

Islam Integrated Science Module Development for Integrated Islam School

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Abstract. This study aims to produce teaching material products in the form of Islamic integrated science modules on the characteristics and needs of living things in the hope of knowing the feasibility, the potential for increasing pretest-posttest scores, and the practicality of the products that have been developed. The development uses the ADDIE pattern, which consists of 5 stages, namely: analysis, design, development, implementation, evaluation. Based on the results of the analysis, the validity percentage results were 72.85%; 90.2 %; 95.8 %; 84.2% of the validators are learning material experts, media experts, imtaq experts and field practitioner experts with valid criteria. Based on the results of the analysis, the average score of the students' pretest was 83.25 and 93.75 in the posttest, which indicated that student learning outcomes had increased. Based on the validation results obtained, it can be concluded that the integrated Islamic science module on the characteristics and needs of living things is feasible to use.

1 Introduction

Islamic education in the process and results of learning is always inherent in Islam and has a system of teaching material that is in harmony with human nature and aims to purify humans [1]. In accordance with the provisions outlined in Republic of Indonesia Law No. 20 of 2003 pertaining to the National Education System, specifically articulated in Article 3, the overarching objective of national education is the cultivation of a well-rounded Indonesian individual. This objective is also echoed in the execution of primary and secondary education, as delineated in Government Regulation Number 17 of 2010 addressing the Management and Implementation of Education. The primary aim of this educational framework is to establish a robust foundation for fostering the potential of participants, guiding them towards embodying individuals who possess unwavering faith in God Almighty, exhibit noble character, and exemplify a dignified personality. Additionally, the education system aspires to nurture individuals who are knowledgeable, proficient, critical, creative, and innovative. Furthermore, it endeavors to instill qualities such as good health, independence, confidence, tolerance, sensitivity, sociability, democratic values, and a sense of responsibility [2].

From the explanation of the National Education Law, it can be interpreted that actually the government through the law emphasizes the importance of building the character of students, namely the most important goal of national education is to give birth to people who

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believe and have piety, and in article 36 concerning curriculum it is indicated that the curriculum is prepared with paying attention to increasing the faith and piety of students. This is very appropriate because increasing faith and piety is the most important goal of moral education in accordance with human potential (nature).

In the pursuit of enhancing the quality of educational processes and outcomes, the 2013 curriculum endeavors to focus on character education, aiming to cultivate a comprehensive, integrated, and balanced noble character among students, particularly at the foundational level of basic education. This emphasis on character development is envisioned to serve as the cornerstone for subsequent educational levels, including junior secondary education, senior secondary education, and higher education. The envisioned outcome of implementing the 2013 curriculum is the cultivation of individuals who are not only productive and creative but also driven by strong moral character. This holistic approach is anticipated to contribute to the creation of a society with added value and distinctive strengths, positioning it effectively in the globalized era [3].

Through the competency-based and character-based 2013 curriculum, with an integrative thematic approach in its implementation, it is hoped that students will be able to independently improve and use their knowledge. However, there are a number of things that are lacking in the 2013 curriculum, namely the lack of suitability of the competence of educators and education staff with the curriculum being taught and the textbooks used, the lack of teacher ability to balance curriculum changes and adjust to the textbooks that will be taught to students, and the lack of availability of books as teaching materials and learning resources in accordance with the learning interaction model.

In addressing the inadequacies present in the 2013 curriculum, it is imperative to emphasize the importance of implementing supportive measures for its successful execution. Among these essential measures is the creation of educational resources, specifically tailored to bolster the efficacy of the student learning process. Within the realm of education, learning materials stand out as a critical component, demanding thorough examination, scrutiny, and utilization as a substantive body of knowledge to be mastered by students. Simultaneously, these materials serve as comprehensive guidelines facilitating the learning process. The development and incorporation of such teaching materials not only ease the teaching burden for educators but also significantly enhance the learning experience for students, providing them with invaluable assistance and facilitating a more effective educational journey.

In the process of crafting instructional materials, a proficient educator is required to undertake a thorough analysis of students. This analysis is rooted in both juridical and theoretical foundations outlined in Ministerial Regulation Number 19 regarding National Education Standards. From a legal standpoint, it is elucidated that the design of learning materials should be attuned to the requisites, aptitudes, interests, and learning needs of students. Theoretically, students exhibit diverse individual disparities, encompassing familial, social, cultural, economic, and environmental backgrounds. Recognizing this heterogeneity is imperative for educators when formulating lesson plans to ensure their efficacy and efficiency [4].

Based on the characteristics of the 2013 curriculum, the types of teaching materials that should be prepared are constructivist teaching materials. Teaching materials that can be used as learning media in class, as well as being able to train students' independence in building their own concepts [5]. In the development of educational resources, customization of teaching materials is essential to align with the specific requirements and features of the content to be delivered. These instructional resources can be categorized into three main types: printed, non-printed, and display teaching materials. The printed materials encompass modules, textbooks, handouts, and student worksheets, with modules specifically designed to enhance the effectiveness, efficiency, and relevance of the learning process [6].

Learning by using modules students can study individually, adjusting their learning speed to their respective abilities, but there are certain tasks that require students to work together in groups [7]. Thus the fear of individualism as a result of module learning can be avoided. Module learning applies students to active learning, because in the learning process students no longer act as listeners and note takers of lectures, but they are active students reading, searching, analyzing, concluding, solving problems on their own [8]. The role of the teacher in module learning is as a manager, director, supervisor, facilitator and driver of student learning activities. At the end of the activity an objective test is provided, and the answer keys are presented in the module which all students can check themselves [9].

Providing science subjects at the elementary school level has the aim that students acquire scientific and technological competence and cultivate scientific, creative and independent thinking [10,11]. By studying science, it is hoped that it can develop students' potential awareness of faith, knowledge and skills. Because natural science is verses of *kauniyah* in the form of natural phenomena related to the environment, plants, animals, humans and human needs themselves. With the characteristics of natural science, it is hoped that schools and teachers can develop Islamic integrated science learning tools, so that students are motivated to understand the universe, glorify Allah and fear Him through the management and development of learning tools.

In the current educational landscape, it is evident that the emphasis on students' acquisition of scientific knowledge takes precedence over the cultivation of their attitudes and skills. An investigation conducted through observations and interviews with educators at the Integrated Islamic Elementary School in Pekanbaru reveals a prevailing trend in science education. Teachers predominantly concentrate on fostering cognitive development, with limited attention given to affective and psychomotor dimensions in the learning process. The findings underscore a common practice among science educators, wherein 87% rely on conventional teaching materials such as textbooks and worksheets, while only 13% incorporate modules. Notably, the available modules lack integration with Islamic principles. This analysis illuminates the existing gap in addressing holistic development within the science learning framework, urging a reconsideration of pedagogical approaches for a more comprehensive educational experience.

Some teachers stated that there was no Islamic integrated science module because they did not understand and were worried that something would go wrong because they felt that Islamic religious knowledge was lacking, it was difficult to do because there were no Islamic integrated science teaching materials that could be used as a reference. However, teachers support the development of Islamic integrated science teaching materials on the grounds of increasing the Islamic values of students and teachers themselves, so that one of the objectives of the 2013 curriculum on the spiritual aspect can be achieved optimally. The teachers are also of the view that Islamic values that need to be instilled in students include gratitude, discipline, love for *Allah Subhanahu wa Ta'ala's* creation, responsibility and cooperation. Based on the results of this analysis, it can be concluded that in general, Integrated Islamic Elementary Schools require Islamic integration science teaching materials.

kauniyah verses can be used to develop students' awareness of faith values. So that students excel in intellectual knowledge and at the same time understand that all natural systems on this earth occur because someone regulates them, namely *Allah Subhanahu wa Ta'ala*.

The module can be linked to the *ukhrowi* dimension, where by showing attachment to natural systems and their regularity, it further increases belief in the existence of the One Supreme power that cannot be matched, namely *Allah Subhanahu wa Ta'ala*. This dimension describes the nature of science as linking material logical aspects with spiritual aspects, which for the time being is considered an empty horizon, because one assumption between science and religion are two different sides that have no relationship and cannot be united in one

study or study. In fact, there is a link between the two. For this reason, science is not only required to know about science, but also to understand that the order in the universe cannot be separated from God's control [10].

For this reason, the author feels the need to conduct research and development of teaching materials in the form of Islamic integrated science modules with the title "Development of Islamic Integrated Science Teaching Materials for SDIT". The science material developed is "Characteristics and Needs of Living Things".

2 Research Methodology

In the course of this research and development, the selected framework employed is the Dick and Carey iteration of the ADDIE development model encompassing five key stages: analysis, design, development, implementation, and evaluation. The subsequent section delineates the methodological steps involved in crafting educational modules within this research endeavor.

2.1 Analysis (Analysis Stage)

The purpose of the analysis is to clearly define the details of the program or design related to the development of teaching materials, including: curriculum analysis, needs analysis, analysis of teaching material development.

2.2 Design (Design Stage)

The activities carried out at the design stage are: Preparing reference books related to material characteristics and living things and verses of the Qur'an related to this material; Develop a map of the needs of teaching materials, design teaching materials, and design assessment instruments.

2.3 Development (Development Stage)

The purpose of this stage is to change the basic design of the product until it reaches the final version for use. The activities to be carried out at this stage are:

- a. Book draft writing.
- b. Development of assessment instruments and interviews regarding student responses
- c. Development of test questions.
- d. Expert validation, this is done to obtain data about the strengths and weaknesses of the product which will then be improved. The validator in this study is Dr. Siti Robiah, M.Si as an expert in learning materials, Dr. Amnah M.Pd as a learning media expert, Dr. Syahraini Tambak, M. Pd and Dr. Khairil Anwar, MA as imtaq expert, Nila Sari, S. Si., Hidayatul Fitri, SE Sy., Riza Safitri, S. Pd., Reza Herawati, S. Pd. I., Ririn Budiarti, S. Pd., Azizah, S. Pd., Wenni Yarti, S. Si., Tuti Sulasti Sukiman, S. Pd as field practitioners.
- e. Revision, this is done based on editing and suggestions for improving teaching materials by experts, if declared valid then the developed module is ready to be tested in learning.
- f. Trial (Developmental Testing). Trials are carried out after the product has been revised according to the validator's suggestions, by applying modules that have been validated and have been revised previously. The research trial was carried out on class III students at 8 SDIT Pekanbaru City, namely SDIT Islam Plus YLPI Pekanbaru, SDIT Bunayya Pekanbaru, SDIT Az-Zuhra Islamic School Pekanbaru, SDIT AL-Azhar Syifa Budi Pekanbaru, SDIT Al-Rasyid Pekanbaru, SDIT Insan Utama Pekanbaru, SDIT An-Namiroh Pekanbaru, and

SDIT Al-Madinah Pekanbaru with a total of 80 students in the 2019/2020 Academic Year. The development trial stage is carried out to determine the effectiveness and potential to increase the value of the pretest and posttest of a product that is made.

3 Result and discussion

3.1 Theoretical Studies

According to Abuddin Nata, integration is more synonymous with the word Islamization, so that when interpreting the sentence integration of science and religion, he prefers to use a concept known as the term "Islamization of science" [12]. The concept of integrating knowledge can be characterized as a manifestation of professionalism or expertise within a global scientific community in a specific domain, underpinned by a consciousness rooted in divine principles. This divine awareness is particularly enhanced when coupled with a fundamental understanding of Islamic sciences. The synergy between personality development and Islamic sciences creates a mutually reinforcing framework that serves as the bedrock for the advancement of science and technology. In essence, the integration of knowledge implies the adept amalgamation of scientific and technological proficiency with insights from Islamic sciences and the cultivation of an Islamic persona.

Efforts to integrate science in a simple way can be said to be redefining and reconstructing science within the framework of scientific terminology in an Islamic perspective, so that the desired results regardless of the form of development implementation will forever be in the paradigm of science in an Islamic perspective. Anyone who will conduct research and development of knowledge as well as users of knowledge will realize that Allah *Subhanahu wa Ta'ala* is always the basis of their paradigm [13].

In his assertion, Kuntowijoyo emphasized the pivotal nature of knowledge integration, characterizing it as a concerted endeavor to harmonize, rather than merely amalgamate, divine revelations and the insights derived from human reason (rational sciences). This pursuit aims not at the isolation of God (secularism) or the withdrawal of humans into otherworldly asceticism but strives for a cohesive synthesis. The model of integration propounded by Kuntowijoyo seeks to establish the Qur'an and al-Hadith as the overarching framework for knowledge, thereby allowing the verses of *qauliyah* and *kauniyah* to find meaningful application. The integration in question pertains to the deliberate fusion of general and Islamic scholarship, preserving the distinctiveness of each without sacrificing their intrinsic unity [14].

The main basis for the integration of knowledge is that the Qur'an states that Allah teaches humans, Allah is the main source of knowledge. Allah is the teacher of humans as in his word which means: "And He taught Adam the names (objects) in full, then conveyed them to the Angels and then said: "Tell Me the names of those things, if you are truly right person!" (QS. Al-Baqarah (2): 31).

Efforts that can be made in realizing the integration of knowledge within the madrasah environment are: making the holy book the main basis or source of knowledge, expanding the boundaries of Islamic study material and avoiding the dichotomy of knowledge, cultivating individuals with the character of *ulil albab* or people of reason, tracing verses - verses in the Koran that talk about science, and develop educational curricula in educational institutions.

There are 5 ways of integration taken in the development of integrated Islamic science teaching materials, namely: linking with the verses of the Koran and Hadith that are relevant to the concept or sub-concept being studied, linking the values that exist in the concept or sub-concept suitable for increasing faith, instilling awareness and confidence in students

through the material studied that Allah has established the principles of the rules of the universe (sunnatullah / natural law), exploring values (amtsal-amtsal) contained in the substance of the material either through reading, contemplation, thinking in depth or from observation (observation), carrying out a 2-way reciprocal relationship, namely by raising the value of faith first then connected with the appropriate material or vice versa.

The realization of an integrated Islamic education system can be one way to foster the faith and confidence of students in studying. Islamic-based education will make science based on religious knowledge, as a divine source that is universal and comprehensive, accompanied by cooperation in all educational institutions with religious nuances that are educative and scientific.

Knowledge is necessary because science has a big role in the growth of education and human welfare if science is accompanied by faith in Allah Subhanahu wa Ta'ala , science makes human life more interesting, modern, materialistic and hedonic, humans have a desire to have religion which is only fulfilled when accompanied by guidance from Allah, and with faith in the existence of God, humans get the foundation of happiness.

The synthesis of knowledge within the realm of contemporary science is synonymous with expertise and proficiency in a specific, practical domain, coalescing with a heightened awareness of the divine or rooted in the essence of divine consciousness. It is imperative to note that the manifestation of divine consciousness is intrinsically linked to a fundamental understanding of Islamic sciences. Consequently, the harmonious interplay between Islamic sciences and individual character constitutes a symbiotic relationship, jointly forming the bedrock for the advancement of science and technology [15].

Phenomena of sensory nature should be analyzed rationally, analogies should be made to produce findings in the form of theories and even propositions. The findings can instill in the soul of the researcher faith and submission to Allah, who has established the laws of nature that are found. This is what the Qur'an implies regarding intellectuals, namely: "Intellectuals are people who remember Allah and study the contents of this nature, the theories or laws of nature that they find can add to their admiration for Allah" [16].

Science learning on religious values is empirically aware of the existence of a relationship in this universe with His regulator. Thus science has a value that is in line with religious views. Science is related to how to find out (inquiry) about nature systematically, so that Science is not only a mastery of theories, concepts and facts, but also a process of discovery [2].

Attitudes, processes, products and applications are the main elements of science that are expected to appear in students, so that they can experience the learning process as a whole and use their curiosity to reveal natural phenomena through problem solving activities that apply the steps of the scientific method. Development Science is not only demonstrated by facts, but arises as a result of scientific methods and attitudes, mental operations, skills and strategies in discovering the science concept itself [17].

The essence of natural science is natural phenomena in the dimension of knowledge (scientific), thus, knowledge can be linked to the dimensions of spiritual values , where paying attention to the order in the universe will further increase the belief in the existence of an all-powerful power that cannot be denied anymore, namely *Allah Subhanahu wa Ta'ala* [10]. Science Subjects in Elementary Schools aim for students to gain faith in the greatness of God Almighty, develop curiosity, process skills to investigate the natural surroundings, increase awareness to participate in preserving the natural environment and acquire provision of knowledge as a basis for continuing education to SMP/MTs [18].

Science learning using modules should be arranged systematically in language that is easy for students to understand, according to their age and level of knowledge and adjusting the material and Basic Competencies, so that students can learn independently without or with at least the teacher, because the teacher is only a facilitator.

For this reason, module development should have the characteristics of being stand-alone or not dependent on other media, with self-instructional criteria, being able to teach oneself, not depending on other parties, user-friendly, namely fulfilling friendly/familiar principles with the wearer, self-contained, namely all learning material from one competency unit or sub-competence studied is contained in one module as a whole between the initial objectives and the final objectives of the module must be clearly and measurably formulated [19].

According to Prastowo, in writing the structure of teaching materials the module consists of titles, study instructions, basic competencies, supporting information, exercises/assignments, work steps and assessments, and according [20] to Samsul Arifin modules must have content feasibility components, presentation components, linguistic components, and components. Graphically, [21] according to Ali Mudlofir, modules [19] are learning tools that contain materials, or methods, ways of evaluating that are designed in a systematic and interesting way to achieve the expected competence according to the level of difficulty.

The procedure for writing a module starts from analyzing the needs of the module, drafting, validating, testing the module, and revising. The resulting product is developed in accordance with KI and KD Curriculum 2013 on the material characteristics and needs of living things in class III, referring to the module development standards set by the BSNP. The Islamic integrated science module contains the meaning of faith, science and technology [22].

The anticipation is for instructional resources presented in the shape of integrated Islamic science modules to possess credibility, efficacy, and appeal concerning the educational achievements of students. The referenced validity pertains to an assessment of the instrument's reliability or soundness, illustrating its degree of validity [23]. The effectiveness of the module is seen from the feasibility test in the development research of achieving learning objectives by using products developed for the learning process [24]. The effectiveness of instructional materials can be ascertained when the typical student actively engages in learning activities, and both student and teacher responses to the conducted learning are favorable. Indicators utilized to gauge the efficacy of educational tools encompass assessments of learning management skills, achievements in learning tests, outcomes from student response surveys, and observations of students' spiritual attitudes [25].

While the module in terms of attractiveness or attractiveness is the tendency of students to keep learning which can occur because of the quality of learning. Variables that can be used as indicators of the attractiveness of learning are the appreciation and desire shown by students [24].

The syntax (stages) of learning or learning models in the module trials consist of preliminary activities, core activities and closing. In accordance with Permendiknas No 65 of 2013 in conjunction with Permendiknas No 103 of 2015, and Permendikbud No 22 of 2016 regarding the learning process. The integrated Islamic science learning syntax is designed by naming the INTEGRATED Syntax (Study, Exploration, Formulate, Present, Worldly, Ukhrowi).

3.2 Research Results

3.2.1 Expert Validation Result

The results of expert validation are used to obtain data and suggestions from the validator so that it is known whether the learning modules that have been produced at the design stage are valid or not. Expert validation is carried out by learning material experts, media experts,

imtaq experts, and field practitioners. The results of expert validation are presented in Tables 1, 2, 3, and 4.

Table 1. Summary of Data from Module Validation Results by Learning Material Experts.

No	Aspect	Percentage validity	Validity Level
1	Content Eligibility	71.42 %	Valid Enough
2	Presentation	70 %	Valid Enough
3	language	75 %	Valid Enough
4	graphics	75 %	Valid Enough
Percentage average validity		72.85 %	Valid Enough

Based on the results of the calculations listed in Table 1, the average assessment result by learning material experts is 72.85%. This value indicates that the product developed is included in the valid criteria and is suitable for use in learning.

Table 2. Summary of Data from Module Validation Results by Learning Media Experts.

No	Aspect	Percentage validity	Validity Level
1	Structure module	87.5 %	Very Valid
2	Skin design module	90%	Very Valid
3	Illustration content	83.3 %	Very Valid
4	Content design module	90.6 %	Very Valid
5	graphics	100 %	Very Valid
Average percentage aspect		90.2 %	Very Valid

Based on the results of the calculations listed in Table 2, the average result of the assessment by learning material experts is 90.2%. This value indicates that the product developed is included in the valid criteria and is suitable for use in learning.

Table 3. Summary of Data from Module Validation Results by Learning Media Experts.

No	Aspect	Percentage validity Imtaq 1	Percentage validity Imtaq 2	Validity Level
1	suitability verses of the Koran, Hadith and values Islamic .	100 %	100 %	Very Valid
2	Ability use values Islamic .	91.66 %	100 %	Very Valid
3	Accuracy values implanted Islam .	91.66 %	100 %	Very Valid
4	Influence Material To Student	100 %	100 %	Very Valid
Average Percentage		95.8 %	100 %	Very Valid

Based on the results of the calculations listed in Table 3, the average result of the assessment by imtaq I experts is 95.8%, and imtaq II experts are 100%. This value indicates

that the product resulting from the development is included in the valid criteria and is suitable for use in learning.

Table 4. Summary of Data from Module Validation Results by Learning Practitioners.

No	Aspect	Learning Practitioner Expert Validation Percentage							
		1	2	3	4	5	6	7	8
1	Content Eligibility	85.7 %	96.4 %	100 %	89.2 %	100 %	100 %	92.8 %	92.8 %
2	Presentation	95 %	85 %	100 %	100 %	90%	100 %	90%	95 %
3	language	81.2 %	100 %	100 %	87.5%	81.2 %	100 %	87.5 %	81.2 %
4	graphics	75 %	93.7 %	100 %	93.7 %	81.2 %	100 %	93.7 %	75 %
Percentage Average		84.2 %	93.7 %	100 %	92.6 %	88.1 %	100 %	91 %	86 %

Based on the results of the calculations listed in Table 4, it is obtained that the average assessment results by expert practitioner 1 are obtained 84.2% (very valid), expert practitioner validator 2 is obtained 93.7% (very valid), expert practitioner validator 3 is obtained 100%. (very valid), validator expert practitioner 4 obtained 92.6% (very valid), validator expert practitioner 5 obtained 88.1% (very valid), validator expert practitioner 6 obtained 100% (very valid), validator expert practitioner 7 obtained 91 % (very valid), expert practitioner validator 8 obtained 86 % (very valid). Overall, it can be seen that the validation results of the integrated Islamic science module from expert learning practitioners are at a very valid level and are suitable for use in learning.

3.2.2 Recapitulation of Observation Results of Student Activities in the Learning Process

Table 5. Recapitulation of Observation Results of Student Activities in the Learning Process.

No	School name	Percentage (%)	Ket
1	SD Islam Plus YLPI Pekanbaru	87 %	Very active
2	SDIT Bunayya Pekanbaru	85 %	Very active
3	SD Al-Rashid Pekanbaru	85 %	Very active
4	SD Al-Azhar Pekanbaru	81 %	Very active
5	SDIT Al-Madinah Pekanbaru	93 %	Very active
6	SDIT Insan Utama Pekanbaru	85 %	Very active
7	SDIT An Namiroh Pekanbaru	82 %	Very active
8	SDIT Az-Zuhra Pekanbaru	90%	Very active

From the table above we can see that student activity in the learning process at SD Islam Plus YLPI Pekanbaru is 87% (very active), SDIT Bunayya Pekanbaru is 85% (very active), SD Al-Rasyid Pekanbaru is 85% (very active), SDIT Al-Azhar Pekanbaru is 81% (very active), SDIT Al-Madinah Pekanbaru is 93% (very active), SDIT Insan Utama Pekanbaru is

85% (very active), SDIT An Namiroh Pekanbaru is 82% (very active), SDIT Az-Zuhra Pekanbaru is 90% (very active). It can be concluded that overall the results of observations of student activity in the learning process using the integrated Islamic science module are very active, this is evidenced by the learning outcomes that reach percentages above 80% (very active).

3.2.3 Recapitulation of Student Learning Pre Test and Post Test Results

The potential for increasing students' pretest and posttest scores is known based on the tendency to increase cognitive test scores based on the pretest and posttest. Increasing the progress of test scores, especially cognitive learning outcomes can be known by means of pretest and posttest during learning activities. The results of students' pretest and posttest scores can be seen in table 6 below:

Table 6. Recapitulation of Student Learning Pre Test and Post Test Results.

No	School name	Pre Test	Posttest
1	SD Islam Plus YLPI Pekanbaru	81	93
2	SDIT Bunayya Pekanbaru	83	93
3	SD Al-Rashid Pekanbaru	84	96
4	SD Al-Azhar Pekanbaru	82	87
5	SDIT Al-Madinah Pekanbaru	86	96
6	SDIT Insan Utama Pekanbaru	80	96
7	SDIT An Namiroh Pekanbaru	84	93
8	SDIT Az-Zuhra Pekanbaru	86	96

3.2.4 Early Stage Analysis

1. Average Count (Mean)

Based on student learning outcomes, then analyzed the average count of student pre-test and post-test learning outcomes as follows:

Table 7. Average Pre test and Post test Student Learning.

Group	Average Count	
	Pre-test	Post test
Experiment	83.25	93.75

2. Variety/Variance

Based on student learning outcomes, data is then used as an analysis of variance in students to be used as a technique to find out group homogeneity, the following is the variance/variance of student pre-test and post-test learning outcomes:

Table 8. Average Pre test and Post test Student Learning.

	Variance	
	Pre Test	Posttest
Experiment	57,66	46,52

3. Normality Test Pre test and Post Test

Upon evaluating student learning outcomes, the data undergoes a normality test analysis utilizing SPSS 16, including normality tests on students based on pre-test and post-test assessments. Data is deemed normal if the significance value exceeds 0.05 ($P > 0.05$); conversely, a significance value less than 0.05 indicates abnormal data. Subsequent to the SPSS analysis, the results from both the pre-test and post-test were affirmed to exhibit normal distribution. Detailed information regarding the normality test outcomes is provided in Table 9:

Table 9. Average Pre test and Post test Student Learning.

Group	Pre test normality test	Information	Post test normality test	Information
Class III	0.01	Normal	0.20	Normal

4. Final Stage Analysis

In the process of analyzing the test results data, a series of statistical procedures were employed, beginning with a normality test followed by a hypothesis test. The investigation aimed to ascertain the comparative effectiveness of two instructional approaches, namely, "Islamic integrated science learning modules" and "conventional teaching materials." The hypothesis was tested utilizing an independent sample t-test, with the subsequent findings revealing a calculated t-value of 9.21 against a critical t-table value of 1.83.

The comparison indicated that the obtained t-value surpassed the critical t-table value, leading to the rejection of the null hypothesis (H_0) and acceptance of the alternative hypothesis (H_a). This outcome suggests a significant disparity in the learning outcomes of Class III students before and after the implementation of the Islamic integrated science module. Consequently, it can be inferred that the developed Islamic integrated science module has demonstrated a statistically significant effectiveness in enhancing student learning outcomes. It is imperative to acknowledge the originality and efficacy of the module in contributing to improved educational outcomes.

4 Conclusion

In the course of this research and development endeavor, a distinctive integrated Islamic science module addressing the characteristics and necessities of living entities for the third-grade students at SDIT was successfully created. Employing the ADDIE model formulated by Dick and Carrey, the developmental process yielded a module that not only adheres to predefined criteria but also garnered validation approval. Upon meticulous examination of pretest and posttest outcomes, it is evident that the module effectively enhances students' cognitive learning achievements. Specifically, the analysis indicates an average pretest score of 83.25, ascending to an impressive posttest score of 93.75. Moreover, the module's appeal is underscored by favorable responses obtained during interviews with students. Their enthusiastic reception affirms the module's attractiveness. Moving forward, it is advised that the Islamic integrated science module for third-grade SDIT, focusing on the characteristics and needs of living things, be integrated into teaching materials alongside standard textbooks. This recommendation stems from the module's unique feature of incorporating relevant propositions from the al-Qur'an, reinforcing the subject matter through hands-on experiments that cultivate students' process skills.

Recognizing the pivotal role of teachers, especially for third-grade students, it is emphasized that the teacher, serving as a learning facilitator, plays a crucial role in confirming students' conceptual understanding post-module usage. Additionally, there is a

call for the continued advancement of this developmental product, exploring its applicability in diverse subjects through either Islamic integration or innovative approaches that align with contemporary learning trends. This evolution should be in tandem with the ongoing progression of educational methodologies.

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