

BUKTI KORESPONDENSI

Judul Artikel: The Development of Natural science Learning Material Integrated with Islamic Values to Attract Santris'
Interest in Learning the Human Digestive System

➤ **Submission (3 Juni 2018)**



ICONSME 2018 submission 22

1 pesan

Dari: ICONSME 2018 <iconsme2018@easychair.org>

Kepada: Umi Farliah <u_farliah@yahoo.com>

Terkirim: Minggu, 3 Juni 2018 pukul 02.44.16 WIB

Judul: ICONSME 2018 submission 22

Dear authors,

We received your paper:

Authors : Umi Farliah and Dimas Dinar Septiadl

Title : THE DEVELOPMENT OF NATURAL SCIENCE LEARNING MATERIAL INTEGRATED WITH ISLAMIC VALUES

Number : 22

The paper was submitted by Umi Farliah

Thank you for submitting to ICONSME 2018.

Best regards,
EasyChair for ICONSME 2018.

➤ LoA (7 Juni 2018)



Announcement ICONSME 2018 (LOA)

1 pesan

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Terkirim: Kamis, 7 Juni 2018 pukul 14.47.51 WIB

Judul: Announcement ICONSME 2018 (LOA)

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Dr. Dwi Wahyuni, M.Kes
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LoA-ICONSME 018-22.pdf
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The First International Conference on
Natural Science, Mathematics, and Education (ICONSME 2018)
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Jember, June 7, 2018

Notification of Acceptance of the ICONSME 2018

Dear Umi Fariyah

Paper Id: ICONSME 018-22, Paper Title: The Development Of Natural Science Learning Material Integrated With Islamic Values On The Topic Of The Human Digestive System

Congratulations! Based on the recommendations of the reviewers and the Program Committee, we are pleased to inform you that your paper identified above has been accepted for **oral** presentation. You are cordially invited to present the paper orally at ICONSME-2018 which will be held on July 07-08, 2018, Jember, East Java Indonesia.

Please prepare your manuscript and send your full paper to us through the easychair system or send directly to the email: iconsme.fkip@unej.ac.id by 16 – 30 June 2018. Please notify the following important dates.

1.	Notification of Acceptance Payment for Early Bird Payment for Standard	5 – 15 June 2018 (5 – 14 June 2018) (15 – 30 June 2018)
2.	Manuscript Submission for Conference	16 – 30 June 2018
3.	Conference Date	07– 08 June 2018
4.	Paper Submission for Publication	20 July 2018
5.	Notification of Acceptance	31 August 2018
6.	Camera Ready for Publication	20 September 2018

Registration Fee

Category	Early bird registration (5 – 14 June 2018)	Standard registration (15 – 30 June 2018)
International Standard Presenter	US\$ 200	US\$ 250
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Dr. Dwi Wahyuni, M.Kes

➤ Review (26 September 2018)



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Number : 01/UN25.3/FKIP/ICONSME/I/2018
Subject : IJET Publication

26th September 2018

Umi Farihah
State Islamic Institute of Jember

Paper ID : ICONSME - 22
Title : The Development of Natural Science Learning Material Integrated with Islamic Values on The Topic of the Human Digestive System

Dear Authors,

Thank you for participating in the International Conference of Natural Sciences, Mathematics, and Education. I am very delighted to say that the conference has been successfully held. Following your paper which you have submitted to the ICONSME 2018 and also based on the review results of your paper, I am pleased to inform you that your paper is potentially to be published in the **International Journal of Engineering and Technology (IJET): Science Publishing (UAE) (Indexed by Scopus)**, with the following conditions.

1. Please kindly revise your paper based on the feedback given by the reviewer as attached in the email.
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REVIEW FORM CONTENT

Paper ID : Iconsme - 22

Paper Title : The Development of Natural Science Learning Material Integrated with Islamic Values on The Topic of the Human Digestive System

	Clear	Partially	Not Clear
----- The title reflects the content and purpose of the research -----	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
----- The abstract contains summarize of the paper content -----	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
----- The introduction clearly explains state of the art of research -----	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
----- The novelty is clearly defined -----	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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----- The methodology is clearly described -----	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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----- The conclusion answered the problem in the research -----	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Evaluation:

- The article can be published as it is
- The article can be published after some minor revision.
- The article must undergo a major revision before it can be resubmitted to the journal.
- The article cannot be published.



REFEREE REPORT

Title	Please revise the title to make it more appealing, e.g by including what the students' problem was and How did you try to provide solution to the problem (e.g. why including Islamic Values in the materials, etc)
Abstract	
Introduction	There has no strong link between the problem that you said happened to your students with regard to Physics and the solution that you offer. Please refocus and strengthen the link.
Methodology	Please elaborate and clarify the stages of research that you did.
Result and Discussion	The results contained a lot of information from the literature (although not clearly marked, please refine these parts and add your sources) with no apparent links with your actual findings from the field. Please revise and clarify. Also some other parts have not been linked to the existing literature. Please revise
Conclusion	It is not clear if the materials developed had answered the problems that were raised at the beginning of your paper. Please clarify the link.
References	Please add more current publications in your references (within 5 years)



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Paper ID : I c o n s m e - 2 2

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Rate the paper based on these following details with 3 categories (yes, partially, and no).

	Yes	Partially	No
1. Has this paper showcased effective sentence formation? -----	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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(Please mention the paper's strengths and weaknesses with regards to the language elements of it. Please also make constructive suggestions to address the weaknesses).

The ideas presented in this paper are arranged orderly. Sentences are quite easy to understand. However, author/s need/s to be careful with the sentence formation and tenses. The most apparent errors are in form of missing subjects and verbs. Authors need to be extra careful when



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deciding if a noun phrase needs to be a subject or an object of preposition. The incorrect use of tenses also dominates the work. Verbs that need to be written in past forms are still written in their base form. Some sentences are too long that they become confusing to readers. It is highly suggested that authors rephrase the sentence. One of the ways is through breaking down the sentence into several sentences.



The Development of Natural Science Learning Material Integrated with Islamic Values on The Topic of The Human Digestive System

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Abstract

This research aims to produce Natural Science Learning Material based on Ploomp Theory for Junior high School Students'. The learning material in this research is a book which is integrated with islamic values and satisfies validity, practicality, and effectivity. Besides, the researchers also convince that those criterias, validity, practicality and reliability, appropriate with students' answer test. The subjects of this research was 15 of eighth grade students of Madrasah Tsanawiyah (MTs) Darul Hidayah Wuluhan Jember, east Java Indonesia. The methodology on this research is adapted from Ploomp Theory. The product validity of this learning material can be shown by the expert validity and it is said valid for both the book and the test sheet. The practicality of the book must reach very practical criteria. This is based on how practical teacher teaches the material and students in studying the material. The effectivity of the product can be shown by the attitude in learning activities, the cognitive skill, and well skilled in psychomotor. The learning material can be said valid because the validators said that those instruments are valid. Validator scored the learning material (book) as 3.3 (4 scale), and test sheet as 3.58. Hence, those learning materials can be said valid. Secondly, the learning materials also called practical because the validators said that the book can be used with minor revision and students' activities while they learn shows well. The learning materials called effective as well, because satisfied two indicators of effectivity, which are students' response about learning activity is positive with 82.21% students answered so, and the result of the test said valid with minimal 0.73 and reliable with 0.57.

Keywords: Developmental research, Islamic values, Natural sciences learning material.

1. Introduction

Education is one of the national development sectors in an effort to educate the life of the nation in order to produce quality human beings. According to UU No 20 year 2003 on National Education System, qualified human beings are defined as an educated human beings who are faithful and devoted to God, have a noble character, healthy, knowledgeable, capable, creative, independent, and become democratic citizens and responsible. Through learning activities, national education is expected can be used optimally to build the a nation and people character.

A component that plays imprtant roles is learning material. Hence, teacher must be able to prepare and design a well-structured learning (includes learning materials) so that learning can be focused on students' activities. [1] states that during the learning process, learning problem mostly relates to learning materialand learning resources. Moreover, he states that students have different leaning experience which will be used to support the learning activities. However, for students who have less experience related to the material to be studied will face problems in learning, especially regard to readiness to learn. This applies to all subjects including natural sciences subject.

Natural science is one of the fields that has an important role both in school and in everyday life. The usefulness and benefits of studying natural science can be felt in many ways. But in fact,

natural sciences is still a lesson that is considered difficult by students MTs Darul Hidayah, Wuluhan Jember, east Java Indonesia. Based on preliminary interviews with one of the teachers at the school, she stated that the average score of student at their final report in even semester is quite low, especially in natural science lesson. It is around 6.51. The average score for this natural science lesson is low compared to the score of other subjects. The result of preliminary observation showed that students at MTs Darul Hidayah Wuluhan Jember, east Java Indonesia are less motivated to study natural science. Most of the students who studied at MTs Darul Hidayah are santri so that they prefer to study all things relates to Islamic to general subject (includes natural sciences subject). Furthermore, teachers tend to buy teaching materials in the form of students worksheet which is hoped that teacher will get benefits and bonuses from the seller, regardless of the content of teaching materials. This suggests that natural science teachers in schools are less creative in developing teaching materials especially that integrate natural science and Islamic values.

One of the students, named Romi said that he was not ready to study natural science, he was bored in learning natural science, he said that textbooks and students worksheet less interesting, then it makes him unable to understand the material. Related to this, we need some improvement, both from learning process and the availability of learning resources for students which interest-

ing by integrating Islamic values and natural science, so that the results obtained **is** better.

Teachers' ability in designing or arranging materials or teaching materials becomes one of the things that play an important role in determining the success of students learning activities. Therefore, teacher, as presenter of the material, should be able to choose a method or approach which is appropriate to the conditions of the students' ability in the class, **includes** the suitability in developing the teaching materials by integrating science and Islamic values to support the learning activities. According to [2], there are several things teachers need to do with the availability of teaching materials, (1) providing various examples and representations of student learning materials, (2) encouraging high levels of interaction in the learning process, (3) linking subject matter with the real world. The material that has been developed can be organized into teaching materials to make it easier for students to learn it.

Related to that, the availability of teaching materials is needed to support the learning process and improve students' learning achievement, **one of them by** applying meaningful learning. In textbooks, meaningful learning can be applied by asking some questions which links the students' knowledge with the material **will be learned**. In reality, however, the availability of meaningful textbooks, which **integrating** science and Islamic values, and supporting the achievement of science learning objectives in accordance with curriculum demands, target characteristics, and problem-solving demands especially in junior secondary schools **is** still limited or even **is** not available.

Similarly, most of **teacher** still used textbooks that emphasize more on the subject matter and set of questions which **is** used as exercises. It influences the way of teacher in transferring the material, which **is tend** to be teacher-centered learning, whereas it has been described in Permendikbud No. 68 year 2013 [3], that teachers are suggested to use scientific approach, **the students** learn every subject actively looking for their own concept about the subjects or in other words learning which emphasizes student activeness (students-centered). In addition, students faced difficulty in mastering the material which **was** learned, both from cognitive aspect or soft skill aspect.

Teachers should be able to prepare natural sciences teaching materials **in** which **contains** the activities and able to choose strategies and approaches to learn in accordance with the conditions in the school by integrating science and Islamic values, so that students will experience more meaningful learning and reach good outcomes. Learning activities both in classroom and the learning materials should be linked to students' daily life and designed as fun activities as possible for students, so that learning activities experienced by students will be more meaningful to them. In order to make learning activity to be fun, new concepts or information must be linked to existing concepts in the student's cognitive structure. According to [4], the knowledge already possessed by students will determine the success or failure of a learning process.

In the learning activities, **includes** natural science learning, if teachers can associate the material discussed with the condition of students, whether the hobby or the needs of students, cognitive development, daily environment, and stock that has been owned by students, it will have a positive impact for students **which is students felt** that their science concept learned is meaningful. [5] suggests that knowing the relevance of the material that has been learned with everyday life can provoke learners' curiosity to learn well so as to improve their learning achievement. This learning can be applied through the use of contextual problems as a bridge of students' understanding of science, because the use of contextual problems is a concept of learning that assumes that children will learn better if the environment is created naturally, **the meaning** of learning will be more meaningful if children "work" and "experience" **itself** what they learn, not just "knowing" it.

Based on the description of the facts of the problem, the researcher will conduct developmental research to produce teaching materials for students at MTs Darul Hidayah Wuluhan Jember,

er, east Java Indonesia which integrate science and Islamic values in order to overcome the problems in natural science learning. **The title** of the research that **will be** conducted by the researcher is "the development of natural science learning material integrated with islamic values on the topic of the human digestive system"

2. Methodology

The type of research that **will be** conducted **is** research and development (R & D) because researchers **develop** natural science teaching materials that integrate the Islamic values. R & D is a research method undertaken to produce a particular product and test the effectiveness of the product used to anticipate problems in education [6]. The development of natural science teaching materials in junior high school class VIII integrated with Islamic values **is** based on Plomp Theory. **In** this research, the researcher **modifies** the development of Plomp model into 4 phases, which **are**: (1) initial investigation phase, (2) design phase, (3) phase of realization / construction, and (4) test phase, evaluation, and revision. The object of this research **is** the teaching materials of natural science in the form of modules / teaching materials integrated with the values of Islamic values on the human digestive system. The subjects in this study were students MTs Yayasan Pondok Pesantren Darul Hidayah Wuluhan Jember, east Java Indonesia as many as 15 students and science teachers in the class.

3. Results and Discussion

3.1. The Result of Preliminary Investigation Phase

In this phase, researchers identified and assessed the curriculum 2013 for natural science subjects, then did student analysis, material analysis, and task analysis. The results of the initial investigation are as follows.

3.1.1 Curriculum Analysis

The curriculum used in the development of learning material refers to the curriculum 2013. Based on Permendikbud No 68 year 2013, it is mentioned that learning is designed to follow the four core competencies. These four core competencies include the spiritual, social, knowledge, and skills aspects. Curriculum 2013 also used scientific approach which includes observing, Questioning, Experimenting, Associating, and Communicating. Based on curriculum 2013, students are expected to master the skills such as observing, asking, reasoning, trying, making hypotheses and proving, furthermore the ability to write coherently based on fact or phenomenon is required. **So**, it **takes natural science** must facilitate students to think critically and creatively and to know directly its integration in the science of Islamic religion.

3.1.2 Students Analysis

Analysis of students **aims** to examine the character of students at MTs Darul Hidayah Wuluhan Jember, east Java Indonesia especially class VIII-A academic year 2017-2018. Data about these students **obtained** by interviews with natural science teacher namely **Muflikhah, S. Pd.** Student analysis **includes** background knowledge, cognitive development, and learning characteristics in the classroom. From the analysis results obtained the findings **as follows**.

1) Students' Knowledge Background

Students have learned human digestive system in the previous level but still limited to basic knowledge. Therefore, the problems contained in the Textbook/module **are** constructed to make students build their own knowledge at the human digestive sys-

tem main material by linking the initial knowledge that students **have**.

2) **The cognitive development of students**

The students of MTs Darul Hidayah Wuluhan Jember, east Java Indonesia class **are** 13-14 years old. Piaget assumes that at that age a child has entered the formal operation stage so that the student has been considered capable enough to use logic and reasoning. At that stage, students have been able to think abstractly, they are no longer dependent on the **immediate or real**. Therefore, it is possible that students at this stage are able to complete more systematic abstract tasks. Based on the level of cognitive development of students it is **possible students** can complete a series of tasks well.

3) **Characteristics of learning in the classroom**

Students at VIII-A **have** heterogeneous understanding and knowledge about natural sciences. Students Grade VIII-A **consist** of 15 students and **can be** classified into high, medium, and low-ability students based on the score of natural science subject in their previous daily test in the material before. Based on the results of interviews with natural science teachers in class VIII-A also **obtained** the following results.

- a) Teachers **are** not accustomed to teach by using scientific approach. She used **commonly** learning methods (teacher centered method).
- b) Student learning resources mostly **comes** from student handbooks and notes from teachers.
- c) Students' understanding about the human digestive system material **tends** to be low, especially which **has** to be integrated to Islamic value.
- d) Students' understanding related to natural science or applied science related to Islam **is still lack**, so they **do** not know the link between the two clumps of science.

Based on the analysis, the researchers **argue** that it **is** necessary to develop natural science teaching materials integrated Islamic values, especially on the material of the human digestive system

3.1.3 **Material Analysis**

Material analysis aimed to identify, and arrange the material systematically especially in the human digestive system main material. The development of teaching materials must follow the concept of scientific approach, integration with Islamic values, and content material in the curriculum 2013. **Main competencies**, basic competencies, and indicators for human digestive system materials in grade VIII SMP are presented in Table 1 as follows.

Table 1: The Analysis of Material at Human Digestive System

Main competencies	Basic competencies	Indicators
3. Understanding and implementing knowledge (factual, conceptual, and prosedural) based on students' curiosity in natural science, technology, related culture and art happened in real life.	3.6 Describe human digestive system and its relation with another human system like respiratory system, blood vessel system, and the usage food energy.	<ul style="list-style-type: none"> • States the types of nutritions • Explain the usage of nutrition based on its types • Explain the structure of human digestive system • Explain the function of human digestive system organ • Explain all kind of human digestive system problem
4. Processing, the serving, and	4.6 investigating the mechanical hu-	<ul style="list-style-type: none"> • Differentiate the mechanic human

Main competencies	Basic competencies	Indicators
giving concrete aspect (by using breaking down, arranging, modifying, and making) and abstract aspect (by using writing, reading, calculating, drawing, and arranging) based on what they learned at school and another resource which has the same theory.	man digestive system and chemist human digestive of food	digestive system and chemist human digestive system <ul style="list-style-type: none"> • Proof the type of food based on its type of nutrition.



3.2. **The result of Designing Phase**

Preliminary design in developing this learning tool **is** the **making natural** science teaching materials integrated with Islamic values which **relates** to human digestive system and **consist** of Textbook / Module, and Test of Learning Result (THB).

Furthermore, **it** is also designed the instruments needed in the study, **include** validation material/ module validation sheet (validity), practicality **can be** seen from student activity observation sheet and effectiveness instrument (seen from the result of student learning and response). In general, the results of this design phase are as follows.

3.2.1 **The design of learning aids**

1) **Integrated Instructional Materials (Integrated Modules)**

The developed teaching material **is** a series of activities in the form of theory, practical guides, and problems that **are** developed with the aim of helping students find their own knowledge. In the teaching **materials are** also equipped with questions that **help** students improve their knowledge in studying the material.

2) **The result of Learning Result (THB)**

The developed THB **is** a series of questions used to measure student learning outcomes. The developed test form **is** a multiple choice of 8 and a description of two items. The time available to complete the test **is** 60 minutes. THB preparation process **is** done with attention to each indicator of achievement of learning outcomes.

3) **Design of Research Instruments**

- a) Natural science teaching material validation sheet

The validation sheet **includes** an integrated piece of validated teaching material with an Islamic value, and a THB validity sheet. Both validation sheets **are** revised based on discussions with supervisors. The validation sheet **is** given to several experts with each expertise in their field sciences. The experts **include** 1 religious expert who **focuses** on the integration of Islamic values with science, 1 biologist who **focuses** on material content, 1 health biologist and practitioner who **focuses** on biological cases, 1 biology education expert who **highlights** the **problem obedience** of teaching materials.

- b) Student Activity Sheet

Student activity observation sheets were adapted from Lestari [7] with modifications in accordance with research objectives. Then it **revised** based on discussions with supervisors, especially **in several categories of student activities matched** to the purpose of research.

c) Student Response Questionnaire

The student response questionnaires were adapted from Lestari by revising the statement points that were adapted to the application of natural science integrated with Islamic values. The student response questionnaire consists of 9 items of statements, containing 4 items of favorable statements and 5 unfavorable statements. There are two choices answer for each statement, i.e. Yes and No.

3.3. The Result of Realization Phase

The result of this phase is natural science learning material integrated with Islamic values on the topic of human digestive system for grade VIII Junior High School (MTs), student activity observation sheet, response questionnaire, and Learning Outcome Tests (THB). The learning media resulted from this phase is called prototype 1. In addition, it is also designed the necessary instruments for another activity, i.e validation sheet. Prototype 1 and research instruments will be discussed with research team for improvement until a prototype was ready for trial.

Bahan-bahan pokok ini berfungsi sebagai sumber karbohidrat yang merupakan pemasok energi utama tubuh manusi. Selain itu, berbagai jenis buah-buahan dan sayuran sebagai sumber vitamin dan mineral juga tumbuh subur di sekitar kita.

Makanan merupakan sumber energi utama bagi makhluk hidup, tanpa makanan yang masuk ke dalam tubuh, manusia dapat mati karena tidak punya energi untuk bertahan hidup. Coba pikirkan apa yang akan terjadi jika kamu tidak makan selama sehari saja? Tentu tubuhmu akan lemas dan tidak berenergi. Begitu penting peran makanan, oleh karena itu kita harus

Sebagai peserta didik yang belajar IPA kamu juga harus tahu bagaimana makanan-makanan tersebut dicerna dalam tubuhmu serta apa saja makanan yang baik untuk tubuhmu. Untuk mengetahui semua itu,ayo kita pelajari materi ini dengan cermat.

Fig. 1: Islamic Values 1 Integrated with Natural Science

Moslem Corner

Marasmus yaitu suatu kondisi serius malnutrisi kekurangan kalori dan protein, diabetes militus yaitu gangguan metabolisme karbohidrat, serta laktose intolerance yaitu gangguan metabolisme laktosa karena difisiensi enzim laktase.

Untuk menghindari dari penyakit tersebut maka telah diperingatkan olah Allah dalam surat Thaha ayat 81 yaitu:

كُلُوا مِنْ رِزْقِنَا مَا نُنزِّلُكُمْ وَلَا تُضِلُّوا رِزْقِنَا بِالْجَنَاحِ الْعَظِيمِ (الأنعام)

"Makanlah di antara rezeki yang baik yang telah Kami berikan kepadamu, dan janganlah melampaui batas padanya, yang menyebabkan kemurkaan-Ku menimpamu"

Fig. 2: Islamic Values 2 Integrated with Natural Science

Mari Uji Makanan Kita

Tujuan umum kegiatan uji coba zat makanan adalah kalian dapat mengidentifikasi zat makanan yang terdapat di dalam berbagai bahan makanan yang telah ditentukan. Selanjutnya melakukan uji zat-zat makanan terhadap berbagai bahan makanan secara rinci

A. Alat dan Bahan:

Bahan

1. Reagen (lugol, biuret, benedict)
2. Bahan makanan yang ingin di uji (nasi putih, kentang, singkong, kuring telur, minyak, margarin, tahu, tempe, dll)

Alat :

1. Penjepi tabung reaksi
2. Pipet tetes
3. Lumpang porselin
4. Tabung reaksi
5. Pemes/pisau
6. Bunsen burner

Fig. 3: Feature Design on the Learning Media 1

and Nutrition.

Techno Corner

Protein sel tunggal, biasa dikenal dengan PST, merupakan produk pengembangan bahan makanan berkadar protein tinggi yang berasal dari mikroba melalui mekanisme bioteknologi. Istilah protein sel tunggal (PST) digunakan untuk membedakan bahwa protein sel tunggal berasal dari mikro organisme bersel tunggal atau banyak. Sejarah penggunaan protein sel tunggal secara komersial dimulai pada era Perang Dunia pertama di negara Jerman dengan memproduksi khamir torula. Kelebihan PST adalah sebagai berikut laju pertumbuhan sangat cepat yaitu dalam ukuran jam dan masih bisa ditingkatkan lagi, dapat menggunakan bermacam-macam media atau substrat, produksi PST tidak bergantung iklim dan musim, dan memiliki kandungan protein lebih tinggi daripada hewan dan tumbuhan.

Fig. 4: Feature Design on the Learning Media 2

3.4. The Result of Test, Evaluation, and Revision Phase

There are two results of this phase, i.e. the results of learning media validation and the results of learning media tests. The result of validation analysis done by the supervisor is used to know whether or not to use teaching materials or to know the category of validity and revise the teaching materials that will be used in the trial. While the results of the analysis of trial data in the form of data about the effectiveness of these teaching materials will be used to revise the teaching materials that have been used in the trial to produce a good teaching material, called the final teaching material / final prototype that is ready to be implemented. The resulting developments that we got, evaluated, and revised are made as follows.

3.4.1. Test Result Data

The data obtained through the learning result test (THB) was analyzed to check whether the developed THB **has met** the requirements of validity, and reliability. The process of calculating the analyzes **is more fully** attached.

1) Validity Item Problem

The result of THB item validity analysis is presented in table 2 below

Table 2: The validity of The Test

Question's number	Validity Coefficient	Validity Category
1	0.48	Medium
2	0.63	High
3	0.9	Very High
4	0.7	High
5	0.74	High
6	0.63	High
7	0.8	Very High
8	0.59	Medium
9	0.91	Very High
10	0.9	Very High

Based on the criteria of the validity of the items that have been specified, an item is determined to be valid if the validity coefficient is more than 0.4 or at least in the medium category. The **result** of the analysis **shows** that the validity of the item **is** included in the category of medium, high or very high so that the THB item **can be said** to be valid and **can** be used to assess the students' success in following the learning by using IPA teaching materials integrated with Islamic values.

2) Reliability of Problem Item

According to the reliability coefficient calculation procedure of the test, the results obtained from the calculation of the reliability coefficient **item of 0.57**. Based on the criteria of reliability of the items that have been set, test results are reliable if the coefficient of reliability is more than equal to 0.40 or at least are in the medium category.

The **result** of the analysis **shows** that the reliability of the item **is** included in the high category so that the THB item **can be said** to be reliable and **can** be used to assess the students' success in following the learning by using IPA teaching materials integrated with Islamic values.

3.4.2. Students' Activity Data

The result of student activity data in learning by using IPA teaching materials integrated with Islamic values during two meetings obtained result that time used by student to do every activity at first meeting in accordance with percentage of ideal time which is designated with tolerance 10% so that student activity in learn-

ing The integrated science of Islamic values on the topic of the digestive system in the trial class at the first meeting **is said** to be good. In addition, the time students used to conduct each activity at the second meeting was also in accordance with the ideal percentage of planned time with a tolerance of 10% so that student activity in science learning integrated the Islamic values on the topic of the digestive system in the trial class at the second meeting **is said** to be good.

The **result** of student activity analysis showed that the students activity for 2 meetings was in accordance with ideal time percentage which was planned with 10% tolerance. **So** based on the category of student activity that **has** been determined, student activity as a whole **is** good.

3.4.3. Students' Response Data

The results of questionnaire to students at the end of the learning activities that **aims** to collect information about student responses

to science teaching materials integrated with Islamic values and cooperative learning activities with a scientific approach. Based on the available data, the average percentage of students who responded positively was 82.21%. Based on predetermined criteria **can be said** that the student's response to learning **is** positive.

3.4.4. Achievement of Natural Science Teaching Materials Integrated with Islamic Values

The criteria of IPA teaching materials integrated with good Islamic values **are** teaching materials developed based on learning device development procedures **that suitable** with the categories, valid, and effective. Validity of teaching materials **are** viewed from the supervisor assessment results. The effectiveness of teaching materials **is** seen from the results of the learning outcome tests. Achievement of these criteria can be seen in the following table.

Table 3: Learning Aids Criteria Achievement

Number	Category	Explanation
1	Expert's validation of learning device (Validity)	Valid
2	Learning outcome tests (Effectiveness)	Valid, Reliable
3	Student's response	Positive
4	Student's activity	Good

1) Validity of learning aids

Learning devices **are said** to be valid because it **has been declared** valid by the supervisor. According to the average supervisor scores **obtained** the criteria score of all aspects for teaching materials **is** 3.3; and for THB **is** 3.58. **So** the two devices can be said to be valid.

2) Practicallity of learning aids

Learning devices **are** said to be practical because the experts (supervisor) say the device **can be used** with a little revision and student's activity **indicates** the good category.

3) The effectiveness of learning aids

Learning devices **are** said to be effective because they **have met** the two predefined effectiveness indicators; the student's response **to positive learning** where the minimum percentage of all statements **is** 82.21% and the TBH result **meets** the valid criteria with at least $r_{xy} = 0.73$; and reliable with the value of $\alpha = 0.57$.

Based on these data, the developed teaching materials **meet** the valid, practical and effective criteria so that it **can be** said that the teaching materials of IPA integrated Islamic values **is** good.

4. Conclusion

Based on the results of data analysis and discussion of research results development of natural science teaching materials integrated the Islamic values on human digestive system material, **obtained** the following conclusions:

- The process of developing natural science teaching materials integrated in Islamic values on the human digestive system material in this study uses a development model of Plomp which consists of five phases. However, in this study only limited to the fourth phase. The four phases are as follows.
 - Preliminary Investigation Phase
In this phase, identification and assessment of natural science curriculum, student analysis, and analysis of natural science materials are **used** identifying, detailing and systematically preparing the main parts of the lesson
 - Design Phase
In this phase, natural science materials are designed to integrate Islamic values on human digestive system

materials including integrated learning materials and THB. In addition, there are also designed research instruments that include validation of teaching materials, student activity observation sheets, and student response questionnaires.

c. Realization Phase

In this phase, natural science teaching materials are integrated into Islamic values on the human digestive system material called prototype 1.

d. Test, Evaluation, and Revision Phase

In this phase validation of learning devices, revisions, and prototype trials are performed to produce a good learning device, which meets valid, practical, and effective categories.



2. The resulting learning device is said to be good. This is because the learning device have been developed based on the learning device development procedure and meet the three predefined categories.

a. Validity of learning device.

Learning devices are said to be valid because it has been declared valid by the validator. According to the average validator scores obtained the criteria score of all aspects for teaching materials is 3.3; and for THB is 3.58. So the two devices can be said to be valid.

b. Practicality of learning device.

Learning devices are said to be practical because the experts (validators) say the device can be used with a little revision and student activity indicates the good category.

c. The effectiveness of learning device.

Learning devices are said to be effective because they have met the two predefined effectivity indicators, the student's response to positive learning where the minimum percentage of all statements is 82.21% and the TBH result meets the valid criteria with at least $r_{xy} = 0.73$; and reliable with the value of $\alpha = 0.57$.

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The development of natural science learning material integrated with islamic values to attract santris' interest in learning the human digestive system

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