



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

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Abstract: Integrating Islamic science in universities is very important to be applied to form human resources with character. This study aimed to analyze the expectations and implementation of the integration of Islamic values in lecturers of PTKIN 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 an interview, observation, and document analysis (curriculum, books, standard operating procedures (SOPs), and Rencana Pembelajaran Semesters (RPS) or semesterly lesson plans). Data analysis was carried out with an interactive model. 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. PTKIN hopes to achieve its vision, goals, and objectives in integrating Islamic values. These objectives can be achieved in science learning. 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. Nevertheless, this study has not examined a set of learning.

INTRODUCTION

Aceh is an Indonesian province where sharia law has been implemented for several decades. Implementing Islamic sharia is expected to affect all aspects of life, including education in the higher education institutions, by rearranging the Acehese high education system by incorporating local content values (Mujiburrahman, 2019). In supporting the law's implementation in the so-called Veranda of Mecca province, PTKIN 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. As Fullan (2016) posited, their understanding influences the implementation in the actual classroom and students' learning.

Integrating Islamic values into sciences is based on several regulations in the Aceh context. The conversion of several private Islamic universities in Aceh and 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 Acehese education (sharia-based) integrating Islamic values into the 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 & Rofie, 2014).

One 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 (Mujiburrahman et al., 2022). It is necessary to remember that science and religion tend to be separated over decades due to positivistic views (Siponen & Klaavuniemi, 2021; Spoelstra et al., 2021). 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, PTKINs in Aceh have Islamic-based visions and missions, as seen from the visions and missions launched by three PTKINs located in Aceh. The inclusion of the terms such 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 Teuga (strong Aceh), and Aceh Malem (Islamic Religious Aceh) programs launched by the Aceh government (Pemerintah Daerah 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, and the ability to integrate Islamic values with the field of knowledge possessed.

In addition, lecturers must have solid national insight into practicing moderate Islam within the Unitary State of the Republic of Indonesia (Ministry of Religion of the Republic of Indonesia, 2019). In implementing the curriculum, lecturers must integrate the material being taught with Islamic values. Lecturers as curriculum implementers are responsible for achieving the visions and missions of Sharia-based Acehese education. Lecturers must have competencies to integrate the pedagogic, professional, and social competencies (Bisschoff & Grobler, 1998; Fauzi & Nurlaila, 2017; Yusnita et al., 2018). Yusnaeni et al (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.

A myriad of studies has been conducted on integrating 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, and Basic Mathematics. The atmosphere of the integration of Islam and science can be seen in the tradition of student clothing and lecture activities that require all lecturers and students to recite the Qur'an at the beginning of the lecture. Muhammad (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 the one-day one-verse of Quran program. There are Islamic Shari'a Studies, Islamic Study Methodology, Kalam Science, and Introduction to Islamic Science courses.

The data in the field was found that in several lesson plans, lecturers did not fully content Islamic sourced arguments and assessments instruments, including knowledge, attitudes, or skills. Likewise, in the practice of student learning, the applications of Islamic-sourced arguments (Qur'an and Hadith) have not been seen. Furthermore, normatively, PTKIN's vision and mission, science learning objectives, and SNPT have mandated learning to foster religious, superior, and noble character.

However, some studies are still 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 into science learning is an essential competency.

This study was therefore carried out to fill in the void. This study focused on the expectation and implementation 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.

To understand the implementation of a curriculum, it is useful to align with the curriculum based on its levels of representation. In this regard, Goodlad (1979) and Akker (2004) have developed the six curriculum representations levels.

Table 1. Curriculum Representations (Thijs & Akker, 2009)

| | 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 | The actual process of the curriculum in teaching and learning |
| Attained | Experiential | Curriculum as experienced by students |
| | Learned | Resulting learning outcomes for students |

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 improves students learning at the attained level, needs to have good perceptions of the implementers. In this context, the academics' perceptions of the integrated sciences with Islamic values and how they operate in their classrooms need to be considered.

METHOD

This study used a qualitative descriptive approach to describe the form of expectation and implementation of integration the Islamic values into science learning that have been carried out (Gunawan, 2013). The sampling technique selection used in this study is the snowball sampling technique to obtain accurate data and reliably.

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 course 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 concluding (Miles et al., 2016). During the data reduction, all the unnecessary information was removed. The data from document analysis, classroom observations, and FGD were analyzed by coding, finding the themes, and categorizing them.

RESULT AND DISCUSSION

Expectations of the Integrated Islamic Values and Science

The results of a review of the documentation written in the vision and mission of PTKIN Aceh, Science learning objectives in National Education Department 2008, National Higher Education Standards (NHED), and the KKNI curriculum. are found similar expectations of the integration of Islamic values in science learning.

First, the vision and mission of PTKIN from UIN Ar-Raniry, Aceh, is to become a university that excels in the development and integration of Islamic science, science, and technology. The mission of UIN Ar-raniry is (1) to produce graduates who have competitive academic, professional, and or advocacy abilities, (2) to create graduates to have a future-oriented and noble character, (3) to develop a multidisciplinary and integrative research tradition based on Islamic law, and (4) to implement knowledge to build a civil society, which is faithful, knowledgeable, and charitable.

The vision and mission of IAIN Lhokseumawe are to make the Islamic institutions superior, knowledgeable, and insightful in education, research, and community service. Community by (3) developing Islamic science, technology, and arts through scientific studies and

research and (4) building cooperation at local, national, and international levels to develop and improve the quality of education, research, and community service.

The vision and mission of STAIN Teungku Dirundeng Meulaboh are to make the Islamic High School a center for leading Islamic education and science development. Its mission is (1) to transfer Islamic knowledge in-depth with an emphasis on improving the quality of education and teaching, (2) to conduct activities to develop Islamic knowledge in the form of education, research, and community service (3) to create an educational and teaching environment that is capable of producing professional and reliable scholars in the future, (4) to create Aceh Province as a region that implements Islamic Law in various aspects of community life in the field of education.

The fourth is based on the application of the KKNI in the higher education curriculum in Indonesia. KKNI has a strategic role and responsibility for shaping the character of qualified and competitive Indonesian human resources. From the point of view of forming the character of human resources, the implementation of the KKNI-based curriculum has a great influence on shaping Indonesian human resources who have religiously valued attitudes, superior competence, religious insight, and noble character.

Data from the written documentation review is also triangulated with data from interviews. We interviewed three vice-chancellors from each PTKIN Aceh as research subjects for the academic field. Interviews were conducted regarding the expectation of integrating Islamic values in science learning at 3 PTKIN Aceh, namely UIN ar-Raniry Banda Aceh, IAIN Lhoksema, and STAIN Teungku Dirundeng Meulaboh. Among their responses were:

Excerpt I:

"... I think PTKIN Aceh as an Islamic university should integrate Islamic values in science learning as a step to produce graduates who have competitive academic, professional or vocational skills who are future-oriented and have noble character as the vision and mission that has been formulated and has become the goal of education in Islam".

Excerpt II:

"In following up on our vision and mission, we created a superior program to house students to provide character education and guide them through the established curriculum."

Excerpt III:

"... following the vision and mission that has been formulated, STAIN Teungku Dirundeng requires every student to memorize juz 30 as a graduation requirement before presenting the student's thesis final exam. The leading program is an effort to improve the quality of education, build human resources, and as a place for students to deepen their religious knowledge, character formation, the practice of boarding life, and learn foreign languages, especially Arabic and English"

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 holiness 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. (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 changed the name of the courses from general science to science labeled Islam and must be integrated into the ontological, epistemological, and axiological sciences themselves.

This is important to provide a comprehensive understanding of students' intellectual perspectives and the mindsets of lecturers in understanding science integration. It is free from the understanding of Western intellectual culture, which relies on materials and ratios but denies basic truths (the truth of monotheism).

The competence of the lecturers largely determines the success of integrating Islamic values into 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 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.

Integrating Islamic values into the science curriculum can integrate 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 like 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.

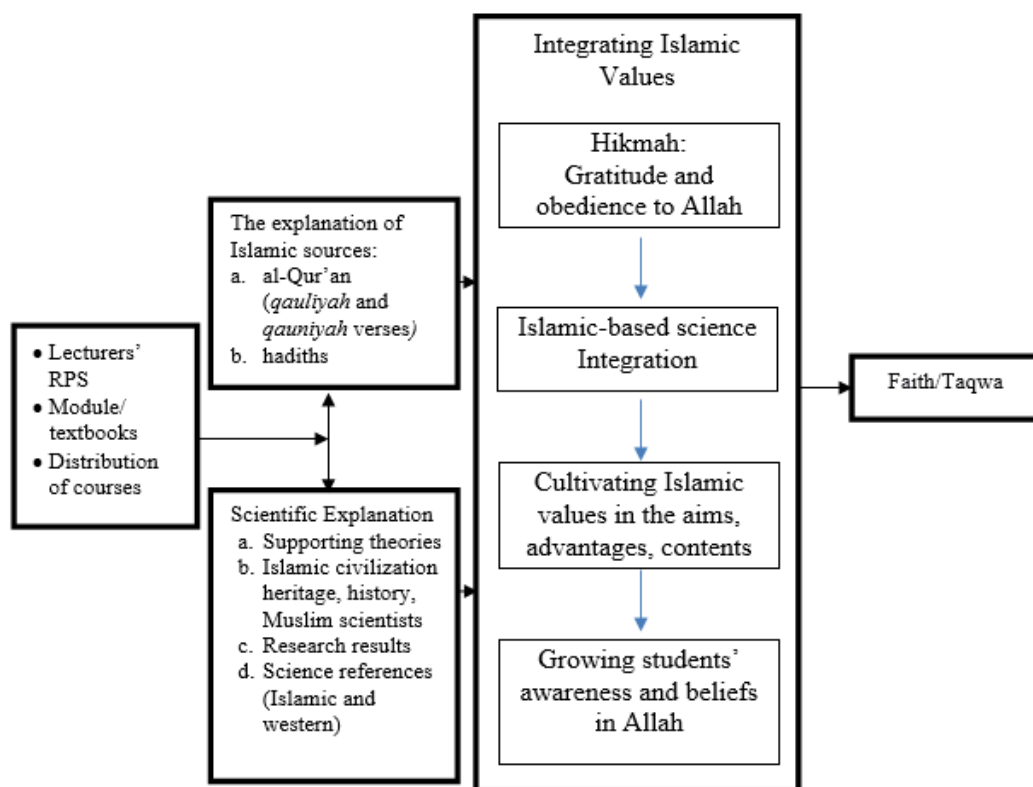


Figure 1. The Conceptual Framework for the Integration of Islamic Values

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, teaching 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 of 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, and characteristics in humans, nature, and other entities. Every science learning must be based on the scientific method. 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.

Lecturers as curriculum implementers must integrate Islamic values with students in every science material. Students are taught a critical and comprehensive mindset toward science in understanding Western theoretical views combined with Islamic values in each material (Adawiah, 2016; Afriana et al., 2016; Fadli & Sudrajat, 2020; Muspiroh, 2013).

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 of 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. A few lecturers even studied 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 is 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. Still, 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. 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. Still, the integration is carried out only by 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. Most of the lecturers do not have the ability in a structured way to integrate Islamic values into the science curriculum of PTKIN Aceh. Obviously, 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 desired 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. 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 sources. However, scientific material 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. Its strengthening emphasized the wisdom of the material. So it did not have to force all science material to be integrated thoroughly into all learning materials. In addition, during 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, 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 into 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 ('Ali, 2018; Muspiroh, 2013).

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 research results, 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 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 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 integrating 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 to reference 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 (Golmoradi & Ardabili, 2016; Jyoti, 2013; Rahayu & Hutabarat, 2019; Sá & Serpa, 2020). The integration of Islamic values at PTKIN Aceh still focused on curriculum development. In contrast, the development of lecturers' abilities in integrating the lecturer's worldview and 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, 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 shows the expectations and implementation of the integration of Islamic values in science learning at PTKIN Aceh. This study found expectations and implementation of the integration of Islamic values in science learning at PTKIN Aceh. Expectations identified through PTKIN's Vision and Mission, Science Objectives, and KKNI Curriculum are generally found that the tri dharma of higher education is directed at the formation of a religious character. While the implementation, lecturers still have not fully implemented Islamic values in science learning in planning, implementation, and evaluation. This research has theoretical implications for contributing new knowledge on the importance of implementing the expectations that have been set.

Nevertheless, this study was 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, their problems, and their identity development. Further studies are necessary to do involving lecturers teaching each of the courses at PTKINs so that generalizations can be made.

REFERENCES

- Ali, U. F. H. Q. (2018). Model integrasi nilai-nilai islam dalam pembelajaran tematik di tingkat menengah. *Jurnal Pendidikan Islam Rabbani*, 2(2), 380–390.
- Adawiah, R. (2016). Integrasi sains dan agama dalam pembelajaran kurikulum PAI (perspektif islam dan barat serta implementasinya). *Al-Banjari: Jurnal Ilmiah Ilmu-Ilmu Keislaman*, 15(1), 99–124.
- Afriana, J., Permanasari, A., & Fitriani, A. (2016). Penerapan project based learning terintegrasi STEM untuk meningkatkan literasi sains siswa ditinjau dari gender. *Jurnal Inovasi Pendidikan IPA*, 2(2), 202. <https://doi.org/10.21831/jipi.v2i2.8561>
- Akker, J. Van Den. (2004). *Curriculum perspectives: An introduction*. Kluwer Academic Publishers.
- Alattas, M. N. (2001). *Risalah untuk kaum muslimin*. International Institute of Islamic Thought and Civilization.
- Baran, E., Canbazoglu Bilici, S., Albayrak Sari, A., & Tondeur, J. (2019). Investigating the impact of teacher education strategies on preservice teachers' TPACK. *British Journal of Educational Technology*, 50(1), 357–370. <https://doi.org/10.1111/bjet.12565>
- Bidin, I., Zein, M. Z., & Vebrianto, R. (2020). Beberapa model integrasi sains dan islam serta implikasinya terhadap pendidikan islam. *Bedelau: Journal of Education and Learning*, 1(1), 33–42.
- Bisschoff, T., & Grobler, B. (1998). The management of teacher competence. *Journal of In-Service Education*, 24(2), 191–211. <https://doi.org/10.1080/13674589800200041>
- Chotimah, C., & Fathurrahman, M. (2014). *Komplemen manajemen pendidikan islam-konsep integratif pelengkap manajemen pendidikan islam*. Teras.
- Compiler. (2018). *Panduan pengembangan kurikulum PTKI mengacu pada KKNi dan SN-Dikti*. Direktorat Pendidikan Tinggi Keagamaan Islam Direktorat Jenderal Pendidikan Islam Kementerian Agama Republik Indonesia.
- Damanik, B. E. (2019). Pengaruh fasilitas dan kompetensi dosen terhadap motivasi belajar. *Jurnal Ekonomi Dan Bisnis (EK&BI)*, 2(2), 239.
- Depdiknas. (2008). *Strategi pembelajaran MIPA*. Departemen Pendidikan Nasional.
- Directorate General of Learning and Student Affairs. (2016). *Buku panduan teknologi pembelajaran pendidikan tinggi vokasi*. Ristekdiksi.
- Fadli, M. R., & Sudrajat, A. (2020). History learning module based on islamic values on KH Hasyim Asy'ari's jihad resolution material. *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah*, 5(1), 65–75. <https://doi.org/10.24042/TADRIS.V5I1.5894>
- Fauzan. (2017). Integrasi islam adan sains dalam kurikulum program studi pendidikan guru MI berbasis KKNi. *JMIE (Journal of Madrasah Ibtidaiyah Education)*, 1(1), 1–13. <https://doi.org/10.32934/jmie.v1i1.21>
- Fauzi, A., & Nurlaila, I. (2017). Kompetensi guru dan pembelajaran

- guru PAI dan strategi pembelajaran dalam penanaman nilai-nilai keagamaan. *Tadris: Jurnal Pendidikan Islam*, 12(1), 105–116.
- Fullan, M. (2016). *The new meaning of educational change (fifth edition)*. Teachers College Press.
- Golmoradi, R., & Ardabili, F. S. (2016). The effects of social capital and leadership styles on organizational learning. *Procedia - Social and Behavioral Sciences*, 230, 372–378. <https://doi.org/10.1016/j.sbspro.2016.09.047>
- Goodlad, J. I. (1979). *Curriculum inquiry. The study of curriculum practice*. McGraw-Hill.
- Guessoum, N. (2014). Islam and science. In *The Customization of Science*. Palgrave Macmillan UK. https://doi.org/10.1057/9781137379610_2
- Gunawan, I. (2013). *Metode Penelitian Kualitatif*. Bumi Kasara.
- Ibrahim, M. A., Mat, S. R., Noor, L. M., & Arifin, A. (2017). The integration of naqli and aqli for chemistry course: A study on tamhidi students' expectations. *IJAEDU- International E-Journal of Advances in Education*, 3(9), 476–483. <https://doi.org/10.18768/ijaedu.370400>
- Jyoti, J. (2013). Impact of organizational climate on job satisfaction, job commitment and intention to leave: An empirical model. *Journal of Business Theory and Practice*, 1(1), 66. <https://doi.org/10.22158/jbtp.v1n1p66>
- Khoirudin, A. (2017). Sains Islam berbasis nalar ayat-ayat semesta. *At-Ta'dib*, 12(1), 195. <https://doi.org/10.21111/at-tadib.v12i1.883>
- Kristiawan, M. (2019). Analisis pengembangan kurikulum dan pembelajaran. In *UPP FKIP Universitas Bengkulu*. FKIP Universitas Bengkulu.
- Kuhn, T. S. (1962). *The structure of scientific revolutions*. University of Chicago Press.
- Kuntowijoyo. (2006). *Islam sebagai ilmu: Epistemologi, metodologi, dan etika*. Tiara Wacana.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2016). Qualitative data analysis a methods sourcebook. In *Arizona State University*. SAGE. <https://doi.org/10.7748/ns.30.25.33.s40>
- Ministry of Religion of the Republic of Indonesia. (2019). *Moderasi beragama*. Litbang dan Diklat Kementerian Agama RI.
- Muhaimin. (2001). *Upaya mengefektifkan pendidikan agama di sekolah*. Rosdakarya.
- Muhammad, A. R. (2017). Kurikulum terpadu antara Islam dan sains. *Seminar Nasional Teknologi Informasi, Komuniiasi Dan Industri (SNTIKI)* 9, 18–19.
- Mujiburrahman. (2019). Transformasi pendidikan berbasis syariat islam di Aceh. *Jurnal MUDARRISUNA: Media Kajian Pendidikan Agama Islam*, 1(1), 39.
- Mujiburrahman, M., Zulfatmi, Z., Sabirin, S., Husnul Khatimah, H. K., & Husen Ismail, F. (2022). Reformulation of competency development of lecturers of state islamic religious universities in Indonesia after covid-19. *Asian Journal of University Education*, 18(1), 15. <https://doi.org/10.24191/ajue.v18i1.17165>
- Multazam, U. (2019). Kepemimpinan dan budaya akademik di perguruan tinggi. *Ta'dibi: Jurnal Manajemen Pendidikan Islam*, 2(7), 128–147.
- Munadi, M. (2016). Integration of islam and science: Study of two science pesantrens (Trensain) in Jombang and Sragen. *Jurnal Pendidikan Islam*, 5(2), 287.

- <https://doi.org/10.14421/jpi.2016.52.287-303>
- Murdiono, M. (2010). Strategi internalisasi nilai-nilai moral religius dalam proses pembelajaran di perguruan tinggi. *Jurnal Cakrawala Pendidikan*, 1(3), 99–111. <https://doi.org/10.21831/cp.v1i3.239>
- Muspiroh, N. (2013). Integrasi nilai-nilai islam dalam pembelajaran IPA di sekolah. *Jurnal Pendidikan Islam*, 28(3), 173.
- Nuridin, Z. (2021). Supporting 21st-century learning by providing educational infrastructure in the form of land: Legal perspective. *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah*, 6(1), 163–170. <https://doi.org/10.24042/tadris.v6i1.8638>
- Pemerintah Daerah Aceh. (2017). *Visi dan misi pemerintahan Aceh 2017-2022*. Biro Humas Dan Protokol Sekretariat Pemerintah Aceh.
- Purwanto, A. (2015). *Nalar ayat-ayat semesta: Menjadikan al-Quran sebagai basis konstruksi ilmu pengetahuan*. Mizan Pustaka.
- Purwati, N., Zubaidah, S., Corebima, A. D., & Mahanal, S. (2018). Increasing Islamic junior high school students learning outcomes through integration of science learning and Islamic values. *International Journal of Instruction*, 11(4), 841–854. <https://doi.org/10.12973/iji.2018.11453a>
- Rahayu, N. A., & Hutabarat, I. M. (2019). Pengaruh kepemimpinan transformasional dan iklim organisasi terhadap kinerja dosen dimediasi kompetensi dosen di Kabupaten Jayawijaya. *Wahana: Tridarma Perguruan Tinggi*, 71(1), 47–60. <https://doi.org/10.36456/wahana.v71i1.1893>
- Sá, M. J., & Serpa, S. (2020). The covid-19 pandemic as an opportunity to foster the sustainable development of teaching in higher education. *Sustainability (Switzerland)*, 12(20), 1–16. <https://doi.org/10.3390/su12208525>
- Shihab, M. Q. (2007). *Tafsir Al-Misbah*. Lentera Hati.
- Siponen, M., & Klaavuniemi, T. (2021). Demystifying beliefs about the natural sciences in information system. *Journal of Information Technology*, 36(1), 56–68. <https://doi.org/10.1177/0268396220901535>
- Spoelstra, S., Butler, N., & Delaney, H. (2021). Measures of faith: Science and belief in leadership studies. *Journal of Management Inquiry*, 30(3), 300–311. <https://doi.org/10.1177/1056492620901793>
- Tajuddin, M. S., & Rofie, M. K. H. (2014). A new paradigm of integration between science and Islam: An epistemological framework. *Journal of Islam and Science*, 1(1), 1–12.
- Taufiqurrahman, Hidayat, A. T., & Erman. (2021). The integration of science in islamic science university of malaysia: A model for islamic study development in uin imam bonjol padang. *Journal of Educational and Social Research*, 11(1), 232–244. <https://doi.org/10.36941/jesr-2021-0021>
- Thijs, A., & Akker, J. Van Den. (2009). *Curriculum in development*. SLO.
- Vebrianto, R., Jannah, M., Putriani, Z., Syafaren, A., & Gafur, I. A. (2020). Comparative analysis of strengthening of skills of the 21 st century teaching candidates in Indonesia and Malaysia. *Revista ESPACIOS*, 41(23), 50–61.
- Vebrianto, R., Rus, R. B. C., Jannah, M., & Syafaren, A. (2020). Study of strengtheninf 21st-century skill in prospective science teacher based on gender. *Jurnal Bioedukatika*, 8(2),

79–90.

Yusnaeni, Corebima, A. D., Susilo, H., & Zubaidah, S. (2017). Creative thinking of low academic student undergoing search solve create and share learning integrated with metacognitive strategy. In *International Journal of Instruction* (Vol. 10, Issue 2, pp. 245–262).

Yusnita, Y., Eriyanti, F., Engkizar, E., Anwar, F., Putri, N. E., Arifin, Z., & Syafril, S. (2018). The effect of professional education and training for teachers (PLPG) in improving pedagogic competence and teacher performance. *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah*, 3(2), 123.

<https://doi.org/10.24042/tadris.v3i2.2701>

Zarkasih, Z., Yusuf, K. M., Hasanuddin, H., & Susilawati, S. (2020). Integration of naqli and aqli knowledge in Islamic Science University of Malaysia: Concept and model. *POTENSIA: Jurnal Kependidikan Islam*, 5(2), 123. <https://doi.org/10.24014/potensia.v5i2.7800>

Zulfata, Z. (2017). Kontekstualisasi filsafat ilmu murtadha munthahhari dalam membidik epistemologi UIN Ar-Raniry Aceh. *Jurnal Ilmiah Islam Futura*, 16(1), 128. <https://doi.org/10.22373/jiif.v16i1.747>