Development Of The Islamic And Muhammadiyah Module Of Integration K13 Supplement At SD/ MI Muhammadiyah

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Abstract: Muhammadiyah Schools must have distinctive features that distinguish them from other schools. The distinguishing characteristic should be something of a positive nature so that it can make Muhammadiyah schools become excellent schools as mandated in the progressive educational interpretation. This should apply to all Muhammadiyah schools including Primary School or Madrasah Ibtidaiyah Muhammadiyah as the first and main formal education level. Thus SD / MI Muhammadiyah need to have distinguishing characteristics with other schools. Distinguishing features that can be the availability of teaching materials that are able to integrate the values of Islamic and Muhammadiyah in a various fields of study including mathematics. So this research is aimed to develop teaching materials in the form of integration module of ke-Islam and ke-Muhammadiyah value on mathematics material of data processing chapter. This study is a developmental study by modifying Borg & Gall (1985) development steps into steps that include: (1) Need Analysis; (2) Module Design; (3) Module Development; (4) Products / Outputs. The results show that module development steps can produce ready-to-use modules in Primary School or Madrasah Ibtidaiyah Muhammadiyah in East Java or Indonesia.

Keyword: Module, 2013 Curriculum, Muhammadiyah SD/MI.
Preleminary

Primary Education is the lowest level of formal education which forms the basis of capacity building from the next level of education (Ministry of National Education, online). Basic education allows students to obtain certain skills that are useful for development in the next period. As well as preparing students who meet the requirements to attend secondary level education. "(Ministry of National Education, online). Education should be able to optimize student competencies so as to realize national education goals, namely educating the life of a progressing nation. This is in line with the views of PP Muhammadiyah (2014: 47) which states that "National education that has been in force so far must be reconstructed into an enlightening education system, with a vision of the formation of devoted, noble, and progressive human learners."

The practical steps that can be taken is to integrate Ke-Islaman dan ke-Muhammadiyahan values in each learning activity, including the teaching materials used. In Muhammadiyah schools, Ke-Islaman dan ke-Muhammadiyahan must also be a special feature, including in the Elementary Schools and Madrasah Ibtidaiyah Muhammadiyah. So the learning program must be rooted in Ke-Islaman dan ke-Muhammadiyahan. In any applicable curriculum, including in the 2013 curriculum, Ke-Islaman dan ke-Muhammadiyahan values must be an integral part. Because what has been done so far is not the case.

Teaching Ke-Islaman dan ke-Muhammadiyahan tends to separate from other subjects. This also happened in the teaching of this material in Class IV. This is known from the results of interviews with Bambang Widiasro, Majelis Dikdasmen Daerah Muhammadiyah Tulungagung stated "Ke-Islaman dan ke-Muhammadiyahan materials are taught separately from general material. There is a 2013 Curriculum Supplement for SD/MI Muhammadiyah, but the supplement has not yet integrated Ke-Islaman dan ke-Muhammadiyahan". Interviews with 3 Muhammadiyah Elementary School Principals from two Districts namely Tulungagung and Ponorogo and interviews with 7 Class IV teachers from 6 Districts in East Java showed relatively similar opinions. The teachers gave a positive response if there were supplements that integrated Ke-Islaman dan ke-Muhammadiyahan values in general subjects. This condition illustrates that SD/MI Muhammadiyah in Indonesia needs supplements to integrate Ke-Islaman dan ke-Muhammadiyahan institutions in learning in the 2013
curriculum. And in integrating halite it is necessary to do this through research.

Research on module development, Muhammadiyah teacher competence, integration of Islamic values in learning and scientific concepts have been carried out by several previous researchers. The research by Wahyuni, S & Chamisijatin, L (online) in 2015 was a qualitative research on scientific concepts in thematic learning at Muhammadiyah Elementary School Malang. While the research conducted by Wahyuni, S & Chamisijatin, L (online) provides information that changes in curriculum can be responded quickly by teachers at Muhammadiyah schools. As for Maryani & Ismaniati (2015) doing research with the title Development of Thematic-Integrative RPP Preparation Module Based on Character Building as Elementary Learning Materials for Elementary Teachers. Whereas Misbahul Munir conducted research under the title Islamic Values in the Thematic Teaching Material for My Healthy and Nutritious Food: A Concept of Integrative Learning in Islamic Madrasas.

Previous researchers have conducted research on module development, Muhammadiyah teacher competencies, integration of Islamic values in competitive learning and concepts, but module development research has not been carried out that integrates Islamic values and Muhammadiyahan as a 2013 curriculum supplement. So it needs to be done the research entitled "Development of Integrative Ke-Islaman and Ke-Muhammadiyahan Modules as K13 Supplements in Muhammadiyah Elementary Schools/MI in East Java". Islamic material integrated in this module is Islamic material in semester II, which is orderly reading and writing, noble character (generous, help, effort). Integration of Islamic values is presented in the section; 1) material and activities; 2) evaluation and; 3) formative tests. The material for Muhammadiyahan are: 1) da'wah movement amar ma'ruf nahi munkar; 2) the characteristics of the Muhammadiyah movement: familiarizing life with help, the spirit of learning through recording as a mandate of Surat Al-Alaq. The integration of Muhammadiyah material appears in the sections: 1) material and activities; 2) evaluation and; 3) formative tests. This study aims to identify the steps to develop Integrative Ke-Islaman and Ke-Muhammadiyahan modules as K13 supplements for SD / MI in East Java.
Method

The research design used was a modification of the research design development of Borg & Gall (1985) which consisted of steps: (1) research and data collection through surveys, (2) planning, (3) initial prototype development, (4) initial testing limited, (5) product revisions, (6) field tests, (7) product revisions based on input from the field, (8) broader operational tests, (9) final product revisions, and (10) dissemination and distribution. Modifications to the development steps of Borg & Gall (1985) above are carried out with steps that include: (1) Need Analysis (2) Module Design; (3) Module Development; (4) Products / Outputs.

Need analysis in this study is a term used by researchers to state research and data collection through surveys. Module design is another term used by researchers to state planning. Development is a combination of various steps, namely: (1) development of the initial prototype, (2) limited initial testing, (3) product revision, (4) field testing, (5) product revision based on input from the field, (6) operational testing on a scale wider. Output / Product is: (1) final product revision; (2) dissemination and distribution. So that the output / product can be used on a wide scale. However, dissemination is not carried out because of limited time and available.

The study was conducted at the SD/MI Muhammadiyah in East Java with the following conditions. Analysis needs to be done in the preliminary study. Preliminary studies were conducted in SD/MI in 6 districts in East Java. The study was conducted at 4 schools in three residences in East Java. The school was SD Muhammadiyah 2 Tulungagung, MI Muhammadiyah Plus Suwaru Bandung Tulungagung, SD Muhammadiyah Ponorogo, and SD Muhammadiyah 08 Dau Malang. SD Muhammadiyah 2 Tulungagung and MI Muhammadiyah Plus Suwaru Bandung Tulungagung were at the Kediri Residency. SD Muhammadiyah Ponorogo was in the residency of Madiun. Whereas SD Muhammadiyah 08 Dau Malang is in Malang residency. The data collection in this study uses several methods, including interviews, content analysis, questionnaires, and tests.

Data from the evaluation of the components and subcomponents of the ke-Islaman dan ke-Muhammadiyahan integrated modules as a 2013 Curriculum supplement were developed and
analyzed descriptively. Determination of criteria for product feasibility and revision are as shown in Table 1 below.

Table 1 Criteria for Product Feasibility and Revision Levels

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,26 - 4,00</td>
<td>Very feasible, no need to be revised</td>
</tr>
<tr>
<td>2,51 - 3,25</td>
<td>Worthy, it doesn't need to be revised</td>
</tr>
<tr>
<td>1,76 - 2,50</td>
<td>Less feasible, it needs to be revised</td>
</tr>
<tr>
<td>1,00 - 1,75</td>
<td>Very inappropriate, it needs to be revised</td>
</tr>
</tbody>
</table>

(Source: Adnyana, 2004)

To find out the effectiveness of the product as an action on the small and wide scale field trials used the formulaized Gain Score (Yuliati, et al. 2006). The Digitized Gain Score formula is as follows.

\[
\langle g \rangle = \frac{\% \langle G \rangle}{\% \langle G \rangle_{\text{max}}} \\
\langle g \rangle = \left( \frac{\% \langle S_f \rangle - \% \langle S_i \rangle}{100\% - \% \langle S_i \rangle} \right)
\]

Description:

\( \langle g \rangle \) is the normalized gain score

\( S_f \) is the post test average score

\( S_i \) is the average pre test score

The normalized score gain \( \langle g \rangle \) is a suitable method for analyzing results before development and after module development. The normalized score gain \( \langle g \rangle \) is also a better indicator in showing the effectiveness of the treatment than the score obtained after development. The normalized gain score acquisition level is categorized into three categories, namely:

- **G - high**: with \( \langle g \rangle > 0,7 \)
- **G - middle**: with \( 0,7 \geq \langle g \rangle \geq 0,3 \)
- **G - low**: with \( \langle g \rangle < 0,3 \)
The formula for determining values in the range 0-100 uses the formula proposed by Arifin (2011: 232)

\[ S = \frac{B}{N} \times 100 \]

Description:
B = number of correct answers
N = number of questions
S = score

Criteria values in the range 0 - 100 refer to the opinion of Uno (2012)

<table>
<thead>
<tr>
<th>Value Criteria</th>
<th>Value Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>91 – 100</td>
</tr>
<tr>
<td>Well</td>
<td>76 – 90</td>
</tr>
<tr>
<td>Enough</td>
<td>61 – 75</td>
</tr>
<tr>
<td>Is being</td>
<td>51 – 60</td>
</tr>
<tr>
<td>Less</td>
<td>50 – lower</td>
</tr>
</tbody>
</table>

Research result

The results of this study indicate that the general steps of module development are as follows: 1) do Need Analysis, 2) conduct research, 3) develop products, 4) produce output in the form of modules.

Do Need Analysis

In Need Analysis there are 4 phases, namely planing, collecting data, data analysis, and Final Report. In the first phase, planing was reviewed and examined the targets studied, analysis strategies and participants. The targets examined in this study were students and teachers of the Muhammadiyah Elementary School / MI in East Java. The strategy used is interview, content analysis (analysis of student books in Curriculum 2013). Analysis in this phase is done by analyzing the results of interviews, content analysis (analysis of student books in Curriculum 2013). Participants in this study were students in Class IV Semester II at Muhammadiyah Primary Schools / MI in several districts in East Java. The SD / MI studied were MI / SD who
were in the Madiun Residency, Malang Residency, and Kediri Residency.

The second phase in Need Analysis is collecting data, the phase consists of two, namely determining the number of subjects studied and determining the research schedule. In this phase this is done by matching the data in the student's book with the applicable syllabus. In addition, interviews with teachers and elementary / MI Muhammadiyah students and the books used were related to book layout, book content, instruction in books, learning activities, evaluation, difficulty level of the questions, and language used. The third phase in Need Analysis is data analysis. In this phase the data obtained from phases 1 and 2 are analyzed. If the student book that is used now is as expected, it does not need to be supplemented. But if a student's book has deficiencies, it needs to be improved, and if you need supplements, you need a supplement. Based on the above process, information was obtained that needed student book supplements that integrate ke-Islaman dan ke-Muhammadiyahan values.

The fourth phase in Need Analysis is the final report which in detail will describe the objectives of module preparation, module preparation process, module draft, and module preparation steps.

Module Design

In the module design steps, a study of 4 key preparation materials is carried out: 1) Determining the characteristics of the learner. Characteristics of learners refer to the characteristics of students and elementary school teachers, the type of language used, the level of difficulty of the questions, so that modules are designed according to the characteristics of learners, 2) Determine learning objectives, 3) Select learning strategies, in this case consider what content and skills are low expected so that the selection of learning strategies used is appropriate, 4) Determining evaluation procedures.

Module Development

Module development is carried out by steps: Review of Literature, Drafting, Expert Validation, Revision, Product Testing, Revision, Dissemination. Literature review is conducted so that researchers have sufficient knowledge based on the existing literature. Drafting is a product design that will be made. After the drafting process, expert validation is carried out so that the product gets input. The input obtained is used for the product revision process before
being tested on a small scale. Small-scale trials will get information about the quality of products so that revisions can be made if needed. Because in practice, it is very possible that there are aspects that must be revised. After the second revision process is complete, the product can be disseminated so that after dissemination, the product is ready to be used on a wide scale. If in this study the product produced is a Module as a supplement to the 2013 Curriculum, then this module can be used in schools.

**Output / Product Research**

The output / product in this study is a mathematical module of data processing material that integrates *ke-Islaman* and *ke-Muhammadiyahan* values in all parts of the module. In addition, this study can also produce 2 scientific articles, namely articles about: 1) identification of steps to develop modules; 2) analysis of integration of *ke-Islaman* and *ke-Muhammadiyahan* values in mathematics learning for elementary school students in Grade IV. In addition, modules and articles can be submitted to obtain intellectual property rights (HKI). Outputs in the form of modules can also be published in book form that can be marketed on a broad scale.

**Discuss**

**Need Analysis**

Need Analysis in this research includes 4 phases, namely planing, collecting data, data analysis, and Final Report. This refers to the theory put forward by Morison, G.R. (eds). (2001: 30) which states that analysis needs can be done through planing, collecting data, data analysis, and Final Report. The targets studied in this study were students and teachers of the Muhammadiyah SD/MI in East Java. Because this research produces mathematical modules that are expected to be used in mathematics learning as a 2013 curriculum supplement. So that teachers and students who are asked for opinions on supplements are needed. Because teachers and students have an interest in the availability of teaching materials.

The strategy used is interview, content analysis (analysis of student books in Curriculum 2013). Analysis in this phase is done by analyzing the results of interviews, content analysis (analysis of student books in Curriculum 2013). Interviews about teaching materials needed in learning are carried out to teachers. Because teachers have sufficient knowledge and experience as practitioners in the
implementation of the 2013 curriculum. But how is the layout, font shape, paper type, paper size, attractiveness of instructional materials asked to students. Because students who will use teaching materials so students who should be asked for information about it. The findings obtained were that students wanted teaching materials with many images, the pictures were colored, the paper was not opaque paper, A4 sized paper, the writing was not monotonous.

The content analysis was carried out by researchers by comparing the existing teaching materials with the 2013 curriculum content. The findings obtained were that the teaching materials in the form of books already contained complete material. The pictures contained in the book were also good and colorful. But the scientific process has not been explicitly facilitated in textbooks. So that teaching materials are needed to facilitate students to take a scientific approach. In addition, mathematics textbooks only contain mathematics material, there is no component that facilitates students to form better characters.

The information obtained, can be the basis for compiling teaching materials in the form of mathematics learning modules that allow students to find many color images, colorful fonts, clean paper, suitable paper sizes, load material according to the curriculum and use a scientific approach. These components form the basis of the initial drafting of the module. Sufficient information is needed to find potential that may be developed from existing problems. This is in line with Sugiono's opinion (2016: 300) which states "After the potential and problems can be shown in factual and up to date, then further information needs to be collected that can be used as material for planning certain products that are expected to solve the problem."

**Initial Draft Module**

The resulting product is a module that allows students to learn independently or classically. The components in this module are two parts. The first part is the introduction, which contains core Competencies, Indicators, and instructions for using the module. The second part is Chapter on the module. In each chapter there are 7 components, namely: 1) introduction; 2) student materials and activities; 3) evaluation; 4) summary; 5) feedback; 6) answer key; 7) assessment and follow-up.
Modules are in the form of printed teaching materials consisting of 5 chapters. In Chapter I - Chapter V, each contains the following material: 1) presents data collection material; 2) presenting data in table form; 3) reading and interpreting data in table form, 4) making bar charts; 5) reading and interpreting bar charts. In the module section there is an introduction that contains basic competencies, indicators, module components, and module usage instructions. This module is equipped with color images that are relevant to the theme being discussed. The images also aim to attract students' attention and help communicate the ideas of researchers with students in understanding the module. In the material and activities section of students, scientific steps are presented as stipulated in the 2013 curriculum.

Expert Validation

The results of expert and practitioner Validation can be used as material to revise before the module is tested on a small scale. This is in accordance with Sugiono's opinion (2016: 302) which states "Validation of design is an activity process to assess whether the product design is rationally effective. It is said rationally, because validation is still an evaluation based on rational thinking, not yet the fact of the field."

The results obtained indicate that the percentage value for the module is 91, 55 and is included in the excellent category. And the module average value is 3.66 which means that the module is **very good and does not need to be revised**. Although the results of the assessment for modules are in a very good category, the suggestions and input of experts and practitioners are still used by researchers to improve the module so that the module can be used for testing on a small scale. This is in accordance with Sugiono's opinion (2016: 302) which states that "After product design is validated through discussions with experts and other experts, the weaknesses can be identified. These weaknesses are then tried to be reduced by improving the design."

The errors and shortcomings that arise are: 1) Writing and spelling errors; 2) consistency in using the term *sodaqoh*; 3) the suitability of the title and contents of the column; 4) exploration that needs to be stronger; 5) checking the number of groups entitled to receive zakat; 6) clearer instructions for using the module; 7) availability of places that allow students to record important things in
the module; 8) a more dancing cover design; 9) scientific activities of the question need to be more divergent; 10) integration of ke-Islaman and ke-Muhammadiyahan values must be more coherent. This deficiency was corrected before a small-scale module was tested.

**Revision Based on Expert Input**

Revisions to modules are carried out by steps: 1) Checking and improving writing and spelling procedures; 2) Consistent in using the term sodaqoh; 3) Adjust the title of the column and table; 4) More explorative in presenting the problem; 5) The type of group entitled to receive zakat is stated as many as 8 according to the provisions; 6) Modules are equipped with instructions for use at the beginning of the module; 7) Empty space is provided by printing the module not back and forth; 8) The color of the cover is originally yellow, replaced with green, the writing is also sharper; 9) The scientific step asks to allow students making questions free from the readings provided; 10) Integration of ke-Islaman and ke-Muhammadiyahan values in the material sought to be coherent. Results of validation Experts and practitioners do provide very feasible assessments and do not need to be revised in the module. However, a record of the 6 validators when collected is an important entry for the module revision process.

**Small Scale Trial**

Based on the results obtained from the four instruments used in small-scale trials in this study, information can be obtained that:

1. Mathematical material that is processing data presented in this module can help students learn. Modules can increase the value of students, which can be shown by the average mathematical value that increases. Module effectiveness in mathematical material based on the results on the gain score also shows that, this module is included in the high category. The results of the tests indicate that the average score obtained by students at pre-test and post-test is 92.93 and 98.99 respectively. This shows that in the results of the pretest and post-math test, the student scores are very high. The results of the pre test showed very high results because this material had been taught before hand so students did not have difficulty in completing the tests given. The post test results also showed that the post-test average was also in a very high category. If the pre-test and post-test averages are compared, it appears that there is an increase in the average value of 6.06 points.
2. *Ke-Islamaman* and *ke-Muhammadiyahan* values that are integrated into mathematical material in modules can improve students' ability to integrate these values. This can be seen from the average increase obtained at 3.54 from before and after the use of the module. The gain score results indicate that module effectiveness is in the medium category. This data also shows that students actually have the ability to implement these values in life even though they are not taught at school. And the use of teaching materials in the form of modules that integrate those values, can improve students' ability to integrate their religious understanding in other fields.

3. The results of the assessment of students and teachers indicate that the module is categorized as good and feasible to use without revision. But there are some parts of the module that are given enough value by students, namely drawing attractiveness, ease in understanding the introduction, ease in understanding scientific activities, and the attractiveness of the drawings in the module. So that these components need to be revised so that the module has better quality. Values that have not been classified as good can be a clue to making revisions.

**Revision Based on Small Scale Test Results**

Revisions made based on small scale test results are: 1) The picture on the cover is clarified. The top title on the cover was changed to "Mathematical Module: Integration of *Ke-Islamaman* and *ke-Muhammadiyahan". In addition, the cover also includes a description of "Class IV Semester II" so that it is clear who can use it; 2) The introduction to the initial part of the module is completed with instructions for using the module in more detail; 3) Color images are added to the parts needed to make the module more interesting. For example, in Chapter II a picture of money, fruit and drinks was added to illustrate the type of sodaqoh issued by the worshipers of the mosque; 4) The language used is sought to be adjusted to the level of thinking of grade IV elementary school students; 5) Scientific steps to associate and communicate plus more detailed and detailed information.

**Large-Trial Scale / Dissemination**

Large-scale trials are carried out after modules that have been tested on a small scale are revised. This is in accordance with Sugiono's opinion (2016: 310) which states "After testing of the
product is successful and there may be a revision, then the product can be applied to a broad scope and assessed the shortcomings and obstacles that arise for further improvement. Based on the results obtained from the four instruments used in the large-scale trial in this study, information can be obtained that:

1. Mathematical material that is processing data presented in this module can help students learn. Modules can increase the value of students, which can be shown by the average mathematical value that increases, from 89.73 to 96.39. Module effectiveness in mathematical material based on the results on the gain score also shows that, this module belongs to the medium category

2. *Ke-Islaman* and *ke-Muhammadiyahan* values that are integrated into mathematical material in modules can improve students' ability to integrate these values. This can be seen from the increase in the average obtained before and after the use of the module, which is 64.06 to 79.32. The gain score results indicate that module effectiveness is in the medium category. This data also shows that students actually have the ability to implement these values in life even though they are not taught at school. And the use of teaching materials in the form of modules that integrate those values, can improve students' ability to integrate their religious understanding in other fields.

3. The results of the student assessment indicate that the module is categorized as good and feasible to use without revision. The results of the teacher's assessment indicate that the categories are very feasible and can be used without revision. All module components are assessed well by the teacher. Even on some items the teacher gives a very good value. Items that are considered very good include: 1) ease in understanding the introduction; 2) ease of reading the table of contents; 3) ease in participating in trying activities; 4) ease in participating in socialization activities; 5) suitability of the answer key; 6) ease in completing formative tests; 7) suitability of the image with the theme discussed. This very high assessment is one indicator that modulini has advantages in these aspects.

**Conclusion**

Modules are developed through steps: analysis needs, module design, module development, and outputs in the form of these modules can be used in Muhammadiyah SD/MI in East Java or in Indonesia. Because the results obtained in this study indicate that both in small
and wide-scale trials, the modules were declared feasible for use in mathematics learning at Muhammadiyah SD/MI. This research is only limited to the integration of _ke-Islaman_ and _ke-Muhammadiyahan_ values in mathematics subjects in data processing material. So that researchers consider it necessary to provide recommendations, among others: the next researcher can conduct research by integrating _ke-Islaman_ and _ke-Muhammadiyahan_ values on mathematics subjects in addition, subtraction, multiplication, division, fraction, decimal, and other mathematical material. In addition, integration of _ke-Islaman_ and _ke-Muhammadiyahan_ values can also be carried out on teaching material in other subjects, both thematic and non thematic teaching materials.

**Daftar Pustaka**


