



Development of Integrated Learning Tools for Character Values in Science Subjects in Junior High School

Monita¹, Rayandra Asyhar¹, Pinta Murni¹

¹Department of Science Education, Pascasarjana, Universitas Jambi, Jambi, Indonesia

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ABSTRACT

Purpose of the study: The purpose of this study is to provide learning tools along with Student Worksheets that are integrated with character values, to determine student responses to Student Worksheets contained in learning tools, and to determine the effectiveness of Student Worksheets.

Methodology: The development procedures used are ADDIE, Analysis, Design, Development, Implement, Evaluate, with a research design of one group pretest-posttest design. The sample of the study was 33 grade VIII students, Junior High school 17 Jambi City. The instruments used are questionnaires, observation sheets of teacher and student needs, and documentation. The instruments used are obtained by adaptation.

Main Findings: The results of the teacher's response obtained an average score of 4 with a good category and the results of the average student response of 4.2 with a good category. The validation results of material experts and media experts were 3.9, Good category and 4.5, Very Good category, respectively

Novelty/Originality of this study: This research integrates character values into a learning tool equipped with Student Worksheets. From this research will help readers to know how to integrate character values into a learning tool.

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Corresponding Author:

Monita,
Department of Science Education, Pascasarjana, Universitas Jambi,
Raden Mattaher Street No.21, Kota Jambi, Jambi 36123, Indonesia
Email: monitams1698@gmail.com

1. INTRODUCTION

Indonesia is currently facing various challenges in the fields of life, social, economic, political, environmental and even education. The problems faced as stated include financial stability, climate change, and intolerance in the form of political absolutism, racial crisis and fundamentalism in religion. To overcome these problems, quality human resources are needed, both intellectual and character. The main factor that determines a person's success based on the results of several surveys is his character/attitut not his hard skills or high grade point average (GPA) [1], [2]. Even GPA according to Thomas J. Stanley is in 30th place or only 15% of technical skills and hard skills affect one's success in work and 85% of one's success in work is influenced by soft skills and character factors (such as honest, discipline, slang, and others). Neff and Citrin's report is reinforced by these data where the key to success is determined 90% by soft skills only 10% hard skills [3]. Therefore, to recruit prospective employees and leaders, several large companies and government and non-government institutions put the character aspect first. In the era of the industrial revolution 4.0, value-based leadership is needed [4].

Character is expressed in various terms, including value, attitut, behavior, and temperament. Character in the field of education as moral qualities, ethical values, and responsibility for oneself and others in society [5]. The quality of a person's character explains the ability to effectively utilize knowledge [1]. Character is

something that can be changed, so it can be learned and taught to some extent. Character education according to Agboola and Tsai is a scientific discipline that develops with conscious efforts to optimize student behavior and ethics [6]. Until now, students' personalities have been formed through habits and examples. This strategy does not give the best results. This is because there is no standard guideline for teaching character through teaching materials [7]. To support the achievement of the demands of Presidential Regulation Number 87 of 2017 concerning Strengthening Character Education and Regulation of the Minister of Education and Culture Number 20 of 2018 concerning Strengthening Character Education, it is necessary to develop creative models as alternative ways of teaching character to students. To support the achievement of the demands of Presidential Regulation Number 87 of 2017 concerning Strengthening Character Education and Regulation of the Minister of Education and Culture Number 20 of 2018 concerning Strengthening Character Education in Formal Education Units, it is necessary to develop creative models as alternative ways of teaching character to students. And Then, in Article 1 of the Minister of Education and Culture Number 20 of 2018, it is stated that character education is strengthened through the heart, mind, sports, and sports. Integration in various activities, including learning activities, is one way to achieve KDP.

There are 18 values in character education, namely: religious, honest, tolerance, discipline, hard work, creative, independent, democratic, curiosity, national spirit, love of the motherland, respect for achievement, communicative, love of peace, love of reading, and social care and responsibility [8]. These character values will be entered into a student worksheet. In the worksheet students technically consist of 3 parts, namely the title, learning instructions, basic competencies or subject matter supporting information and tasks or work steps [9]. In student worksheets there are sheets that contain tasks to be done by students and there are instructions or technical work on the material in accordance with the competencies to be achieved [10].

Through creativity exercises, [5] incorporate character education into math learning. [8] did the same by incorporating character education into economic learning activities. [11] believes that integrating character values into each subject will be more effective because it will be taught according to each teacher's area of expertise. That is, character education is the responsibility of all subject teachers, not only those who teach religion, citizenship, or guidance and counseling subjects. Therefore, the author feels the need to implement character into the learning process so that students have good morals. In addition, students' academic abilities need to be developed. The solution that can be done is the integration of character education into learning tools that can improve aspects of students' academic abilities in science learning. In this research, an integrated science learning tool integrated with character values will be developed for Class VIII Junior High School/MTs Students in Jambi City.

Learning theory that can support the development and use of students worksheet as teaching material is constructivism theory. Constructivism is one of the understandings of the process of acquiring knowledge that begins with the occurrence of cognitive conflicts that students overcome with the knowledge they already have, and ends with students building new knowledge or concepts through their experiences as a result of interaction with their environment. As a result, constructivism considers knowledge as the result of its own construction (formation) by a learner [12]. In line with the theory of constructivism, this study aims to develop student worksheets that are arranged in learning tools and contain student activities that are useful for stimulating and providing existing problems.

2. RESEARCH METHOD

This type of research is research development (Research and Development) because the output is a product in the form of Integrated Science teaching tools with character education enrichment for students of Junior high school 17 Jambi City. The teaching tools developed consist of: (1) Learning program Plan (RPP), (2) Student Worksheets (LKPD).

The ADDIE model used in this study consists of five stages of activity: (a) analysis, (b) design, (c) development, and (d) implementation. and (e) evaluation. This model was chosen because the process is easier, adaptable, and easily accessible and applicable for various purposes and fields, as well as to control from start to finish. The evaluation process can be carried out at each stage in this model to ensure that the resulting product is of high quality.

ADDIE (Analysis-Design-Develop-Implement-Evaluate) instructional design model. This ADDIE model uses 5 stages or development steps:

1. **Analyze**, The analysis stage is a needs assessment process, to identify needs, analyze tasks (task analyze) that must be prepared for students.
2. **Design**, This stage is known as making a product blueprint. Like a building, before it is built, it is necessary to make a basic design on paper first.
3. **Development**, This stage is the process of turning the blue print into reality. At this stage the product is developed until valid results are obtained and ready for use.

4. **Implementation**, Implementation is a real step to implement the developed product. At this stage, everything that has been developed is piloted through large groups then evaluated and revised. Then trials can be carried out on large groups and then re-evaluated and revised so as to produce a final product that is ready for dissemination.
5. **Evaluation**, The evaluation step involves determining whether the developed product meets or exceeds initial expectations. Because the goal is for revision needs, the evaluation step can be carried out at each of the four stages above, which is called formative evaluation. The ADDIE paradigm will be used as a whole in this study, from the analysis stage to the final evaluation stage, with minor modifications. Product development techniques will be used to elaborate on the details.

Research activities with the ADDIE model are carried out in two stages. Each stage will contain several customized development procedures. The stages carried out are: (1) the product development stage to produce teaching devices and (2) the product trial stage in schools. Test Subjects. In this study, the test subjects were junior high school and MTs students in Jambi City. A total of 33 students of class VIII. The sampling technique uses purposive sampling.

The data in this study were analyzed in various ways/techniques depending on the purpose. Valid and reliable instruments are needed to assess the quality of student learning processes and quality outcomes by utilizing learning tools created in real learning. The technique of agreement between observers will be used to calculate observational reliable instruments,

$$\text{Percent agreement } (R) = 100 \left[1 - \frac{A - B}{A + B} \right]$$

Information:

A = The frequency aspect of behavior observed by the observer gives a high frequency.

B = The frequency of aspects of behavior observed by other observers by giving low frequencies.

The validity of the test items will be obtained by calculating the grain sensitivity of each question item. The formula to be used is

$$\text{Sensitivitas } (S) = \frac{Ra - Rb}{T}$$

Information:

S = Question item sensitivity index

Ra = the number of students who answered correctly on the final test

Rb = the number of students who answered correctly on the initial test

T = Number of students taking the test

Effective items have positive values between 0.00 and 1.00, with higher positive values indicating a higher index of learning effects. Student response data was obtained using a questionnaire using a Likert scale where the question items given were as many as 15 questions / statements. So that the maximum and minimum scores will be obtained as follows:

$$\text{Range of values} : \frac{\text{skor maksimum} - \text{skor minimum}}{\text{Criteria Categories}}$$

Build an interval class : $S_{min} + R$ Interval classes are arranged to the highest value. It looks like the following table.

Value scale	Score	Category
5	67 – 79	Excellent
4	54 – 66	Good
3	41 – 53	Not good
2	28 – 40	Bad
1	15 – 27	Very Unkind

3. RESULTS AND DISCUSSION

3.1 Need Analysis

21st Century Learning Analysis

Regarding the development of learning in the 21st century, several things need to be considered, including: the main task of teachers as learning planners, including elements of higher order thinking, the application of varied approaches and learning models, and technology integration [14] states that there are 4 main principles of 21st century learning, namely 1) *Instruction should be student-centered* 2) *Education should*

be collaborative 3) *Learning should have context* 4) *Schools should be integrated with society* which means that in 21st century learning Learning development should use a student-centered learning approach, and students must learn to be able to collaborate with others. Learning is meaningful if it has an impact on students' lives outside of school. Therefore, the subject matter needs to be related to the daily life of students. According to [13] In 21st century learning students must have special characteristics, namely a) critical thinking, have the will and ability to solve problems and communication, creative, collaborative and innovative. b) Have the will and ability of digital literacy, new media and ICT. and c) Flexible and adaptive initiatives.

Analysis of Indonesia's Education Policy

In Law Number 25 of 2000 concerning the National Development Program (PROPENAS), it is stated that there are three major challenges in the field of education in Indonesia, namely (1) maintaining the results of educational development that have been achieved; (2) preparing human resources who are competent and able to compete in the global job market; and (3) in line with the enactment of regional autonomy, the national education system is required to make changes and adjustments so as to realize a more democratic education process, pay attention to diversity, pay attention to regional needs and students, and encourage increased community participation.

School Analysis

Based on observations made by researchers at SMPN 17 Jambi City, information was obtained that the facilities in the school are complete, there are computer laboratory rooms and science laboratories that can support science learning. There are 9 science teachers at SMPN 17 Jambi City, 2 of whom teach in class VIII. Based on the results of the researcher's observation of science teachers who teach in class VIII, information was obtained that in the learning process the teacher has integrated character values with students by including character values in the learning program plan and student worksheets used by the teacher. However, teachers do not understand about the independent curriculum, because the school has not implemented the independent curriculum. This is in line with the information obtained by researchers through observations made on 2 science teachers at the MTS Laboratory.

Student Analysis

By knowing the characteristics of students can be used as a consideration so that later the learning student Worksheet that will be developed is right on target, effective, and the content is easily understood by students. Identification of student characteristics is done by interviews with subject teachers. It was found that students of Junior high school 17 Jambi City prefer to learn using Students Worksheet media which contains many student activities and supporting images.

This is because students prefer varied learning activities such as observing, watching, and doing directly. The results of the student needs questionnaire also showed that students had less interest in learning when teachers used manual textbooks. The category of student interest and character in learning is not too low, but there needs to be media that can increase student interest. With the existence of student worksheets equipped with student activities such as practicum and exercises, it will help in the learning process and problem solving [15]

3.2 Design Product

Design of Integration of Character Values in Learning

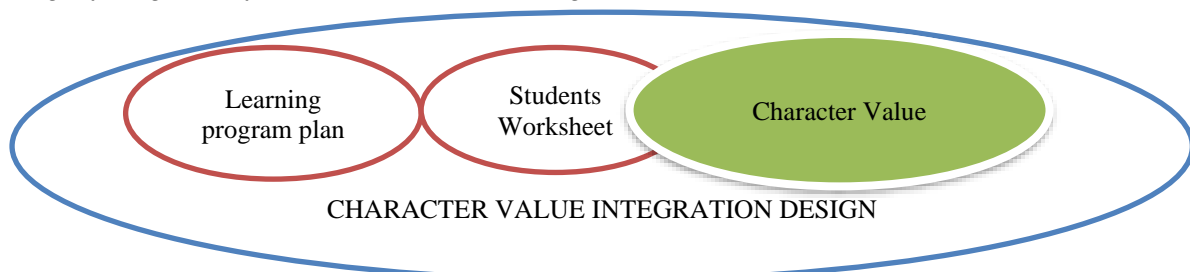


Figure 1. Character Value Integration Design

Character values are integrated in learning through learning tools that will be developed. The Learning Tools to be developed contain 21st century skills, HOTS (High Order Thinking Skill), Literacy, and PPK (Strengthening Character Education). To contain these 4 things, a student-centered model/method/strategy/approach is needed. So that students are active in learning (active learning). One of the learning models that can be used is discovery Learning.

Character values that can be integrated into Students worksheet or classroom learning include religious where students are expected to believe more in the greatness of God who has created humans with all their complexity, honest where students are expected to be able to behave honestly during learning related to doing assignments and exercises or in making research data, tolerance where students are expected to have tolerance for differences that exist between himself and other classmates. Hard work, students are expected to be able to focus and work hard in carrying out learning activities either practicum or learning material. As well as some other character values.

Learning program plan Products

Learning program plan products are validated by Expert. where the validation results can be seen as follows figure 2.

LESSON PLAN STUDY	
Education Unit	JUNIOR HIGH SCHOOL UPTUDAJAMBE
Subject	SCIENCE
Class / semester	VIII (one)
Subject matter	Digestive System in Humans
Time Allocation	4 meeting (10 Meeting Hours)

A. CORE COMPETENCIES	
1. Respect and live the teachings of the religion he adheres to	
2. Demonstrate honest, disciplined, polite, confident, caring, (tolerance, mutual assistance), polite, and confident behavior, within the reach of association and existence	
3. Understand knowledge (factual, conceptual, procedural, and metacognitive) based on curiosity about science, technology, art, culture related phenomena and visible events	
4. Try, process, and present in the concrete realm (using, decomposing, stringing, modeling, and creating) and abstract realm (writing, reading, calculating, drawing, and computing) according to what is learned in school and other sources that are the same in point of view / theory	

B. BASIC COMPETENCIES AND INDICATORS OF COMPETENCY ACHIEVEMENT	
BASIC COMPETENCIES	INDICATORS OF COMPETENCY ACHIEVEMENT
3.3 Analyze the digestive system in humans and understand disorders related to the digestive system, as	3.3.1 Explain the function of food intake (C1) 3.3.2 Determining the nutritional content of food (C2) 3.3.3 Analyze daily energy needs (balanced activities) (C3) 3.3.4 Develop a healthy food plan to avoid indigestion (C3) 3.3.5 Explaining the digestive system in humans (C2) 3.3.6 Analyze the main causes in the human digestive system and their

Figure 2. After revision

Figure a shows a revision in the face-to-face meeting hour section, which is as many as 3 meetings or 7 lesson hours. While in picture b shows 4 meetings or 10 hours of lessons.

4.2 Presenting the results of investigations on mechanical and chemical digestion	4.2.1 Conduct an experiment to mechanical and chemical digestion 4.2.2 Present reports on the results of investigations on mechanical and chemical digestion
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Character Value: Cooperation, religious, responsible, communication, critical, and honest

C. LEARNING OBJECTIVES	
3.1.1	Through practical investigations of packaged foods, learners can explain the functions of food ingredients correctly
3.1.2	Through practical investigations of packaged foods, students can determine the nutritional content of food appropriately
3.1.3	Through group discussions, students can analyze daily energy needs (balanced activities) appropriately
3.1.4	Through observation and discussion, students can find out healthy food ingredients to avoid indigestion
3.1.5	Through experiments, learners can explain the digestive system in humans correctly
3.1.6	Through video observation, pictures and group discussions, learners can analyze 3 major organs in the human digestive system
3.1.7	Through video observation, pictures and group discussions, learners can analyze the functions of the 3 major organs in the human digestive system appropriately
3.1.8	Through group discussion experiments, learners can determine 4 additional digestive organs in human previously
3.1.9	Through observation, learners can correctly determine 7 diseases or disorders of the human digestive system
3.1.10	Through observation and discussion, learners can explain 7 diseases or disorders of the human digestive system appropriately
3.1.11	Through observation and group discussions, students can analyze effects of poisons or overactive disorders / diseases of the human digestive system correctly
3.1.12	Through experiments and discussion, learners can conduct investigations on mechanical digestion
3.1.13	Through experiments and discussion, learners can conduct investigations on chemical digestion
3.1.14	Through observation, learners are able to present reports on the results of investigations on

Figure 3. After revision

The picture above shows an improvement in the learning objectives section that is compiled, namely, improving writing to use standard rules, correcting the context of the rules mentioned, correcting errors in the

preparation of rules, and sentence errors that make the material discussed not in accordance with the material raised.

Students Worksheet Products

The students worksheet product developed has reached the validation stage and is declared feasible for testing after going through 3 stages of validation. There are quite a lot of things or aspects that need to be improved such as image accuracy, depth of material, use of poor standard grammar, completeness of students worksheet that is still lacking, making pages that are not appropriate, cover of students worksheet that is less attractive and several other things. The results of students worksheet that have been successfully developed are as figure 4-8.

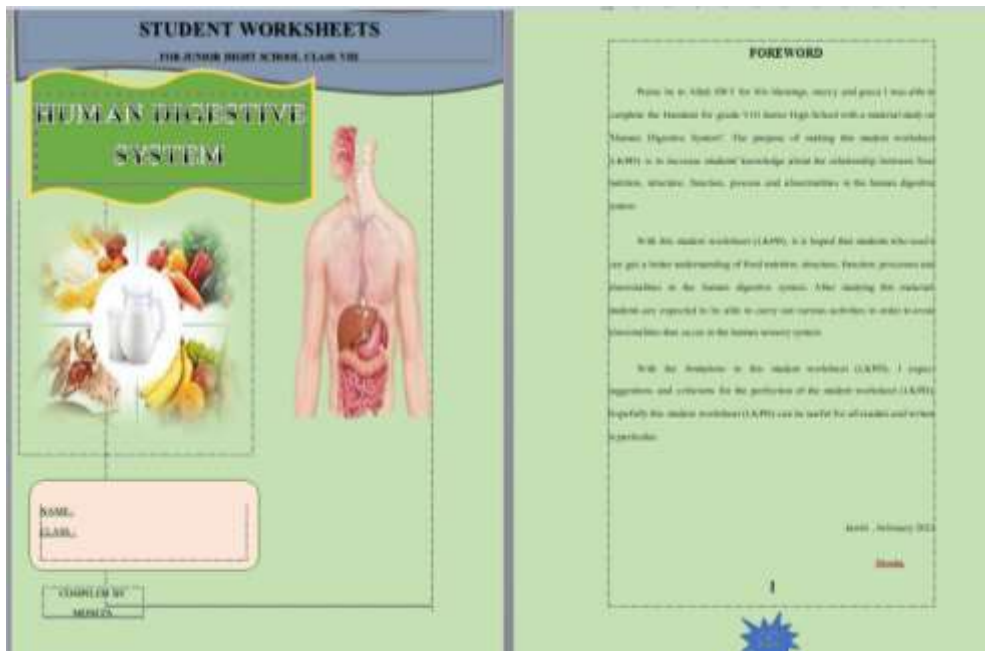


Figure 4. Student worksheet Form Opening Section



Figure 5. Form student worksheets Part Content



Figure 6. Form of student worksheets Content Section: Student Practicum Activities

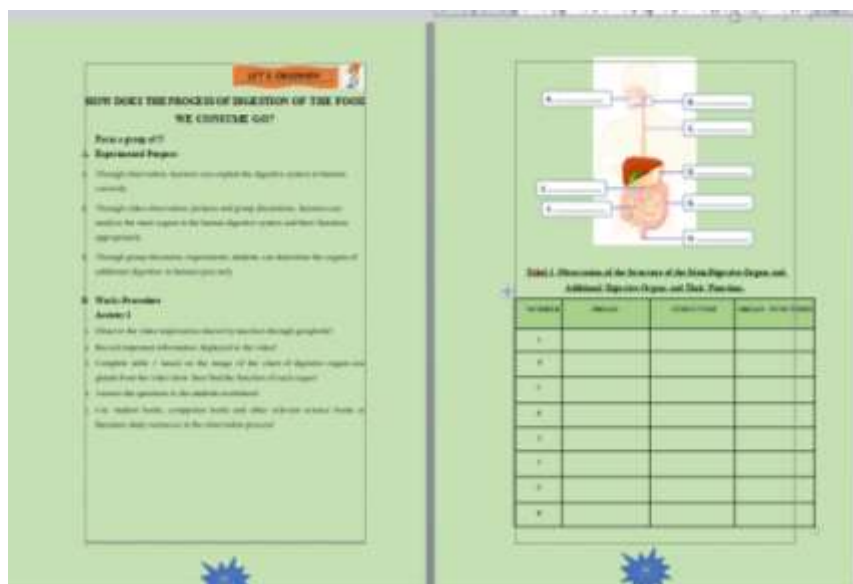


Figure 7. Form of student worksheets Content Section: Student Discussion Activities



Figure 8. Student Worksheets Shape Closing Part

3.3 Development

Material Expert Validation

Material validation was carried out by expert II. The results of validation by material experts can be seen in the following table:

Table 2. Material Expert validation results at each Stage

Questions/statements	Score					
	Phase 1	Information	Phase 2	Information	Phase 3	Information
The regularity of the arrangement of human digestive system material presented in the student worksheets of the human digestive system is in order	3	Less viable	4	proper	4	proper
The level of depth of elaboration of human digestive system material in student worksheets is in accordance with the characteristics of junior high school students	3	Less viable	4	proper	4	proper
The scope of the material in the question already represents every indicator of achievement in the basic competence of the digestive system material in humans	1	Very unworthy	2	Less viable	3	Less viable
The notation and symbols of science presented are correct and accurate in accordance with the field of science	2	Not worth it	3	Less viable	4	proper
The material in this student worksheets is in accordance with the latest developments in the field of science	2	Not worth it	3	Less viable	4	proper
This student worksheets has integrated the character value and science material	2	Not worth it	3	Less viable	4	proper
The attraction of presenting digestive system material in humans with images on human digestive system material in student worksheets	2	Not worth it	3	Less viable	4	proper
The questions given can train students to reach the cognitive level of C4-C6 level	2	Not worth it	4	proper	4	proper
Clarity and ease in the description of digestive system material in humans displayed in student worksheets	2	Not worth it	3	Less viable	3	Less viable

Questions/statements	Score					
	Phase 1	Information	Phase 2	Information	Phase 3	Information
The picture in student worksheets in visualizing the concept of science material and human digestive system material is good	2	Not worth it	4	proper	5	Very Worth It
The examples given can be a guide for students in answering questions in the student worksheets of the human digestive system	2	Not worth it	3	Less viable	4	proper
Questions given in student worksheets can increase students' knowledge	2	Not worth it	3	Less viable	4	proper
Sum	2,08	Not worth it	3,25	Less viable	3,92	Proper

In stage 1, all components in the students worksheet that have been developed still need to be improved in each indicator. Both from writing, images, material relations, language used, and so on. Therefore, improvements were made and then the second stage of validation was carried out.

The second stage of validation obtained results where there are still many improvements in the student worksheets that have been developed. These improvements include the need to add training questions or sample questions in students worksheet. Improvement of narrative in the delivery of material in students worksheet, improvement of inappropriate symbols. The addition of materials is still too little. The character value of the students worksheet nature has not yet been seen. Systematics of material that is not right, the images added are still too few and less interesting. There are still no questions and there are no discussion questions or idnidu for students. After doing the 2nd stage validation with bad points, then improvements were made to carry out the 3rd stage validation.

In the 3rd stage of validation, in the 3rd stage of validation, 3.92 points were obtained in the good category. This point is supported by the absence of much improvement. There is a slight improvement, namely in the addition of questions, and the systematization of the material is not good. However, expert validators have stated that the students worksheet material of the human digestive system is suitable for use. This result is in line with the research conducted by [16] where validation carried out with valid or good and very good results can mean that students worksheet can be continued for trial. In line with that, research conducted by [17] which obtained results that if students worksheet which has validation results in the good or very good category can be tested. The development of student worksheets can be integrated with a provide several projects that can be carried out by students, this can help or stimulate students' problem-solving skills or help hone student creativity [18].

Table 3. Advice given by validators to students worksheet

Suggestion
1. Adjust the preparation with the components that must be present in the students worksheet
2. Clarify and add more material in the form of images and videos
3. There is no soa in the students worksheet
4. Check again all notations and symbols
5. The material in students worksheet is still too little
6. There is no visible character value in students worksheet There is no visible character value in students worksheet
7. students worksheet is still not interesting, complete and add interesting material
8. No questions yet, add
9. Not yet systematic and not yet clear because the material is small
10. Images are still few and less interesting
11. There are no questions or student activities yet. Add.

Media Expert Validation

The results of validation by media experts can be seen in the table 4.

Media validation stage 1, in stage 1 validation almost all components in student worksheets need to be improved. In each indicator item there needs to be improvement, these improvements include the image is not appropriate, ha; the page presented is not coherent and still random, there is no integration between improving student character and the material contained in students worksheet. The images and text on each page are not yet appropriate to emphasize the material discussed. Transitions between pages have not been appropriate, the use of supporting icons and so on. The letters and sizes are not yet appropriate and need to be corrected. The image presented is less attractive because it has poor quality. The contrast of writing and bagroun is less smelly so that the writing is difficult to read. The colors used in student worksheet do not match the writing or collide. The rules used are not precise so that they are difficult for students to understand. And the instructions given are not quite right.

Media validation stage 2, in stage 2 media validation there are still many improvements in each indicator which is valued including: images are not in accordance with the material, page order is still not right, character values have not been well integrated in the developed student worksheet. The suitability of the image to the material is still not quite right. The balance of image and writing layout is still messy or inappropriate. The combination of writing and baground is still not right so that writing is difficult to read. Instructions for use poorly fitted.

Stage 3 media validation. After improvements were made from the results of stage 2 validation, then continued the 3rd stage validation. The results of the 3rd stage of validation are the approval of students worksheet for trial. The results of the 3rd stage of validation obtained results of 4.56 with a very good category. In other words, students worksheet material of the human digestive system has been worthy of being tested in schools. This is in accordance with research conducted [19] which states that good category can mean that the developed student worksheets can be tested. In accordance with research [20] where electronic worksheets are categorized as suitable for use both in terms of material and media used if good or very good results have been obtained.

Table 4. Media/stage validation points earning table

Questions/statements	Score					
	Phase 1	Information	Phase 2	Information	Phase 3	Information
Students worksheet uses images that match the subject matter	4	Less viable	4	proper	5	Very decent
The simplicity of the images in the students worksheet material is easy to understand	2	Less viable	3	Less viable	4	proper
Compatibility of page order in students worksheet	2	Sangat tidak layak	3	Less viable	4	proper
Integration of character values and learning materials	2	Not worth it	3	Less viable	5	Very decent
Images and text on each emphasis page	3	Not worth it	4	proper	5	Very decent
Continuity of transitions between pages in students worksheet	3	Not worth it	4	proper	4	proper
Suitability of the size and shape of the letters and titles of each page accordingly	3	Not worth it	4	proper	4	proper
The suitability of the image with the material that must be conveyed	2	Not worth it	3	Less viable	5	Very decent
Balance the layout of images and writing on each page in the students worksheet on the material	2	Not worth it	3	Less viable	5	Very decent
Interesting images used in students worksheet	3	Less viable	4	proper	5	Very decent
The combination of writing and background in students worksheet on the material has been balanced and interesting	2	Not worth it	3	Less viable	5	Very decent
The colors used in students	3	Less viable	5	Very decent	5	Very decent

Questions/statements	Score					
	Phase 1	Information	Phase 2	Information	Phase 3	Information
worksheet in the material of the human digestive system are interesting						
The color of the writing and the mere background are appropriate	4	proper	5	Very decent	4	proper
Images and text applied have emphasis	4	proper	5	Very decent	5	Very decent
Accuracy of sentence selection in students worksheet and Learning Program Plan	3	Less viable	4	proper	4	proper
The guidelines for using students worksheet in the material are appropriate	3	Less viable	3	Less viable	4	proper
Sum	2,8	Not worth it	3,75	Less viable	4,56	Very Worth It

Validation by media experts is carried out in 3 stages according to the suggestions and improvements made. Where at each stage can be seen in the table above. In general, the results at stage 1 obtained a result of 2.8 with sufficient category. Continued with the 2nd stage validation with points obtained of 3.75, this score is already in the good category but there are still some improvements. Therefore, stage 3 media validation is carried out. Where in the 3rd stage of validation obtained results of 4.5 with a very good category, so that the students worksheet that had been developed was declared feasible and could be tested. The improvements made in detail in each aspect can be seen through the table above. In line with that, research conducted by [20] which obtained results that if the worksheets of students who have validation results in the good or very good category can be tested.

Results of Teacher Responses

The results of the teacher response questionnaire can be seen in the following table.

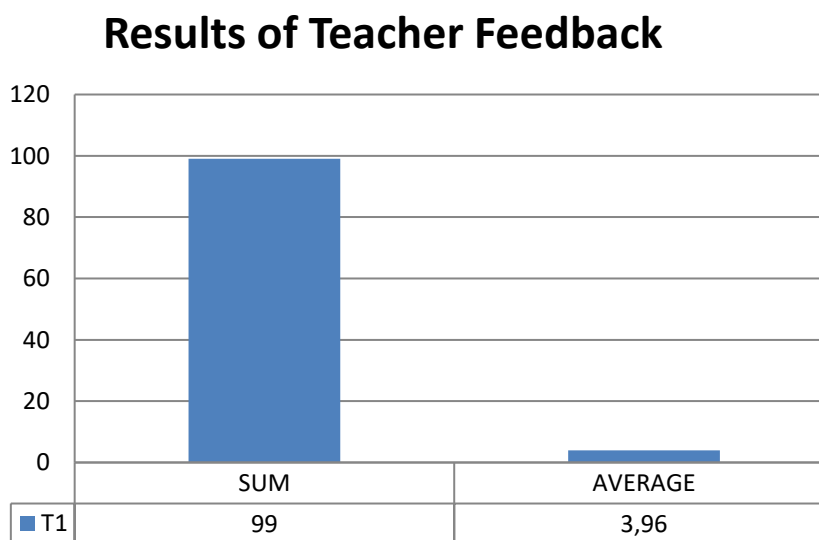


Figure 9. Results of Teachers' Responses to student worksheets.

Of the 25 questions / statements given, the results of the entire teacher's response to student worksheets were 3.96 where the results were in the Good category. In addition, teachers have agreed that the student worksheets developed can be tested on students.

Teachers are indispensable in teaching and learning activities in class. Apart from being the main source of information looking for learning materials, teachers are also expected to provide examples of good behavior. Teachers are required to have good character values in front of their students, this is because the interaction between teachers and students greatly affects students' assessment of teachers and the extent to which students will model the behavior and character of their teachers. As in research conducted [22] which states that

according to teachers, the values of honesty, discipline, curiosity, can be implicitly instilled when carrying out student activities. In conducting experiments, we must adhere to a step-by-step trial procedure (discipline and honesty), then at each step allow students to be curious about what happened or why it should be treated that way (curiosity). The value of curiosity and love to read can also be applied in every learning meeting, especially by using the Constructivist/K-13 learning approach.

3.4 Implementation

Student Response Questionnaire Results

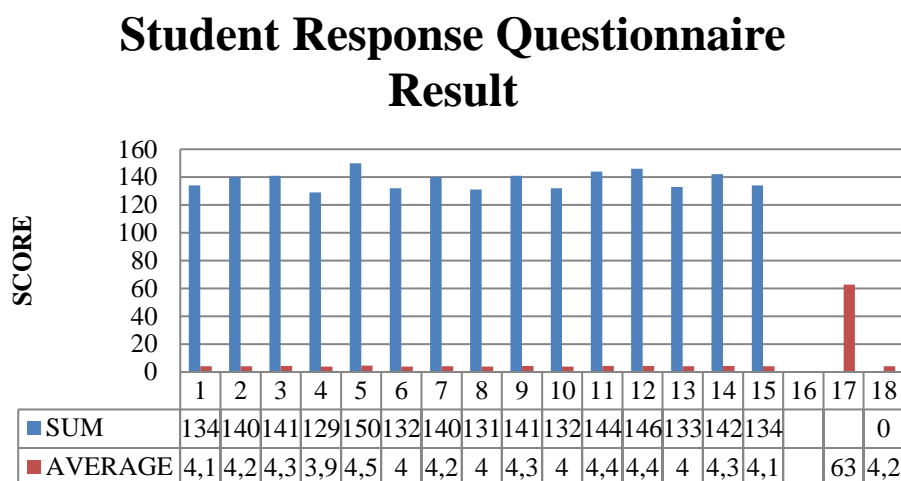


Figure 10. Results of student response questionnaire

It can be seen from Figure 10, that the student response questionnaire has very good criteria to be used as a learning medium. This can be seen from the average answer received by each question. Where in the Very Good category, namely at 63 points and an average of 4.2. This research is in line with the results obtained [17] where the learning process using students worksheet will increase student interest in learning which can be seen in excellent student responses. The use of student worksheets in the learning process is expected to facilitate teachers and support and encourage students to be able to think, analyze, and compile their own results from their activities with their abilities [23]

Results of Student Character Score Analysis

Student character can be known from the provision of student character questionnaires. Where questionnaires are given after students learn to use student worksheet that has been developed. The results of the questionnaire were obtained as table 5.

Tabel 5. Frequency of distribution of character points from each student

Score	Frequency	Category
21 - 24	1	Very unkind
25 - 28	4	Bad
29 - 32	10	Not good enough
33 - 36	13	Good
37 - 40	5	Very good

From the table above, it is known that there are some students who have low character scores, namely from the category of very never and never, which is as many as 5 people. While students who earn character points are enough or sometimes as many as 10 students. And students who earned points were once or well as many as 13 students. And the remaining 5 students get points often or always with very good categories.

Table 6. Student Character Questionnaire Point Distribution Table

Name	No Questions/Statements										Sum	Average
	1	2	3	4	5	6	7	8	9	10		
MA	3	3	3	3	3	3	3	3	3	3	30	3
RR	2	2	2	2	2	3	2	2	2	2	21	2.1
SV	2	3	3	3	3	3	2	3	2	2	26	2.6
MOM	4	4	3	2	3	3	4	4	3	4	34	3.4
SY	3	4	2	4	4	3	3	4	4	4	35	3.5
APS	4	4	4	4	4	4	4	4	4	4	40	4
KP	3	2	3	3	2	3	2	3	2	3	26	2.6
GV	4	4	2	4	4	4	4	4	3	4	37	3.7
EY	2	4	2	2	4	4	3	3	4	4	32	3.2
SS	3	4	2	3	4	4	4	4	3	4	35	3.5
NMA	3	2	4	3	2	3	2	4	1	2	26	2.6
MR	4	4	3	2	3	3	4	4	3	4	34	3.4
FB	4	4	2	3	2	3	2	4	4	4	32	3.2
GPK	2	4	3	4	4	4	4	4	4	3	36	3.6
JS	4	3	4	3	3	3	3	3	2	3	31	3.1
GK	4	4	2	3	4	3	4	4	4	4	36	3.6
DP	3	4	2	2	4	3	3	4	2	4	31	3.1
ACA	4	4	4	3	4	4	4	4	4	4	39	3.9
KME	3	4	2	2	4	4	4	4	4	4	35	3.5
GA	2	4	2	2	4	4	4	4	4	4	34	3.4
NAP	3	4	4	4	4	4	4	4	4	4	39	3.9
ADJ	4	4	4	4	4	4	4	4	4	4	40	4
EY	4	4	2	3	3	4	4	4	4	4	36	3.6
MSG	4	4	2	3	4	4	4	4	4	3	36	3.6
BNK	2	4	2	2	4	4	3	3	4	4	32	3.2
ALA	3	3	4	3	3	3	2	3	2	3	29	2.9
HSP	3	3	3	3	3	2	2	2	3	2	26	2.6
MRP	4	3	4	3	4	3	3	3	4	3	34	3.4
VP	4	4	2	2	3	3	4	4	4	4	34	3.4
YS	3	4	2	2	3	4	4	4	3	3	32	3.2
BE	3	4	2	2	4	3	4	3	4	3	32	3.2
JS	2	3	2	3	4	4	4	4	2	3	31	3.1
MAR	4	3	3	2	3	3	4	3	3	2	30	3
Sum	106	118	90	93	113	113	111	118	107	112		108.1
Average	3.2	3.6	2.7	2.8	3.4	3.4	3.4	3.6	3.2	3.4		3.2757576

As for question points no. 1 to no. 2 show religious character, points no. 3 to point no. 5 show the character of daring to argue, point no. 6 shows honest character, points no. 7 to 10 show honest and responsible character. [24] Gurel stated that the process of involving students in the learning process will certainly produce a conception that is different from the conception obtained without student participation.

Good character will greatly affect student involvement in classroom learning activities. In accordance with research conducted by [23] that character values can be instilled in learning. The character values that can be instilled in learning are as follows: honesty, discipline, cooperation, independence, democracy, independence, religion, responsibility, never give up, care, ability to manage time, love for the country, optimism and hard work. The presentation of teaching materials delivered by teachers in the learning process is in accordance with learning objectives. While learning outcomes are related to achievement in acquiring skills with certain goals that have been planned. So that students can implement the character values contained in the material delivered by the teacher in everyday life. It can be concluded that learning using science-minded character education learning modules with a Quantum learning approach can increase students' understanding of materials can also be applied in other materials, [25]. In line with that, Kustandi in his book states that the development of learning media is very important to support student learning activities which in the process of making can be adjusted to

the needs [26], [27]. In addition, student worksheets can help and facilitate teaching and learning activities so that interaction between students and educators can be formed and student activities can be formed in increasing interest in learning [28].

The author has succeeded in developing learning tools, especially student worksheets that are integrated with character values. Nowadays, the cultivation of character values needs to be done well in order to create a good next generation. The learning tools developed have been successfully completed to the trial stage. Where from the results of the trial, it was obtained that the learning tool can be used to improve the character scores of students who were previously fairly poor. In the end, character education in schools is very important to do because most of the students' time is spent in school, so the cultivation of good character will be very influential for the continuity of the student learning process [29], [30].

4. CONCLUSION

The development stage begins with conducting preliminary studies to find out the needs of students and teachers. After that, it is known that the availability of Students Worksheet is very lacking and needed. After that, the development of Students Worksheet was carried out on digestive system material in humans. Student Worksheets (LKPD) are validated by 2 validator lecturers. The two validator lecturers successively became material and media validator experts. In material validation, it is carried out in 3 stages where the score obtained in the last stage with the category "Good". Meanwhile, media expert validation is carried out in 3 stages with the final score obtained, namely with the category "Very Good". The results of the trial found that students of Junior high school 17 Jambi City, especially class VIII, had a good response to this liquid pressure Students Worksheet. This can be seen from the average score obtained by students against Students Worksheet learning with the "Good" category. Teacher responses to the development of integrated learning tools, character values are categorized as very good despite improvements at the beginning. The developed Students Worksheet is declared feasible and effective for use in learning activities because it can increase the value of student character.

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