THE DEVELOPMENT OF SCIENCE TEACHING MATERIAL BASED ON AL-QUR'AN IN SECOND THEME AND FIRST SUB THEME FOR FOURTH GRADE IN ISLAMIC ELEMENTARY SCHOOL OF AS SALAM MALANG

THESIS

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June, 2016

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iii

Alhamdulillahi robbil alamin hamdan Syukron lillah giving thanks gratitude from the bottom of my heart deepest ever sailed the fruit of my work simple.

I dedicate this modest work to: Father and Mother beloved (Sutarno and Umi haniín) who always guided me, counseled and give their affection to me that there was no incessantly.

Always pray for me in every night with full sincerity.

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MOTTO

هُوَ الَّذِي جَعَلَ الشَّمْسَ ضِيَاءً وَالْقَمَرَ نُورًا وَقَدَّرَهُ مَنَازِلَ لِتَعْلَمُوا عَدَدَ السِّنِينَ وَالْجِسَابَ أَ مَا خَلَقَ اللهُ اللهُ ذَٰلِكَ إِلَّا بِالْحُقِّ أَ يُفَصِّلُ الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ (٥) إِنَّ فِي اخْتِلافِ الْلَيْلِ وَالنَّهَارِ وَمَا خَلَقَ اللهُ اللهُ ذَٰلِكَ إِلَّا بِالْحُقِّ أَ يُفَصِّلُ الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ (٥) إِنَّ فِي اخْتِلافِ الْلَيْلِ وَالنَّهَارِ وَمَا خَلَقَ اللهُ وَاللهُ ذَٰلِكَ إِلَّا بِالْحُقِّ أَيْ يُعَلِّمُونَ (٦)

"He makes the sun shine and the moon luminous and set his manzilah-manzilah (places) for the journey of the month, that ye may know the number of years and the reckoning (of time). God did not create this, but with the haq. Allah describes the signs (of his greatness) to people who ngetahui. (Qur'an, 10: 5) In the alternation of night and day and what Allah has created in the heavens and on earth, indeed are signs (of his power) for those who do right. (Qur'an, 10: 6) "(Yunus: 5-6)

Dr. Muhammad Walid, M.A The Lecture of Tarbiyah and Teaching Training Faculty The State Islamic University of Maulana Malik Ibrahim Malang SUPERVISOR OFFICIAL NOTE Malang, June 11st 2016 : Thesis of Itsna Amaliya Ratnasari Matter : 4 (four)Exemplar Appendixes The Dean of Faculty of Tarbiyah and Teacher Training State Islamic University of Maulana Malik Ibrahim Malang Malang Assalamu'alaikum, wr wb Having read all the chapters carefully in terms of its contents, language and writing technique, I testify that this following thesis written by: : Itsna Amaliya Ratnasari Name NIM : 12140053 : Islamic Elementary Teacher Education Tittle of Thesis: The Development of Science Teaching Material Based on Al-Our'an in Second Theme and First Sub Theme for Fourth Grade in Islamic Elementary School of As Salam Malang

CERTIFICATE OF THESIS AUTHORSHIP

that the thesis I wrote to fulfill the requirement for Sarjana Pendidikan entitled "The Development of Learning Material Science Based Al-Qur'an 2 Sub Thema 1 for Grade IV SDI As-Salam Malang" is truly my original It does not incorporate any materials previously written or publish by person. Except those indicated in quotations and bibliography. Due to I am the only person who responsible for the thesis if there is any objection or claim from others.

Malang, june 11st 2016

TEMPEL 14ADDADF824118868

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Itsna Amaliya Ratnasari

PREFACE

Alhamdulillah Praise Allah SWT writer who has give a mercy, taufiq and guidance, so that writer can finish this thesis with the title "The Development of Learning Material Science Based Al-Qur'an Thema 2 Sub Thema 1 for Grade IV SDI As-Salam Malang".

Prayers and greetings is always devoted to lord the king of the Prophet Muhammad, the family, friends, and followers who have brought the truth of the whole human user *al-Dinnul Islam* we expect his intercession in the world and the hereafter.

The writing and preparation of this intended to complement the overall learning activities that have been declared by the State University of Maulana Malik Ibrahim Malang as a form of accountability author was a student State University of Maulana Malik Ibrahim Malang and meet one of the requirements to obtain a Bachelor Degree of Education of Islamic Elementary Teachers in UIN Maliki Malang.

The writer fully aware that the limited capacity and lack of experience, many obstacles and difficulties encountered in the preparation is always the author of this thesis. By finishing this thesis, the writer do not forget to say thanks to all those who provide direction, guidance and guidance in the preparation of this paper, with all humility, say thanks you to:

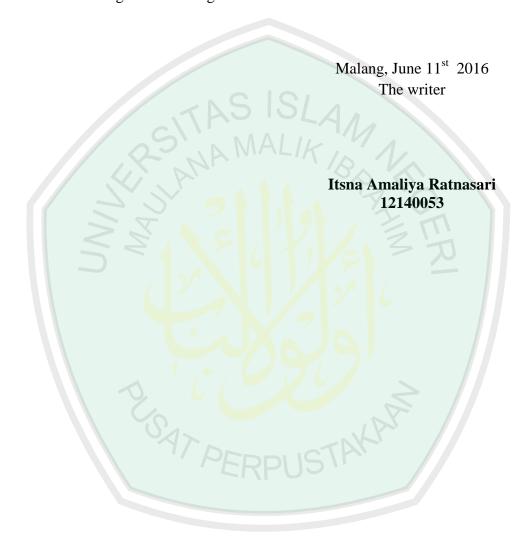
- 1. Dear people, dear parents (Mr. Sutarno), (Mother Umi Hani'in) and brother and sister (Farida Khoirunnisa', afi maulida zain, hasna rahmania firdausy, faris apriliansah) as well as extended family who always give prayer blessing, motivation and their love is always shining on my way.
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No words spoken other than of gratitude should deepest and sincere prayer, may Allah SWT will always bestow grace and matchless reply to all those who have helped up to the completion of this thesis. Amiin.

The writer realizes its full weakness, resulting in completing this thesis there is still a lot of mistakes and shortcomings. The writer expects their comments and suggestions from all people to enhance this research.

With all humility, authors hope that this simple thesis can be useful for the writer himself in particular and to the general reading. Amiin.



GUIDELINES FOR ARABIC-LATIN TRANSLITERATION

Arab-Latin transliteration writing in this thesis uses the transliteration guidelines based on a joint decision of the Minister of Education and Culture number. 158 year 1987 and number. 0543/b/U/1987 can be broadly described as follows:

A. Letter

$$= a$$

$$\mathbf{j} = \mathbf{z}$$

$$= \mathbf{b}$$

$$\mathbf{w} = \mathbf{s}$$

$$\mathbf{z} = \mathbf{k}$$

$$\varepsilon = \mathbf{j}$$

$$z = h$$

= zh

$$\mathbf{e} = \mathbf{w}$$

$$a = d$$

$$\mathbf{\dot{c}} = \mathbf{dz}$$

$$c = v$$

$$=\mathbf{f}$$

B. Vocal

Vocal Diphthong

Vocal (a) length =
$$\hat{a}$$

أوْ
$$= aw$$

Vocal (i) length =
$$\hat{i}$$

Vocal (u) length =
$$\hat{u}$$

$$\hat{\mathbf{u}} = \hat{\mathbf{u}}$$

TABLES LIST

| 1. | Table 1.1 Table Original of Research | |
|-----|--|----|
| 2. | Table 1.2. Table Previous Study | |
| 3. | Table 3.1 Model design R&D Borg and Gall30 | |
| 4. | Table 3.2 Langkah-langkah pengembangan bahan ajar33 | |
| 5. | Table 3.3 The basic competencies selected key34 | |
| 6. | Table 3.4 Desain validasi produk | |
| 7. | Table 3.5 Table Scouring criteria used in giving assessment on the development | of |
| | media that was development41 | |
| 8. | Table 3.6 The average score of the answers to the questionere42 | |
| 9. | Table 3.7 Tabel Qualification criteria49 | |
| 10. | Tabel 4.1 Results Revision Matter Expert | |
| 11. | Table 4.2 frequency Distribution Feasbility Level Expert content63 | |
| 12. | Tabel 4.3 criticis and suggestions to the Material64 | |
| 13. | Table 4.4 Revision Based Materials Expert | |
| 14. | Table 4.5 Assessment Teaching Material Design Experts66 | |
| 15. | Tabel 4.7 Frequency Distribution Feasibility Level Teaching Material Design | |
| | Experts68 | |
| 16. | Table 4.8 Criticis and Suggestions To Design69 | |
| 17. | Table 4.9 Revision Teaching Material Based Design Validation Expert70 | |
| 18. | Table 4.10 Assessment Subject Teacher Science71 | |
| 19. | Tebel 4.11 criticis and suggestion design expets | |
| 20. | Table 4. 12 data pre-test and post-test on field trials76 | |
| 21. | Tabel 4.13 Eligibility Criteria Subjects | |



PICTURE LIST

| 1. | Picture 4.1 Cover visible from the front |
|-----|--|
| 2. | Picture 4.2 Foreword |
| 3. | Picture 4.3 study Al-Qur'an54 |
| 4. | Picture 4.4 More the Book |
| 5. | Picture 4.5 SK, KD, Indicator55 |
| 6. | Picture 4.6 contents and guidelines for the use of textbooks55 |
| 7. | Picture 4.7 table of conten56 |
| 8. | Picture 4.8 Experiment |
| 9. | Picture 4. 9 Now I know |
| 10. | Picture 4.10 Evaluation |
| 11. | Picture 4.11 Bibliography |

APPENDIXS LIST

1st Appendix : Thesis Consultation

2nd Appendix : Research Certificate from Faculty

3rd Appendix : Research Certificate from SDI As-Salam Malang

 4^{rd} Appendix : The Form of Assesment Instrument based Al-Qur'an

5th Appendix : Identity from Validator Experts

6th Appendix : Questioner from Matter Expert

7th Appendix : Questioner from Design Expert

8th Appendix : Questioner from Learning Expert

9st Appendix : The Value of Pre-Test from Control Group

10nd Appendix : The Value of Post-Test from Control Group

11th Appendix : Documentation

TABLE OF CONTENTS

COVER

| TITLE SHEET i |
|---|
| APPROVAL SHEETii |
| LEGITIMATIONii |
| DEDICATIONiv |
| моттоv |
| ADVISOR OFFICIAL NOTEvi |
| MOTTO |
| PREFACEviii |
| TRANSLITERATION GUIDELINES OF ARABIC-LATIN xi |
| TABLES LISTxii |
| PICTURE LISTxiv |
| APPENDIX LISTxv |
| TABLE OF CONTENTSxvi |
| ABSTRACTxx |
| CHAPTER I: INTRODUCTION CRPUS |
| A. Background1 |
| B. Formulation of the Problem4 |
| C. The Purpose of Development4 |
| D. The Benefit of Research5 |
| E. The Assumption of Development6 |
| F. The Scope of Development6 |
| G. Product Specification |

| H. Originality of Research | 8 |
|-------------------------------------|----|
| I. Operational Definition | 11 |
| J. The Systematic of Discussion | 12 |
| CHAPTER II: RIVIEW LITERATURE | |
| A. Previous Study | 14 |
| B. Theoretical Framework | 16 |
| 1. Nature of Science | 16 |
| 2. Understanding about Development | 22 |
| 3. Based Al-Qur'an | 21 |
| 4. Theorical Review Energy Source | 24 |
| CHAPTER III : RESEARCH METHODOLOGY | |
| A. Type of Research | 29 |
| B. Methodology of Development | 29 |
| C. Procedur of Developmet | 33 |
| 1. Stage of Pre-Product Development | 34 |
| 2. Stage of Product Development | 26 |
| 3. Stage of Product Trial | 37 |
| 4. Stage Product Revision | 37 |
| D. Population and Sample | 37 |
| E. Validity | 38 |
| F. Product Trial | 42 |
| G. Trial Design | 42 |
| H. Type of Data | 43 |
| I. Instrument Data collection | 44 |
| 1. Observation | 44 |

| 2. Interview45 |
|--|
| 3. Quesioner |
| 4. Tes48 |
| J. Data Analisys Technique48 |
| CHAPTER IV RESEARCH RESULT |
| A. Description of Design IPA Based Al-Qur'an52 |
| B. Presentation of the Result Quality Data Validation Expert59 |
| 1. Result of Validation Expert Matter59 |
| 2. Result of Validation Expert Theacher Science71 |
| 3. Result of Validation Expert Learning Material Based Al- |
| Qur'an76 |
| CHAPTER V DISCUSSION |
| A. Analysis of Design Development of Teaching Material Based Al-Qur'an Based |
| |
| 1. The Result Development of Teaching Material79 |
| 2. Validation Expert Analysis o Object Based Al-Qur'an84 |
| B. Analysis of Data Quality Validation Result of Expert Material Based Al- |
| Qur'an87 |
| |
| CHAPTER VI CONCLUSION |
| A. Conclusion of the Proses Development89 |
| 1. Conclusion of The Design Development89 |
| 2. Conclusion of Quality Material Development89 |
| B. The Suggestion of Product Development in the Future90 |
| BIBLIOGRAPHY |



ABSTRACT

Ratnasari, Itsna Amaliya. 2016. The Development of Science Teaching Material Based on Al-Qur'an in Second Theme and First Sub Theme for Fourth Grade in Islamic Elementary School of As Salam Malang .Skripsi, Islamic Primary Teacher Education Program, Faculty of Tarbiyah and Teachin Training, Maulana Malik Ibrahim State Islamic University, Malang.Advisor: Dr. Mohammad Samsul Ulum, MA

The source of energy is one of the subjects in science subjects that must be mastered by the students of class IV SD / MI. In this material the students are required to know the kinds of energy sources that exist on this earth, and know the integration of the verses of the Quran on materials science, and practice these simple steps in doing practical work. To determine the relevance of material science with the verses of the Qur'an then made the development of teaching materials based Al-Qur'an.

The aim of this study; (1) to determine the design of teaching materials based Al-Qur'an tema 2 sub tema 1, (2) to determine the quality of teaching materials based Al-Qurán Tema 2 Sub Tema 1.

Forms of study the researchers used a method of research and development (Research and Development), which the research methods used to produce a specific product and test the effectiveness of the product. Methods of research and development refers to the model of the Borg and Gall.

Based on the development of research that has been done it can be concluded that (1) Design development of teaching materials have resulted in a book-based teaching materials Qur'an all kinds of energy sources. From these materials the validation results demonstrate the validity of which is evident by the average percentage of expert validation contents (matter) 90.9% declared valid, the validation results media expert instructional design 82.5% stated quite valid, the results of expert validation subjects (teacher) 90% declared invalid. The results of the percentage level of validity of the trial class IV SDI As-Salam Malang showed 87.8% declared valid. From the analysis of the data through a formula correlated t-test (related), generating t = 3.002> t table = 2.056, so that there is a difference in students who use the teaching materials that do not. (2) The quality of teaching materials based on the Quran that have been developed have a good level of relevance with the existing curriculum, teaching materials easy to understand, the language used is simple and the explanation paragraph in the textbook are appropriate, and the simple steps in carrying out practical work. The result of these developments has been able meningkatkatkan student learning outcomes.

Keywords: Development, teaching materials, science-based Al-Qur'an

ABSTRAK

Ratnasari, Itsna Amaliya. 2016. *Pengembangan Bahan Ajar Ipa Berbasis Al-Qur'an Tema 2 Sub tema 1 pada siswa kelas IV SDI As-Salam Malang*. Skripsi, Jurusan Pendidikan Guru Madrasah Ibtidaiyah, Fakultas Ilmu Tarbiyah dan Keguruan, Universitas Islam Negeri Maulana Malik Ibrahim Malang. Pembimbing Skripsi: Dr. Mohammad Samsul Ulum, MA

Energi adalah salah satu materi pada mata pelajaran IPA yang harus dikuasai oleh siswa kelas IV SD/MI. Pada materi ini siswa dituntut dapat mengetahui macam-macam sumber energi yang ada di bumi ini, dan mengetahui integrasi ayat-ayat Al-Qur'an pada materi IPA, serta mempraktikkan langkah-langkah sederhana dalam melakukan praktikum. Untuk mengetahui keterkaitan materi IPA dengan ayat-ayat Al-Qur'an maka dibuat pengembangan bahan ajar IPA berbasis Al-Qur'an.

Penelitian ini bertujuan ; 1) Untuk mengetahui desain bahan ajar IPA berbasis Al-Qur'an, 2) Untuk mengetahui kualitas bahan ajar IPA berbasis Al-Qur'an.

Bentuk penelitian yang digunakan peneliti adalah metode penelitian dan pengembangan (*Research and Development*), dimana metode penelitian yang digunakan untuk menghasilkan produk tertentu dan menguji keefektifan produk tersebut. Metode penelitian dan pengembangan ini mengacu pada model Borg and Gall.

Berdasarkan penelitian pengembangan yang telah dilakukan maka dapat disimpulkan bahwa (1) Desain pengembangan bahan ajar ini menghasilkan buku ajar berbasis Al-Qur'an materi macam-macam sumber energi. Dari hasil validasi bahan ajar ini menunjukkan kevalidan yang terbukti dengan presentase rata-rata dari validasi ahli isi (materi) 90,9% menyatakan valid, hasil validasi ahli mata pelajaran (guru) 90% menyatakan valid. Hasil presentase tingkat kevalidan pada uji coba kelas IV SDI As-Salam Malang menunjukkan 87,8% menyatakan valid. Dari hasil analisis data melalui rumus uji t-test berkorelasi (*related*), menghasilkan t hitung = 3,002> t tabel = 2,056, sehingga terdapat perbedaan pada siswa yang menggunakan bahan ajar dengan yang tidak. (2) kualitas Bahan ajar berbasis Al-Qurán yang telah dikembangkan memiliki tingkat relevansi yang baik dengan kurikulum yang ada, materi bahan ajar mudah dipahami, bahasa yang digunakan lebih sederhana serta penjelasan ayat pada buku ajar sudah tepat, dan langkah-langkah sederhana dalam melaksanakan praktikum. Hasil pengembangan yang telah dilakukan mampu meningkatkatkan hasil belajar siswa.

Kata Kunci: Pengembangan, Bahan ajar, IPA, berbasis Al-Qur'an

مستخلص البحث

راتناساري، إثنا عملية، ٢٠١٦. تطور الكتاب التعليمي عن علم الطبيعي بناءً على القرأن الكريم في الموضوع الثاني والفصل الأول على التلاميذ في الفصل الرابع في المدرسة السلام الإبتدائية الإسلامية مالانج. رسالة البحث. قسم تربية المعلمين للمدرسة الابتدائية. كلية علوم التربية والتعليم. حامعة مولانا مالك إبراهيم الإسلامية الحكومية مالانج. المشرف: الدكتور محمد شمس العلوم الماجستير.

المادة عن مصدر الطاقة من أحد المادات في مادة دراسية علم الطبيعي التي يجب أن يفهم التلاميذ في الفصل الرابع في المدرسة الإبتدائية الإسلامية أو المدرسة الإبتدائية العامة. يُطلب التلاميذ أن يعرف نوع مصدر الطاقة في الأرض، واندماج آيات القرأن الكريم في مادة دراسية علم الطبيعي، وتطبيق المراحل البسيطة في عمل الإجراءات. ولهذا، لمعرفة علاقة مادة دراسية علم الطبيعي بناءً على بآيات القرأن الكريم فتعمل الباحثة البحث عن تطور الكتاب التعليمي عن علم الطبيعي بناءً على القرأن الكريم.

يهدف هذا البحث؛ ١) لمعرفة تخطيط الكتاب التعليمي عن علم الطبيعي بناءً على القرأن الكريم، ٢) لمعرفة جودة الكتاب التعليمي عن علم الطبيعي بناءً على القرأن الكريم.

كان منهج البحث المستخدم في هذا البحث هو البحث والتنمية (R & D = Research and) وهذا المنهج لحصول على النتاج المعيّن ولإختبار فعّالية ذلك النتاج. يتبع هذا المنهج على غوذج بورغ وغال Borg and Gall .

كان تطور هذا الكتاب التعليمي قد يُنتج النتاج يعني الكتاب التعليمي عن علم الطبيعي في نوع مصدر الطاقة بناءً على القرأن الكريم. يدل من نتائج صدق الكتاب التعليمي على الصدق المتأكّد بنسبة مثويّة عند صدق المحتوى 9.9 % يدلّ على الصدق، والصدق عند تخطيط التدريس المتأكّد بنسبة مثويّة على الصدق، والصدق عند المدرّس 9.9 % يدلّ على الصدق. كانت نتيجة نسبة مثويّة درجة الصدق على تجربة في الفصل الرابع في المدرسة السلام الإبتدائية الإسلامية مالانج تدلّ على الصدق. ومن نتيجة تحليل البيانات بإختبار — ت المرتبطة (related) تحصل على 0.00 وهي الصدق. ومن نتيجة تحليل البيانات بإختبار — ت المرتبطة (related) تحصل على 0.00 وهي الصدق. ومن نتيجة على القرأن الكريم المطور له درجة العلاقة الجيدة بمنهج غير المستخدمون. كان الكتاب التعليمي بناءً على القرأن الكريم المطور له درجة العلاقة الجيدة بمنهج

التعليم، كان الكتاب التعليمي سهولة للفهم، ومستخدم اللغة البسيطة، وشرح آيات القرأن الكريم في الكتاب التعليمي مطابقة، والمراحل في عملية الإجراءات سهل، والتطور القائم يستطيع أن يرقي نتائج دراسة التلاميذ.

الكلمة الرئيسة: التطور، الكتاب التعليمي، علم الطبيعي، بناءً على القرأن الكريم.



CHAPTER I

INTRODUCTION

In this chapter will be discussed, (a) background, (b) the formulation of the problem, (c) the purpose of development, (d)the benefit of research, (e) the development of assumption, (f) the scope of development, (g) product specification, (h) originality of research, (i) operational definitions and (j) systematic of discussion.

A. Background

Science is one of study that learn about nature systematically, so its not only learn about some facts, concepts or principles but also the discovery process. Science education hoped to be media for students to learn about self, nature and growing process for daily activity.

Laksmi prihartono said that science is product, process and application. As the product, science is knowledge which is using to do studying object, discovery and growing products science such as technology to give anyone easy for lifeL.¹

Knowledge and religion exactly balance. Knowledge that no based on religion will be crowded because of there is no faith in deep of that. And also at the general knowledge, Allah SWT has given information in the holy Qur'an . studying to meditation of true Qur'an with created this world.

Islam as the value system has good growing until in that growth, it needs every discipline knowledge as the fulling of Islamic demand. Some knowledge which can be integrated from Qur'an and Sunnah as a point of Islamic moslem law. At the discipline knowledge is mathematic and science. It can be showing a new paradigm hat actually every knowledge can be growth in the veil widely.²

Education is the sense effort and plant to showing a study atmosphere and process students to has a stronger religion spiritual, self confident, personality, intellectual, good moral and art that needs for their self, society, nation and country.³

Education is also way to reach a purpose for nation and way to human for their life. Education is a process individual way to a good side that match with a having human potency. Two concepts education that combine are study and teach. Its there in studying process that match with the purpose of studying.

The purpose of study is there is a change of positive behavior from students after joining studying activity. From science education, we can teach students to increasing the faith and devotion to Allah SWT that created a nature and world.

In the studying activity, actually is the unique condition because all of the side with a intentionally or no adding in the process of study. Teacher has done studying process is nedded a material to teach

² Agus mulyono dan ahmad abtokhi, *Fisika dan al qur'an*, malang. 2006.UIN press

¹ Trianto, model pembelajaran terpadu, Jakarta. 2010. sinar grafika offset. Hlm 137

³ Redaksi sinar grafika, *Undang-Undang sistem pendidikan nasional*. Bandung. 2009. sinar grafika, hlm. 2

because using to help the teacher in the studying activity in the class. From this process, will be get a value at the generally named of studying value.

Teach material is all of the material that using to help the teacher and students for reach the aim of study. Teach material actually important thing to fix a winning of study. Teach material have to authorized and understand by students because it can be helped them to reach the purpose of study.

A value in the study also depend on the based of study which is using for studying process. By the studying based which is using for studying, a concepts have to accepted with true, konkrit and fully. So, its needed developing and make it for teach material in the shape of material to help studying process . teach material which is developing can be a printing teach material, film, modul, tape audio, tape video, map and combining of all.⁴

Based on the value of interview with science teacher (Ms Adna Arum Ambar Wati, S.Pd) in the Islamic elementary school As-salam is due to teach material that using in the studying science process, using LKS. It means that science studying still continuoue only at one way discipline of knowledge that integrated with concepts in the Hadits Qur'an and the value of religion. That things, because of the teacher still felling difficult to combine science material with Qur'an and there is no material that facilitate the integration with the Qur'an in the science study. Needs a teach material like a book that special design in the science study to need integration process.

Science study in the Islamic elementary school As-salam Malang still hanging with a talkative teach design and only answer question. So, the students less to learn and application the concepts of science in the fact life. Students knowledge only limited at the things that gived from the teacher.

Based on the important of studying source that can be help the studying process and integrate with Qur'an, the solution is developing material teach that integrating with Qur'an. So, the writer make the title about "The Development of Science Teaching Material Based on Al-Qur'an in Second Theme and First Sub Theme for Fourth Grade in Islamic Elementary School of As Salam Malang".

B. Formulation of the problem

Based on explanation above, background research problems can be formulated as follows:

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⁴ Suparwoto, Dasar-dasar dan Proses Pembelajaran Fisika. Yogyakarta. 2007.FMIPA UNY hal. 23

- 1. How is Design The Development of Science Teaching Material Based on Al-Qur'an in Second Theme and First Sub Theme for Fourth Grade in Islamic Elementary School of As Salam Malang?
- 2. How is the Quality The Development of Science Teaching Material Based on Al-Qur'an in Second Theme and First Sub Theme for Fourth Grade in Islamic Elementary School of As Salam Malang?

C. The Purpose of Development

The purpose of development is to be achieved by researchers after research was carried out.

Based on the problem formulation, then the research objectives are as follows:

- To get the product Science Teaching Material Based on Al-Qur'an in Second Theme and First Sub Theme for Fourth Grade in Islamic Elementary School of As Salam Malang
- 2. To know the quality Science Teaching Material Based on Al-Qur'an in Second Theme and First Sub Theme for Fourth Grade in Islamic Elementary School of As Salam Malang

D. The Benefit of Research

The benefits that can be drawn from this study are:

1. For researcher

Adding the knowledge and new information about science that integrated with Qur'an and can be showing for students about integration of science and Qur'an with a religion value.

2. For teacher

For the science teacher or class teacher can be benefit of modul to help schedule science that integrated with Qur'an. It can be motivated the teacher to continuing development of studying media like a teach material that using now.

3. For students

It can be increasing an idean of students to learn science that integrated with Qur'an and get a new knowledge about science interested, Qur'an and religion value.

4. For school

From the research value, the wirites hope that it can be give a positive contribution and also as a material for school as a threaten for studying at the class. Beside that, it can be a way to science studying process that still separated with religion and has a new studying source like a science teach material based on Qur'an.

5. For society

Opening new view about integrated between science and Qur'an.

6. For knowledge development

It can be using as ource in the continuing research.

E. The Assumption of Development

There are several assumptions associated with the development of Science Teaching Material Based on Al-Qur'an in Second Theme and First Sub Theme for Fourth Grade in Islamic Elementary School of As Salam Malang:

- 1. Can be created science teach material based on Qur'an in the tema 2 subtema 1 for students at IV class.
- 2. Material expert knows surely about science knowledge because the people in this research is lecture that concentrated in science knowledge.
- 3. Peer reviewer knows surely about media developing teach because peer reviewer in this research is students in university that doing the research of R&D.

F. The Scope of Development

Developing teach material is limit at the material in tema 2 subtema 1 for students at IV class in the Islamic elementary school As-salam Malang. Such as :

- 1. The developed is a thema always save energy on the various energy sources in the fourth grade.
- 2. Developing teach material based on Qur'an.
- Increasing good concepts for students at IV class in the Islamic elementary school As-salam Malang.

G. Product Specification

A product can be development in this research is a developing science teach material with integrated or based on Qur'an and also religion value. Beside that, developing teach material hoped that can be increasing faith and devotion of students for Allah SWT that created all of the world. A developing for teach material are kind of energy in the daily activity.

- 1. The material that will be developing is material about science knowledge in the tema 2 subtema 1 for the students at the 4 class in the Islamic elementary school As-salam Malang.
- 2. Choosing the 4 class as a sample for making teach material because has done 2013 material curriculum that developing is kind of energy about:
 - a. KI
 - b. KD
 - c. Learning objective
 - d. Mind map
 - e. Science material
 - f. Al-Qur'an lesson
 - g. Resume
 - h. Others
 - My activity
 - j. Evaluation
- Teach material design like a material that developing is science learning based on Qur'an. So, students will be interest to learn science that can be increasing faith and devotion to Allah SWT.
- 4. Physic product shape that will be valued in the developing teach material like a printing media with the size of paper is A4 80 gram, font type is Century Gothic with 12 size and 1,5 space.
- 5. Making with Microsoft word

Science teach material based on Qur'an that using in the class by the students and teacher as teach material. This teach material, students can be learn to increase a good concepts in the increasing devotion to Allah SWT that greater one. Teacher can be used a modul as the teach material.

H. Originality of the Research

In previous studies, researchers found three existing research to support research that will be conducted by the researchers now.

The first research done Qorina Widadiyah student of PGMI State Islamic University of Maulana Malik Ibrahim Malang was unfortunate under the title" Developing science teach material based on leading inkuiri style point learn and changing at the V Islamic elementary school Al-maarif 01 Singosari Malang". The study stated that the resulting decent learning media use. Because the validation test results of science teach material acquired the results of 86% of teachers of science, subjects and obtain 78.5% of expert 2 content 82.14%, and 83% from the results obtained expert media design learning. The three exposure above shows that media researchers used i.e. material based on leading inkuiri style point learn and changing need to be revised. Whereas on the basis ikuiri learning, experimental class scored higher than the class of the control. This is evidenced in the table with the test t, class control i.e. Class 4A and 4B class i.e. experimental class.

A second study conducted by Ratna Nandini Stanford University students majoring in Mathematics Learning Media development under the title "Developing teach material about combine between a life creature and nature based on point discovery to increasing a good concepts for students at 4 class nation elementary school Banyudono 2". This research shows the positive results of the reson validation and field test. So as to produce a decent Pocket Books used for secondary students. The results of the prroduk a good assessment of the evidence by the validator and values students as well as the results of the observation shows a positive response. Can improve student learning outcomes because it is accompanied by pictures and color variations in it can attract the attention of students, so that the results of the study can be increased than if using a book that is not presented with the image and color variations.

The third researcher conducted by Ayu Muhayyinah, titled Developing teach style science material knowledge with learning mode cycle 5 phase for students at IV class Islamic school pakis-tumpang at 2012. This research Developed of learning material in IV Class

Table 1.1 Originality of research

| Name of | The Title | The same | Different |
|------------------|-------------------|-------------------|-----------------|
| Researcher | research | | |
| Qorina Widadiyah | Developing | Developing | Based inkuiri |
| | science teach | learning msterial | |
| | material based on | Same class IV | |
| | leading inkuiri | | |
| | style point learn | 11/61 | 3 为 |
| | and changing at | | |
| | the V Islamic | | |
| | elementary | 09/7 | |
| | school Al-maarif | | 3 / |
| | 01 Singosari | TNY | 2 |
| | Malang. | RPUS IN | |
| Ratna Nandini | Developing teach | Development | based on |
| | material about | of learning | discovery point |
| | combine between | material | |
| | a life creature | At material | |
| | and nature based | science | |
| | on point | | |
| | discovery to | | |

| | increasing a good | | | |
|----------------|-------------------|------|--------------|----------------|
| | concepts for | | | |
| | students at 4 | | | |
| | class nation | | | |
| | elementary | | | |
| | school | | | |
| | Banyudono 2 | | | |
| | magetan | 6 13 | | |
| Ayu Muhayyinah | Developing teach | MAL | Developed of | Style material |
| | style science | 4 | learning | |
| | material | 1 1 | material | Em |
| | knowledge with | 6. | Class IV | 37 |
| | learning mode | | | |
| | cycle 5 phase for | | | |
| | students at IV | | | |
| | class Islamic | | | \$ // |
| | school pakis- | | | |
| | tumpang at 2012 | RP | US III | |

I. Operational Definition

1. Development

Development is a process to create a maping or concepts that set like this in the physic shape. Beside that, it means that as translate process specification design in the physic shape. Translate process design specific like a identification of problem identification and aim

of learning strategy or learning method and effecteivaly evaluation, efficiency and learning interest. ⁵

- Teach material is materials or activity material learning that set systematically that using for students and teacher in the learning process. Teach material surely a good education for students to study in the school.
- 3. Science is a study that has clause. It means that every new concepts have to join good pra clause to earlier concepts. So, if difficult happened to one of point essay to making continue essay.
- 4. Based on Qur'an is integrated some of science knowledge with a ayat Qur'an that direct from Allah and believe of Qur'an. Al-Qur'an is point that goved to human to prosperity from alive or hereafter, so Allah surely of a someone that get guidance.⁶

J. The Systematic of Discussion

Essay systematic in the developing research separate become IV side that every side has a sub side:

First is showing an essay like a introducing such as background of study, identification of problem, developing purpose, product specification that developing, important of research and developing, assums and limitation, definition and writing systematically.

Second is based on literature that explain about characteristic studying, studying modul, development studying modul based on Qur'an and product design developing.

Third is about developing method that explain a kind of research, developing model, developing procedure, and test of product(test design, test subject, kind of data, instrument of data and data analyses.

Fouth is consist about value of research and developing that explain of developing value instrument, a test of increasing value students tema 2 subtema 1 and kinds of source energy, analyses of teacher responds.

⁵ Fitrotun uyun pengembangan bahan ajar pembelajaran al qur'an hadist dengan pendekatan humeneuitik bagi kelas v min malang 1, thesis, (malang: program pasca sarjana universitas islam negeri malang,2010), hlm.21 ⁶ Ridwan abudullah sani, *sains berbasis al qur'an*, (cet 1, jakarta:PT bumi aksara,2015), hlm.viii

Fifth is consist of essay that explain about development analyses value instrument, test analyses of increasing studying value from students at IV class, tema 2 subtema 1 kinds of source energy, analyses teacher responds.

Sixth is consist of closing research and developing that consist from the summary and suggestion. .



REVIEW LITERATURE

In this chapter will be discussed, (a) Previous study, (b) Theory study: 1) Nature of the natural science, 2) Understanding about development, 3) Based al-qur'an, 4) Theorical review on kind energy source.

K. Previous Study

Related to previous studies, researchers have been tracking some thesis on the development of mathematical learning media. Researchers found some previous research related to mathematics media, among others, the following:

Table 1.2 Previous Study

| No | Title of Research | Media | Material |
|----|----------------------------|------------------------|------------------|
| 1 | Developing science teach | Developing learning | Sciece material |
| | material based on leading | material | |
| | inkuiri style point learn | S ISLAM MALIK IS | |
| | and changing at the V | MALIK | 1. |
| | Islamic elementary school | 182 | |
| | Al-maarif 01 Singosari | | 王山 |
| | Malang. | 2011/61 | 372 |
| 2 | Developing teach material | Developing learning | Science material |
| | about combine between a | mat <mark>erial</mark> | |
| | life creature and nature | | |
| | based on point discovery | | \$ |
| | to increasing a good | TAK | <i>></i> // |
| | concepts for students at 4 | ERPUS | |
| | class nation elementary | | |
| | school Banyudono 2 | | |
| | magetan | | |
| 3 | Developing teach style | Developing teach | Science material |
| | science material | style science material | |
| | knowledge with learning | | |
| | mode cycle 5 phase for | | |

| students at IV class | |
|-----------------------|--|
| Islamic school pakis- | |
| tumpang at 2012 | |

From that researchs the first previous studies discuss about the use of developing science teach material based on leading inkuiri style point learning and changing at the V Islamic Elemntary School. introduced by usman consisting of 10 steps to implement the strategy of research and development that begins with an analysis of the problem, gather information from various sources, designing products, discuss with the validator about the products that are already created, improve products in accordance with the results that have been validated by the validator, product testing, product revision, test product usage, product revision, and produce product.

The second research discusses the use of learning material about combaine between a life creature and nature based on point discovery to in creasing a good concept for student at 4 class nation elementary school.. Researchers used a cycle 4 shape development model. This development model consists of four stages of development that Define, Design, Develop and Disseminate. In principle the procedure of product development need to understand that the development process requires some testing and revision so that although the development procedure is shortened, but it already includes the process of testing and revision and include in good criteria product, tested empirically and no mistakes again.

The third research discusses the development of learning materials in the form combine between a life creature and nature based o point discovery to increasing a good concepts for student at 4 class nation elemnatry school. Using a Dick and Carey development model. That is discussthe development and selection of material or subject matter. Before designingformative evaluation activities and shows that learning materials is the core activity of learning system design, which relates to the preparation of materials.

L. Theoretical Framework

1. Nature of Nature Science

a. Definition

Natrure science is a part of science which was originally derived from the English "science". The word "science" it self comes from the latin "scientia" which means I know. While literally the natural science or science is the study of the universal, object that exist on the surface of the earth, in the belly of the earth and space, both can be observed by the senses or not observed by the senses. According to Fowler H.W in this book trianto said science is a systematic and formulated knowledge, which is associated with symptoms of material that is based on experience and deduction.⁷

Referring to the above explanation can be concluded that the IPA is a natural science that systematically learn above the events that occur in nature which are formulated with specific ways related symptoms and interrelated material between the way the other way.

In essence, the natural sciences include four main elements are:

- Attitude is a sense of wainting to know about objects, natural phenomena, livings as
 well as the causal relationship give rise to new problems and car be solved trough the
 correct procedures.
- 2) The process is problem solving procedures through scientific methods which include preparation of hypothesis, design, experimentation, evaluation, measurement and conclusion.
- 3) Product in the form of fact, principles, theories and laws.
- Application means the application of scientific methods and conceps of science in everyday life.

The conclusion of some devinition above that sciece is a process of obtaining the truth of the facts and natural phenomena that includes aspect of biology, physics.

While the nature of IPA can be viewed as attitudes, process, product and application knowledge in every life which are all closely interrelated.

⁷ Trianto, *Model Pembelajaran Terpadu* (Jakarta: Bumi Aksara, 2010), hlm.136

b. Function of Learning Science SD/MI

Studied nature science in MI has a function as follows:

- Increase the curiosity and awareness of different types of natural environment and the built environment in relation to their use in everyday life.
- 2) Develop a process skill that increases problem –solving skills through *doing science*.
- 3) Developing the ability to apply science and technology, as well as life skills and to contonue to the a higher level.
- 4) Develop knowledge, attitudes, values that are useful for everyday lie and the relation with the advancement of science and technology, the environment as well as their use for everyday life.⁸

However the function from study science can be concluded that the provision of science education in elementary aims to make students able to master the concept of science and its relevance and be able to develop a scientific attitude to solve the problems it faces so much aware of the greatness and power of her Creator.

c. The Purpose of Learning the IPA SD/MI

The subject of natural sciences aims so that learnes have the ability as follows:

- 1) Obtain confidence in the truth of God Almighty is based on the existence, beauty, order the creatures of nature and its creation.
- Develop knowledge and understanding of materials science that are useful and can be applied in everyday life.
- Develop a curiosity, a positive attitude and awareness about their relationship interplay between science, environment, technology and society.
- Develop skill to investigate the process of nature aaround, solved problems and make decisions.
- 5) Increase awareness to play a role in preserving, maintaining, and preserving the environment.

⁸ Usman samawoto, *Bagaimana Membelajarkan IPA di Sekolah Dasar*, (Jakarta, Depdiknas DIKTI Direktorat ketenagaan, 2006), hln. 102

- 6) Increase the awareness to appreciate nature and all its regularity as one of his creation.
- 7) Obtain on stock of knowledge, concepts and skill of science as a basic for continue their education to SMP/MTs.⁹

In addition to the porpose learning science the student can be concluded learning science is the study of the events that occur in nature by observation, experimentation, inference, theory development so that students have the knowledge, ideas and concepts are organized on the environment, based on experience gained through a series of scientific process include the investigation preparation and presentation of ideas.

d. The Scope of Learning IPA SD/MI

Scope of the study material IPA for grade SD/MI includes the following aspect:

- 1) Living organisms and life processes, namely humans, animals, plants and their interaction with the environment, and health.
- 2) Objects / materials, properties and uses include: liquid, solid and gas
- 3) Energy and the changes include: the style, sound, heat, magnetism, electricity, light and simple aircraft
- 4) Earth and the universe include: the land, the earth, the solar system, and other celestial objects.¹⁰

Curriculum developed with reference to the Content Standards (SI) and standard com- compe- Graduates (SKL), based on the curriculum guide that compiled by the National Education Standards, as well as consideration watched the school / madrasah. Under these provisions, the curriculum SD / MI developed with the following principles.

2. Undestanding about Development

¹⁰ Ibid, 162

⁹ Peratutan Menteri Pendidikan Nasional Repub;ik Indonesia Nomor 22 Tahun 2006 Tentang Standart Isi untuk Satuan Pendidikan Dasar dan Menengah (Jakarta: BSNP, 2006), hlm. 162

Development is a process used to develop and validate product is aproduction. These studies follow a steps in the cycle. The steps of the research or development process consist of a review of the finding and of the research product that will be developed, developed product based on these finding, conduct field trials in accordance with the setting in which the product will be used and do revision of exam result.¹¹

In addition the development is also define as follow: "the research development, as distinguished from a simple learning development, define as the systematic to design, developed and evaluate programs, processes and outcomes of learning should meet the criteria of consistency and efectives internally".

In this simples form this, can be either a development research:

- 1) The study of process and the impact to draf development and spesifict development afforts or special.
- 2) A situation in which a person performs or understand design, development or learning activities review process at the same it.
- 3) Study of the design, development and evaluation of the learning process that involve the components of the process as whole or only certain.

3. Based on Al-Qur'an

In general the strategy has the sense of a large bow stripesto act in an attempt to achieve the objectives that have been determined. If linked to the teaching and learning strategies could be interpreted as a general activity patterns of theacher- student in the realization of teaching and learning activities to achieve the objectives that have been outlined.

Al-Qur'an in present points of it contents has its own strategy which is capable of being accepted by all walks of lifeand different levels of logical reasoning power readers. Moving on from things that are concrete, can be seen and recognized, such as: rain, wind, plants, lightning, and lightning.

¹¹ Setyosari. Punaji, *Metode Penelitian Pendidikan (Pendekatan kuantitatif, Pendekatan Kualitatif, dan R&D)*, Bandung: Alfabeta, hlm.20.

Then move on thigs such as dogmatic, mush acknowledge the existence, majesty, power and perfect natural of God the whole. All of these are some times express with the phrase, either with the inteintion of giving attention, make happy, as well as with other purpose that can simulate the effect of God;. Such as: subject, tafakkur, and a special love to God.

After that, recently presented a range of wordship and behaviour is ideal for applying the morals of rabbani practically.

The existence of the effort to make the emotions o readers (as students) to feel involved with the topic of the material presented. This is done, so that the attention of learne to words material presented get maximum attention. By simulating awide range of emotions repead with different experience of affective behaviour, by a particular object.

At the beginning of the decline of the Al-Qur'an, directed to combat iliiiteracy and motivation well as teach it. Because it is a muslim who is not able to read or don't like reading religion properly and unable to carry out the repair perfectly, taht is no wonder if the first paragraph down to the Prophet peace be upon him: is s. al-Alaq: 1-5.

It means: "(1) Read the (call) the name of your Lord who created. (2) He has created man from a clot. (3) Read and your Lord is the Most Generous. (4) Who taught (man) with perantaran Qalam (stationery) (5) He taught man what he did not know. "

In the of refrigeration we utilise heat science energy. in the Our'an many explanations about heat energy .Al-Quranis the basic of science, and basic of life. The verses of the Qur'an About Qur'an Heat in variouscontests to mention the source of heat and power to power AllahTujuannya: enticemen to greatness and humans canharness that energy source for the sake of her life thank him.

The source of thermal energy memeringatkan man God so as not to forget the fact and usur-usur energy sourcespanas Yaitu the Lord who made you the fire of wood yanghijau, then all of a sudden you turn it on (api) from the wood. [Q. S. Yasin: 80].

The God who appointed for you fire from the green wood, then suddenly you turn on the (fire) of the woodwork

In addition the benefits and advantages of energy. For those layers of fire above them and below they layers (from the fire) of his servants with doom it. So fear me, [Al-Zumar: 16].

They will have canopies of fire above them and below them, canopies. By that Allah threatens His servants. O My servants, then fear Me.

4. Theorical Review on kind Energy source

a. Definition of energy

The word energy comes from the Greek, which ergon meaning work. So, energy is defined as the ability to do work or effort. Energy is something very important in the life of this nature, especially for human life, because everything we do requires energy. Energy in nature is available in various forms, such as chemical energy, electrical energy, heat energy and light energy. Energy can be useful if there is a change shape from one form of energy into another form. For example, electric irons would be helpful if there is a change of electrical energy into heat energy. Moving or stationary objects turned out to have a stored energy. Energy generated as a result of the movement of an object is called kinetic energy, while the energy stored in an object due to its position is called potential energy. ¹²

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¹² http://www.temukanpengertian.com/2014/06/pengertian-energi.html

From understanding Energy is the ability to do work or effort. Anything that can do the work referred to energy. Solar energy. Solar energy as a primary energy source on earth. Without energi, the world will live or frozen. In human life is always going activities and the energy required for muscle activity. That energy is obtained throught the process of oxidation (burning) of nutriens that enter the body with food. Other human activities in producing goods and transportation and others also required energy from the energy source material is often called natural resources. ¹⁴

The sun as the primary energy source on earth has been stated in the Qur'an Ash-Shams verses 1-2 and letters full of verse 16. From the above verses can be deduced that the sun is an object that is the sky that emits a beam of light that is much stronger than in the moonlight, as well as being the center of the solar system and could produce heat.

In everyday life, when on the move we certainly need energy or effort. Energy itself means an ability to do work or on the move.

In everyday life, we always encounter a variety of energy on this earth. In contrast to the energy, the energy source is a producer of energy other. On earth we live in, there are a lot of natural elements of various shape taht can be converted into other energy.

b. Various from Energy

Based on their nature itself, there are a wide variety of energy sources that we encounter in the wild such as the following:

1) Wind

Wind is one source of energy that is never-ending. While the earth is still there, so the wind will remain there forever because of its availability is not limited. The wind itself is often used in windmill technology, particularly in countries with very much wind intensity. This wind will push turbun of windmills that can generate electrical energy.

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¹³ H. Rozaline, *Ensiklopedia fisika*, (Jakarta: Media Pusindo, 2008), hlm. 4.

¹⁴ Maskoeri Jasin, *Ilmu Alamiah Dasar*, (Jakarta: PT. Raja Grafindo Persada, 1993), hlm. 69.

Wind power is a renewable energy source that is abundant in our country and environment friendly for suppressing emission of CO2, therefore we can obtain cheap electricity from wind energy is not limited.

In the verse Al-Qur'an Al-Ftir verse 9, Allah said as follow:

Meaning: "And Allah is He Who sends the winds, and the winds that stir the clouds, cloud We explet them to a country that is dead, and turn the earth after its deadth it rains. Such is the Resurrection".

2) Sun

The sun is the most important source of energy in human life. Sources of heat energy from the sun is also widely used for various activities, such as artificial photosynthesis, solar power, drying clothes and so forth.

3) Replace Sea Water

Utilization of high tides or waves of sea water is increasingly used as a renewable energy source to generate electricity.

4) Geothermal

Geothermal energy or geothermal itself is the heat energy from the earth's crust. In geothermal energy is obtained as a result of radioactive decay and heat release or heat continuously in the earth.

5) Plant

Products produced from a plant or plants can actually be processed for the needs of other products, such as paper, wood to other products that can be exploited. However, a shortage of renewable energy are a variety of natural disasters could result if used continuously but does not offset the preservation of these plants.

6) Water

In addition to high tides, hydro energy alternative energy also can be used as a substitute for fossil fuels. This one energy source is obtained by utilizing the potential energy and kinetic energy possessed by the water In Indonesia alone there have been dozens of hydropower to conserve non-renewable resources.



CHAPTER III

RESEARCH METHODOLOGY

A. Types of Research

The types of research that used by Researcheris development research (research and development) oriented product development in the education field

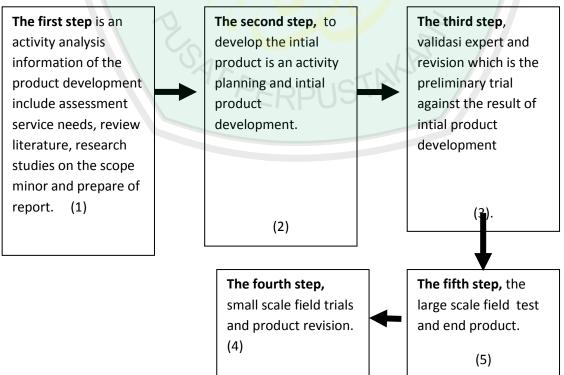
B. Methodology of Development

The method used in this study is a research method development or Research and Development (R&D). The model will be developed is referring to the research model development or Research and Development (R&D) from Borg and Gall which is a strategy for developing effective educational products that can be used to overcome learning problems. ¹⁵

The desain of the development of the design model research and development (R&D) adopted by researchers in developing their products, there are 5 steps of development, such as: (1) Conduct an analysis of the product to be developed. (2) Develop the intial product. (3) Validation specialists and revisions. (4) Intial field trials and product revision. (5) Major field trials and the final product.

Borg and Gall model selection is based on the consideration the development model that is programmed and arranged systematically with steps of preparation and careful planning. So that research adopt as development steps as in the following below:

Table 3.1 Model Design R&D Borg and Gall



¹⁵ Sugiyono. *Metode Penelitian Kuantitatif, Kualitatif dan R&D,* (Bandung: Alfabeta, 2011), hlm. 297.

Based on the research model from Borg and Gall described above, then a description of the procedures of research and development include:¹⁶

1. Research and Collecting early information

Research and collecting information, which included a literature review, observation or classroom observation, and the preparation of initial report. Early research or analysis needed is important in order to obtain initial information to do the development. This can be done with classroom observation to see the real condition of the field and interviews.

2. Planning

Planning includes formulate the ability, formulate specific goals to determine the sequence of material, and small scale trial. The Important step in this stage is formulating specific goals to be achieved. This objective is intended to provide information appropriate materials to develop products that have been tested in accordance with the specific goal to be achieved.

3. Validation expert and revision

preparation of learning materials, and evaluation. Format of product development includes learning materials, handbooks, and evaluation tools. Format of product development can be printed materials such as modules and teaching materials such as textbooks, sequence of processes or procedures in the design of learning system is equipped with a books or compact disc form.

4. Small scale field trial and product revision

Small scale field trials done at 1-3 schools, that include 6-12 subjects, data of result interview, observation, and questioner collected and analyzed. Trial product done to program format that developed adapted with purpose.

5. Large scale field trial test and end revision

_

¹⁶ Punaji Setyosari, *Metode Penelitian Pendidikan dan Pengembangan*, (Jakarta: Kencana, 2012) hlm 228 - 230

Product revision is done based on the results of field trials. The results of the field trial involving a larger group or subject matter is intended to determine the product's success in achieving its objectives in improving the product for repair at a later stage.

According to Borg and Gall research and development is a development model, based on the industry in which the research is finding used for the design of product and procedure, which are then systematically tested in field, in the evaluation and refined until they meet certain criteria, effectivities and quality. ¹⁷

The purpose of this research is the development of product learning moduls that will be used as a teaching and learning process is processed. The method used in this research is the research and development of research model which to get product and to test effective here.

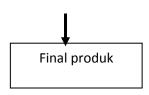
C. Procedure of development

2013.

Based on the model chosen and specified, developers summarizes research procedures are described as below:¹⁸

Stage of Development: **Product** revision a. Reviewing curriculum Conduct field studies c. Data collection Field testing fourth graders d. Frame the material SDI As-Salam Malang Stage of Development: Revision a. To the arrangement of instructional media content and structure b. The preparation of learning activities No Yes c. Preparation of evaluation tools Produk revision Final produk Validation phase: an dan pengembangan: Suatu Pengantar, Ed.1 (Cet.2, Jakarta: a. Validation specialists (subject matter experts and design) berbasis multimedia interaktif untuk meningkatkan hasil b. Validation teachers anusia kelas IV MIN Cengkok Ngronggot Nganjuk. Skripsi, uan. Universitas Islam Negeri Maulana Malik Ibrahim Malang.

Table 3.2 Langkah-langkah pengembangan bahan ajar



Of the step that have been describe above, the explanation as follow:

(1) Pre- development stage, (2) phase development produk, (3)the test phase of the produk, (4) the stage of revision.

1. Stage of pre-development product

Interest pre-development stage that study and explore characteristics of the materials developed in the teaching materials planned. Additionally, collecting the materials materials needed to design teaching materials. Activities undertaken in These stages are:

a. reviewing curriculum

Analysis conducted curriculum aims to define basic competencies and indicators. At this stage, a predetermined number of basic competencies and indicators that will be developed into teaching materials.

Table 3.3 The basic competencies selected key is on:

| Basic Competence | Competency Standards | Indicators |
|------------------------------|-------------------------|--------------------------|
| 3. Understand factual | 3.4 Differentiating the | • Students are able to |
| knowledge by observing | various forms of energy | explain the various |
| (hearing, seeing, reading) | through observing and | forms of energy. |
| and ask by curiosity about | describing its use in | Students are able to |
| her, God's creatures and | everyday life. | perform simple |
| activities, and objects that | | experiments. |
| met in homes, schools, and | | Students are able to |
| playgrounds. | | explain the benefits of |
| | | the various forms of |
| | | energy in everyday life. |

b. Conducted a field study

Field studies were carried out aiming to identify the behavior and characteristics of the students of class IV SDI As-Salam Malang, to analyze the students' learning difficulties, and analyzes the teaching materials science learning material energy source class IV SD / MI. This activity is carried out by means of interviews with classroom teachers and observe the textbook used in science learning, especially in the matter of energy sources.

The results showed that the textbook used in science learning already using Kurikulu 2013, only material presented are not yet integrated with the al-Quran. Besides textbooks used only focus on content alone, while the book is still a little praktikumnya activities. In the end it will make students have difficulty doing practical so that will affect student learning outcomes.

c. Data collection and selection of materials

At this stage of data collection and selection of textbooks that will be developed in the development of teaching materials. Textbooks are selected according to the ability of students in SD / MI. The results of that process will be material with respect to energy sources, integrating all quran verses on the material, as well as with simple steps in doing practical work.

d. Developed the framework for teaching materials

Preparation of instructional materials framework for categorizing indicators, materials evaluation of the competence of the source material energy.

2. Stage of product development

At this stage, the development of teaching materials. In developing this material, researchers conducted a consultation with subject teachers and some who are competent in the field of natural sciences. The material presented in this book are not material presented describes the concept, but the material presented in the form of teaching materials based on the Koran. The process is as follows:

a. Prepare materials related to the topics to be discussed.

- b. Content and structure to the arrangement of the contents of teaching materials by the way
- determine the flow of teaching materials in accordance with the IPA framework of teaching materials
- d. which have been prepared.
- e. Make experimental measures in accordance with the material
- f. especially in the matter of energy sources.
- g. Creating Evaluation.

3. Stages of product trials

The activities at this stage to determine the feasibility of an early draft resulting from the development phase so that it can be improved to improve products in the form of teaching materials. At this stage there are two steps, namely the stage of expert validation and field trials. Validation of products made in consultation with the experts, the experts in design, materials and learning practitioners. Results of the assessment of the validation of the Experts used to improve products. After the trial period field to determine the feasibility and attractiveness of the media that have been developed.

4. Stage product revision

This phase is carried out for repairs or improvements to the initial draft based on an analysis of data or information obtained from experts and students. If a valid instructional media had said the researchers do not need to be revised and the product is ready to be implemented, but if the teaching material is not said to be valid it must be revised prior to the final product development.

D. Population and Sample

1. Population

The population includes is grade IV B Islamic elementary school As- Salam Malang academic year 2015/2016.

2. Sample

The sample in this study were taken using a sample with purposive sampling technique, accompanied by specific reasons. Class that used as sample is the recommendation of the teacher of natural science and is quite representative terms of the number of student and the level of student ability that other class the sample in this study is a class IV B.

E. Validity

Test expert to strengthen and review the intial product and give feedback on the Improvement of media expert, conten expert field of study and instructional design expert.

With the validation of the final product is expected to instructional materials This developed eventually completely accountable. In order validation achieved well, need accuracy in selection design validation, subject validation, data types, data collection instrument, and data analysis techniques development of teaching materials. In detail, it is described as follows:

1. Design validation

Validation is aimed to obtain complete data for the improvement of the product or the perfection of the product to be made. It is also to know the products developed decent tested on students. Validation is done through expert evaluation and validation of subject teachers.

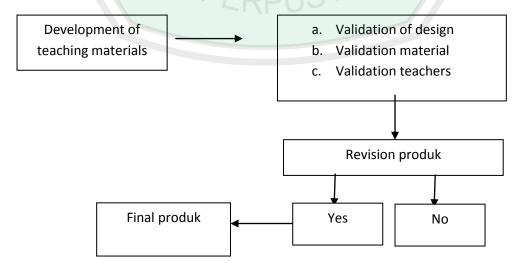


Table 3.4 Bagan Desain validasi produk

2. Subject validation

Subjects to be tested in this study is the subject matter material expert, expert instructional design, fourth grade teacher at SDI As-Salam Malang.

a. Material experts

Subject matter experts are lecturers who are experts in the material master sources of energy and material master praktitum energy sources. In terms of This subject matter experts chosen by the researchers is Mrs. Dewi Anggraeni, M.Sc. As tarbiyah science faculty lecturer and teacher. He was selected by researchers as a content expert for already qualified experts in. The development of research, namely:

- 1) Mastering the material characteristics of energy resources class IV MI / SD.
- 2) Having insight into the experience of the product relavan developed.
- 3) Available as a product tester IPA teaching materials based Al-Quran

b. Media experts

Media experts who set out to test the validity and feasibility of teaching materials products this lab book, basically have the same criteria as subject matter experts however, should the media expert who have the ability in the field of instructional design. In this case the researchers validate the designs to Mr. Ahmad Abtokhi, M. Pd, He is a lecturer in the faculty of science and technology, he is also a media expert or instructional design.

c. Learning Expert

Learning expert in Master Class IV Islamic Elementary School Malang

Mrs. Adna Arum Ambarwati S. Pd. is a fourth grade teacher at Islamic Elementari School Malang is learning experts who will provide feedback and an assessment of the development of teaching materials based on Al-Quran IPA source material energy. The criteria for learning experts are as follows:

- 1) The teacher was teaching institution level SD / MI.
- 2) Have experience in teaching sub theme of force and motion.
- 3) The willingness of classroom teachers as assessors and product users development for data acquisition source development results.

3. Research subject

The field trials are taken from the fourth grade students of Islamic elementary school as salam Malang, amounting to 26 students.

Guidenelines for using the scoring in the validation of a scale of 5, while the scoring criteria used I this study are as follow:

Table 3.5
Scoring criteria used in giving assessment on the development of media that was development

| // | KUNN | SCORE | BOVA | |
|-----------|--------------|---------|---------|--------------|
| 1 | 2 | 3 | 4 | 5 |
| Very | Less Precise | Enough | Precise | Very Precise |
| Imprecise | | Presice | | 2 |

After the question data is converted into the data as a value based on table 3.5, the next step is to determine the average scores of students. The average score questionnaire with linkert scale statement, are:

Nilai Prosentase =
$$\frac{\sum total\ jawaban}{\sum skor\ ideal}$$
 x 100%

The ideal score is determined by the following formula:

 $\sum skor ideal = skore tertinggi x jumlah responden x jumlah butir$

Result percentage then interpreted based on the category scale capabilities as follow:"

Table 3.6

The average score of the answers to the questionere

| Value % | category |
|--------------|-----------|
| S≤ 20 | Very less |
| S21 ≤ S ≤ 40 | Less |
| 41≤ S≤ 60 | Enough |
| 61≤ S≤ 80 | Good |
| 81 ≤ S≤ 100 | Very Good |

F. Product Trial

Product Trial aiming to obtain accurate data that is used to make revisions or improvements. Before tested, the product must first be consulted with several expert covering material and instructional media expert. After going trought the consultation phase, the product is addressed and assessed by teachers in nature science.

G. Trial Design

Design test conducted using descriptive trial design. The design allows the development of descriptive data to obtain quantitative and qualitative data which is very beneficial in the refinement of product development.

H. Type of Data

Data is defined as information or tangible material on which to base assessment (analysis or conclusions). ¹⁹The data used as a basis to determine the effectiveness and appeal of the product.

¹⁹ Ayu Muhayyinah, Pengembangan Bahan Ajar Ilmu Pengetahuan Alam Materi Gaya dengan Model Learning Cycle 5 Fase untuk Siswa Kelas IV MI Islamiyah Pakis-Tumpang,.(Malang: Program Studi Pendidikan Guru Madrasah Ibtidaiyah. UIN Malang. 2012), hlm. 62.

Types of data collected were distributed into two, according to the type of data in general, namely:

- 1) Quantitative data, obtained from the measurement results in the form of a percentage through expert assessment questionnaire, a questionnaire assessment of teachers teaching science, and test results of student learning are as follows:
 - a. Assessment expert content and design of learning about the suitability of the content teaching materials. Suitability of teaching materials covering the attractiveness of the packaging, ikesesuaian Quran with the material, the steps clearly in conducting experiments and completeness of other components, which can make a teaching materials to be effective.
 - b. Rate subject teachers and students test against the attractiveness of the textbook.
 - c. The test results of student learning before and after using materials resource development results (the results of the initial test and final test results).
 - d. Questionnaire responses of students about the development of teaching materials based on Al-Quran

2) Qualitative Data

- a. The observation of student learning before and after using science-based development of teaching materials Qur'an.
- b. Input, comments, and suggestions for improvements based on the results expert assessment obtained through interviews of experts content / materials, media specialists, learning specialists and grade IV Islamic Elementary School As salam Malang.

I. Intrument Data Collection

Instruments used in the form of data collection including interviews, questionnaires, and test the acquisition of learning outcomes. Each instrument will be explained as follows:

1. Observation

Results of observations including one of the instruments of data collection were used in this study. Observation of activities carried out on learning activities and for research activities take place. Results of observations during the study to be considered in determining the effectiveness of product development. As for the stages performed on observation, among others:

- a. Observation activities conducted on learning activities. This is because researchers wanted to know how the teaching and learning of science at SDI As Salam Malang.
- b. Observation activities conducted to determine the availability of facilities and infrastructure that support the learning of science courses at SDI As Salam Malang.
 Results of observation and evaluation of materials used as inputs for researchers to enhance the development product.

2. Interview

Interviews were conducted to obtain research data were not recorded either on questionnaire data and observation. Measures in interviews is as follows:

- a. Create interview guide
- b. Interviews were conducted to Mrs. Adna Arum Ambarwati, S. Pd as teacher class IV Islamic elementary School As-Salam Malang. Interviews are used to find problems that must be investigated, and want to know the things of the respondents deeper.

The interview guide used by the researchers to determine the existing problems in the sub-theme of the various energy sources is as follows:

- a) Needs teaching materials.
- b) The level of understanding of students during the learning
- c) The difficulties faced by teachers

Based on the interviews have been conducted, following

Interviews were conducted to Mr. Arief Chusaeni, M. KPD as head master in Islamic Elementary School As-Salam Malang. interviews are used to know science learning and the learning process took place at Islamic Elementary School As-Salam Malang. The interview guide used by researchers are as follows:

- 1). The process of learning activities in schools.
- 2). Application of curriculum 2013 in the school

From interviews over researchers trying to design book practicum to improve learning outcomes energy source materials.

3. Questionnaire

Questionnaire is a technique of data collection is done by giving a set of questions or a written statement to the respondent to answer. Questionnaire is an efficient data collection techniques if researchers know for certain variables to be measured and know what can be expected from the respondents. In addition, the questionnaire is also suitable when the number of respondents is quite large and spread out over a large area.²⁰ The questionnaire required are as follows:

- Questionnaire responses expert assessment or the content of teaching materials IPAbased Al-Quran
- 2) Questionnaire responses expert assessment or instructional materials design IPA-based Al-Qur'an
- 3) Questionnaire responses assessment or science teachers Natural grade IV Islamic elementary School As-Salam Malang
- 4) Questionnaire ratings or feedback about the attractiveness IPA teaching materials based on the Qur'an through field trials

The scale used in the questionnaire in assessment is a Likert scale, the scale used to measure attitudes, opinions, and perception of a person or group of people about the phenomenon social. ²¹

4. Test

The test is a way to hold a vote in the form of a task or series of tasks that must be done by a child or group of children so as to produce a value of behavior that can be compared with the value achieved by other children or with default values set.

The tests used in this study is a pre-test and post-test. Pre-test and post-test that will be used to see the influence of students' mathematics learning outcomes.

²⁰ Ibid hlm 199

²¹ Sugiyono, op.cit., hlm. 134

J. Data Analysis Techniques

The analysis used in the study of this development has three such techniques, learning content analysis, descriptive analysis, and analysis of test results.

a. Analisys of learning content

This analysis is done by formulating learning objectives are adjusted to the standards of competence and core competencies to deliver the composition of the material that will be used as a medium of learning in the form of products that are already developed. The results of this analysis are used as teaching material development of science-based Al-Our'an.

b. Analysis descriptive

In the pilot phase, the data collected using questionnaires assessment is open to criticism and feedback improvement. The results of this analysis are used to determine deskriptuf the level of accuracy, effectiveness and results of product development IPA in the form of teaching materials based on the material of the Qur'an all kinds of energy sources, to analyze the results of the responses of the validator using the following formula:²²

Information:
$$P = \frac{\sum xi}{\sum x} \times 100 \%$$

P = Feasibility

 Σ Xi = Number ultimate answer

 $\Sigma X =$ Number of answers ratings

In giving meaning and the decision to revise the teaching materials used qualifications that have the following criteria:²³

Table 3.7 Tabel Qualification criteria

| %Percentage 100% | Qualification | Eligibility criteria |
|--------------------------------|--------------------|----------------------|
| $84\% < \text{skor} \le 100\%$ | Sangan valid Tidak | Revis |

²² Suharsimi Arikunto, *Dasar – dasar evaluasi pendidikan* (Jakarta:Bumi Aksara,2003), hlm. 313.

²³ Ibid

-

| 68% < skor ≤ 84% | Valid | Tidak Revisi |
|------------------|---------------------|--------------|
| 52% < skor ≤68% | Cukup valid | Perlu Revisi |
| 36%< skor ≤ 52% | Kurang valid | Revisi |
| 20%< skor ≤ 36% | Sangat kurang valid | Revisi |

c. Analysis of Results Validation Expert Learning

Practitioners This study is one of the testers level of validity of the product development of teaching materials based on Al-Quran IPA. As for learning practitioner qualification are as follows:

- a. Master was teaching at the institutional level SD / MI
- b. Have experience in teaching
- c. Willing as testers and product-based science teaching materials AL-Quran as a result of the development.

Based on the results of expert assessment of learning is bu Adna Arum Ambarwati, S.Pd as a fourth grade teacher SDI As-Salam Malang result percentage 92.8%, the percentage of these achievements are at a very valid qualifications or feasible to use (84% <score ≤ 100 %). According to the expert opinion of learning, science-based textbooks Koran is said to be feasible because of the materials presented are in accordance with the curriculum of 2013, core competencies, basic competencies and existing indicators. The entire verse used was very appropriate to the material and learning objectives to be achieved and appropriate so that children are motivated to learn more.

The language used in textbooks tailored to the language that is easily understood by the students so that when the students will easily understand, besides integrating the verses of the Quran with the material is appropriate. Likewise with the existing evaluation instrument, according to an expert study are in accordance with the submitted materials, so that students will have no trouble understanding the purpose of evaluation questions that exist.

Associated with the measures undertaken in the review as well as the learning practitioners with expert review content and instructional design experts.

CHAPTER IV RESEARCH RESULT

In this fourth chapter will describe two things related to development results. *First*, a description of the design of teaching materials that explain the results of the development of the design of the development of textbooks. *Second*, the presentation of data validation, contains the results of the assessment that the development of products consists of three things: 1) Exposure Data; 2) Data Analysis; 3) Revised Product Development. All presented based on input from subject matter experts/content, design experts, and expert learning science, as well as field trials.

A. Description of Design IPA-Based Al-Quran

This book can be viewed through three aspects: the introduction, the content part and supporting part:

1. Introduction

In this introductory section contains the front cover, preface, integrsi Qur'an, the excess books, standards of competence, basic competence, indicators, and guidelines for the use of the contents of the book, and the table of contents. Here are the results of the development in the introduction:

a. Front cover

On the front cover contains the title "Textbook Ipa-based Al-Qur'an Thema 2 sub-theme 1 (sources of energy)" for whom the textbook (for SD / MI students fourth grade second semester), author names, images corresponding support material, Cover the back there is a sentence that shows information briefly excess textbooks, aphorisms, as well as the constituent institutions.



picture 4.1 Cover visible from the front

b. Foreword

In the preface contains a series of sentences about gratitude authors have completed the textbook, the general image the contents of textbooks, demand criticism and suggestions from the author to correct the textbooks have been developed.



Introduction of the Overlan

Picture 4.2 Foreword

are few studies of the Qur'an that is

integrated with science subjects.



Picture 4.3 study Al-Qur'an

d. more the Books

In this section contain excess textbook-based Al-Qur'an



Kelebihan Bahan Ajar

- Bahan ajar ini dilengkapi dengan landasan Al-qur'an sertaisi dan pedaman buku, sehingga pembaca dapat mengeri tujuan dari Bahan Ajar ini.
- Materi yang disajikan sesuai dengan KI-KD sehingga Bahan Ajar ini dapat tersusun secara sistematis.
- Pada setiap pembahasan, dilengkapi dengan gambar-gambar pendukung sehingga siswa tertarik untuk mempelajarinya.
- Uji kemampuan dari Bahan Ajarini alsusun untuk memperkuat penauasaan akan materi sekaliaus sebagai instrument evaluasi.
- penguasaan akan materi sekaligus sebagai instrument evaluasi. 5. Bahan Ajar ini di dalamnya dilengkapi dengan konsep, percobbaan-percobaan sedemana untuk mempetajam konsep, latihan sod, dan informasi informasi pendukung yang berkaitan dengan teknologi.

Picture 4.4 more the book

e. Standards Competency, Basic Competency, Indicators

The existence of a competent third is very important in the textbook. It is necessary to see the level of success achieved by students in learning.



Picture 4.5 SK, KD, dan Indicator

f. The content and usage guidelines Books

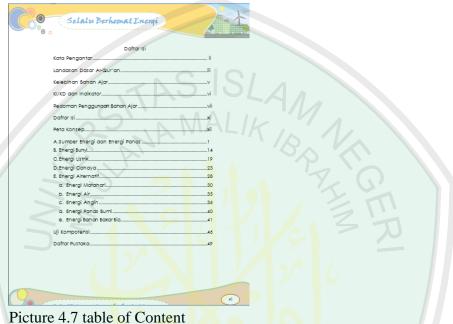
Guidelines for the use of this book shows the steps that must be done during the learning process. And comes with an evaluation



Picture 4.6 contents and guidelines for the use of textbooks

Table of contents

In the table of contents page there is a list of all the sections in the book-based teaching the Qur'an



2. Contents

On the part of the content contained on: activities of experimentation and learning materials

Initial activity

Before students conduct experiments, students must first observe the surrounding area associated with the material. After that, students are given questions in the textbook. That question will be solved by doing experiments



Gambar 4.8 Kegiatan Eksperimen dan Hasil Pengamatani

b. Now I know

In the "now I know" contains learning material prepared by each experiment, where this learning material as a theory which supports the results of the experiments that have been done.



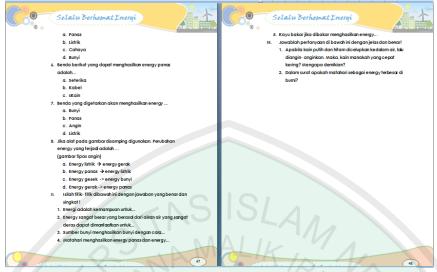
Picture 4.9 Now i know

3. Support

In this section there are supporters of the evaluation and bibliography

a. Evaluation

In the evaluation presented questions to test students' competence and understanding of the concept of incorporating questions UNAS.



Gambar 4.10 Evaluasi

b. Bibliography

In part this bibliography contains references-references used in preparing the book-based teaching the Qur'an.



B. Present

lidation Experts

e Qur'an has done validtor experts held

on 28 product development textbooks Qur'an conducted 4 stages. First, obtained from the assessment of product development textbooks based on the Qur'an carried out by one of the lecturers tarbiyah as expert material / content of teaching materials. Second, obtained from the assessment of

product development textbooks conducted by one lecturer of physics as an instructional design. Kertiga, obtained from the assessment of product development textbooks conducted by one of the teachers pengampu subjects of Natural Sciences (IPA) Elementary School fourth grade science teaching Islam as an expert. Fourth, obtained from the assessment of product development textbooks conducted during field trials.

The data obtained are quantitative and qualitative data. The quantitative data obtained from the questionnaire linker ratings scale, while the qualitative data obtained from the assessment form validator additional assessment or advice. Data validation results are analyzed using terknik calculation of the average value on each item ratings.

Presentation of data from the analysis of a questionnaire of expert material / content, design experts and learning experts, are as follows:

- 1. The result of Validation Expert Matter
 - a. Quantitative Data Exposure

Tabel 4.1 Results Revision Expert Matter

| No | Statement | X | Xi | P (%) | Qualification | Information |
|----|-----------------|---|----|-------|---------------|-------------|
| 1 | How the | 4 | 5 | 80 | Good | Decent, no |
| | accuracy of the | | | | | need |
| | writing of the | | | | | revision |
| | book's title to | | | | | |
| | the materials | | | | | |
| | science-based | | | | | |
| | development of | | | | | |

| | teaching | | | | | |
|---|-----------------|----|------|------|-----------|------------|
| | materials | | | | | |
| | Qur'an | | | | | |
| 2 | How to ease | 5 | 5 | 100 | Very Good | More |
| | the language to | | | | | Decent, no |
| | be understood | | | | | need |
| | in the | | | | | revision |
| | development of | AS | ISI | 41 | | |
| | teaching | N/ | ALIK | M | 1. | |
| | materials based | | | BP | | |
| | IPA Qur'an | 21 | 1 5 | Y | E CO | |
| 3 | How is the | 5 | 5 | 100 | Very good | More |
| | clarity of the | | | 5/ K | | Decent, no |
| | materials on | | 10 | | | need |
| | IPA-based | | | 9/ | | revision |
| | teaching | | | | 3 | |
| | materials | | | -NYP | 3 | |
| | Qur'an | ER | PUS | 11. | | |
| 4 | Is the material | 5 | 5 | 100 | Very good | More |
| | presented is in | | | | | Decent, no |
| | conformity | | | | | need |
| | with the | | | | | revision |
| | existing theme | | | | | |
| | in science | | | | | |
| | teaching | | | | | |
| | | | | | | |

| | materials based | | | | | |
|-------|------------------|-----|------|------------------|-------------|------------|
| | on Al-Quran | | | | | |
| 5 | How suitability | 4 | 5 | 80 | Good | Decent, no |
| | verses on the | | | | | need |
| | theme of | | | | | revision |
| | science that | | | | | |
| | existed at the | | | | | |
| | IPA teaching | AS | ISL | $\Delta \Lambda$ | | |
| | materials based | A M | ALIK | M | 1. | |
| | on the Qur'an | A 1 | | BP | | |
| 6 | How the | 5 | 5 | 100 | Sangat baik | More |
| 4 1 1 | accuracy of the | 76 | | E1 | 3 D | Decent, no |
| | verse with | | | 20 | | need |
| | scientific | | / 9 | | | revision |
| | themes that | | | | | |
| | exist in science | | | | <i>W</i> | |
| | teaching | | | TAKP | 3 | |
| | materials based | ER | PUS | 11. | | |
| | on the Qur'an | | | | | |
| 7 | How depth | 5 | 5 | 100 | Sangat Baik | More |
| | explanation of | | | | | Decent, no |
| | the verse that | | | | | need |
| | existed at the | | | | | revision |
| | IPA teaching | | | | | |
| | materials based | | | | | |

| | on the Qur'an | | | | | |
|---|-----------------|---|----|-----|-------------|------------|
| 8 | How to fill the | 5 | 5s | 100 | Sangat Baik | More |
| | breadth of | | | | | Decent, no |
| | science | | | | | need |
| | teaching | | | | | revision |
| | materials based | | | | | |
| | Al-Qur'an | | | | | |

Based on the results of the quantitative data validation by experts material / content. The next step is to analyze the data, can be calculated by the percentage below the level of achievement for an explanation:

$$P = \sum x \times 100\%$$

$$-100$$

Information:

X = score of the answers by the validator that the Mother Goddess as a content expert / teaching materials

Xi = highest answer score

P = the percentage level of qualification

Table 4.2 Frequency Distribution Feasibility Level Expert Content /
Content of teaching materials

Tabel 4.2 frequency Distribution Feasbility Level Expert content

| Stape qualitation | F | % |
|-------------------|---|----|
| Very good | 2 | 25 |
| Good | 6 | 75 |

| Enought | - | - |
|---------|---|---|
| | | |

In Table 4.1 and 4.2 show the results data valiadasi content expert / teaching materials to product development textbooks based al quran materials science theme 2 sub-theme 1 class IV SD / MI 2nd half ie 25% said very good, ie items 1 and 5, and 75% expressed either in the item 2,3,4,6,7,8

b. Explanation Qualitative Data

The qualitative data gathered from feedback, critiques and expert advice contents / teaching materials in a public statement regarding the textbook can be seen in Table 4.3

Tabel 4.3 criticis and suggestions to the Material

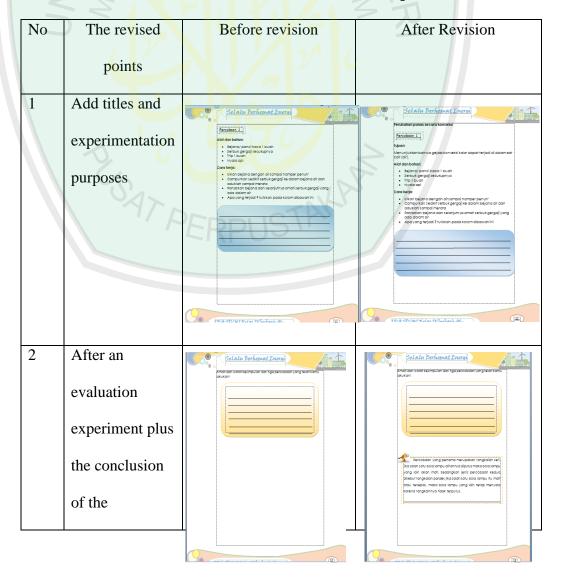
| Name Subject Test Expert | | |
|--------------------------|----------------|---|
| Dewi Anggraini | a. b. c. | The steps of experiments adapted to question Problems created contextual Picture on the material supporting documentation should be derived from the author |

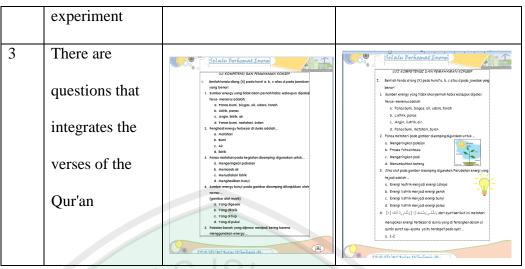
According to the table above criticism and advice, has written that there are several aspects that need to be revised or corrected for consideration whether or not a product worth studying, as well as enhancements to the product so that it

can become more qualified. In this textbook improvement requires 2 times revisia. Validation of the expert material / content carried on 18 mei2016 by Mrs. Dewi Anggraini, in the process with expert material / content, researchers have conducted consultation related to teaching materials with the supervisor that Dr. M. Samsul Ulum, MA, so that when the validation process with subject matter experts only slightly related to the revision of the material presented, only validator material experts say that "measures adapted to the experimental questions, the questions that made contextual, and image support should come from personal documentation".

c. Producet revision

Table 4.4 Revision Based Materials Expert





All data is the result of the reviews, ratings, and comments and suggestions from the expert material / content Textbook Based Qur'an as a material used as a basis for revision. It is useful for the improvement of components Textbook Based on the Qur'an before tested to grade IV.Data Hasil Validasi Ahli Desain Bahan Ajar

a. Quantitative Data Exposure

Table 4.5 Assessment Teaching Material Design Experts

| No | Assessment | X | Xi | P % | Kualifikasi | Keterangan |
|----|-------------------------|----|-----|-----|-------------|---------------|
| 1 | Cover design in | 5 | 5 | 100 | Very Good | Very decent, |
| | accordance with the | DI | 151 | VA | | does not need |
| | content | PC | | | | revision |
| 2 | Font used in | 4 | 5 | 80 | Good | Decent, does |
| | accordance with the | | | | | not need |
| | student kleas IV SD / | | | | | revision |
| | MI | | | | | |
| 3 | The size of the letters | 5 | 5 | 100 | Very Good | Very decent, |
| | used in accordance | | | | | does not need |
| | with the fourth grade | | | | | revision |

| | students of SD / MI | | | | | |
|----|---|-----------|----|-----|-----------|--|
| 4 | Pictures on the books in accordance with the material presented | 5 | 5 | 100 | Very Good | Very decent does not need revision |
| 5 | The images used in the book to attract students to learn | 4 | 5 | 80 | Good | Decent, does not need revision |
| 6 | The layout of the images in an interesting book | 5S AL, | 5 | 100 | Very Good | Very decent does not need revision |
| 7 | The images on the book clarify material | 4 | 5 | 80 | Good | Decent, does not need revision |
| 8 | The image size at the right book | 4 | 5 | 80 | Good | Decent, doe not need revision |
| 9 | Consistent colors on books | 5 PL | 5 | 100 | Very Good | Very decent does not need revision |
| 10 | Layout used in an interesting book | 4 | 5 | 90 | Good | Decen , doe not need revision |
| | Total | 45 | 50 | | Very Good | Very decent does not need revision |

Based on the results of the quantitative data validation by experts design, the next step is to analyze the data, can be calculated by the percentage level of achievement, the following explanation:

$$P = \frac{\sum xi}{\sum x} \times 100 \%$$

Information:

X = Score validator answers by Ahmad Abtokhi, M.Pd as expert design teaching materials

Xi = Score Highest answers

P = Percentage qualification level

Tabel 4.6 Frequency Distribution Feasibility Level Teaching Material

Design Experts

| Level of Qualification | F | % |
|------------------------|-------|----|
| Very Good | 5 | 50 |
| Good | RPUST | 50 |
| Enough | - | - |

In Table 4.6 and 4.7 show the results of data validation design expert instructional materials to Sproduk development Textbook Based Qur'an energy source material at a grade IV SD / MI Semester II is 50% expressed very well, namely in item number 1.3, 4.5 and 10.

b. Qualitative Data

The qualitative data gathered from feedback, critiques and expert advice material / content of teaching materials in a public statement regarding the textbook can be seen in tebel 4.8

Table 4.7 criticis and Suggestions To Design

| Name Subject Text Expert | Critic and suggestion |
|--------------------------|-------------------------------------|
| Ahmad Abtokhi, M.Pd | a. All the pictures are not of the |
| | results should be included |
| TAS ISI | reference documentation |
| 25 NAMALIA | writers |
| KI PIN | b. Cover still unattractive but the |
| \$ 3 2 1 1/g | image is already represented |
| 531741 | c. Try not there are a lot of empty |
| | space on each page |

According to the table above criticism and advice, has written bahwasannya there are several aspects that need to be revised or corrected for consideration whether the product is eligible for the study or not, as well as enhancements to the product so that it can be more qualified, in the improvement of textbooks based on Qur'anic requires 2 revisions.

Validation of the design experts made on the 1st of May 2016 by Mr. Ahmad Abtokhi, M Ed, in the validation process design experts, researchers have conducted consultation related to teaching materials with the supervisor, Dr. M. Samsul Ulum, MA, so that when the validation process only slightly revised design experts associated with the material presented, only validator design experts say that "all images are not from the authors should

divantumkan rujukanya documentation, and make sure there are plenty of empty space on every page ".

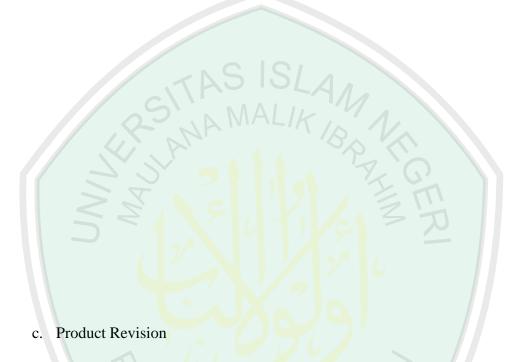
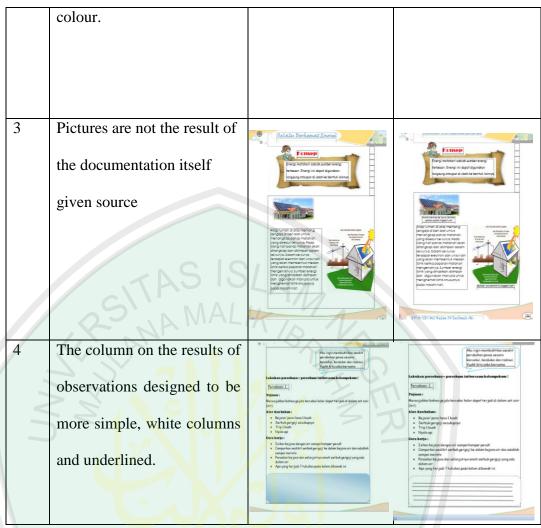


Table 4.8 Revision Teaching Material Based Design Validation Expert

| No | The Revised Point | Before revision | After revision |
|----|--------------------------------|--|---|
| | 1 PEDDI | ISTA / | |
| 1 | Cover less attractive, but the | TECHNIA MINISTRE S BLEKEL MARKE PAR [TEMM_2 SLED TEMM 1] | MACAM-MACAM SUMBER ENERGI BUKU AJAR IPA TEMA 2 SUB TEMA 1 |
| | image has been representing | MACAM-MACAM SUMBER ENERGI | |
| | the content of the material. | | |
| | It's just more natural | | |
| | images. | Untuk DS/MI kelas IV semester 2 | Kelas IV |
| 2 | Design on page up and | Selalu Berhemat Inemi | Schalu Berhemat Lucrai |
| | down is converted into | Folusion kanu periningnya mempelajari energi dan pembahannya bagi kehidapan manusiai? Bisahah kira menjidasi kehidapan tanpa energi? Apa suja manfast energi bagi kehidapan kira sehari-hari? Baguinana jika senerji yang ada di asan ini hakibi? Adalah energi isan yang bisa dimenfastkan? Pada bah ini kalian dian mempelajari energi serta kemanfastanya dalah hekidapa kira sebari-hari. | Education in Court of the Court |
| | simpler, and not many | Distin: All-Quiron terrisport oyet your perceiption of the polymore of the pol | popular "Attigurus hadaspar ujuh yada pinti yada dili Annikur ujuh di pang pengunyi. |
| | ı | ل المشاهدية بسطح كالمشاهدية المسلم المسلم كالمشاهدية المسلم كالمسلم كالمشاهدية المسلم كالمشاهدية كالمشاكية كالمشاهدية كالمشاهدية كالمشاهدية كالمشاهدية كالمشاهدية كالمشا | الموسية المشاخ الرئيسة المراحة المشاخ الرئيسة الميان المراحة الرئيسة المراحة المراحة ولا مولية المراحة المراح |
| | | prilinys: "Allah (pemberi) cahaya (kepada) langit dan bumi. Perumpanan cahaya Allah adalah seperti sebuah labang yang tidak temba, yang di dalaman dap celiti bezar (pelitia ta) didah kaca. | pikkyp Alba (jakholar) dannya (kapeda) lang) dan buhi Permaanaan dahaya Alba dadah seperi sebah lugang yang idad serbua yang di dalam ya dalapih sebar Alba (hi dalam saba da da ili sebah aban birkang jyang bersahaya) seperi muliasa. |



All data from the review, research or criticism and suggestions from experts design the book-based teaching the Qur'an as a material used as a basis for revision. It is useful for the improvement of textbook-based component of the Qur'an before tested to grade IV.

2. The Results Validation Expert teacher science

a. Quantitative Data Exposure

Table 4.9 Assessment Subject Teacher Science

| No | Assessment | X | Xi | P (%) | Qualification | Information |
|----|--------------|---|----|-------|---------------|-------------|
| 1 | How | 4 | 5 | 80 | Good | Decent, no |
| | formulation | | | | | need |
| | topic on the | | | | | revision |

| | | development | | | | | |
|--------------|---|-----------------|-----|------|------|-------|------------|
| | | of teaching | | | | | |
| | | materials | | | | | |
| - | 2 | How | 4 | 5 | 80 | Good | Decent, no |
| | | suitability of | | | | | need |
| | | the material | | | | | revision |
| | | presented in | | | | | |
| | | the | ΔS | IS/ | 11 | | |
| | | development | M | ALIK | M | 1. | |
| | | of teaching | | \ | BP | | |
| | | materials | 9 🚹 |) (4 | 7 | EG (| |
| | 3 | How relevant | 4 | 5 | 80 | Good | Decent, no |
| \mathbb{N} | | is the focus of | | | | | need |
| | | learning the | 7 | | | | revision |
| | | indicators on | | | 91 | | |
| | | the | | | | 3 // | |
| | | development | | | -NAP | 3 /// | |
| | | of teaching | DER | PUS | TH | | |
| | | materials | | | | | |
| - | 4 | Are indicators | 4 | 5 | 80 | Good | Decent, no |
| | | in the | | | | | need |
| | | formulation of | | | | | revision |
| | | teaching | | | | | Tevision |
| | | materials | | | | | |
| | | | | | | | |
| | | presented | | | | | |

| | with the | | | | | |
|----------|-----------------|-----|------|---------------------------------------|-----------|------------|
| | formulation of | | | | | |
| | basic | | | | | |
| | competencies | | | | | |
| | that have | | | | | |
| | specified one | | | | | |
| | in the | | | | | |
| | curriculum in | AS | ISL | 41. | | |
| | 2013 | NMA | ALIK | M | 1. | |
| 5 | Is the learning | 4 | 5 | 80 | Good | Decent, no |
| 1, 1, 1, | content in | | 19 | | | need |
| 111 | teaching | 716 | (1) | 5 | S P | revision |
| | material | | | 20 6 | | |
| | according to | | | | | |
| | curriculum | | | \mathcal{I}' | | |
| | 2013 | | | | W. // | |
| 6 | How | 5 | 5 | 100 | Very Goog | Very |
| | systematic | ER | PUS | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | | Decent, no |
| | description of | | | | | need |
| | the content of | | | | | revision |
| | learning in | | | | | |
| | these | | | | | |
| | materials | | | | | |
| 7 | How the | 5 | 5 | 100 | Very Good | Very |
| | scope of the | | | | | Decent, no |

| material | | need |
|--------------|--|----------|
| presented in | | revision |
| this IPA | | |
| teaching | | |
| materials | | |

Based on the results of the quantitative data validation by experts design, the next step is to analyze the data, can be calculated by the percentage level of achievement, the following explanation:

$$P = \frac{\sum xi}{\sum x} \times 100 \%$$

Information:

X = Score validator that answer by your mother's mother as a teacher of science subjects.

Xi = Score Highest answers

P = Percentage qualification level

(Frequency distribution table feasibility level design expert teaching materials)

In Table 4.9 and 4.10 shows the results of data validation expert teaching science to product development textbooks IPA-based Al-Qur'an energy source material at a grade IV SD / MI the second half of that 42% said excellent, namely in item number 1.2 , 3. 4, 5 and 80% excellent items 6, 7Paparan Data Kualitatif

The qualitative data gathered from feedback, critiques and expert advice contents / teaching materials in a public statement regarding the textbook can be seen in Table 4.11

Tebel 4.10 criticis and suggestion design expets

| Name Subject Test Expert | Criticis and suggestion | |
|---------------------------|---|--|
| Ibu Adna Ambar Wati, S.Pd | In general, these instruments are in | |
| | accordance with the learning | |
| | objectives to be achieved in the matter | |
| | of energy. But there are few materials | |
| | that should not be entered into the | |
| TAS ISI | instrument. That material about light | |
| 25 IAMALIA | experiment. It's good material so that | |
| WIRE. | only the scope of energy alone | |
| 33 21119 | instrument users (students) do not | |
| 5311941 | have excess and confusion of | |
| | understanding. also for heat transfer | |
| | material, it would be better if they | |
| | were also written explanation of the | |
| | concept of (convection, conduction | |
| SAT PEDDUS | and radiation). | |

According to the table above criticism and advice, has written that there are several aspects that need to be revised as the improvement of products, the improvement of these materials require two times the revision, the data taken on May 25, 2016. Validation of learning experts is that Mrs. Adna Arum Ambarwati, S. Pd. He only suggested that "basically textbook developed already good, desainya is appropriate, but there are some materials that should that should not be included in the instrument that is about light, matter sufficient in energy sphere

alone. And the displacement of material plus an explanation of the concept of convection, conduction and radiation. "

All data is the result of the reviews, ratings, and comments and suggestions from the expert teacher learning science teaching as a material used as a basis for the revision and refinement of the components useful for teaching materials before tested to grade IV.

3. The Results of the Validation Learning Material Based Al-Qur'an

Validation of the results obtained from the test results of the textbook which was held on May 28, 2016. The products development are tested in the field in the form of science-based textbooks Al- Quran on the theme of two sub-theme 1 of an energy source. Which testing these products will go through two stages are: 1) small group trial (small group evaluation), which are divided into 4 groups; 2) large-scale trial (field evaluation) is done by all the fourth grade students of elementary school of Islam unfortunate. Following exposure test result data.

Following the presentation of data pre-test and post-test of fourth graders on field trials will be presented in the following table:

Table 4. 11 data pre-test and post-test on field trials

| No | Nama | Pre-test | Post-test |
|----|--------------------------|----------|-----------|
| 1 | A 1 17 1 F | 7.5 | 0.7 |
| 1 | Achmad Zaidan F | 75 | 85 |
| 2 | Ahmad Fakhrudin Ar-Razi | 75 | 85 |
| 3 | Daffa Rajaza Putra Fauzi | 68 | 85 |
| 4 | Faiq Nasrullah Acmad | 76 | 80 |
| 5 | Fariza Zarkasya Wibowo | 75 | 80 |
| 6 | Fatta Choirul Wahid | 80 | 85 |

| 7 | Kevin Satria Nugroho | 79 | 85 |
|----|--------------------------|-------|------|
| 8 | Muhammad Azfan R | 75 | 80 |
| 9 | Muhammad Zaim A | 80 | 80 |
| 10 | M Rauf Al- Kayys | 80 | 85 |
| 11 | Ahmad Mujahir Abdun | 68 | 70 |
| 12 | M Amin Cahyono | 75 | 80 |
| 13 | Daffa Taqiyuddin | 80 | 85 |
| 14 | Fikri Abdullah | 85 | 90 |
| 15 | Muhammad Zahi Dicky S | 80 | 85 |
| 16 | Nafis Rahmadika D | 76 | 85 |
| 17 | Ziad amrullah | 76 | 85 |
| 18 | Wahyu Fadhilah Romadhon | 80 | 85 |
| 19 | S Rasyid Pasha | 85 | 85 |
| 20 | Salsabila Zaki Taciyudin | 70 | 80 |
| | Jumlah | 1538 | 1660 |
| | Rata- rata | 76, 9 | 83 |
| | | | |

Data value of pre test and post test proficiency level is analyzed by t-test phase with a significance level of 0.05. This analysis technique is used to determine whether there is the level of student understanding of the treatment given to kelmopok objects. The indicator ditaknya students' level of understanding of this study, ie when there is a difference in student learning outcomes were performed before and after using textbooks that have been developed.

CHAPTER V

DISCUSSION

In chapter V describes the discussion. The discussion in this development is divided into two main ideas include: (a) an analysis of the design development of teaching materials based Al-Qur'an, (b) analysis of data quality validation results.

A. Analysis of The Design Development of Teaching Materials Based Al-Qur'an

The development of this textbook is based on the fact that the textbook used there are integration Qur'an and various experiments and evaluations will be developed by the researchers. Thus the results of the development that is intended to meet science-based textbook availability of the Qur'an that can enhance students' understanding on the material kinds of energy sources.

The results of the development of teaching materials in the form of "textbook science-based Al-Qu'an theme 2 sub theme 1 in grade IV". The presence of product development is intended to assist students in understanding the material presented teacher. In addition, the book-based teaching the Qur'an can assist teachers in presenting the material to be integrated with the verses of the Quran and using experiments that could make students become more active during the learning process.

1. The Results Development of Teaching Materials

The finished product of this development is the science teaching materials based on the material Qur'an all kinds of energy sources. The presence of the product development of teaching materials based al-qur'a aims to meet the availability of supporting books that can improve the effectiveness and attractiveness of the students in the study of Natural Sciences on the matter of energy sources in accordance with SBC 2006, this book has the primary goal is to improve student learning outcomes.

Development of teaching materials based Al-Qur'an IPA is based on the fact that the unavailability of supporting books that support the learning of Natural Sciences at the material source of energy that is integrated with the verses of Qur'an.

Thus the results of the development of this textbook is meant to be meet the availability of teaching materials that can increase effectiveness, and attractiveness keefisiensani in study Natural Sciences in SD / MI in achieving educational outcomes that have been set in the curriculum.

Based on the model chosen and described, then the research procedure include: ²⁴

a) Research and information gathering early

This first step includes needs analysis, literature, literature, small-scale studies and reports required standards.

Researchers conducted an initial interview of the fourth grade teachers to analyze the needs. Based on interviews with fourth grade teacher SDI As-Salam Malang, the teacher explains that in learning science student learning outcomes that have less impact on learning outcomes unsatisfactory because students are falling behind the KKM'. This sometimes may be due in the learning process of teachers

²⁴ Farida Nursyahidah, Research and Development vs Development Research. Dalam www.infokursus.net diakses pada tanggal 25 Desember 2015, hlm.12.

often use the lecture method and do lab directly to the students. Learning materials such as energy resources, students are required to determine the types of energy sources has been no integration verses quranya for example so that the students' knowledge is merely material. He admitted that they had difficulty in making teaching materials that are of interest of students while information technology development and growing rapidly.²⁵

Further observations on the learning process to obtain real data. Researchers conducted observations in class IV SDI As-Salam Malang to look at the reality on the ground during the learning process.

After obtaining the data, analyze it and determine solutions based on the needs on the field.

b) Planning

Research planning R & D include: formulating research objectives, estimate the funds, manpower and time in research.

Based on preliminary information, the researchers want to develop teaching materials ipa-based al-Quran as teaching materials science learning material energy sources. The aim is to produce teaching materials based al quran in learning science, explains the attractiveness of the LKS-based al quran in learning science, and explains the improvement of student learning outcomes with the use of the product development of teaching materials ipa-based al quran in class IV SDI As-Salam Malang.

After the researchers should be able to estimate the funds, manpower and time. For funds, the researcher as much as possible to minimize the funds will be issued. While manpower and time, researchers predict manufacture products that will be

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²⁵ Hasil wawancara dengan ibu Adnai guru kelas IV SDI As-Salam Malang pada tanggal Hari Sabtu, 7 Maret 2015, Pukul 09.20 WIB

completed within a period of one month and will do the research for approximately two months to complete the study this development ranging from observation phase to field trials.

c) Development of the initial product format

After formulating the plan, researchers began making products based teaching book Qur'an. Researchers assessed based al quran textbook will help students in the learning process as a supplement book in the study material in the design of energy sources as attractive as possible so that students know that god created everything that has been stated in the Qur'an. and students learn mentafakuri truth of the Qur'an.

End of manufacture of textbook-based al quran is to publish the product to be ready to be tested. Not only that investigators must also specify the research facilities that will be needed during the research process development.

d) Early trials

Dilakuakan early trials to the two experts, each pakarpengembangan design instructional materials and expert subject matter experts to obtain the validity of a product. Researchers set the validator to assess the validity of the media developed. Researchers chose Mr. Ahmad Abtokhi, M. Pd as a validation of design experts, Ibu Dewi Anggraeni, S.Si., M.Sc as validation of subject matter experts and Mrs. Adna Arum Ambarwati S.Pd as validation of science teaching experts.

e) Revision of the product

Based on the results of early trials, researchers conducted repair product development input from media experts and learning experts.

f) Field test

After the revision, the researchers need to test piloted in one class students. In this study, the test was carried on class IV SDI As-Salam Malang. Need to measure

the student's ability to use products developed with that do not use products that are developed, using Pre-test and post-test.

g) Revision of the final product

Once tested, the researchers still need to do a revision on the results of field trials to obtain maximum results.

h) The dissemination and implementation

The last stage of this development study is to write a research report based on the previous procedure.

After fulfilling the procedures development of teaching materials, produced teaching materials based al quran class IV SD / MI material energy source valid or feasible for digunakan.Bahan this lesson is about the integration paragraph contains al quran with energy matter that is in SD / MI equipped with simple steps and also the image so that students are easier to understand. To measure student skills and understanding, the developer also includes exercises at the end.

Researchers chose to use the textbook teaching materials shaped as seen from the results of the field for observation bahwasannya most students feel bored with the conventional method used by teachers in presenting the material on science learning, especially in the matter of energy sources for this material.

Teaching materials such as textbooks based al quran is intended to help students understand the material presented by the teacher. In addition the developers also hope bahwasannya this book students can mentaakuri verses of Qur'an in everyday life, so as to develop students' thinking skills, as well as the expectations of researchers latter is the result of this development can also be used as an alternative learning in addition to books that have been provided by the schools and used in learning that have taken place.

2. Validation Expert Analysis Of Subjects IPA-based Al-Quran

Validation can be done by the expert or experts who are experienced in the field.

This validation is done before in ujicobakan teaching materials to students.

In giving meaning and the decision to revise the teaching materials used qualifications that have the following criteria:²⁶

Tabel 4.13 Eligibility Criteria Subjects

| Tingkat Pencapaian | Kualifikasi | Keterangan |
|--------------------|------------------------|--------------------|
| 80 – 100% | Sangat Valid | Tidak perlu revisi |
| 68 – 84% | Valid | Tidak perlu revisi |
| 52 – 68% | Cukup valid | Perlu Revisi |
| 36 – 52% | Kurang valid | Revisi |
| 20-36% | Sangat kurang valid | Revisi |

Product validation can be done by presenting some expert or experienced experts to assess the new product. The validation phase, covering. ²⁷

a. Analysis of Results Validation Expert Content

Based on the conversion scale set out in the questionnaire product assessment questionnaire, are as follows:

- 1. Mastering the learning characteristics
- 2. It has a depth of knowledge associated with the product

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²⁶ Sugiyono. Metode Penelitian Kuantitatif, Kualitatif, dan R&D. (Bandung :CV. ALFABETA. 2008), hlm.93.

²⁷ Ibid. hlm 302

 Developed Available as a product tester science textbook based Al-Quran class IV SDI As-Salam Malang

Based on the results of expert assessment of the contents of the results obtained percentage of 90.9%, the percentage of these achievements are at a very valid qualifications or feasible to use (84% <score ≤ 100%). IPA textbook-based Al-Quran class IV SD / MI material energy source according to expert content has been valid or eligible to be used as is appropriate curricula, Competency Standards, Competency, indicator and learning objectives with the material in the book. Likewise with the component contents of the book in the form of the suitability of the material presented in the development of teaching materials, the suitability of core competencies with indicators, compliance indicators with basic competence, suitability systematic description of learning content, clarity exposure to the material, the material presented can to motivate students, a summary of the material in accordance with the discussion, the accuracy of evaluation instruments used can measure the student's ability, ease of language used in teaching materials.

According to the expert validation of the contents, textbook-based al quran presented is simple, attractive and can be done in groups by students.

b. Analysis of Result Design Validation Expert

Experts set design to test the validity of teaching material products have basically the same criteria as subject matter experts (content) but experts are learning design should have the ability in the field of instructional design.

Based on the evaluation result of design experts percentage 82.5%, the percentage of these achievements are in qualification valid or feasible to use ($68\% < score \le 84\%$). Expert assessment of the design seen from several aspects, the first is an assessment of the cover or cover, the cover is considered to be interesting and appropriate to the content

of the material because according to the expert color design used was appropriate and not overly lit, the image on the cover has also been adapted to title books, namely energy source material, the use of the font and its size was considered appropriate that the book looks interesting to read and learn.

Contains teaching materials developed teaching materials that integrate with verses of al-Quran, and is equipped with a practical source of energy and is accompanied by images that support to facilitate students in learning.

The use of the model and size of the letters was very appropriate to fourth grade students, because the letters are easy to read. All letters are models, sizes and different colors according to the character of elementary school students. And finally the overall layout of the book considered attractive and in accordance with the soul at the level of elementary school children.

c. Analysis of Results Validation Expert Learning

Practitioners This study is one of the testers level of validity of the product-based teaching materials based on the Qur'an. As for learning practitioner qualification are as follows:

- 1. The teacher was teaching at the institutional level SD / MI
- 2. Have experience in teaching
- 3. Willing as testers and product-based teaching materials al quran for data acquisition source development results.

Based on the results of expert assessment of learning ie classroom teachers IV SDI As-Salam Malang result the percentage of 90%, the percentage of these achievements are at a very valid qualifications or feasible to use (84% <score \leq 100%). According to the expert opinion of learning, teaching materials based al quran is feasible because of the materials presented are in accordance with SBC 2006, Core

Competence, Competency and existing indicators. Overall teaching material used was very appropriate to the material and learning objectives to be achieved and in accordance with the child's ability to reason so that children are motivated to learn more.

B. Analysis of Data Quality Validation Results of Experts Material Science Based Al-Our'an

In this study, based teaching materials developed Qur'an meets the criteria attractiveness. It is seen from the process of learning activities carried out in class IV SDI As-Salam Malang to mentafakuri verses of Quran in living a good life after receiving treatment using these materials.

Based on observations in the experimental class, the students were active and enthusiastic in following the process Study abroad teaching. By showing the results of the validation of teaching materials in field trials for the development of teaching materials based al quran to class IV in SDI As-Salam Malang is considered good with prsentase results obtained 86.3% of the established criteria. Percentage these achievements are at a valid qualification. The assessment results in field tests showing the effectiveness and attractiveness of the Qur'an based teaching materials developed for students of class IV SD / MI so that teaching materials can be used in learning activities. Koran-based teaching materials can be said to be effective and engaging in learning, because of the exposure to the material in each unit in the textbook easy to understand students, matter-because easy to do, how to use it easily, as well as the response of students and teachers to better learning.

CHAPTER VI

CONCLUSION

In this chapter will discuss some things includes, a) conclusion of the prosses development, b) suggestion. Exposure to more, as follow:

A. Conclusion the Process Development

1. Conclusion of the Design Development

Based on the results of the validation process of development and discussion of teaching materials in the form of laboratory work in the LKS-based energy source material, it can be concluded the following results: (a) development a teaching material based Al quran produce products such as textbooks, (b) material science ter integrasi with al qur'an, (c) easy to understand language, (d)suitability pictures with material

2. Conclusion of Quality Material Development

(a) Products developed through the process of validation of three experts, namely the content expert (matter) 90.9%, 82.5% product design experts, and experts ipa subjects

(teachers) 90%, of the three experts indicate valid criteria on expert content / material, design, and subjects (teachers) So based teaching materials Qur'an is not needed revision and feasible for use in the learning process.(b) Teaching materials. This can be said to be valid because the teaching materials developed have differences with other teaching materials. (d) have good level of relevance with the application curriculum,

B. Suggestion of Product Development in the Future

Based on the results of teaching materials developed are expected tosupport science teaching in class IV SD / MI. As for suggestions that candelivered on science-based development of teaching materials The Qur'an is as follows:

- a. Teaching materials that have been developed have been proven to improve student learning outcomes in implementing the learning activities so that its utilization should be supported with more adequate facilities.
- b. The teaching materials for teachers can digunakaan properly by the teacher because it was through the research process. Teachers can also develop teaching materials are more creative. These materials only as a means of alternative and not the only teaching materials used for learning so that teachers of Natural Sciences (IPA) suggested it could combine with a more attractive strategy so that students can be motivated in learning activities.
- c. The products these materials only on the material source of energy, therefore, the need for further development with other materials relating to the subjects of Natural Sciences (IPA).
- d. Teaching materials in the form of lab-based worksheets can be used as a reference by teachers to develop teaching materials that match the students' abilities.

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| 1. 13 MPRIL 2016 | konsuctasi BAB S, G, III | my |
| 2. 28 APRIL 2016 | Revisi RAS S. S. T. | my |
| 3. Dr Mer 2016 | Formulas. RAB I. J. J. W. V | my |
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Kepada Yth. Kepala SDI As Salam Malang

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Assalamu'alaikumWr. Wb.

Dengan hormat, dalam rangka menyelesaikan tugas akhir berupa penyusunan skripsi mahasiswa Fakultas Ilmu Tarbiyah dan Keguruan (FITK) Universitas Islam Negeri Maulana Malik Ibrahim Malang, kami mohon dengan hormat agar mahasiswa.

berikut:

: Itsna Amaliya Ratnasari Nama

12140053 NIM

Pendidikan Guru Madrasah Ibtidaiyah (PGMI) Jurusan

: Genap - 2015/2016 Semester - Tahun Akademik

The Development of Science Teaching Material Judul Skripsi

Based on Al Quran in Second Theme and First Sub Theme for Fourt Grade in Islamic

24 Maret 2016

Ementary School of As Salam

diberi izin untuk melakukan penelitian di lembaga/instansi yang menjadi wewenang

Bapak/Ibu.



YAYASAN AS SALAM INSAN MADANI SEKOLAH DASAR ISLAM (SDI) AS SALAM

NPSN: 60726485

Jl. Bendungan Wonorejo 1A Malang 65415, Telp. (0341) 580550

SURAT KETERANGAN Nomor: 246/SDI-AS/V/2016

Yang bertanda tangan dibawah ini:

Nama

: Drs. M. Arief Chusaeni, M.Kpd

Jabatan

: Kepala Sekolah

Menerangkan bahwa :

Nama

: Itsna Amaliya Ratnasari

NIM

: 12140053

Program Study

: PGMI

Telah melakukan kegiatan penelitian untuk menyelesaikan Skripsi di SD Islam As Salam Malang dengan judul "The development of learning materials science based Al-Qur'an thema 2 subtema 1 for grade IV SDI As Salam Malang" mulai Penelitian 4 April - 7 Mei 2016.

Demikian surat keterangan ini dibuat dengan sebenar-benarnya untuk dipergunakan sebagaimana mestinya.



PENGEMBANGAN BAHAN AJAR IPA BERBASIS AL-QUR'AN TEMA 2 SUB TEMA 1 UNTUK SISWA KELAS IV SEKOLAH DASAR ISLAM AS-SALAM MALANG

A. Pengantar

Berkaitan dengan pelaksanaan pengembangan buku ajar IPA berbasis Al-Qurán tema 2 sub tema 1 untuk siswa kelas IV Sekolah dasar. Maka peneliti bermaksud mengadakan validasi materi buku ajar yang telah diproduksi sebagai salah satu buku pembelajaran. Untuk maksud di atas, peneliti mohon kesediaan Bapak/Ibu agar agar mengisi angket di bawah ini sebagai ahli materi. Tujuan dari pengisian angket adalah mengetahui kesesuaian pemanfaatan buku ajar ini. Hasil dari pengukuran dimanfaatkan dalm pembelajaran. Sebelumnya saya sampaikan terimah kasih atas kesediaan Bapak/Ibu sebagai ahli materi.

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B. Petunjuk pengisian angket

- 1. Sebelum mengisi angket ini, mohon terlebih dahulu Bapak/Ibu membaca atau mempelajari buku ajar yangdikembangkan.
- 2. Berilah tanda silang (x) pada salah satu huruf a, b, c, d, atau e pada jawaban sesuai dengan penilaian yang Bapak/Ibu anggap paling tepat.
- 3. Kecermatan dalam penilaian ini sangat diharapkan.

C. Pertanyaan-pertanyaan angket

- 1. Bagaimana ketepatan penulisan judul buku terhadap materi pengembangan bahan ajar ipa berbasis Al-Quran ini?
 - a. Sangat tepat
 - b. Tepat
 - c. Cukup tepat
 - d. Kurang tepat
 - e. Sangat kurang tepat
- 2. Bagaimana kemudahan bahasa untuk dipahami dalam pengembangan bahan ajar ipa berbasis Al-Quran ini?
 - a. Sangat mudah
 - b. Mudah
 - c. Cukup mudah
 - d. Kurang mudah
 - e. Sangat kurang mudah
- 3. Bagaimana kejelasan materi yang ada pada buku ajar ipa berbasis Al-Quran ini?
 - a. Sangat jelas
 - b. Jelas
 - c. Cukup jelas
 - d. Kurang jelas
 - e. Tidak jelas
- 4. Apakah materi yang disajikan sudah sesuai dengan tema yang ada pada bahan aajar ipa berbasis Al-Quran ini?

a. Sangat sesuai dengan tema b. Sesuai dengan tema c. Cukup sesuai dengan tema d. Kurang sesuia dengan tema e. Tidak sesuai dengan tema 5. Bagaimana kesesuaian ayat dengan tema Sains yang ada di buku ajar bahan ajar ipa berbasis Al-Quran ini? Sangat sesuai b. Sesuai Cukup sesuai Kurang sesuai Tidak sesuai 6. Bagaimana ketepatan penjelasan ayat dengan tema Sains yang ada di bahan ajar ipa berbasis Al-Quran ini? Sangat tepat b. **Tepat** Cukup tepat d. Kurang tepat e. Tidak tepat 7. Bagaimana kedalaman penjelasan ayat yang ada di buku ajar ipa berbasis Al-Quran ini? Sangat dalam Dalam Cukup dalam Kurang dalam d. Tidak dalam 8. Bagaimana keluasan isi bahan ajar ipa berbasis Al-Quran ini? Sangat luas b. Luas Cukup luas

d. Kurang luase. Tidak luas

- 9. Bagaimana kelengkapan materi yang dipaparkan dalam bahan ajar ipa berbasis Al-Quran ini?
 - a. Sangat lengkap
 - b. Lengkap
 - c. Cukup lengkap
 - d. Kurang lengkap
 - e. Tidak lengkap
- 10. Bagaimana kesesuaian soal/ uji kompetensi dengan materi yang dipaparkan pada bahan ajar ipa berbasis Al-Quran ini ?
 - a. Sangat sesuai
 - b. Sesuai
 - c. Cukup sesuai
 - d. Kurang sesuai
 - e. Tidak sesuai

| D. | Kritik dan Saran |
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ANGKET VALIDASI

AHLI DESAIN PRODUK

PENGEMBANGAN BAHAN AJAR IPA BERBASIS AL-QURAN TEMA 2 SUBTEMA 1 UNTUK SISWA KELAS IV SEKOLAH DASAR ISLAM AS-SALAM MALANG

A. PENGANTAR

Berkaitan dengan pelaksanaan pengembangan bahan ajar ipa berbasis Al-Quran pada tema 2 sub tema 1 untuk siswa kelas IV sekolah dasar, maka peneliti bermaksud mengadakan validasi desain bahan ajar yang telah diproduksi sebagai salah satu bahan pembelajaran. Untuk maksud di atas, peneliti mohon kesediaan Bapak/Ibu agar mengisi angket di bawah ini sebagai ahli desain bahan ajar. Tujuan dari pengisian angket adalah mengetahui kesesuaian pemanfaatan bahan ajar ini. Hasil dari pengukuran melalui angket akan digunakan untuk penyempurnaan bahan ajar agar dapat dimanfaatkan dalam pembelajaran. Sebelumnya saya sampaikan terima kasih atas kesediaan Bapak/Ibu sebagai ahli desain.

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B. PETUNJUK PENGISIAN ANGKET

- 1. Bacalah setiap item dengan cermat.
- Instrument ini terdiri dari kolom pernyataan dan kolom jawaban. Silahkan Bapak/Ibu memberi tanda cek pada salah satu jawaban yang sesuai dengan pernyataan Bapak/Ibu.
- 3. Keterangan makna pada huruf pilihan Bapak/Ibu adalah sebagai berikut:

| Jawaban | Keterangan | Skor |
|---------|-------------------|------|
| SB | Sangat Baik | 5 |
| В | Baik | 4 |
| СВ | Cukup Baik | 3 |
| KB | Kurang Baik | 2 |
| STB | Sangat Tidak Baik | 7 |

C. PERTANYAAN-PERTANYAAN ANGKET

| NO | O PERNYATAAN | | KETERANGAN | | | |
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| | AT PEDDUS | 5 | 4 | 3 | 2 | 1 |
| 1. | Desain <i>cover</i> sesuai dengan isi materi. | | | | 7 | |
| 2. | Jenis huruf yang digunakan sesuai dengan siswa kelas IV SD/MI. | | | | | |
| 3. | Ukuran huruf yang digunakan sesuai dengan siswa kelas V SD/MI. | | | | | |
| 4. | Gambar pada buku sesuai dengan materi yang disajikan. | | | | | |
| 5. | Gambar yang digunakan pada buku menarik minat siswa dalam belajar. | | | | | |
| 6. | Tata letak gambar pada buku menarik. | | | | | |

| 7. | Gambar pada buku memperjelas materi. | | | |
|-----|--|--|--|---|
| 8. | Ukuran gambar pada buku tepat. | | | |
| 9. | Warna pada buku konsisten. | | | |
| 10. | Layout yang digunakan pada buku menarik. | | | |
| | JUMLAH | | | - |



| D. KRITIK | DAN SARAN | | | | |
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ANGKET VALIDASI

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PENGEMBANGAN BAHAN AJAR IPA BERBASIS AL-QURAN TEMA 2 SUBTEMA 1 UNTUK SISWA KELAS IV SEKOLAH DASAR ISLAM AS-SALAM MALANG

A. PENGANTAR

Berkaitan dengan pelaksanaan pengembangan bahan ajar ipa berbasis Al-Quran pada tema 2 sub tema 1 untuk siswa kelas IV sekolah dasar, maka peneliti bermaksud mengadakan validasi desain bahan ajar yang telah diproduksi sebagai salah satu bahan pembelajaran. Untuk maksud di atas, peneliti mohon kesediaan Bapak/Ibu agar mengisi angket di bawah ini sebagai ahli desain bahan ajar. Tujuan dari pengisian angket adalah mengetahui kesesuaian pemanfaatan bahan ajar ini. Hasil dari pengukuran melalui angket akan digunakan untuk penyempurnaan bahan ajar agar dapat dimanfaatkan dalam pembelajaran. Sebelumnya saya sampaikan terima kasih atas kesediaan Bapak/Ibu sebagai ahli pembelajaran.

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B. PETUNJUK PENGISIAN ANGKET

- 1. Bacalah setiap item dengan cermat.
- 2. Berilah tanda silang (x) pada salah satu huruf a, b, c, d atau e pada jawaban sesuia dengan penilaian yang Bapak/Ibu anggap paling tepat.
- 3. Kecermatan dalam penilaian ini sangat diharapkan.

A. Pertanyaan- pertanyaan angket

b. Sesuai

| 1. | . Bagaimanakah rumusan topik pada pengembangan bahan ajar ipa ini? | | | |
|----|---|--|--|--|
| | a. Sangat jelas, spesifik dan operasional | | | |
| | b. Jelas, spesifik dan operasional | | | |
| | c. Cukup jelas, spesifik dan operasional | | | |
| | d. Tidak jelas, spesifik dan operasional | | | |
| | e. Sangat tidak jelas, spesifik dan operasional | | | |
| 2. | Bagaimana kesesuaian materi yang disajikan pada pengembangan bahan ajar ipa | | | |
| | ini? MALIK | | | |
| | a. Sangat sesuai | | | |
| | b. Sesuai | | | |
| | c. Cukup sesuai | | | |
| | d. Kurang sesuai | | | |
| | e. Tidak relevan | | | |
| 3. | Bagaimana relevansi fokus pembelajaran dengan indikator pada pengembangan | | | |
| | bahan ajar ipa ini? | | | |
| | a. Sangat relevan | | | |
| | b. Relevan | | | |
| | c. Cukup relevan | | | |
| | d. Kurang relevan | | | |
| | e. Tidak relevan | | | |
| 4. | Apakah rumusan indikator dalam bahan ajar disajikan dengan rumusan | | | |
| | kompotensi dasar yang telah ditetapkan dalam kurikulum 2013? | | | |
| | a. Sangat sesuai | | | |

Cukup sesuai Kurang sesuai Tidak sesuai 5. Apakah isi pembelajaran dalam bahan ajar sesuai dengan kurikulum 2013? Sangat sesuai Sesuai Cukup sesuai Kurang sesuai Tidak susai 6. Bagaimana sistematik uraian isi pembelajaran dalam bahan ajar ini? Sangat sistematis Sistematis b. Cukup sistematis Kurang sistematis Tidak sistematis 7. Bagaimana ruang lingkup materi yang disajikan dalam bahan ajar ipa ini? Sanat sesuai dengan tema Sesuai dengan tema Cukup sesuai dengan tema Kuramg sesuai dengan tema Tidak sesuai dengan tema 8. Apakah materi yang disajikan melalui bahan ajar ipa ini dapat meningkatkan hasil belajar siswa? a. Sangat memotivasi Memotivasi

| | | c. | Cukup memotivasi |
|----|------|-------|---|
| | | d. | Kurang memotivasi |
| | | e. | Tidak memotivasi |
| | 9. | Ba | gaimana tingkat kesukaran bahasa yang digunakan, apakah sesuai dengan |
| | | tin | gkat pemahaman siswa? |
| | | a. | Sangat sesuai |
| | | b. | Sesuai |
| | | c. | Cukup sesuai'kurang sesuai |
| | | d. | Tidak sesuai MAL |
| | 10. | . Ap | akah instrument evaluasi yang digunakan dapat mengukur kemampuan siswa? |
| | | a. | Sangat dapat mengukur kemampuan siswa |
| | | b. | Dapat menguku <mark>r</mark> ke <mark>mampuan siswa</mark> |
| | | c. | Cukup mengukur kemampuan siswa |
| | | d. | Kurang mengukur kemampuan siswa |
| | | e. | Tidak mengukur kemampuan siswa |
| В. | Kr | itik | dan saran |
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Pre TEST MATERI ENERGI

| Nama | : |
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| | |
| Α. | Berilah tanda silang (x) pada huruf a, b, c dan d pada jawaban yang benar ! |
| 1. | Penghasil energy terbesar di dunia adalah |
| | a. Lampu |
| | b. Kompor |
| | c. Matahari |
| | d. Minyak bumi |
| 2. | Pakaian basah yang dijemur menjadi kering karena menggunakan energi |
| | a. Listrik |
| | b. Bunyi |
| | c. Cahaya |
| | d. panas |
| 3. | Berikut ini benda yang menggunakan energi listrik adalah |
| | a. Radio |
| | b. Matahari |
| | c. Lemari |
| | d. Jam tangan |
| 4. | Benda berikut yang dapat menghasilkan energi panas adalah |
| | a. Setrika |
| | b. Televisi |
| | c. Kompor |
| | d. Tipas angin |
| 5. | Suatu benda dikatakan memiliki energi apabila |
| | a. Terbuat dari kayu dan batu- batuan |
| | b. Dapat melakukan gerakan |
| | c. Terbuat dari besi |
| | d. Dapat melakukan usaha |

- 6. Salah satu getaran yang dapat kita dengar adalah bunyi. Bunyi disebabkan oleh ...
 - a. Suatu benda yang bergetar
 - b. Suatu benda yang terkena panas
 - c. Suatu benda yang terkena dingin
 - d. Suatu benda tidak bergerak
- 7. Benda berikut ini yang dapat menghasilkan energi bunyi adalah ...
 - a. Lilin
 - b. Gitar
 - c. Kipas angin
 - d. Kran air
- 8. Panas matahari pada gambar disamping digunakan untuk ...
 - a. Memasak padi
 - b. Membasahi padi Mengeringkan padi
 - c. Menumbuhkan padi



- 9. Jika alat pada gambar disamping digunakan. Perubahan energi yang tejadi adalah ...
 - a. Energi lestrik menjadi energi cahaya
 - b. Energi listrik menjadi energi gerak
 - c. Energi listrik menjadi energi bunyi
 - d. Energi listrik menjadi energi panas
- 10. Matahari merupakan energi terbesar di dunia yang di terangkan dalam al qurán surat asy-syams ayat ...
 - a. 1-2
 - b. 3-4
 - c. 1 dan 3
 - d. 2 dan 1
- 11. Gong berbunyi akibat dipukul dan terjadi ...
 - a. Panas
 - b. Getaran
 - c. Pantulan
 - d. Putaran
- 12. Di bawah ini merupakan energi alternatif, kecuali
 - a. bioetanol
 - b. energi matahari



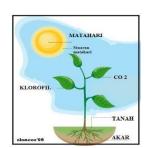
- c. biji jarak
- d. minyak bumi
- 13. Dalam Quran suart An-Nur ayat 35 telah membahas tentang cahaya Allah, yang mana terdapat sebuah lubang yang tak tembus, yang di dalam nya ada pelita besar. Perumpaan pelita disini adalah ...
 - a. Matahari
 - b. Lampu
 - c. Lilin
 - d. angin
- 14. Energi dari air terjun digunakan untuk
 - a. tempat wisata
 - b. tempat pemandian
 - c. pembangkit listrik
 - d. sarana transportasi
- 15. Kuat lemahnya bunyi ditentukan oleh
 - a. simpangan
 - b. banyaknya getaran
 - c. amplitudo
 - d. frekuensi
- B. Isilah titik-titik di bawah ini dengan jawaban yang singkat dan benar!
 - 1. Energi adalah kemampuan untuk...
 - 2. Energy sangat besar yang berasal dari aliran air yang sangat deras dapat dimanfaatkan untuk...
 - 3. Sumber bunyi menghasilkan bunyi dengan cara...
 - 4. Matahari menghasilkan energy panas dan energi...
 - 5. Kayu bakar jika dibakar menghasilkan energi...

Post TEST MATERI ENERGI

| Nama | | |
|-------|-----|---|
| Kelas | | : |
| No Ab | sen | : |
| C. | Be | rilah tanda silang (x) pada huruf a, b, c dan d pada jawaban yang benar ! |
| 16. | Per | nghasil energy terbesar di dunia adalah |
| | e. | Lampu |
| | f. | Kompor |
| | g. | Matahari |
| | h. | Minyak bumi |
| 17. | Pal | kaian basah yang dijemur menjadi kering karena menggunakan energi |
| | e. | Listrik |
| | f. | Bunyi |
| | g. | Cahaya |
| | h. | panas |
| 18. | per | hatikan contoh – <mark>contoh ener</mark> gi <mark>berikut !</mark> |
| | | 1) matahari |
| | | 2) batu bara |
| | | 3) biogas |
| | | 4) avtur |
| | | 5) angin |
| | | 6) panas bumi |
| | | 7) minyak bumi |
| | | 8) air |
| | | |

contoh energi alternatife ditandai oleh nomor:

- e. 1,2,3 dan 7
- f. 3,4,5,dan 8
- g. 1,2,3 dan 8
- h. 3,5,6 dan 8
- i. Jam tangan
- 19. Benda berikut yang dapat menghasilkan energi panas adalah ...
 - e. Setrika
 - f. Televisi
 - g. Kompor
 - h. Tipas angin
- 20. Suatu benda dikatakan memiliki energi apabila ...
 - e. Terbuat dari kayu dan batu- batuan
 - f. Dapat melakukan gerakan
 - g. Terbuat da<mark>ri</mark> besi
 - h. Dapat melakukan usaha
- 21. Salah satu getaran yang dapat kita dengar adalah bunyi. Bunyi disebabkan oleh ...
 - e. Suatu benda yang bergetar
 - f. Suatu benda yang terkena panas
 - g. Suatu benda yang terkena dingin
 - h. Suatu benda tidak bergerak
- 22. Benda berikut ini yang dapat menghasilkan energi bunyi adalah ...
 - e. Lilin
 - f. Gitar
 - g. Kipas angin
 - h. Kran air
- 23. Panas matahari pada gambar disamping digunakan untuk ...
 - d. Mengeringkan pakaian
 - e. Proses fotosintesis
 - f. Mengeringkan padi



- g. Menumbuhkan batang
- 24. Jika alat pada gambar disamping digunakan. Perubahan energi yang tejadi adalah ...
 - e. Energi lestrik menjadi energi cahaya
 - f. Energi listrik menjadi energi gerak
 - g. Energi listrik menjadi energi bunyi
 - h. Energi listrik menjadi energi panas
- 25. [٢] وَالْقَمَرِ إِذَا تَلَاهَا [١] وَالْقَمَرِ إِذَا تَلَاهَا [٢] وَالْقَمَرِ إِذَا تَلَاهَا

merupakan energi terbesar di dunia yang di terangkan dalam al qurán surat asy-syams yaitu terdapat pada ayat ...

- e. 1-2
- f. 3-4
- g. 1 dan 3
- h. 2 dan 1
- 26. Gendang be<mark>rbunyi akib</mark>at <mark>dipukul dan te</mark>rjadi ...
 - e. Panas
 - f. Getaran
 - g. Pantulan
 - h. Putaran
- 27. Di bawah ini merupakan energi alternatif, kecuali
 - a. bioetanol
 - b. energi matahari
 - c. biji jarak
 - d. minyak bumi
- 28. Dalam Quran suart An-Nur ayat 35 telah membahas tentang cahaya Allah, yang mana terdapat sebuah lubang yang tak tembus, yang di dalam nya ada pelita besar. Perumpaan pelita disini adalah ...
 - e. Matahari
 - f. Lampu
 - g. Lilin

- h. angin
- 29. Energi dari air terjun digunakan untuk
 - a. tempat wisata
 - b. tempat pemandian
 - c. pembangkit listrik
 - d. sarana transportasi
- 30. Contoh perpinda
 - a. simpangan
 - b. banyaknya getaran
 - c. amplitudo
 - d. frekuensi

D. Isilah titik-titik di bawah ini dengan jawaban yang singkat dan benar!

- 6. Panas bumi merupakan sumber energi alternatife yang digunkan untuk
- 7. Energy sangat besar yang berasal dari aliran air yang sangat deras dapat dimanfaatkan untuk...
- 8. Sumber bunyi menghasilkan bunyi dengan cara...
- 9. Sebutkan 3 Manfaat da<mark>ri sumber en</mark>ergi pada kehidupan seharihari.....
- 10. Kayu bakar jika dibakar menghasilkan energi...

DOCUMENTATION













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