

Development Of Students' Worksheet Oriented To Islamic Values Through Oncoming Material About Human Excretory

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Abstract

Teachers still employ irrelevant teaching material related to Islamic values during teaching and learning. They used the lecturing and question-and-answers methods. Thus, researchers developed teaching materials to make students happy and interested. This research entitled Development of Students' Worksheet (LKPD) Oriented to Islamic Values through Oncoming Material about Human Excretory System in Class VIII of Junior High School/ Islamic Junior High School (SMP/MTs) to know the students' responses to the work. The research problems were how to develop students' worksheets (LKPD) oriented to Islamic values through the oncoming material about the human excretory system and how the students' responses to LKPD that researchers made. This research was a development research that used the 4D research method. Products produced were categorized as valid not revised because of the validation of design to the tune of 78.12%, validation of subject matter experts to the tune of 70%, and subject matter from Islam experts to the tune of 80%. Meanwhile, the responses of 10 students indicated that four students were categorized as "worthy" to the tune of 94.44%, 83.33%, 100%, and 85.18%, while six students were classified as "quite worthy" with each percentage of 61.11%, 70.37%, 79.62%, 75.92%, 68.51%, and 75.92%.

Keywords: development of students' worksheet (LKPD), Islamic values

1. Introduction

Nowadays, students' learning material needs must follow current technology development, especially in technological availability, for instance, computers, LCD projectors, and adequate laboratory equipment. Many schools lack technological learning facilities; thus, the teaching materials remain in students' worksheets (LKS).

The learning activities using LKS teaching materials at Islamic Junior High School (MTs) Hidayatullah Mataram were less effective in engaging students during the learning process; many students were still passive. It was because the teacher acted as a facilitator during the classroom's teaching and learning activities. Teachers used more conventional methods in explaining science learning during the learning process.

To overcome this learning issue, innovative teaching materials are required to increase students' interest and motivation in the form of LKPD, containing relevant content to the development of education. This research employed problem-based student worksheets (LKPD). These students' worksheets are expected to develop knowledge through the problems given. With the problems, students are required to solve problems according to their knowledge (Wijayanti et al., 2019).

Therefore, researchers are interested in conducting research entitled Development of Students' Worksheets Oriented to Islamic Values on Excretory System Material, which

aims to determine the development of student worksheets (LKPD) oriented to religious values on excretory system material and to obtain student responses related to the LKPD development oriented to Islamic values on excretory system material.

2. Material and Method

This research design was *Research and Development*, which could be used to produce specific products and test the product’s effectiveness. The research model was the 4D model. The 4D development model consisted of four stages: *Define, Design, Develop, and Disseminate*.

At the *define* stage, the researchers collected information by interviewing students and natural science subject teachers at MTs Hidayatullah Mataram. In addition, the researchers should develop upcoming students’ worksheets (LKPD) at the *design* stage. This stage also included determining the appropriate problem-based learning method, the material to be developed in students’ worksheets, and the excretory system material for class VIII MTs. The development of students’ worksheets was oriented to Islamic religious values. Furthermore, at the *development* stage, the students’ worksheets to be developed were tested by media experts, 30 material experts, and religious experts aimed to produce student worksheets that had been revised based on experts’ input. The material and Islamic religious values tests consisted of lecturers and subject teachers. Then, the researcher made revisions according to the validators’ input.

Due to time and cost constraints, the researchers used three of four development stages in developing LKPD oriented to Islamic religious values through a problem-based learning approach on the excretory system material.

3. Results and Discussion

3.1 Results

The researcher compiled a student worksheet (LKPD) oriented to Islamic values on the excretory system material, which then was tested on validator experts, including media, material, and religious experts, and finally divided the students’ response instrument related to the student worksheet validated by the validator experts. The final validation results from the three validator experts can be seen in the table below:

Table 1
Validation Results

Assessment Aspects	Validator Assessment		
	Media Experts	Material Experts	Religious Experts
Content Quality	41	41	41
Appearance	28	22	31
Use of Letters and Spacing	16	16	19
Presentation	20	16	17
Language	20	17	20
Total	125	112	128

Percentage	$P = \frac{\sum X}{\sum X_1} 100\%$ $P = \frac{125}{160} 100\%$ $= 78,12\%$	$P = \frac{\sum X}{\sum X_1} 100\%$ $P = \frac{112}{160} 100\%$ $= 70\%$	$P = \frac{\sum X}{\sum X_1} 100\%$ $P = \frac{128}{160} 100\%$ $= 80\%$
Description	Valid 'Not Revised'	Valid 'Not Revised'	Valid 'Not Revised'

Based on Table 1 above, media, material, and religious experts provided scores on the feasibility test. The researcher obtained the criteria 'valid not revised' on final validation according to the three experts. The assessment results of teaching material experts in the form of LKPD were included in the criteria for LKPD, which was 48 valid (not revised) and could be used in the next test, i.e., determining students' responses. Each of the feasibility test results of the students' worksheet (LKPD) had its assessment details based on the results of the revisions until valid. In the feasibility test, the validators would fill out a questionnaire sheet where there were five assessment aspects on the questionnaire sheet. Then, from the five assessment aspects, some questions would be assessed by all validators and validators would fill out the questionnaire sheet. The media, material, and religious experts would use the same assessment aspects.

The details of the assessment from media, material, and religious experts and students' responses can be seen below:

1. Media Experts

Table 2
Media Expert Validation Results

Assessment Aspects	Validator Assessment		
	Validation 1	Validation 2	Validation 3
Content Quality	34	39	41
Appearance	9	18	28
Use of Letters and Spacing	7	9	16
Presentation	12	14	20
Language	15	15	20
Total	77	95	125
Percentage	$P = \frac{\sum X}{\sum X_1} 100\%$ $P = \frac{77}{160} 100\%$ $= 48,12\%$	$P = \frac{\sum X}{\sum X_1} 100\%$ $P = \frac{95}{160} 100\%$ $= 59,37\%$	$P = \frac{\sum X}{\sum X_1} 100\%$ $P = \frac{125}{160} 100\%$ $= 78,12\%$
Description	Quite Valid Revised	Quite Valid Revised	Valid 'Not Revised'

Table 2 emphasized that the media expert validator had revised three times to obtain valid results. In the first revision, the researchers obtained the criteria of "quite valid (revised)" 50 again. Then, the second revision obtained the criteria of "quite valid

(revised),” and the third revision obtained the criteria of “valid, not revised” again. Based on the results of the third validation, the LKPD prepared by the researchers was included in the LKPD, which was suitable for use as teaching materials, especially on the excretory system material.

2. Material Experts

Table 3
Material Expert Validation Results

Assessment Aspects	Validator Assessment	
	Validation 1	Validation 2
Content Quality	34	41
Appearance	16	22
Use of Letters and Spacing	13	16
Presentation	19	16
Language	12	17
Total	77	112
Percentage	$P = \frac{\sum X}{\sum X_1} 100 \%$ $P = \frac{94}{160} 100 \%$ = 58,75%	$P = \frac{\sum X}{\sum X_1} 100 \%$ $P = \frac{112}{160} 100 \%$ =70%
Description	Quite Valid Revised	Valid 'Not Revised'

Based on Table 3 above, the material expert conducted the assessment results. When the material expert was validating, the researchers revised twice to obtain appropriate results for seeing students’ responses. After all the values from the material expert were collected, the researchers then calculated the percentage score for the quality of each aspect of the student’s worksheets oriented to Islamic values through a problem-based learning approach on the excretory system material for class VIII MTs Hidayatullah Mataram using a *Likert scale*. Then, the assessment results were obtained with two revisions. At the first validation stage, the researcher obtained the criteria 52, “quite valid (revised)”, and at the second validation stage, the researcher obtained the criteria “valid not revised”. The results of the second revision stage reported that the LKPD prepared by the researcher was feasible to use as teaching materials, especially for the excretory system material.

3. Religious Experts

Table 4
Religious Expert Validation Results

Assessment Aspects	Validator Assessment
	Validation 1
Content Quality	41
Appearance	31
Use of Letters and Spacing	19
Presentation	17
Language	20
Total	128
Percentage	$P = \frac{\sum X}{\sum X_1} 100\%$ $P = \frac{160}{128} 100\%$ $= 80\%$
Description	Valid 'Not Revised'

Table 4 above displays the results of the assessment committed by the religious expert validator by filling out a questionnaire prepared by the researchers containing five aspects. Each aspect had questions that must be filled by the validator with a Likert scale option; it obtains the criteria "valid, not revised". Based on these results, the teaching materials in student worksheets oriented to Islamic values through a problem-based learning approach were also feasible for teaching materials, especially for the excretory system material.

4. Students' Responses

Table 5
Student Response Results

Assessment Aspects	Student Assessment									
	1	2	3	4	5	6	7	8	9	10
Material	9	9	12	14	11	12	9	15	13	12
Presentation	16	12	17	19	14	17	16	19	18	15
Language	8	17	14	18	16	16	12	20	15	15
Total	33	38	43	51	41	45	37	54	46	42

Based on the percentage of eligibility of the student responses above, out of 10 students who answered the questionnaire, four of their answer percentage results were included in the "very feasible" criteria, and six respondents whose answer percentage results were included in the "feasible" criteria. With these respondent results, the student worksheets were oriented towards Islamic values through a problem-based learning approach to the excretory system material. Notably, the LKPD developed by the

researchers had a high appeal for use in teaching and learning activities, especially in the excretory system material for class VIII at MTs Hidayatullah Mataram.

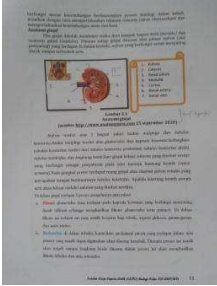
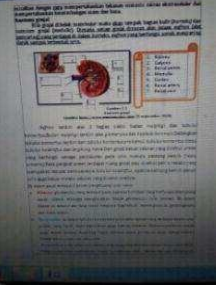
In the comments column on average, students comment that the presence of this LKPD can improve students' interest in learning. Moreover, there were pictures in each sub-material in this LKPD; thus, students were happier in learning because, with the pictures, students could directly see examples. Students also commented that the appearance of the LKPD was fascinating, assisting them to understand learning, making them happy with the discussion of the material in the LKPD, and facilitating them to easily understand the material presented. Indeed, people can recognize Allah's power from the existing material because it is associated with the Qur'an and hadith values. Besides, this LKPD could provide students with new knowledge. Some students also commented that students first did not understand the existing terms in the LKPD. Student 1 got a percentage of 61.11%, student 2 got 70.37%, student 3 got 79.62%, student 4 got 94.44%, student 5 got 75.92%, student 6 got 83.33%, student 7 got 68.51%, student 8 got 100%, student 9 got 85.18%, student 10 got 75.92% of 57 LKPDs, and some students firstly did not understand the LKPD concerned.

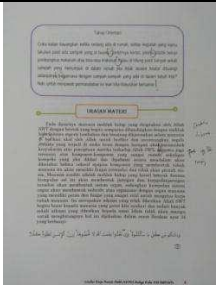
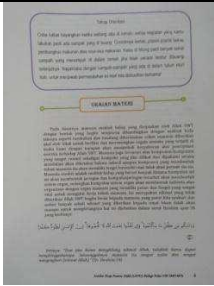
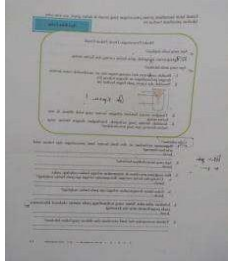
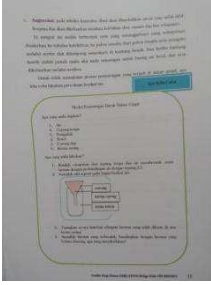
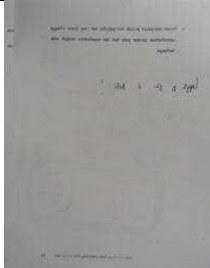
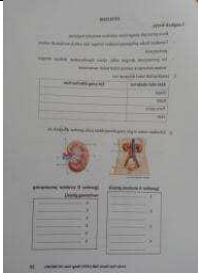
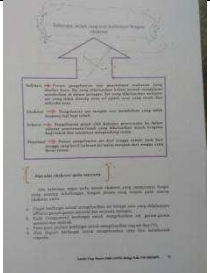
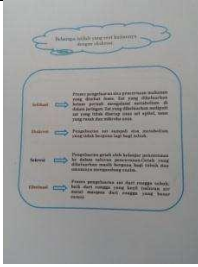
Product Revision

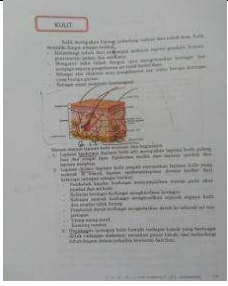

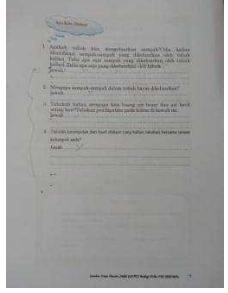
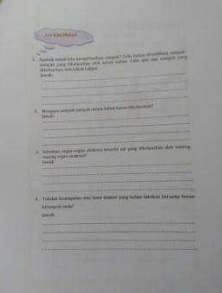
After assessing the validators' LKPD teaching materials, the researchers received criticism and suggestions from the three validators. Then, the researchers revised the teaching materials in the next stage. The results of the revision obtained by the researcher from the three validators can be seen as follows:

1. Media Expert Validator

Appearance before revision by the media expert

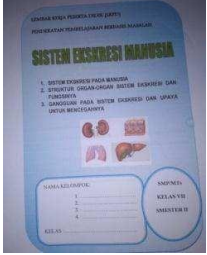

Before Revision	After Revision
 <p><i>Note:</i> The figure and caption position were arranged to be more attractive, and the caption size was reduced.</p>	 <p><i>Note:</i> The figure caption has been reduced and the figure position has been adjusted in the revised LKPD.</p>

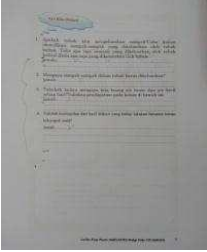

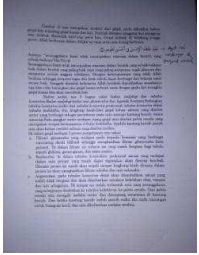
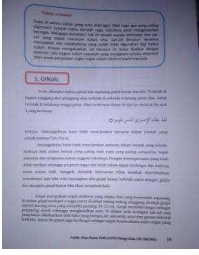
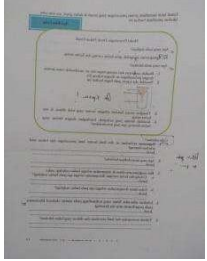
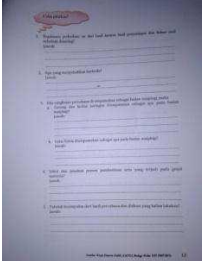
 <p><i>Note:</i> Create relevant values to the Islamic values on content and material and revise some typing errors.</p>	 <p><i>Note:</i> The relevant values have been added to the content and material, and some typing errors were also corrected in the revised LKPD.</p>
 <p><i>Note:</i> Create a complete experiment with precise figures accompanied by instructions following the development of science and technology.</p>	 <p><i>Note:</i> In the revised LKPD, the experiments made were precise with instructions in accordance with the development of science and technology.</p>
 <p><i>Note:</i> Create evaluation questions according to the indicators. Before the revision, there were no evaluation questions.</p>	 <p><i>Note:</i> The researcher has revised and created evaluation questions based on the indicators.</p>
	 <p><i>Note:</i> After being revised, the</p>

<p><i>Note:</i> LKPD was made more attractive by having a different appearance and font color.</p>	<p>LKPD was made with a more attractive appearance and different font colors.</p>
 <p><i>Note:</i> Essential terms in LKPD were distinguished by slashes or given a different color so that students could distinguish terms according to color.</p>	 <p><i>Note:</i> After being revised, the terms in the LKPD have been given different colors so that students can distinguish terms according to color.</p>
 <p><i>Note:</i> Create a more expansive answer space for students to answer questions.</p>	 <p><i>Note:</i> After being revised, the answer space for students was corrected.</p>

2. Material Experts

Before and after revision from the material expert

Before Revision	After Revision
 <p><i>Note:</i> Improve the cover design.</p>	 <p><i>Note:</i> After revision, the cover has been revised.</p>

Before Revision	After Revision
 <p><i>Note:</i> Improve the sentences and questions must be based on learning objectives.</p>	 <p><i>Note:</i> The sentences have been revised, and the questions were based on learning objectives.</p>
 <p><i>Note:</i> Verses on page 10 should be placed in the first paragraph.</p>	 <p><i>Note:</i> Verses on page 10 have been changed to the first paragraph.</p>
 <p><i>Note:</i> Questions about the structure, function, and process of urine formation must be made.</p>	 <p><i>Note:</i> Questions regarding the structure, function, and process of urine formation have been created.</p>

The results of the development obtained by the researchers in terms of display design were an attractive display, using a consistent format, equipped with figures and captions on each image clearly with a good design that could assist students in understanding and mastering the student worksheets.

In terms of material, LKPD was presented using a problem-based learning approach that was directly related to the problem-based learning approach, and the material presented was very systematic, which facilitated students to understand the material being studied. The language used in LKPD was easy to understand because the language used was comprehensive, communicative language, effective, and short sentences.

3.2 Discussion

During the validation of media experts, the researcher conducted validation three times to get results worthy of use as teaching materials. During the first validation, the researcher got an average value of 44.37% with a 'quite valid revised' statement. Furthermore, in the second validation, the researchers got a value of 59.37%, which is a 'quite valid revised' statement. Then, in the third validation, the researcher got an average value of 78.12% with a 'valid not revised' statement. The final results indicated that the teaching materials were feasible for use or testing on students.

However, the researchers validated the material expert twice to produce teaching materials that were suitable for use. In the first validation, the researcher got an average value of 56.87% with a 'quite valid revised' statement. After the researcher had revised, the researcher carried out a second validation and obtained 70%, with a 'valid not revised' statement based on the final results of the material expert. It emphasized that the LKPD was suitable for testing on students.

Meanwhile, in terms of the religious expert validator, the researchers validated once with an average value of 80% with a 'valid not revised' statement. Hence, the LKPD could be tested on students.

During the product trial, the students' responses were limited to 10 students. Then, the results revealed that the percentage of 10 students, four students obtained a 'worthy' percentage (94.44%, 83.33%, 100%, and 85.18%). In comparison, respondents who were included in the 'quite worthy' criteria were six students, obtaining percentages including 61.11%, 70.37%, 79.62%, 75.92%, 68.51%, and 75.92%. The results were 'worthy' because students were interested in the LKPD that had been developed and had an attractive appearance. The material presented was explicit and easy to understand, and the figures in the LKPD help students in learning.

Conclusion

The students' responses obtained a score of 10 students. Four students gave a percentage of "worthy" (94.44%, 83.33%, 100%, 70, and 85.18%), while respondents who were included in the "quite worthy" criteria were six students whose percentages included 61.11%, 70.37%, 79.62%, 75.92%, 68.51%, and 75.92%. Hence, the students' worksheet oriented to Islamic values through a problem-based learning approach on the excretory system material for eighth-grade students of SMP/MTs was attractive to use in the learning process.

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