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Needs Analysis for Developing Interactive Science Learning Media Based on the Local Wisdom of Traditional Foods in Nganjuk Regency for Elementary School Students

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Abstract : The needs analysis is an initial activity aimed at achieving learning objectives, including in science education. This needs analysis provides information as a reference for the development of learning media. The objective of this study is to analyze the need for the development of interactive learning media based on local wisdom of The Great Regency for fifth-grade students of SDN 1 Tirtobinangun. The research used a descriptive analysis method, interviews, and questionnaires as data collection instruments. Based on the results of this study, it can be concluded that the needs analysis for the development of interactive learning media based on local wisdom of The Great Regency received positive feedback. This study can be further developed in the creation of interactive learning media based on local wisdom of The Great Regency on the human digestive system material for fifth-grade students of SDN 1 Tirtobinangun.

INTRODUCTION

In this 21st era, the evolution of technology is increasingly advanced. Technology can be accessed anywhere and anytime. The development of this technology has an impact on various fields including education. The acceleration of the development of technology and information has many positive impacts, for example motivating teachers to create innovative and creative learning media to support the learning process. Innovative and creative learning

media can increase students' interest in learning. This is reinforced based on the opinion conveyed by Firmadani (2020) that the accuracy in choosing learning media can create a more lively learning atmosphere, so that students are more interested and motivated to study the knowledge being studied.

Learning media is a tool used to support learning activities so that the lessons delivered by the teacher can be clearly understood by students (Nurfadhillah et al., 2021; Helmanto & Adri, 2023). Learning media in the process of receiving lessons and teaching has a crucial role in the development of students in an academic environment so that information obtained from the teacher can be received clearly (Sapriah et al., 2019). In the practice of the teaching and learning process in schools, learning objectives must be achieved (Suprapto et al., 2022; Suherman, et al, 2023). The achievement of learning objectives can be through learning facilities that are in line with the characteristics and needs of students.

Every field of study requires learning media to create meaningful learning experiences, including in the field of Natural and Social Sciences (IPAS). Natural and Social Sciences (IPAS) is one of the important fields of study in the education curriculum in Indonesia. IPAS lessons not only teach an understanding of natural and social phenomena, but also play a role in building students' concern for the environment and the surrounding community. On the other hand, the IPAS learning process is not free from various obstacles, including low student learning motivation, the application of monotonous teaching methods, and the lack of interesting learning media (Susanti et al., 2024). This condition has an impact on students' less than optimal academic achievement, especially in materials that require in-depth understanding and application in real contexts.

Efforts that can be made to solve these problems are by designing interactive and interesting learning media. Interactive learning media can facilitate students to actively participate in learning activities, in order to strengthen mastery of material and material retention (Pratama et al., 2022; Adri et al, 2021). Learning will be more meaningful when using media that is relevant to the real world of students.

Local wisdom, including regional specialties, can be a source of learning materials that are full of cultural values and traditional knowledge of the community.

Local wisdom reflects the cultural richness containing core values and traditional knowledge that is passed down from generation to generation. According to (Sari et al., 2023; Nurkahfi et al, 2022) local wisdom is a form of community understanding of nature and culture. Education and local wisdom are two inseparable elements in everyday human life, because local wisdom is an inseparable part that is united in the midst of society and education is the main foundation for everyone in the social order (Mailani et al., 2024.). This is in line with the study (Feni Haryati et al., 2021) that the application of culture based on local wisdom is a must for schools in order to strengthen the improvement of the quality and competitiveness of schools, the values contained in local culture need to be introduced and passed on to students. The integration of local wisdom in learning not only enriches teaching materials, but also strengthens students' cultural identity (Ramlah & Julyyanti, 2025; Helmi et al, 2022). Teaching the concept of science can be linked to regional specialties through the study of the content of ingredients and their effects on the digestive system. This local wisdom-based approach serves as an effective link between formal learning and students' concrete experiences in everyday life.

Development interactive learning media based on local wisdom requires a comprehensive needs analysis. The needs analysis process includes identifying problems faced by teachers and students, availability of resources, and learning materials. The initial stage is a preliminary study through data collection from teacher and student respondents, as well as a needs analysis of interactive learning media based on local wisdom. The next stage includes product design, development, and evaluation of the products that have been made (Agus et al., 2020; Rasmitadila et al, 2023).

Several previous studies have shown the great potential of developing local wisdom-based learning media. For example, research by (Efendi, 2025) shows that the use of visual learning media based on local wisdom A'rera can

encourage learning awareness and significantly improve students' academic achievement. Not only that, the study (Suryanti et al., 2020) states that learning materials based on local wisdom that are designed are effective in training science literacy skills.

According to the results of observations at SDN 1 Tirtobinangun in the field of science, specifically the sub-topic of the human digestive system, educators have not prepared appropriate teaching media to support smooth learning of the existing topics. Educators generally still rely on teacher guide books and student books in delivering material through a lecture approach. Not only that, the lack of teacher creativity in developing learning media, especially learning media that utilizes technology, causes students to be less interested in learning activities. This results in results that are not in accordance with expectations . The use of learning media refers to the independent curriculum guidelines that encourage students to be active in learning activities while teachers act as facilitators. Thus, it is necessary to design learning to be in line with students' life experiences. Analysis a of the important needs in providing facilities that support the relevance of learning, including in the learning of science on the sub-topic of the human digestive system for grade V students of SDN 1 Tirtobinangun.

METHOD

Study This aiming collect data needs development of interactive science- based learning media wisdom local " food typical " Regency The Great For student fifth grade elementary school. Data collection was carried out through : (1) interview with the fifth grade teacher , students , and principal school ; (2) distribution questionnaire to head school , teacher, and 12 students Class V SDN 1 Tirtobinangun ; and (3) observation to student class V SDN 1 Tirtobinangun . Analysis applied to the phase This through approach descriptive quantitative (Panoreka & Risdianto , 2022). Questionnaire data about need student processed with calculation score each part in accordance with indicator the answer that has been given determined . Calculation questionnaire given to student refers to the scale *Guttman* (Chess) Prasetiyo et al., 2021) as following :

Table 1 Assessment scores on the scale Guttman

No	*Rating Scale*	*Assessment Score*

1	*Yes*	*1*
2	*No*	*0*

Questionnaire results student converted become form number based on classification certain , then done calculation For to obtain mark percentage with formula as following :

$$Persentase\ respon\ siswa = \frac{\sum skor\ respon\ siswa}{\sum \text{skor maksimal}}\ x\ 100\%$$

Information :

∑ score response from students = Total mark response from student

∑ score maximum = Amount score maximum

In accordance score obtained , then converted in response positive-negative with guidelines below This :

Table 2 Categories response positive – negative

Percentage score every student	Category
51% - 100%	Positive
0 – 50%	Negative

RESULT & DICUSSION

Problems in learning

Results of interviews and observations at SDN 1 Tirtobinangun disclose existence a number of constraint in class V science learning on the material system digestion human , namely related achievement Study students who are not yet optimal. Conditions This due to the limitations of teachers in provide adequate learning media .

"There is eye problems class V science lessons sub material system digestion human . Student grades Still classified as not enough Good that is under kkm 75. The use of learning media is still monoton because of the available media not enough varies ." (Interview)

"Of course right , i experience difficulty in increase understanding student about system digestion humans in class V, especially Because limitations of learning media and supporting teaching materials ." (Interview)

Needs development of learning media

a. Is student experience difficulty in understand sub material system digestion the human being delivered through reading from book text just ?

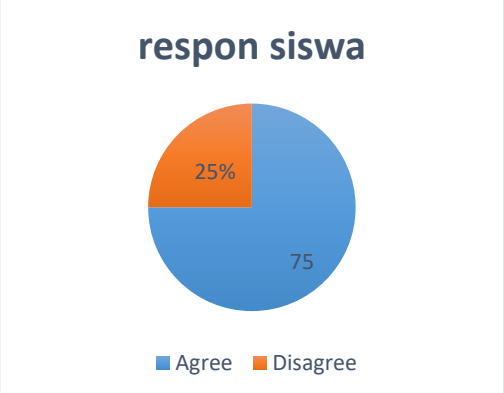

Figure 1 Response about student difficulty get understanding of sub- material system digestion the human being delivered only through book text

From the image above show that there are 15 students with 75% percentage found difficulty For understand material system digestion human being given if with read book text just .

b. Is student feel bored if the teacher only explain material in a way oral ?

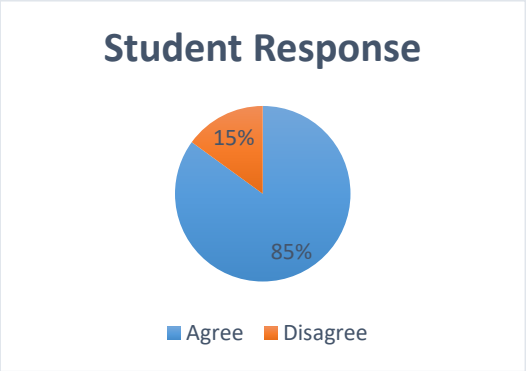

Figure 2 regarding bored students if the teacher only explain material just

From the picture above , 17 students with percentage 85% shows that student bored if only explained with read book text solely .

c. Students need learning media For increase learn science material system digestion man .

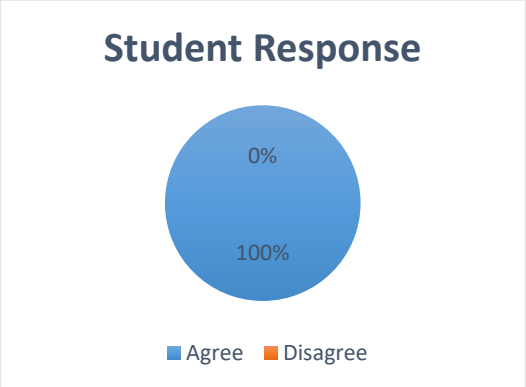

Figure 3 Response about student need learning media in increase understanding material system digestion man

The image above show a total of 20 students agreed with percentage 100% if student b intact learning media in increase understanding Study they in science and natural sciences material .

d. Natural Sciences subject material system digestion man associated with wisdom local " food typical " district Nganjuk so that students more easy understand material .

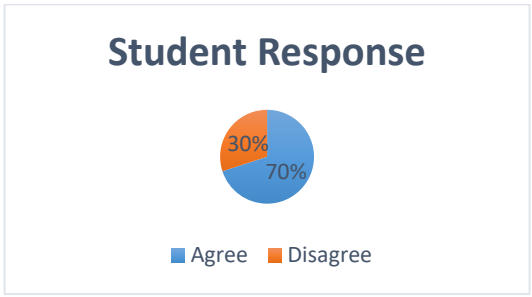

Figure 4 Response student about eye science lessons material system digestion man associated with wisdom local '' food typical '' district The Great so that student more understand material

The image above show that 14 participants educate give answer yes with percentage 87 %, students more understand Topic If correlated with wisdom local " food typical " district Nganjuk.

e. Teaching materials that will be given in the form of interactive learning media based on wisdom local accompanied by with audio ,

interesting and available animations quiz

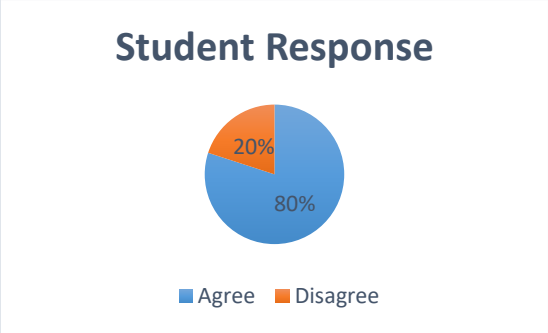

Figure 5 Response about teaching materials provided in the form of interactive learning media based on wisdom local accompanied by with audio, quizzes , and interesting animation

The image above showing 16 participants educate answer YES with percentage 100% if meter learning given in the form of interactive media accompanied by with audio, quizzes , and interesting animation.

Based on the results of the diagram regarding analysis need to development of interactive learning media in field IPAS study can found through studies the field that covers observation and interview. Questionnaire This distributed to students Class V of SDN 1 Tirtobinangun as part in data collection. The questionnaire was distributed aims to get information about development of learning media that will done . Result data questionnaire that has been shared according to the table provided following :

Table 1 Information results questionnaire

Aspects measured	Amount answer " Yes "	Maximum score	Percentage
Whether student difficulty understand material system digestion the human being delivered past book text ?	15	20	75%
Whether student feel bored If delivery only One direction from the teacher?	17	20	85%
For support the learning process , students require media for IPAS material system digestion man .	20	20	100%
Science subject material system digestion man associated with wisdom local " food typical " district Nganjuk so that students more easy understand material .	14	20	70%
Topics lessons given with using learning media interactive based on wisdom local accompanied by with audio, animation which is interesting and there is quiz .	16	20	80%

Based on the questionnaire student In this aspect , there are 5 points that are measured . In this aspect, First , students state that they experience matter difficult in understanding material delivered by the teacher if taught through book text without existence variation Study with 75% classification percentage positive. In the aspect second, students bored if the teacher

only explain material only, activities resulting teacher - centered learning student easy bored with percentage 85% category positive. Aspect Third, students need learning media for support learning. In student learning agree need learning media for Study with percentage 100% with category positive . Aspect fourth , students say agree If learn science material system digestion man associated with wisdom local to be more contextual so that they more easy understand material. Material system digestion man associated with wisdom local "food typical" district The Great give convenience student Because there in the environment around with amount 70% with category positive. In the aspect Fifth, convey agree if teaching materials that will be served in interactive learning media forms based on wisdom local accompanied by with audio, images, and animation with percentage 80% category positive. Based on questionnaire the need for 5 questions submitted, all of them get 70% with category positive, can withdrawn conclusion that interactive science and technology-based learning media wisdom local "food typical" district The Great needed For learning material system digestion humans in class V of State Elementary School 1 Tirtobinangun.

Level of support head school on learning media innovation interactive IPAS based wisdom local "food typical" district The Great

Table 2 Analysis Results Related Power Support Head School to Implementation of Learning Media

Statement	Alternative Answer
School give support for teacher For develop IT skills	Agree
School support teachers to always innovate in using and creating learning media	Agree
Party school provide wifi as internet access for support smoothness of learning media IT based .	Agree
School facilitate teachers to follow training in create learning media interactive .	Agree
Our school accommodates suggestions or input student related development teaching materials used in learning	Agree

Result of questionnaire submitted to the head school indicates that is very supportive as well as give teacher facilities for always innovate in using and creating learning media, facilities wifi provided school For implementation activity Study IT based, school facilitate teachers to follow training creation of interactive learning media, schools are also very open in

accept opinion or proposal students in the development of learning media used in learning.

CONCLUSION

The strategies used by teachers have not yet fully support development skills technology students. Teachers tend to active whereas student passive in learning. Utilization of learning media as reference Study Still Not yet maximum. Teaching materials are not yet available contextual and not yet in accordance with environment student stay. Findings from analysis need student show the need development of interactive science-based learning media wisdom local "food typical" district Nganjuk. The media involving activity student with blend element text, sound, and animation, as well as equipped with quiz interactive For interesting interest students. From the results questionnaire need students, can concluded that development of interactive science- based learning media wisdom local "food typical" district The Great with results response positive.

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