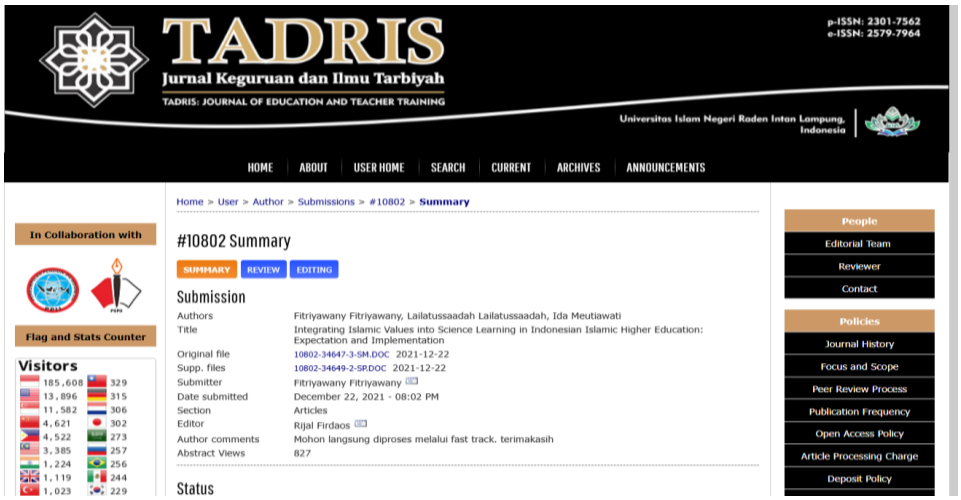
KORESPONDENSI ARTIKEL TADRIS “Integrating Islamic Values into Science Learning in Indonesian Islamic Higher Education: Expectation and Implementation”

BUKTI SUBMIT ARTIKEL



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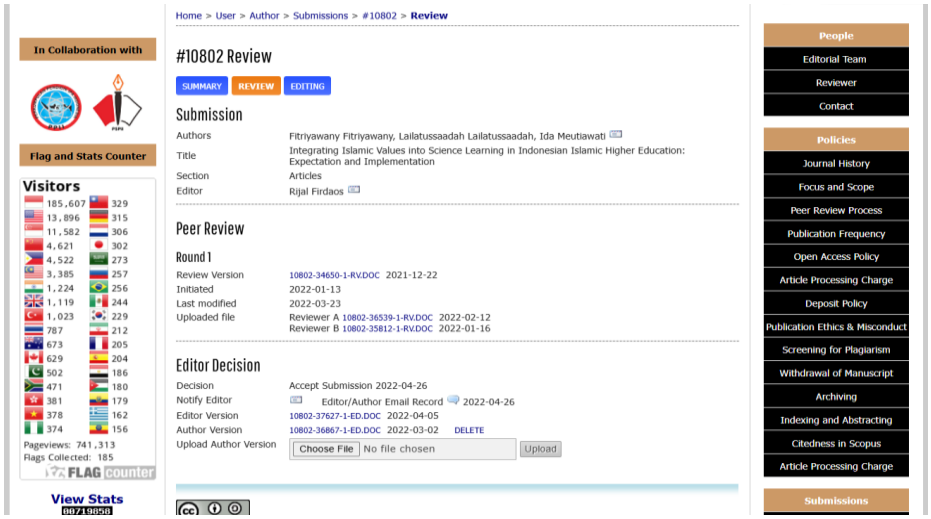

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Integrating Islamic Values into Science Learning in Indonesian Islamic Higher Education: Expectation and Implementation

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Abstract: In recent years, there have been increasing discussions on integrative sciences in State Islamic Higher Education institutions, locally called Perguruan Tinggi Keagamaan Islam Negeri (PTKIN). This study aimed at analyzing the expectations and implementation of the integrating Islamic values in lecturers of PTKINs in Aceh. This qualitative descriptive approach involved three deputy deans for academic affairs, nine lecturers, and 12 students from 3 PTKINs in Aceh. Data collection was through interview and observation, document analysis (curriculum, books, standard operating procedures (SOPs), and Rencana Pembelajaran Semesters (RPS) or semesterly lesson plans). The results revealed that integrating Islamic values into the sciences was very diverse in each PTKIN in Aceh. The lecturers had different views and interpretations of the paradigm of integrating Islamic values into learning regarding the boundaries and the concepts applied. Besides, there were no written standard rules and policies (SOP) on integrating Islamic values and limited references used by lecturers in implementing science learning that integrates Islamic values. This study concluded that science integration at PTKINs in Aceh had not been consistently carried out, affecting the implemented level that may, in turn, affect the students' learning.

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INTRODUCTION

Aceh is an Indonesian province where sharia law has been implemented for several decades. The implementation of Islamic *sharia* is expected to affect all aspects of life, including education in the higher education institutions, through rearranging the Acehnese high education system by incorporating local content values (Mujiburrahman et al., 2017). In supporting the implementation of the law in the so-called Veranda of Mecca province, PTKINs are responsible for integrating Islamic values into the sciences courses they offer. Lecturers must have a good perception of integrating Islamic values into the courses they teach because, as Fullan (2016) posited, their understanding influences the implementation in the actual classroom and students' learning.

In the Aceh context, integrating Islamic values into sciences is based on several regulations. They include Law no. 44 of 1999, Law no. 18 of 2001, Undang-Undang Pemerintah Aceh (UUPA) No. 11 2006, Canon No. 5 of 2008 article 5 paragraph 2. The conversion of several private Islamic universities in Aceh, the change of status of Islamic higher education institutions from Institut Agama Islam Negeri (IAIN) Ar-Raniry to Universitas Islam Negeri (UIN) Ar-Raniry is a form of academic concern for the government, academics, and education practitioners in implementing the UUPA and Islamic law in a philosophical frame, *Pancasila* and the plurality of the Indonesian nation. Hence, the typical Acehnese education (sharia-based) integrating Islamic values into curricula of all PTKINs in Aceh is a solution to these problems. This kind of education needs to be implemented in Aceh to eliminate the dichotomy of sciences and Islam, and it needs to be integrated holistically (Tajuddin & Hj Rofie, 2014).

One that is being actively developed at PTKINs in Aceh is the concept of integrating Islamic religious values into science which is manifested through the implementation of integrative science learning. It is necessary to remember that science and religion tend to be separated in decades due to positivistic views. However, in reality, the two are inseparable units. In the context of PTKIN, the integration of religion and science is different from that in public universities (Compiler, 2018).

Several factors support the concept of implementing integrative science learning at PTKIN in Aceh. First is implementing the Indonesian Qualification Framework (IQF) that requires the KKNI curriculum to shape human resources with Indonesian character, religious, superior, and noble characters. Implementing integrative science learning at PTKIN is expected to reach the goal (Guessoum, 2014; Zarkasih et al., 2020). Second, PTKIN in Aceh has Islamic-based visions and missions, as seen from the visions and missions launched by three PTKINs located in Aceh. The inclusion of the terms as scientific integration, religious people, world-class university, and global insight in the vision and mission, even though it feels like a

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trending topic among PTKIN (Chotimah & Fathurrahman, 2014), is positive. PTKIN Aceh's vision is in line with the slogans *Aceh Caroeng* (Smart Aceh), *Aceh Teug*a (strong Aceh), and *Aceh Malem* (Islamic Religious Aceh) programs launched by the Aceh government (Aceh, 2017). Thus, the need for the implementation of integrative learning is a necessity. Third, Science education aims to instill the belief in God Almighty based on His creation's existence, beauty, and orderliness (Depdiknas, 2008). The implementation of integrative science learning can answer this. Fourth, KEPDIRJEN Islamic Education No. 102 of 2019 concerning PTKI religious standards stipulates lecturers' religious standards, which are the minimum reference for lecturers' competence and basic abilities in integrating Islamic values into the curriculum. These religious standards include noble character, basic Islamic skills (reading and writing the Qur'an, worship), Arabic and English language skills, the ability to integrate Islamic values with the field of knowledge possessed. In addition, lecturers must have solid national insight in practicing moderate Islam within the framework of the Unitary State of the Republic of Indonesia (Ministry of Religion of the Republic of Indonesia, 2019). In implementing the curriculum, lecturers are required to integrate the material being taught with Islamic values.

Lecturers as curriculum implementers are responsible for achieving the visions and missions of Sharia-based Acehnese education. Teachers must have competencies to integrate the pedagogic, professional, and social competencies (Bisschoff & Grobler, 1998; Fauzi & Nurlaila, 2017; Yusnita et al., 2018). Yusnaeni et al (2017) found that the learning strategy used by teachers was instrumental in generating students' motivation and thinking awareness that would affect students' thinking ability and learning results. In addition, lecturers are also required to realize the integration of Islamic values in learning. Moreover, SNPT mandates that the implementation of learning must develop intellectual intelligence, noble character, skills, creative thinking, collaboration, elaboration, and communication (Bidin et al., 2020; Nurdin, 2021; Vebrianto, Rus, et al., 2020; Yusnita et al., 2018). By implementing integrative science learning accompanied by the ability of lecturers in its application, universities will be able to produce super outputs in the development of the integration of Islamic values in science (Nurdin, 2021; Vebrianto, Jannah, et al., 2020; Yusnita et al., 2018). Thus, universities will give birth to multidisciplinary scientists with Islamic law in society.

A myriad of studies has been conducted on the integration of Islamic values into sciences. Purwati et al. (2018), for instance, found that science learning integrated with Islamic values yielded significant effects on the students' learning. A study conducted by Fauzan (2017) revealed that the integration of Islam and science in the curriculum is still limited to using several Islamic and science courses separately. Such as Islamic Studies, Islam and Science, Fiqh, Basic Mathematics. The atmosphere of the integration of Islam and science can be seen in the tradition of student clothing, lecture activities that require all lecturers and students to recite the Qur'an at the beginning of the lecture. Ar (2017) focused on integrating an integrated curriculum between science and religion. The study concluded that integrating the integrated curriculum has been running gradually through the courses taught at PTKINs, such as through the one-day one-verse of Quran program, there are courses in Islamic Shari'a Studies, Islamic Study Methodology, Kalam Science, and Introduction to Islamic Science. However, some studies are still on structuring the concept of integration and model design. Few studies lead directly to integrating Islamic values in the implementation of learning. The

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ability of lecturers to integrate Islamic values in science learning is an essential competency.

Despite these studies, however, to the best of our knowledge, whether the lecturers of PTKINs in Aceh have the ability to apply it has been unknown. The competence of good educators will affect the positive character of graduates (Sarwi, 2018). This study was therefore carried out to fill in the void. This study focused on the ability of science lecturers to integrate Islamic values into the science curriculum at PTKINs in Aceh. This paper contributes to the conceptual framework for integrating Islamic values in the science curriculum of PTKIN in Aceh.

Between Expected and Implemented Curriculum

To understand the implementation of a curriculum, it is useful to align with the curriculum based on its levels of representations. In this regard, Goodlad (1979) and Akker (2004) have developed the six levels of curriculum representtions as can be seen in Table 1 below.

Table 2. Curriculum Representations

	Levels	Representations
INTENDED	Ideal	Vision (rationale or basic philosophy underlying a curriculum)
	Formal/Written	The written curriculum documents
		and/or materials
IMPLEMENTED	Perceived	Curriculum as perceived by its users (e.g., teachers)
	Operational	Actual process of the curriculum in teaching and learning
ATTAINED	Experiential	Curriculum as experienced by students
	Learned	Resulting learning outcomes of students

Source: Thijs and Akker, (2009)

Table 1 shows the six levels of curriculum representations, ranging from ideal, formal, perceived, operational, experiential, and learned levels. From Table 1, it can be understood that the integration of Islamic values into sciences which in turn improve students learning at the attained level, needs to have good perceptions of the implementers. In this context, the academics' perceptions of the intergrated sciences with Islamic values and the ways they operate in their classrooms need to be considered.

METHOD

This study used a qualitative descriptive approach to identify and describe the characteristics of the science lecturers who worked for the PTKINs in Aceh in integrating

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Islamic values into the curriculum. This research was conducted at three PTKINs in Aceh, namely (in pseudonyms) West Islamic College, East Islamic College, and North Islamic College. This study used interviews with three deputy deans for academic affairs, nine science-based courses' lecturers, and 12 students majoring in Sciences. Meanwhile, the document analyzed were curriculum, Rencana Pembelajaran Semester (RPS) or semesterly syllabuses, and academic manuals. Furthermore, we observed the classroom process held by ten science-based course lecturers.

The research data were obtained from structured interviews, document analysis, and classroom observations. In addition, data were also obtained through FGDs with several lecturers and students whose answers, responses, and responses could represent the entire resource person. Triangulation was carried out from all data and summarized the data according to the research problem by eliminating unnecessary data.

The interviews were recorded and transcribed by classifying the information according to the research objectives. The analysis was carried out in the following stages: data reduction, presentation, verification, and drawing conclusions (Miles & Huberman, 1992). During the data reduction, all the unnecessary information was removed. The data from document analysis, classroom observations, and FGD were analyzed by coding, find the themes and categorized

RESULT AND DISCUSSION

Expectations of the Integrated Islamic Values and Science

Integrating the science curriculum of PTKINs in Aceh is expected to build the characters of students and lecturers based on moral values and Islamic spirituality. Science in the context of Islam makes the Qur'an and Sunnah scientific realities and theoretical foundations. The inculcation of Islamic values is a process with a paradigm and a worldview (Khoirudin, 2017; Kuntowijoyo, 2006; Purwanto, 2015; Taufiqurrahman et al., 2021; Zarkasih et al., 2020). Meanwhile, Islamic integrative science is a process that makes faith and piety the final process of understanding knowledge. This term is known as returning science from the context of science to the Qur'anic text.

Connecting science with its sources in the methodology of an Islamic perspective must comply with the values of monotheism. According to Bidin et al. (2020), the integration of Islamic values in the implementation of the science curriculum does not only connect with the lecturer's understanding of the verses of the Qur'an, but the integration of Islamic science must be constructed on a conceptual framework and paradigm that is based on Islamic values . So that the science curriculum at PTKINs in Aceh not only changes the name of the courses from general science to science labeled Islam but must be integrated into the ontological, epistemological, and axiological sciences themselves. This is important to provide a comprehensive understanding of intellectual perspectives and mindsets, students, and lecturers in understanding the concept of science integration. It is free from the understanding of Western intellectual culture, which relies on material and ratios but denies basic truths (the truth of monotheism).

The competence of the lecturers largely determines the success of the integration of Islamic values in the PTKIN curriculum. Every lecturer who teaches science courses at PTKIN needs to be competent and must be equipped with a deep understanding of the field of Islam, especially the competence of lecturers in integrating Islamic values in each learning objective science learning materials and

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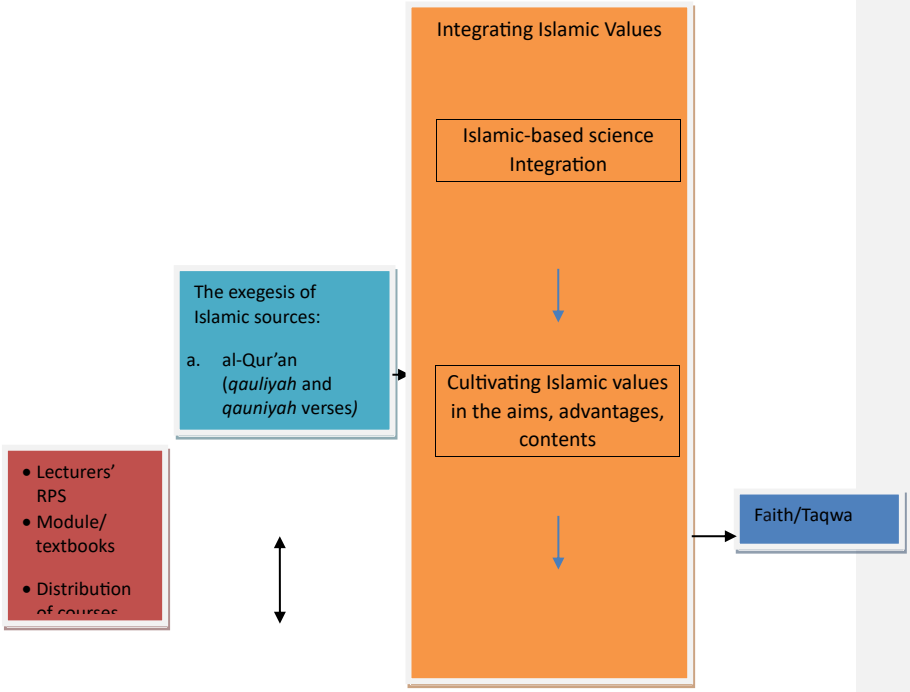
1. The results are an explanation of research findings that are more obtained in the field in the form of interviews, observations, document studies, FGDs and others
The discussion places more emphasis on the results found that are synchronized with existing theories or previous studies.
2. results are synchronized answers to research questions posed at the beginning

3. The results and discussions need deep changes

evaluation. Learning Science lecturers must integrate Islamic-based science learning in every lecture material and prepared curriculum. In addition, lecturers must become role models (Baran et al., 2019), especially in shaping the character of pious students, who have noble characters in shaping human resources with Indonesian character, which is the ultimate goal of internalization in the PTKIN curriculum (Ratnawati, 2018).

Integrating Islamic values into the science curriculum can be done by integrating sharia, creed, and moral values . This is done to make science a means of proving the greatness of Allah SWT (Adawiah, 2016; Munadi, 2016). As such, studying science will add piety and faith as formulated in the nature of science learning and the goals of national education summarized in the IQF curriculum. The process of integrating Islamic values into the PTKIN curriculum can be seen in Figure 1 below.



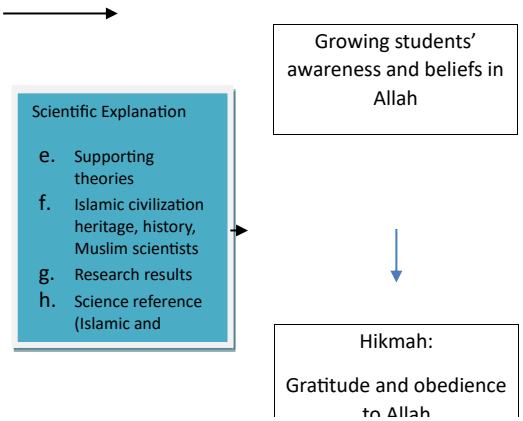


Figure 1. The conceptual framework of Integration of Islamic values

In implementing the science curriculum of PTKIN Aceh, every lecturer must instill Islamic values related to the objectives, benefits, and content of the material. Murdiono (2010) revealed that the strategy for internalizing religious values (in this case, Islamic values) in learning includes exemplary, actual problems in society, inculcating contextually educative values, and strengthening moral values. Designing Islamic values related to scientific material that fosters awareness and belief in Allah SWT's greatness will foster gratitude and increase obedience in worship, which will increase piety to Allah SWT, which is the goal in learning science (Alattas, 2001; Kuhn, 1962; Purwanto, 2015; Shihab, 2007).

In essence, science is built on scientific products, scientific processes, and scientific attitudes. Muhaimin (2001) states that science (science) is human knowledge about the physical world and its phenomena. Science is tasked with discovering the relationship of principles, qualities, characteristics in humans, nature, and other entities. Every science learning must be based on the scientific method, so that it requires the internalization of religious values in cultivating a scientific code of ethics that provides direction and motivation for the scientific product itself. The internalization of religious values will direct the use of useful scientific products for the benefit of humankind instead of producing products that destroy generations and divide peace and humankind.

Trianto (2010) explains the nature and objectives of science learning: the first essence, namely, awareness of the beauty and orderliness of nature to increase belief in God Almighty. Second is knowledge, namely knowledge of the basic principles and concepts, facts in nature, interdependence relationships, and the relationship between science and technology. Third, skills and abilities to handle equipment, solve problems and observe. Fourth, scientific attitude, including skepticism, critical, sensitive, objective, honest, open, correct, and working together. Fifth, the habit of developing inductive and deductive analytical thinking skills by using scientific concepts and principles to explain various natural events. Sixth, appreciating science by enjoying and realizing the beauty of the regularity of natural behavior and its application in technology. Lecturers as curriculum implementers must integrate Islamic values with students in every science material. Students are taught a critical and comprehensive mindset towards science in understanding Western theoretical views combined with Islamic values in each material (Adawiah, 2016).

Integrating Islamic values in the implementation of the Aceh PTKIN curriculum is strongly influenced by the competence, mindset, enthusiasm, and willingness of the Aceh PTKIN science lecturers to reconstruct the general science curriculum into a curriculum integrated with Islamic values. In addition to the competence of lecturers, which significantly influences the success of implementing this curriculum, is the willingness of the lecturers to explore and study science sources through Islamic sources, Islamic civilization, history, as well as research results and theories of Muslim scientists in the

sub-materials of science being taught. The following are the findings in a study on the ability of lecturers to integrate Islamic values in the implementation of the science curriculum of PTKIN Aceh.

The Implementation of the Integrated Islamic Values and Science

The observations of the classroom teaching held by Science lecturers of the PTKINs in Aceh showed several important findings. First, some lecturers had integrated Islamic values in the early stages of learning in the classroom by reading prayers and *tadarus* of the Quran related to the material, and even then, a small number of lecturers studied did the integration of Islamic values in the opening of learning. In reading the verses of the Quran, the verses that are read have not touched the realm of the material being taught, *tadarus* of the Quran are short verses (juz 30). Most lecturers asked students to go directly to the main learning material by asking for group discussions without opening the lesson. It indicates that the integration of Islamic values into the lesson material has not been implemented as intended at the opening stage.

Some lecturers integrated Islamic values at the learning material stage by mentioning verses of the Quran and interpreting verses based on Muslim scientists' material, concepts, and roles and combining them with modern scientific theories in the lesson material being taught. However, some lecturers did not integrate Islamic values into the material. Lecturers directly deliver pure science material without doing integration. The RPS analysis revealed that some of the lecturers previously included the integration of Islam in learning outcomes, but in the implementation of learning in the classroom, they did not integrate. Some of the other lecturers have not integrated Islamic values in their RPS, but in the implementation, the lecturers have linked the integration, although not entirely. Obviously, some lecturers did not teach according to the RPS. Some do it in the initial activities, but the core activities do not integrate. Integration is carried out again in the closing activity in the delivery of reinforcement.

During the interviews, one of the students said:

> *Integrating Islamic values in science learning has not been carried out properly at every face-to-face meeting. Integration is only done in a few meetings, and some do not integrate at every meeting. According to them, the integration carried out by several science lecturers has not touched the material realm, but the integration is carried out only on reading the verses of the Koran at the beginning of learning and directly on the delivery of pure science material. Some lecturers integrate at the final stage by linking science with Islamic values but not at every meeting. Strengthening integration was at the final stage of learning if time was available. Most of the lecturers only teach pure science material at each meeting.*

The excerpt reveals that some lecturers did not integrate Islamic values to organize the curriculum being taught. Most of the lecturers do not have the ability in a structured way to integrate Islamic values into the science curriculum of PTKIN Aceh. It was obvious that in the analysis of curriculum documents, the integration of monotheism values has not been seen in curriculum planning; integration was only on materials that they could integrate, some other lecturers do not integrate at all. The lecturers lacked the ability and desire to find and interpret the verses of the Quran, the reluctance to combine modern scientific theories with Islamic theories,

associate and instill values in the material based on the results of Muslim and Western scientific research.

There was lesson material that can be directly traced in the Quran, and there is material challenging to trace by the lecturers because the explanations in the Quran are general, so the integration process was only at the beginning and end of the meeting. According to them, imposing integration on material because it has not been able to find a source in the Qur'an will result in misinterpretation and misunderstanding of the interpretation of the Quranic verses. Errors in the interpretation of the verses of the Koran will be fatal in instilling Islamic values in learning. This difficulty is due to the absence of complete textbooks and reference materials on science material on integrating Islamic values.

According to them, not all science learning materials can be integrated thoroughly into the learning process at the initial, core, and final stages because they are directly related to Islamic values or Islamic sources. However, there is scientific material that is not yet known to be related to Islamic values, so the integration process can only be carried out in the early and final stages of learning, and its strengthening was emphasized on the wisdom of the material. So it did not have to force all science material to be integrated thoroughly in all learning materials.

In addition, durng the interview, one of the students stated:

> *Implementation of the integration will be successful depending on the ability of lecturers to apply learning methods. Students can absorb integration material depending on the delivery of the material taught by the lecturer through the learning method. According to them, the learning system of some science lecturers still uses the lecture method with a one-way and monotonous transfer of knowledge. Students in the interaction process in class only listen to the lecturer deliver the material from start to finish. Although all lecturers understand active and integrative learning methods, in practice, the lecturers use the unidirectional lecture method and dominate the delivery of material so that the lecture atmosphere tends to be boring.*

Findings indicated that most lecturers who have not implemented the integrated curriculum were graduates majoring in pure science from public universities. The concept of integrating Islamic values in the science curriculum was still new. They have not been equipped with the concept of Islamic science, especially the ability to search for verses from the Qur'an and other Islamic sources explicitly or implicitly to the material to teach. Based on the results of the interviews, there was no provision of knowledge about the interpretation of the Qur'an and other sources of religious education related to science when they became scholars because they were equipped with general scientific knowledge (Muspiroh, 2013; Qissa 'Ali, 2018)..

However, not all pure science lecturers (of public university graduates) have not implemented the concept of integration in the curriculum. Some of them can do it well. The lecturers had tried to integrate Islamic values and relate them to the lecture material. So it can be concluded that apart from the graduate factor, the integration of Islamic values in the science curriculum was also influenced by the lecturer's internal factors such as the lecturer's ability to understand Islamic sciences, obedience, and the values of

the lecturer's piety foundation (Ibrahim et al., 2017).

On the other hand, lecturers who graduated from PTKIN did not integrate it into the curriculum. In fact, in the interview, he seemed to have understood the concept of integration well. Unfortunately, the design of the RPS and the implementation of the curriculum have not integrated it at all. Therefore, the integration of Islamic values in the implementation of the curriculum of the PTKIN in Aceh was strongly influenced by the willingness and interest of the lecturer. Some lecturers lack the willingness and desire to integrate Islamic values into the curriculum. Based on the results of the research, the implementation of integration in the science curriculum of PTKINs in Aceh is strongly influenced by individual factors of lecturers. The ability of lecturers to integrate Islamic values into the science curriculum will affect the formation of students' religious attitudes (Damanik, 2019).

The lecturers' lack of awareness is because integrating Islamic values in the Aceh PTKIN curriculum has not led to massive implementation. On the one hand, PTKIN Aceh applies Islamic integration in its vision and mission as a manifestation of the implementation of Islamic Sharia in education (Zulfata, 2017). On the other hand, there are no standardized guidelines and standards for every lecturer, student, and employee regarding how integration should be implemented. So it can be seen that the implementation of integration in the science curriculum of PTKINs in Aceh tends to be modest, even though it should have become an academic culture at Islamic religious colleges (Multazam, 2019). The awareness of some lecturers still constrains the integration of Islamic values in the science curriculum in Aceh. Because there are no manuals, standard rules, and the lack of awareness of the lecturers, the integration of Islamic values in the science curriculum of PTKIN Aceh has not been achieved and has not been implemented perfectly.

Based on the analyses of documents and interviews with the deputy deans for academic affairs at three PTKIN Aceh, the integration of Islamic values became the main foundation in the vision and mission of PTKIN Aceh. However, in the implementation process in the field, there were no written standard rules that become SOPs. These rules were only conveyed orally through meetings in the discussion of the PTKIN science curriculum. The absence of these standard rules can allow for various interpretations, the burden of responsibility, and the seriousness of each science lecturer in implementing the integrated Islamic values in the curriculum. There are no rules that bind the extent to which the integration of Islamic values, the inculcation of spiritual values, and the value of diversity must be applied in the science curriculum so that PTKIN's vision and mission can be implemented (Compiler, 2018). The written regulations are crucial things to prepare by lecturers, so curriculum planning is right on target (Directorate General of Learning and Student Affairs, 2016; Kristiawan, 2019) . In addition, the integration model developed is still a formality, and the labeling of sharia has not led to the factual component of a holistic implementation.

This is proven based on interviews with lecturers that revealed that some lecturers gave various answers about the concept and paradigm of integrating Islamic values in the PTKIN Aceh curriculum. The lecturers only understand the term integration-interconnection in different meanings and knowledge. The limitations of the integration of Islamic values in the strengthening of science material, and how that integration is carried out without changing the science curriculum itself and material achievements can be carried out by lecturers without adding additional lecture time.

One of the lecturers said:

> *There is no dichotomy in Islamic science, so there is no need for integration in the curriculum. PTKIN Aceh has religion courses and general courses. So that when the preparation and development of the curriculum do not need to be integrated with Islamic values. Islamic values have been constructed in religious subjects. Reference sources and materials can be used as references to Western science without looking for integrative reference sources because they do not yet exist. Regarding the cultivation of Islamic values, students and lecturers can filter secular Western values and dogmas through religious courses. Let the religious courses and general courses stand-alone without integration.*

It indicates that the lecturers have not comprehensively understood the applied integration paradigm model. This is due to the lack of socialization of the integration model applied to each PTKIN Aceh. Thus, a leadership role is needed in the socialization of the integration because there is a significant influence on improving the competence of lecturers (Rahayu & Hutabarat, 2019). The implementation of the integration of Islamic values at PTKIN Aceh still focused on curriculum development, whereas the development of lecturers' abilities both in integrating the lecturer's worldview and in implementing the integrated science curriculum has not been carried out. The integration of Islamic values in the PTKIN Aceh curriculum seems to be completely left to the wishes and desires of the lecturers. Curriculum evaluation has not led to the implementation of integration. So it can be concluded that the implementation of the integration of Islamic values in the Aceh PTKIN curriculum has not fully led to the realization of the vision and mission of the Aceh PTKIN institution.

CONCLUSION

This study has investigated the implementation of an integrated curriculum of Islamic values and science at three PTKINs in Aceh. It demonstrated that the intended curriculum had not been implemented as expected. The lecturers have not comprehensively understood the integration model applied to each PTKIN. It is due to the absence of the standard, SOP, and integration guidebooks at each PTKIN in Aceh and the integration model's lack of socialization applied to each PTKIN in Aceh. Socialization is only delivered orally in curriculum planning meetings. There are differences in the views and responses of lecturers in understanding and interpreting the paradigm of integration of Islamic values in the implementation of learning in the form of boundaries and concepts applied. The implementation of the integration of Islamic values at PTKINs in Aceh was still focused on curriculum development, while the development of lecturers' abilities both in integrating the lecturer's worldview and in implementing the integrated science curriculum is still limited. The integration of Islamic values in the PTKIN Aceh curriculum is completely left to the willingness of the lecturers to implement the curriculum. Besides, curriculum evaluation has not led to the implementation of integration, the limitations of lecturers in finding and interpreting Quranic verses, references related to scientific materials. So it can be concluded that the implementation of the integration of Islamic values in the Aceh PTKIN curriculum has not led to the realization of the vision and mission of each Aceh PTKIN institution. It needs regulations and

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2. The explanation of conclusions is more about the answers to research questions based on field findings and only 2 or 3 short paragraphs
4. It is necessary to add the limitations of this study and the following recommendations

guidebooks on the patterns of integrating Islamic values in learning, research, and community service.

Nevertheless, this study was still limited to a few subjects or has not been carried out comprehensively on PTKINs in Aceh. It has not examined learning resources that integrate Islamic values in science lecturers used in RPS, the problems they encounter, and nd their identity development. Further studies are necessary to do involving lecturers teaching each of the courses at PTKINs so that generalization can be made.

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Integrating Islamic Values into Science Learning in Indonesian Islamic Higher Education: Expectation and Implementation

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Abstract: In recent years, there have been increasing discussions on integrative sciences in State Islamic Higher Education institutions, locally called Perguruan Tinggi Keagamaan Islam Negeri (PTKIN). This study aimed at analyzing the expectations and implementation of the integrating Islamic values in lecturers of PTKINs in Aceh. This qualitative descriptive approach involved three deputy deans for academic affairs, nine lecturers, and 12 students from 3 PTKINs in Aceh. Data collection was through interview and observation, document analysis (curriculum, books, standard operating procedures (SOPs), and Rencana Pembelajaran Semesters (RPS) or semesterly lesson plans). The results revealed that integrating Islamic values into the sciences was very diverse in each PTKIN in Aceh. The lecturers had different views and interpretations of the paradigm of integrating Islamic values into learning regarding the boundaries and the concepts applied. Besides, there were no written standard rules and policies (SOP) on integrating Islamic values and limited references used by lecturers in implementing science learning that integrates Islamic values. This study concluded that science integration at PTKINs in Aceh had not been consistently carried out, affecting the implemented level that may, in turn, affect the students' learning.

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INTRODUCTION

Aceh is an Indonesian province where sharia law has been implemented for several decades. The implementation of Islamic *sharia* is expected to affect all aspects of life, including education in the higher education institutions, through rearranging the Acehnese high education system by incorporating local content values (Mujiburrahman et al., 2017). In supporting the implementation of the law in the so-called Veranda of Mecca province, PTKINs are responsible for integrating Islamic values into the sciences courses they offer. Lecturers must have a good perception of integrating Islamic values into the courses they teach because, as Fullan (2016) posited, their understanding influences the implementation in the actual classroom and students' learning.

In the Aceh context, integrating Islamic values into sciences is based on several regulations. They include Law no. 44 of 1999, Law no. 18 of 2001, Undang-Undang Pemerintah Aceh (UUPA) No. 11 2006, Canon No. 5 of 2008 article 5 paragraph 2. The conversion of several private Islamic universities in Aceh, the change of status of Islamic higher education institutions from Institut Agama Islam Negeri (IAIN) Ar-Raniry to Universitas Islam Negeri (UIN) Ar-Raniry is a form of academic concern for the government, academics, and education practitioners in implementing the UUPA and Islamic law in a philosophical frame, *Pancasila* and the plurality of the Indonesian nation. Hence, the typical Acehnese education (sharia-based) integrating Islamic values into curricula of all PTKINs in Aceh is a solution to these problems. This kind of education needs to be implemented in Aceh to eliminate the dichotomy of sciences and Islam, and it needs to be integrated holistically (Tajuddin & Hj Rofie, 2014).

One that is being actively developed at PTKINs in Aceh is the concept of integrating Islamic religious values into science which is manifested through the implementation of integrative science learning. It is necessary to remember that science and religion tend to be separated in decades due to positivistic views. However, in reality, the two are inseparable units. In the context of PTKIN, the integration of religion and science is different from that in public universities (Compiler, 2018).

Several factors support the concept of implementing integrative science learning at PTKIN in Aceh. First is implementing the Indonesian Qualification Framework (IQF) that requires the KKNI curriculum to shape human resources with Indonesian character, religious, superior, and noble characters. Implementing integrative science learning at PTKIN is expected to reach the goal (Guessoum, 2014; Zarkasih et al., 2020). Second, PTKIN in Aceh has Islamic-based visions and missions, as seen from the visions and missions launched by three PTKINs located in Aceh. The inclusion of the terms as scientific integration, religious people, world-class university, and global insight in the vision and mission, even though it feels like a

trending topic among PTKIN (Chotimah & Fathurrahman, 2014), is positive. PTKIN Aceh's vision is in line with the slogans *Aceh Caroeng* (Smart Aceh), *Aceh Teug*a (strong Aceh), and *Aceh Malem* (Islamic Religious Aceh) programs launched by the Aceh government (Aceh, 2017). Thus, the need for the implementation of integrative learning is a necessity. Third, Science education aims to instill the belief in God Almighty based on His creation's existence, beauty, and orderliness (Depdiknas, 2008). The implementation of integrative science learning can answer this. Fourth, KEPDIRJEN Islamic Education No. 102 of 2019 concerning PTKI religious standards stipulates lecturers' religious standards, which are the minimum reference for lecturers' competence and basic abilities in integrating Islamic values into the curriculum. These religious standards include noble character, basic Islamic skills (reading and writing the Qur'an, worship), Arabic and English language skills, the ability to integrate Islamic values with the field of knowledge possessed. In addition, lecturers must have solid national insight in practicing moderate Islam within the framework of the Unitary State of the Republic of Indonesia (Ministry of Religion of the Republic of Indonesia, 2019). In implementing the curriculum, lecturers are required to integrate the material being taught with Islamic values.

Lecturers as curriculum implementers are responsible for achieving the visions and missions of Sharia-based Acehnese education. Teachers must have competencies to integrate the pedagogic, professional, and social competencies (Bisschoff & Grobler, 1998; Fauzi & Nurlaila, 2017; Yusnita et al., 2018). Yusnaeni et al (2017) found that the learning strategy used by teachers was instrumental in generating students' motivation and thinking awareness that would affect students' thinking ability and learning results. In addition, lecturers are also required to realize the integration of Islamic values in learning. Moreover, SNPT mandates that the implementation of learning must develop intellectual intelligence, noble character, skills, creative thinking, collaboration, elaboration, and communication (Bidin et al., 2020; Nurdin, 2021; Vebrianto, Rus, et al., 2020; Yusnita et al., 2018). By implementing integrative science learning accompanied by the ability of lecturers in its application, universities will be able to produce super outputs in the development of the integration of Islamic values in science (Nurdin, 2021; Vebrianto, Jannah, et al., 2020; Yusnita et al., 2018). Thus, universities will give birth to multidisciplinary scientists with Islamic law in society.

A myriad of studies has been conducted on the integration of Islamic values into sciences. Purwati et al. (2018), for instance, found that science learning integrated with Islamic values yielded significant effects on the students' learning. A study conducted by Fauzan (2017) revealed that the integration of Islam and science in the curriculum is still limited to using several Islamic and science courses separately. Such as Islamic Studies, Islam and Science, Fiqh, Basic Mathematics. The atmosphere of the integration of Islam and science can be seen in the tradition of student clothing, lecture activities that require all lecturers and students to recite the Qur'an at the beginning of the lecture. Ar (2017) focused on integrating an integrated curriculum between science and religion. The study concluded that integrating the integrated curriculum has been running gradually through the courses taught at PTKINs, such as through the one-day one-verse of Quran program, there are courses in Islamic Shari'a Studies, Islamic Study Methodology, Kalam Science, and Introduction to Islamic Science. However, some studies are still on structuring the concept of integration and model design. Few studies lead directly to integrating Islamic values in the implementation of learning. The

ability of lecturers to integrate Islamic values in science learning is an essential competency.

Despite these studies, however, to the best of our knowledge, whether the lecturers of PTKINs in Aceh have the ability to apply it has been unknown. The competence of good educators will affect the positive character of graduates (Sarwi, 2018). This study was therefore carried out to fill in the void. This study focused on the ability of science lecturers to integrate Islamic values into the science curriculum at PTKINs in Aceh. This paper contributes to the conceptual framework for integrating Islamic values in the science curriculum of PTKIN in Aceh.

Between Expected and Implemented Curriculum

To understand the implementation of a curriculum, it is useful to align with the curriculum based on its levels of representations. In this regard, Goodlad (1979) and Akker (2004) have developed the six levels of curriculum representtions as can be seen in Table 3 below.

Table 4. Curriculum Representations

	Levels	Representations
INTENDED	Ideal	Vision (rationale or basic philosophy underlying a curriculum)
	Formal/Written	The written curriculum documents and/or materials
IMPLEMENTED	Perceived	Curriculum as perceived by its users (e.g., teachers)
	Operational	Actual process of the curriculum in teaching and learning
ATTAINED	Experiential	Curriculum as experienced by students
	Learned	Resulting learning outcomes of students

Source: Thijs and Akker, (2009)

Table 1 shows the six levels of curriculum representations, ranging from ideal, formal, perceived, operational, experiential, and learned levels. From Table 1, it can be understood that the integration of Islamic values into sciences which in turn improve students learning at the attained level, needs to have good perceptions of the implementers. In this context, the academics' perceptions of the intergrated sciences with Islamic values and the ways they operate in their classrooms need to be considered.

METHOD

This study used a qualitative descriptive approach to identify and describe the characteristics of the science lecturers who worked for the PTKINs in Aceh in integrating

Islamic values into the curriculum. This research was conducted at three PTKINs in Aceh, namely (in pseudonyms) West Islamic College, East Islamic College, and North Islamic College. This study used interviews with three deputy deans for academic affairs, nine science-based courses' lecturers, and 12 students majoring in Sciences. Meanwhile, the document analyzed were curriculum, Rencana Pembelajaran Semester (RPS) or semesterly syllabuses, and academic manuals. Furthermore, we observed the classroom process held by ten science-based course lecturers.

The research data were obtained from structured interviews, document analysis, and classroom observations. In addition, data were also obtained through FGDs with several lecturers and students whose answers, responses, and responses could represent the entire resource person. Triangulation was carried out from all data and summarized the data according to the research problem by eliminating unnecessary data.

The interviews were recorded and transcribed by classifying the information according to the research objectives. The analysis was carried out in the following stages: data reduction, presentation, verification, and drawing conclusions (Miles & Huberman, 1992). During the data reduction, all the unnecessary information was removed. The data from document analysis, classroom observations, and FGD were analyzed by coding, find the themes and categorized

RESULT AND DISCUSSION

Expectations of the Integrated Islamic Values and Science

Integrating the science curriculum of PTKINs in Aceh is expected to build the characters of students and lecturers based on moral values and Islamic spirituality. Science in the context of Islam makes the Qur'an and Sunnah scientific realities and theoretical foundations. The inculcation of Islamic values is a process with a paradigm and a worldview (Khoirudin, 2017; Kuntowijoyo, 2006; Purwanto, 2015; Taufiqurrahman et al., 2021; Zarkasih et al., 2020). Meanwhile, Islamic integrative science is a process that makes faith and piety the final process of understanding knowledge. This term is known as returning science from the context of science to the Qur'anic text.

Connecting science with its sources in the methodology of an Islamic perspective must comply with the values of monotheism. According to Bidin et al. (2020), the integration of Islamic values in the implementation of the science curriculum does not only connect with the lecturer's understanding of the verses of the Qur'an, but the integration of Islamic science must be constructed on a conceptual framework and paradigm that is based on Islamic values . So that the science curriculum at PTKINs in Aceh not only changes the name of the courses from general science to science labeled Islam but must be integrated into the ontological, epistemological, and axiological sciences themselves. This is important to provide a comprehensive understanding of intellectual perspectives and mindsets, students, and lecturers in understanding the concept of science integration. It is free from the understanding of Western intellectual culture, which relies on material and ratios but denies basic truths (the truth of monotheism).

The competence of the lecturers largely determines the success of the integration of Islamic values in the PTKIN curriculum. Every lecturer who teaches science courses at PTKIN needs to be competent and must be equipped with a deep understanding of the field of Islam, especially the competence of lecturers in integrating Islamic values in each learning objective science learning materials and

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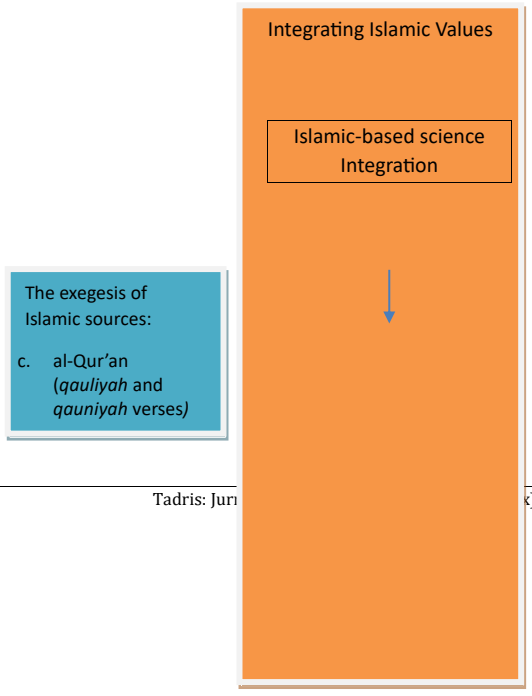
evaluation. Learning Science lecturers must integrate Islamic-based science learning in every lecture material and prepared curriculum. In addition, lecturers must become role models (Baran et al., 2019), especially in shaping the character of pious students, who have noble characters in shaping human resources with Indonesian character, which is the ultimate goal of internalization in the PTKIN curriculum (Ratnawati, 2018).

Integrating Islamic values into the science curriculum can be done by integrating sharia, creed, and moral values . This is done to make science a means of proving the greatness of Allah SWT (Adawiah, 2016; Munadi, 2016). As such, studying science will add piety and faith as formulated in the nature of science learning and the goals of national education summarized in the IQF curriculum. The process of integrating Islamic values into the PTKIN curriculum can be seen in Figure 1 below.



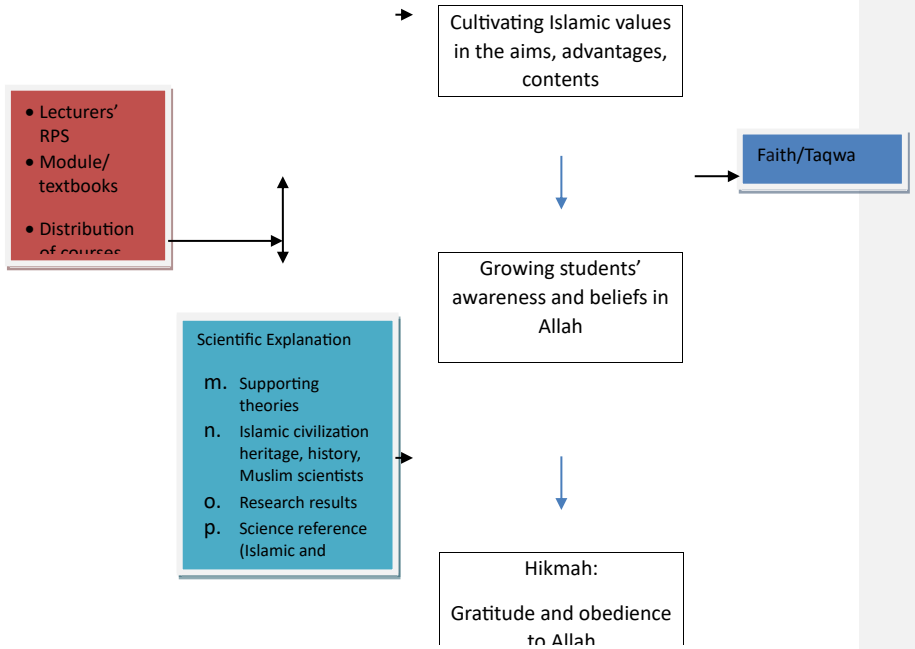


Figure 1. The conceptual framework of Integration of Islamic values

In implementing the science curriculum of PTKIN Aceh, every lecturer must instill Islamic values related to the objectives, benefits, and content of the material. Murdiono (2010) revealed that the strategy for internalizing religious values (in this case, Islamic values) in learning includes exemplary, actual problems in society, inculcating contextually educative values, and strengthening moral values. Designing Islamic values related to scientific material that fosters awareness and belief in Allah SWT's greatness will foster gratitude and increase obedience in worship, which will increase piety to Allah SWT, which is the goal in learning science (Alattas, 2001; Kuhn, 1962; Purwanto, 2015; Shihab, 2007).

In essence, science is built on scientific products, scientific processes, and scientific attitudes. Muhaimin (2001) states that science (science) is human knowledge about the physical world and its phenomena. Science is tasked with discovering the relationship of principles, qualities, characteristics in humans, nature, and other entities. Every science learning must be based on the scientific method, so that it requires the internalization of religious values in cultivating a scientific code of ethics that provides direction and motivation for the scientific product itself. The internalization of religious values will direct the use of useful scientific products for the benefit of humankind instead of producing products that destroy generations and divide peace and humankind.

Trianto (2010) explains the nature and objectives of science learning: the first essence, namely, awareness of the beauty and orderliness of nature to increase belief in God Almighty. Second is knowledge, namely knowledge of the basic principles and concepts, facts in nature, interdependence relationships, and the relationship between science and technology. Third, skills and abilities to handle equipment, solve problems and observe. Fourth, scientific attitude, including skepticism, critical, sensitive, objective, honest, open, correct, and working together. Fifth, the habit of developing inductive and deductive analytical thinking skills by using scientific concepts and principles to explain various natural events. Sixth, appreciating science by enjoying and realizing the beauty of the regularity of natural behavior and its application in technology. Lecturers as curriculum implementers must integrate Islamic values with students in every science material. Students are taught a critical and comprehensive mindset towards science in understanding Western theoretical views combined with Islamic values in each material (Adawiah, 2016).

Integrating Islamic values in the implementation of the Aceh PTKIN curriculum is strongly influenced by the competence, mindset, enthusiasm, and willingness of the Aceh PTKIN science lecturers to reconstruct the general science curriculum into a curriculum integrated with Islamic values. In addition to the competence of lecturers, which significantly influences the success of implementing this curriculum, is the willingness of the lecturers to explore and study science sources through Islamic sources, Islamic civilization, history, as well as research results and theories of Muslim scientists in the sub-materials of science being taught. The following are the findings in a study on the ability of lecturers to integrate Islamic values in the implementation of the science curriculum of PTKIN Aceh.

The Implementation of the Integrated Islamic Values and Science

The observations of the classroom teaching held by Science lecturers of the PTKINs in Aceh showed several important findings. First, some lecturers had integrated Islamic values in the early stages of learning in the classroom by reading prayers and *tadarus* of the Quran related to the material, and even then, a small number of lecturers studied did the integration of Islamic values in the opening of learning. In reading the verses of the Quran, the verses that are read have not touched the realm of the material being taught, *tadarus* of the Quran are short verses (juz 30). Most lecturers asked students to go directly to the main learning material by asking for group discussions without opening the lesson. It indicates that the integration of Islamic values into the lesson material has not been implemented as intended at the opening stage.

Some lecturers integrated Islamic values at the learning material stage by mentioning verses of the Quran and interpreting verses based on Muslim scientists' material, concepts, and roles and combining them with modern scientific theories in the lesson material being taught. However, some lecturers did not integrate Islamic values into the material. Lecturers directly deliver pure science material without doing integration. The RPS analysis revealed that some of the lecturers previously included the integration of Islam in learning outcomes, but in the implementation of learning in the classroom, they did not integrate. Some of the other lecturers have not integrated Islamic values in their RPS, but in the implementation, the lecturers have linked the integration, although not entirely. Obviously, some lecturers did not teach according to the RPS. Some do it in the initial activities, but the core activities do not integrate. Integration is carried out again in the closing activity in the delivery of reinforcement.

During the interviews, one of the students said:

> *Integrating Islamic values in science learning has not been carried out properly at every face-to-face meeting. Integration is only done in a few meetings, and some do not integrate at every meeting. According to them, the integration carried out by several science lecturers has not touched the material realm, but the integration is carried out only on reading the verses of the Koran at the beginning of learning and directly on the delivery of pure science material. Some lecturers integrate at the final stage by linking science with Islamic values but not at every meeting. Strengthening integration was at the final stage of learning if time was available. Most of the lecturers only teach pure science material at each meeting.*

The excerpt reveals that some lecturers did not integrate Islamic values to

organize the curriculum being taught. Most of the lecturers do not have the ability in a structured way to integrate Islamic values into the science curriculum of PTKIN Aceh. It was obvious that in the analysis of curriculum documents, the integration of monotheism values has not been seen in curriculum planning; integration was only on materials that they could integrate, some other lecturers do not integrate at all. The lecturers lacked the ability and desire to find and interpret the verses of the Quran, the reluctance to combine modern scientific theories with Islamic theories, associate and instill values in the material based on the results of Muslim and Western scientific research.

There was lesson material that can be directly traced in the Quran, and there is material challenging to trace by the lecturers because the explanations in the Quran are general, so the integration process was only at the beginning and end of the meeting. According to them, imposing integration on material because it has not been able to find a source in the Qur'an will result in misinterpretation and misunderstanding of the interpretation of the Quranic verses. Errors in the interpretation of the verses of the Koran will be fatal in instilling Islamic values in learning. This difficulty is due to the absence of complete textbooks and reference materials on science material on integrating Islamic values.

According to them, not all science learning materials can be integrated thoroughly into the learning process at the initial, core, and final stages because they are directly related to Islamic values or Islamic sources. However, there is scientific material that is not yet known to be related to Islamic values, so the integration process can only be carried out in the early and final stages of learning, and its strengthening was emphasized on the wisdom of the material. So it did not have to force all science material to be integrated thoroughly in all learning materials.

In addition, durng the interview, one of the students stated:

> *Implementation of the integration will be successful depending on the ability of lecturers to apply learning methods. Students can absorb integration material depending on the delivery of the material taught by the lecturer through the learning method. According to them, the learning system of some science lecturers still uses the lecture method with a one-way and monotonous transfer of knowledge. Students in the interaction process in class only listen to the lecturer deliver the material from start to finish. Although all lecturers understand active and integrative learning methods, in practice, the lecturers use the unidirectional lecture method and dominate the delivery of material so that the lecture atmosphere tends to be boring.*

Findings indicated that most lecturers who have not implemented the integrated curriculum were graduates majoring in pure science from public universities. The concept of integrating Islamic values in the science curriculum was still new. They have not been equipped with the concept of Islamic science, especially the ability to search for verses from the Qur'an and other Islamic sources explicitly or implicitly to the material to teach. Based on the results of the interviews, there was no provision of knowledge about the interpretation of the Qur'an and other sources of religious education related to science when they became scholars because they were

equipped with general scientific knowledge (Muspiroh, 2013; Qissa 'Ali, 2018)..

However, not all pure science lecturers (of public university graduates) have not implemented the concept of integration in the curriculum. Some of them can do it well. The lecturers had tried to integrate Islamic values and relate them to the lecture material. So it can be concluded that apart from the graduate factor, the integration of Islamic values in the science curriculum was also influenced by the lecturer's internal factors such as the lecturer's ability to understand Islamic sciences, obedience, and the values of the lecturer's piety foundation (Ibrahim et al., 2017).

On the other hand, lecturers who graduated from PTKIN did not integrate it into the curriculum. In fact, in the interview, he seemed to have understood the concept of integration well. Unfortunately, the design of the RPS and the implementation of the curriculum have not integrated it at all. Therefore, the integration of Islamic values in the implementation of the curriculum of the PTKIN in Aceh was strongly influenced by the willingness and interest of the lecturer. Some lecturers lack the willingness and desire to integrate Islamic values into the curriculum. Based on the results of the research, the implementation of integration in the science curriculum of PTKINs in Aceh is strongly influenced by individual factors of lecturers. The ability of lecturers to integrate Islamic values into the science curriculum will affect the formation of students' religious attitudes (Damanik, 2019).

The lecturers' lack of awareness is because integrating Islamic values in the Aceh PTKIN curriculum has not led to massive implementation. On the one hand, PTKIN Aceh applies Islamic integration in its vision and mission as a manifestation of the implementation of Islamic Sharia in education (Zulfata, 2017). On the other hand, there are no standardized guidelines and standards for every lecturer, student, and employee regarding how integration should be implemented. So it can be seen that the implementation of integration in the science curriculum of PTKINs in Aceh tends to be modest, even though it should have become an academic culture at Islamic religious colleges (Multazam, 2019). The awareness of some lecturers still constrains the integration of Islamic values in the science curriculum in Aceh. Because there are no manuals, standard rules, and the lack of awareness of the lecturers, the integration of Islamic values in the science curriculum of PTKIN Aceh has not been achieved and has not been implemented perfectly.

Based on the analyses of documents and interviews with the deputy deans for academic affairs at three PTKIN Aceh, the integration of Islamic values became the main foundation in the vision and mission of PTKIN Aceh. However, in the implementation process in the field, there were no written standard rules that become SOPs. These rules were only conveyed orally through meetings in the discussion of the PTKIN science curriculum. The absence of these standard rules can allow for various interpretations, the burden of responsibility, and the seriousness of each science lecturer in implementing the integrated Islamic values in the curriculum. There are no rules that bind the extent to which the integration of Islamic values, the inculcation of spiritual values, and the value of diversity must be applied in the science curriculum so that PTKIN's vision and mission can be implemented (Compiler, 2018). The written regulations are crucial things to prepare by lecturers, so curriculum planning is right on target (Directorate General of Learning and Student Affairs, 2016; Kristiawan, 2019) . In addition, the integration model developed is still a formality, and the labeling of sharia has not led to the factual component of a holistic implementation.

This is proven based on interviews with lecturers that revealed that some lecturers gave various answers about the concept and paradigm of integrating Islamic values in the PTKIN Aceh curriculum. The lecturers only understand the term integration-interconnection in different meanings and knowledge. The limitations of the integration of Islamic values in the strengthening of science material, and how that integration is carried out without changing the science curriculum itself and material achievements can be carried out by lecturers without adding additional lecture time.

One of the lecturers said:

> *There is no dichotomy in Islamic science, so there is no need for integration in the curriculum. PTKIN Aceh has religion courses and general courses. So that when the preparation and development of the curriculum do not need to be integrated with Islamic values. Islamic values have been constructed in religious subjects. Reference sources and materials can be used as references to Western science without looking for integrative reference sources because they do not yet exist. Regarding the cultivation of Islamic values, students and lecturers can filter secular Western values and dogmas through religious courses. Let the religious courses and general courses stand-alone without integration.*

It indicates that the lecturers have not comprehensively understood the applied integration paradigm model. This is due to the lack of socialization of the integration model applied to each PTKIN Aceh. Thus, a leadership role is needed in the socialization of the integration because there is a significant influence on improving the competence of lecturers (Rahayu & Hutabarat, 2019). The implementation of the integration of Islamic values at PTKIN Aceh still focused on curriculum development, whereas the development of lecturers' abilities both in integrating the lecturer's worldview and in implementing the integrated science curriculum has not been carried out. The integration of Islamic values in the PTKIN Aceh curriculum seems to be completely left to the wishes and desires of the lecturers. Curriculum evaluation has not led to the implementation of integration. So it can be concluded that the implementation of the integration of Islamic values in the Aceh PTKIN curriculum has not fully led to the realization of the vision and mission of the Aceh PTKIN institution.

CONCLUSION

This study has investigated the implementation of an integrated curriculum of Islamic values and science at three PTKINs in Aceh. It demonstrated that the intended curriculum had not been implemented as expected. The lecturers have not comprehensively understood the integration model applied to each PTKIN. It is due to the absence of the standard, SOP, and integration guidebooks at each PTKIN in Aceh and the integration model's lack of socialization applied to each PTKIN in Aceh. Socialization is only delivered orally in curriculum planning meetings. There are differences in the views and responses of lecturers in understanding and interpreting the paradigm of integration of Islamic values in the implementation of learning in the form of boundaries and concepts applied. The implementation of the integration of Islamic values at PTKINs in Aceh was still focused on curriculum development, while the development of lecturers' abilities both in integrating the lecturer's worldview

Commented [Z16]: all the elements are complete, the analysis is good and sharp, the correlation and integration of general science courses with Islamic values at the location of the Islamic college (PTKIN) is right, so the state of the art is very original and sharp.

and in implementing the integrated science curriculum is still limited. The integration of Islamic values in the PTKIN Aceh curriculum is completely left to the willingness of the lecturers to implement the curriculum. Besides, curriculum evaluation has not led to the implementation of integration, the limitations of lecturers in finding and interpreting Quranic verses, references related to scientific materials. So it can be concluded that the implementation of the integration of Islamic values in the Aceh PTKIN curriculum has not led to the realization of the vision and mission of each Aceh PTKIN institution. It needs regulations and guidebooks on the patterns of integrating Islamic values in learning, research, and community service.

Nevertheless, this study was still limited to a few subjects or has not been carried out comprehensively on PTKINs in Aceh. It has not examined learning resources that integrate Islamic values in science lecturers used in RPS, the problems they encounter, and nd their identity development. Further studies are necessary to do involving lecturers teaching each of the courses at PTKINs so that generalization can be made.

Commented [Z17]: need input and suggestions that refer to the focus of theoretical expectations as a contribution from your thoughts as writers and researchers, for example or similar to find formal findings in this study manuscript.

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