to be effective in bringing about involvement which has been discussed in the theory of the general characteristics of fifth grade students who are hungry for appreciation."*

3.1.7 Evaluate and revise

The level of understanding of the material that has been provided can be measured through assessments. Sometimes the misconception that occurs is that assessment is often equated with the level of "smartness". However, assessment is not the only indicator of students' intelligence level. Assessment places more emphasis on input obtained after learning occurs. In line with that, evaluation also reflects learning whether the process that has been passed is correct or still needs improvement.

Rank	Nama Siswa	Nilai	Waktu	Benar	Salah	Tidak dijawab
1	Andika	80%	41/40	41	0	0
2	Bendyana	80%	38/50	43	0	7
3	Dinar	80%	17/40	43	0	7
4	theot	80%	38/50	43	0	7
5	Alvin	80%	37/50	42	0	8
6	Roma	80%	32/50	41	0	9
7	Alfiansyah	70%	19/50	38	0	12
8	M. F. Ginting	70%	18/50	37	0	13
9	Nadi Nardas	70%	20/50	37	0	13
10	Nadiah	70%	27/50	37	0	13
11	Alvaro	72%	18/50	36	0	14
12	Dika	60%	29/50	31	0	19
13	P. A. N. Spring	60%	27/50	34	0	16
14	Zikri	60%	26/50	33	0	17

Figure 5. Quizizz Assessment Results

The teacher uses direct assessments obtained from the Quizizz summary. On Quizizz there is data regarding the number of questions, then the time to answer, and several other data. According to the results of the interview with Mr. Ardian, data was obtained that Mr. Ardian usually gives advance notice to students if the quiz in question has its value included as assessment material in the report card. Apart from that, Mr. Ardian has created different question folders, between Quizzes which are only used to improve student learning, and Quizzes where the grades will actually be included in the report card.

Learning evaluation is carried out in various ways which according to researchers are quite creative. At the end of the science lesson, the researcher observed the evaluation carried out by Mr. Ardian, including writing down a resume of the student's learning and feelings after taking part in that day's lesson on heart-shaped paper. Then, this student writing will become evaluation material that can help improve the quality of student learning.

Based on the research results above, the researcher not only analyzed the findings obtained in class V Digital SD Muhammadiyah Purwodiningratan. Furthermore, the researcher provided recommendations and suggestions for the learning plans carried out by the teacher. The researchers summarized these recommendations to answer various problems that have been encountered in learning with digital technology.

Table 8. Suggestions and Recommendations

Suggestions And Recommendations	Description	Target
The school provides 1 central device	The school provides 1 digital device for teachers so that teachers can monitor all student gadget activities while at school. Connect teacher devices with student devices while at school	Students become more supervised in using gadgets
Collect student devices during break times	Schools can create a schedule for teachers who are tasked with collecting gadgets when students take a break	Students do not play with gadgets during breaks
Give students activities to design simple things or explore digital libraries	Students are given and introduced to Canva to try to design more interactive learning	Bringing more interactive learning and students' desire to play games can be diverted
More projects for students related	This aims to ensure that students do not only focus on cognitive and leave effective	Reducing student apathy
Hold exams with strict rules.	This is done with teacher autonomy to arrange for students to sit separately and at a distance. Teachers can also ask for help from other teachers to be exam supervisors.	Instill honesty in students and control their competitive spirit so that they do not resort to any means necessary to win.
Coordination with leadership and all levels of teachers	This is done to conduct regular evaluations of digital learning in class V Digital	Technology-based learning is not only a school branding but also a novel value that brings benefits to students

3.2 Discussion

This study highlights critical insights regarding the integration of digital media within classroom settings, emphasizing the necessity of robust monitoring systems during digital-based instruction. The findings revealed that while digital technologies offer significant benefits to educational processes, they are vulnerable to misuse among students, necessitating proactive strategies to mitigate such behaviors. Observational data indicated frequent instances where students diverted their attention away from educational activities, using their devices for non-educational purposes, particularly playing games or accessing entertainment platforms such as TikTok. This misuse disrupts the learning process and undermines the educational objectives intended by integrating digital media in classrooms (Tondeur et al., 2022).

Consequently, these findings underscore a crucial point of reflection for educators and school administrators aiming to implement digital learning effectively. A systematic approach to classroom management and the implementation of digital learning strategies is required. Teachers must structure activities comprehensively, embedding digital media within broader learning experiences that actively engage students beyond screen-based interaction. For example, group activities, collaborative tasks, or environment-focused observational activities can serve as complementary strategies to digital learning. Such activities encourage physical and interactive participation, thereby reducing students' inclination toward gadget misuse by limiting the duration and nature of their digital engagement (Schindler et al., 2017; López-Pernas et al., 2021).

The significance of promoting interactive, physically engaging activities aligns closely with contemporary pedagogical frameworks advocating active and experiential learning models. Physical engagement and social interaction contribute to students' cognitive and behavioral development, ensuring that digital learning does not isolate students or restrict their physical mobility (Ertmer & Ottenbreit-Leftwich, 2021). Accordingly, it is advisable for teachers to sequence instructional activities carefully—transitioning seamlessly from screen-focused tasks to practical, hands-on, or group-centered exercises, effectively creating balanced and holistic learning environments (Bond, 2020).

In addressing these pedagogical considerations, the ASSURE model emerges as particularly relevant and valuable. The ASSURE model comprises a systematic instructional design approach explicitly tailored to integrate educational technology effectively. Its six stages—Analyze Learners, State Objectives, Select Methods, Media, and Materials, Utilize Materials, Require Learner Participation, and Evaluate and Revise—provide structured guidance that educators can follow comprehensively (Smaldino et al., 2019). This framework does not merely prescribe instructional steps but also emphasizes evaluation and ongoing revision. Thus, the model aids teachers in continuously improving their instructional strategies and in promptly addressing arising problems, including students' potential misuse of digital devices during class (Pérez et al., 2023).

The evaluation stage within the ASSURE model particularly contributes to effective classroom management and instructional improvement by prompting educators to consistently reflect upon and assess their teaching practices and students' learning behaviors. Through continuous evaluation and adaptation, educators can identify effective strategies to minimize digital distractions and enhance student engagement, making digital learning experiences more meaningful and productive (Kurt, 2021).

Moreover, integrating the ASSURE model's evaluation processes systematically encourages a reflective pedagogical practice among educators, fostering continuous professional development and instructional adaptability. Teachers become more adept at recognizing instructional deficiencies and adapting their techniques to meet evolving student needs and classroom dynamics (Pérez et al., 2023). Such adaptability is crucial in maintaining educational efficacy amidst the rapid technological advancements and unpredictable challenges characteristic of modern education.

In summary, effectively integrating digital media into classroom instruction requires a balanced, structured, and monitored approach. The misuse of digital technologies by students poses notable challenges, highlighting the need for comprehensive strategies integrating physical, social, and

collaborative activities. The ASSURE instructional model provides an ideal framework to address these challenges, offering practical and systematic stages to enhance instructional effectiveness and classroom management. Through careful implementation and reflective practice encouraged by ASSURE, educators can significantly improve digital media use, fostering an engaging, interactive, and productive educational environment.

4. CONCLUSION

This study demonstrates that teachers who utilize the ASSURE instructional design effectively meet students' cognitive and participatory learning needs through structured and carefully planned learning activities. The integration of digital media platforms, specifically Quizizz and Google Classroom, has significantly boosted student enthusiasm and participation, particularly in fifth-grade science classes at SD Muhammadiyah Purwodiningratan. Nevertheless, the findings also indicate limitations in exclusively employing digital tools, as continuous reliance on digital platforms occasionally diminishes the contextual and experiential aspects of learning. Therefore, teachers should incorporate project-based and constructivist learning activities alongside digital media to foster deeper contextual understanding and meaningful student engagement. A notable limitation of this research is its restricted scope, focusing solely on one grade level in a single elementary school. Consequently, the findings may lack broad generalizability across diverse educational contexts. Future research should consider encompassing a broader and more diverse population to develop comprehensive insights, enhancing the understanding and implementation of digital media integration in elementary education across Indonesia.

Acknowledgments: We would like to thank the principal of SD Muhammadiyah Purwodiningratan who has given permission to researchers to conduct research. Apart from that, we would also like to thank Mr. Ardian as the homeroom teacher and the digital fifth grade students of SD Muhammadiyah Purwodiningratan who have agreed to participate in this research

Conflicts of Interest: The authors declare no conflict of interest.

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