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Enhancing Students' Spiritual Awareness through Understanding Human Physiology in Biomedical Science Course

Nur Al Marwah Asrul[1,*], Taufiq Al Islam Asrul[2], M Burga[3]

[1]Faculty of Medicine and Health Sciences, Universitas Islam Negeri Alauddin Makassar, Indonesia
[2]Fakulty of Teacher Training and Education, Universitas Internasional Papua, Indonesia
[3]Fakulty of Islamic Education and Teacher Training, Universitas Islam Negeri Alauddin Makassar, Indonesia

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***Correspondence:**
Address:
Tamangapa Modern Land 2,
Makassar City, Indonesia 90235
Email:
nur.almarwah@uin-alauddin.ac.id

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Abstract:
The increasing amount of information among the younger generation is not directly correlated with the enhancement of their spiritual awareness. This is due to the fact that science education emphasizes cognition rather than emotion and fails to include Islamic principles into its curriculum. This study seeks to examine the enhancement of students' spiritual consciousness following their comprehension of human physiology in the Basic Biomedical Sciences course. This qualitative study purposively chose informants from among instructors and students. Data were gathered by observation, interviews, and documentation methods. The gathered data were examined by descriptive analysis methods, and their validity was assessed utilizing triangulation procedures. The study's findings demonstrate that Islam (Qur'anic verses) pertains to the concept of human physiology. Comprehending the subject of human physiology in conjunction with Islamic studies helps enhance students' spiritual consciousness. This study underscores the significance of assembling a curriculum development committee comprising specialists in education, Islamic studies, and human physiology to create an integrated curriculum. Instructors must also be capable of utilizing the subject of human physiology to demonstrate the Greatness and Omnipotence of Allah swt.

INTRODUCTION

The augmentation of information ought to be directly proportional to the enhancement of spiritual awareness in a Muslim (Romlah and Rusdi 2023) .This is seen in Ibn Sina (980-1037 AD), a Muslim physician and philosopher whose writings remain relevant today. "The father of modern medicine" proposed theosophy of illumination, which denotes the comprehensive integration of science, philosophy, and spirituality. This ideology influenced Suhrawardi's philosophy of illumination, which integrates rationality with spiritual sentiment (*zauq*) to attain the ultimate knowledge, specifically the realization and perception of the existence of Allah swt. (Gozali 2016).

With the advent of the modern century, a movement of secularization in science emerged. This indicates that science is becoming liberated from religious influence, evolving into a more autonomous and rational field. This process entails a conflict between scientific and

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religious knowledge, highlighting the scientific approach and rationality in the pursuit of truth (Ferngren 2022). Consequently, there exists a crisis of values or an inadequacy in education regarding the development of students' character. Individuals possessing extensive knowledge yet devoid of religious, moral, and ethical beliefs may adversely affect society, resulting in corruption, criminality, and injustice (Asmaldi et al. 2022). The significance of incorporating Islamic studies into science education is evident (Suciati et al. 2022). Furthermore, science education is an integral component of the comprehensive teachings of Islam in life (Nurcholis 2021)

The integration of Islamic studies is the main driving force behind the institutional transformation of the State Islamic Institute (IAIN) into the State Islamic University (UIN) (Lubis 2021). This transformation has paved the way for UIN to open the Faculty of Medicine and Health Sciences (FKIK). This is both an opportunity and a challenge for FKIK UIN to produce competent and characterful doctors, pharmacists, and nurses (having spiritual awareness). Efforts to realize the profile of these graduates are carried out by integrating Islam into the study program curriculum (Chairudin and Widodo 2024).

The theory and process of integrating Islam into the university curriculum has attracted the attention of researchers to study it in various aspects and approaches, including: Hanifah (2018) studied the concept of scientific integration at Islamic universities in Indonesia; Nugraha (2020) conducted a literature review on the practice of Islamization of general science in universities; Ali (2020) conducted a case study of the integration of science and Islam in the UIN Malang curriculum; Zain et al. (2016) studied the development of an integrated curriculum and teaching materials in science/engineering courses; Wijana (2015) measured the effect of integrating local wisdom-oriented character education in environmental science courses on improving the soft skills of biology students; Arlusi and Fuad (2020), Tamami, Falah, and Rizal (2020), Rizqiani and Sukmawaty (2023) studied the effect of Islamic courses on students' morals, character, and personality. These studies are certainly very normative because the main goal of Islamic learning is to increase spiritual awareness. No one has specifically studied the increase in students' spiritual awareness after gaining knowledge about general science material, especially human body physiology material.

This study aims to analyze the increase in students' spiritual awareness after gaining an understanding of human body physiology in the Basic Biomedical Science Course. The focus of the study is twofold: (1) Integration of Islam in the study materials (teaching materials) of human body physiology in the Basic Biomedical Science Course and (2) increasing students' spiritual awareness after participating in the learning. This study is very important because it not only examines the model of Islamic integration in science courses but also becomes a benchmark for the success of using human body physiology material as a medium to realize the Greatness of Allah.

METHOD

This research method is qualitative with a phenomenological approach. This qualitative research describes the natural phenomenon related to the increase in students' spiritual awareness after understanding the material on human body physiology in the Basic Biomedical

Science Course. The object of the research was Semester 1 students of the 2023-2024 academic year from the Nursing Study Program, Faculty of Medicine and Health Sciences, UIN Alauddin Makassar. The primary data source was informants selected purposively from students and lecturers. Secondary data sources consisted of books, journals, RPS, and Basic Biomedical Science Course Modules. Data were collected using observation, interview, and documentation techniques. The collected data were processed and analyzed using descriptive analysis techniques, namely by reading the entire transcript of the general information results, compiling general information to be taken into specific messages, grouping general data patterns (Sugiyono 2019). Testing the validity of the data using the data source triangulation technique. In this case, comparing the results of interviews with student informants, teaching lecturers, observation data, and learning administration documents (Arianto 2024).

RESULTS AND DISCUSSION

Understanding Physiology in Basic Biomedical Science Learning

Basic Biomedical Science is a compulsory course for health students. This course studies anatomy, physiology, biology, chemistry, and physics in explaining life phenomena, both from the molecular, cellular, to organ and human body levels as a whole (Abadi et al. 2023). This science is the foundation in health science, especially for nursing students. Knowledge of anatomy and physiology and the mechanisms that occur in the body are the basis used in providing nursing care. This knowledge is the basis for events that occur in various conditions of the human body (Asrul 2021).

Based on the Nursing Study Program Curriculum, the Basic Biomedical Sciences Course is part of the basic science group that discusses the concepts of biology, physics, biochemistry, nutrition with attention to the environment and scientific ethics, as well as the concepts of human anatomy and physiology in maintaining body homeostasis. There are four main study materials in this learning, namely: (1) Concepts of Cell Biology and Genetics, (2) Concepts of Human Body Anatomy and Physiology, (3) Body Homeostasis and Principles of Physics, and (4) Biochemistry in the Body (Program Studi Keperawatan 2021).

First, cell biology is the knowledge of cells in the human body. In terms of human body organization, cells are the smallest units in human life. Cell biology discusses cells, the benefits of cells in life, and the genetic material contained in cells. It also includes how cells in the body communicate with each other. Cells that have the same function will form tissue. Tissues that unite and have the same function will form organs. Organs work together with other organs in the organ system. The human body will work well as a result of coordination of all organ systems in the body.

Second, human anatomy is an understanding of the organs in the body. While human physiology refers to an understanding of the mechanisms of systems that work in the body. There are at least ten systems studied in understanding the human body, namely: the nervous system, endocrine system, reproductive system, urinary system, integumentary system, musculoskeletal system, respiratory system, cardiovascular system, digestive system, and immunological system (Asrul 2021).

Third, homeostasis is a fundamental biological process that involves maintaining internal stability and balance in an organism, despite changes in the external environment (Hall and Guyton 2021). This includes various physiological mechanisms that regulate parameters such as body temperature, blood glucose levels, and immune responses to ensure optimal body function in the immune system. For example, it plays an important role in maintaining homeostasis by interacting with the microbiota to maintain a mutualistic relationship between the host and the microbial community (Gao et al. 2018). There are so many roles of homeostasis in the human body because it occurs in all systems of the human body. At the cellular level, regulation of cell homeostasis is influenced by proteins that induce selective autophagy and changes in organelle morphology (Zhu, Wang, and Wang 2021).There are also examples of homeostasis in maintaining sugar levels. The homeostatic model assessment of insulin resistance (HOMA-IR) is used to evaluate insulin resistance, emphasizing the importance of maintaining glucose homeostasis in human physiology (Ojo et al. 2022). Living things known as microbiota also affect homeostasis, such as gut microbiota has been shown to have an impact on gut immune homeostasis and overall body health (Gao et al. 2018).

Fourth, physics and biochemistry are also needed in a fundamental understanding of the human body. The use of physics in the world of health affects two important aspects, namely pathophysiology and therapy. Physiological physics/physiological physics can explain the function of the human body and related conditions, both in health and disease. In therapy, knowledge of physics is used in many aids used for diagnosis, healing and rehabilitation of patients. In the principles of physics, biomechanics, biooptics, bioacoustics, and thermodynamics are also studied, which affect the human body (Gao et al. 2018).

Study of Islamic Integration in Human Physiology

The statement of the Qur'an about the human body/physique refers to QS al-Tin/95: 4, that Allah created (the body) of humans in the best form. The creation of the body in the most beautiful form (*aḥsani taqwīm*) does not only mean the physical model and shape of the body's organs but also means having the function and working mechanism of biological systems to maintain survival and health. Its relation to human body physiology is very relevant to the concept of fitrah in Islamic studies which is based on QS al-Rum/30: 30. Fitrah is the default factory setting of humans with their hardware (body) designed to be able to live, be healthy, and manage/utilize the earth (*khalīfah*), while their software (soul) has been set to believe in Allah, readiness to accept and practice Allah's religion, and purity and holiness of the soul from things other than Allah's power (*tawḥīd*) (Burga 2019). So, from an Islamic perspective, the physiology of the human body can be linked to the concept of fitrah which refers to the natural state or nature of humans created by Allah.

In the Qur'an, there are many verses that emphasize the importance of maintaining the body as a trust from Allah. One of them is QS al-Baqarah/2: 195, that the body must be maintained (not destroyed), namely keeping the body healthy. The Islamic perspective emphasizes that maintaining physical health is part of worship, while physical and spiritual health are interrelated.

In addition, the concept of health in Islam also includes social and environmental aspects. According to the Islamic perspective, maintaining physical health also means

maintaining a healthy environment and society (Irawan 2017). This is in line with the concept of human body physiology which considers the interaction between the human body and its external environment. Thus, the Islamic perspective on human body physiology emphasizes the importance of maintaining physical health as part of obedience to Allah, as well as paying attention to the relationship between the body, the environment, and society in achieving holistic health.

The relationship between the concepts of cell biology and genetics with Islamic studies must be based on the relevance of these scientific concepts to the teachings of the Qur'an (Hukmiah and Sabri 2025). Moreover, the verses of the Qur'an have the meaning of *lawāzim* (consequences) so that the verses that talk about diversity are very likely to have relevance to the concepts of cell biology and genetics. For example, QS al-Hujurat/49: 13 explains that Allah created humans from a male and a female, then made them into nations and tribes. This has the consequence that can be interpreted that certain nations inherit genes and heredity from their ancestors (parents) both physically and in terms of characteristics.

Similarly, the concept of genetics can be associated with the Quranic viewpoint on the inheritance of characteristics and the diversity of organisms. The Quranic passages addressing the transmission of features and the emergence of distinct species can be aligned with genetic concepts such as inheritance and variation (Fajriani et al. 2021). An examination of the Quran's observations regarding the origins and attributes of living organisms reveals a correlation with the scientific principles of genetic inheritance and diversification.

Moreover, within the realm of biology, the verses of the Qur'an suggest the intricate and organized characteristics of living organisms, encompassing cellular and genetic dimensions (see to QS Fathir/35: 28). The verses of the Qur'an can be associated with the concept of cell biology by highlighting the formation and organization of living organisms. For instance, QS al-Insan/76: 2 asserts that human growth commences with a singular cell. This aligns with the principle of cellular organization and development. The connection between scientific comprehension and the teachings of the Qur'an demonstrates that the Qur'an, as a source of information, aligns with biological concepts (Azzuhriyyah and Soleh 2023).

In addition, the concept of homeostasis is in line with the Islamic view of maintaining balance in various aspects of life. The Qur'an and Hadith emphasize the importance of moderation and balance in behavior, diet, and overall lifestyle. The concept of *mīzān* (balance) is central to Islam, which emphasizes balance in all aspects of life, including physical, mental, and spiritual well-being. Islamic teachings encourage maintaining harmony within oneself and with the environment, reflecting the principle of homeostasis in biological systems (Irawan 2017). Therefore, the concept of homeostasis in human physiology can be seen as consistent with Islam's emphasis on balance and moderation in all aspects of life.

Enhancing Students' Spiritual Awareness

The integration of Islamic studies and science illustrates the interconnection between various fields of knowledge, specifically with human physiology and Islamic principles. This concept is aimed at encouraging not only theoretical comprehension but also spiritual knowledge of the Greatness of Allah swt (Suredah and Usri 2020; Irawan 2017).

This opinion is in accordance with the interview data of student informants who said that they were religiously aware of how great God's power is through the detailed and visual presentation of the explanation of human body physiology in the Basic Biomedical Science Course. Student informant 1 said that:

> *Masya Allah, Ma'am, because from this biomedical science learning I am even more impressed with God's creation which is so meticulous and amazing.*

A similar thing was expressed by student informant 2 through his email message:

> *All the physiology materials presented are impressive, Ma'am. Even my view is increasingly open in seeing the power and greatness of God. Allah is Great, Ma'am.*
> *I am very amazed because all this time I did not know how all the physiological work of the body occurs. and I feel guilty if I am still often negligent in worship. Every time I see videos about how the body works, how the nerves and signals process and are completely connected, Masya Allah, the creation of our bodies is so extraordinary, it turns out that in a split second, all body functions work.*

The interview data shows that understanding the physiology of the human body can increase students' spiritual awareness. Spiritual awareness is characterized by a deep appreciation of the complexity and beauty of creation as well as a sense of awe and respect for the Creator (Romlah and Rusdi 2023).

The responses of the two student informants regarding their views and feelings after participating in Basic Biomedical Science learning are in line with the research results of penelitian Huda dan Suyadi (2020), that after someone knows more about their brain and mind, their faith and devotion to Allah swt will increase. because they admire His extraordinary creation. The interview data also strengthens Kusnawan's (2023) research, that Islamic spiritual awareness can be increased through learning about the human body. By understanding the anatomical layout and function of the body, one can gain a deeper appreciation for the intricate design of the human body as God's creation. The body can serve as a reminder of God's existence and the importance of maintaining one's physical and spiritual health. Overall, learning about the human body can deepen one's spiritual awareness by recognizing Divine wisdom in creation and understanding the role of the body in spiritual practices (Kusnawan 2023).

Based on the analysis, it is important to integrate Islamic studies and spiritual care into the curriculum to increase students' spiritual awareness through physiology learning. Various studies have shown that educational programs that focus on spiritual care have resulted in the development of increased spiritual awareness, a more client-centered approach, improved communication skills, and personal impact among nursing and occupational therapy students (Leeuwen et al. 2008; Wang et al. 2022; Caldeira et al. 2016). In fact, the integration of spirituality and spiritual care in education has been shown to expand students' understanding and knowledge of spirituality leading to a holistic approach in meeting the needs of the mind, body, and soul (Caldeira et al. 2016). In addition, educational interventions have been shown to be effective in increasing students' self-awareness and intra-spiritual competence, thereby contributing to their overall spiritual development (Rykkje et al. 2021)

Other research results found that incorporating spirituality into the undergraduate nursing curriculum had a positive impact on increasing students' spiritual knowledge and

attitudes (Wallace et al. 2008). In addition, the results of the identification related to the development of student competencies in spiritual services emphasized the importance of medical personnel who are experts in their fields (both in theory and skills) and have spiritual awareness (Giske et al. 2022). Finally, to improve services in nursing practice, it is recommended that educational institutions bridge the gap between competency development (knowledge and soft skills) and spiritual guidance in nursing practice. The bridge in question is of course the integration of Islam in nursing science.

Integrating Islamic studies into learning human physiology is certainly not an easy thing. The lecturer in charge of Basic Biomedical Sciences revealed the obstacles, that:

> *I am not an expert in Islamic studies. My scientific background is biomedical. However, one of the university's missions is integrated science, this is our characteristic at UIN Alauddin, nursing graduates must be experts in their fields and have a religious character. So, I studied a lot and discussed with fellow lecturers from the religious department to find the relevance of the concept of human body physiology with the Qur'an and hadith.*

The interview data shows the importance of developing educational material standards based on integration. Lecturers in the field of science need a team of experts in education and Islamic studies to develop an integrated curriculum (Harta 2025). The material presented must be linked to the Qur'an and Hadith, while pedagogically paying attention to the development of students' spiritual awareness through self-awareness (both physically and mentally). This is based on the Sufi theory of Yahya bin Muaz al-Razi, *man 'arafa nafsah faqad 'arafa Rabbah* (whoever knows himself, he has truly known his God). So, learning about the body can increase spiritual awareness because it helps individuals to be more connected to themselves and see the body as a sacred place to experience and express spirituality (Syafi'i and Mardiyah 2023).

CONCLUSION

Students' spiritual awareness can be increased after studying the material on human body physiology integrated with Islamic studies. The verses of the Qur'an in context have the meaning of *lawāzim* (consequences) which helps to find the relevance of the concept of human body physiology with Islamic studies.

This study has implications for the importance of UIN Alauddin to form a curriculum development team from experts in education, Islamic studies, and biomedical sciences to formulate an integrated curriculum (Islam and biomedical sciences) in the Biomedical Science Course. In addition, lecturers in charge of the Basic Biomedical Science course must be able to make the material on human physiology a medium to realize the Greatness and Omnipotence of Allah swt. Unfortunately, the indicators of the spiritual awareness variable are only based on students' awe of Allah swt's creation and realizing the theoretical Greatness of Allah. Therefore, further researchers are advised to include increasing the quantity of worship and noble morals as indicators of spiritual awareness. Variables related to appropriate learning methods and the use of media that stimulate students' spiritual awareness also need to be studied further.

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Authors' Contributions

The first author (chief researcher) formulated the title, prepared the research plan, collected, processed, and analyzed the research data, then compiled it in the form of an article. The second author (lecturer expert in physiology) and the third author (lecturer and doctor) validated the data on the integration of Islamic studies in the material on human body physiology. The fourth author (expert in education and Islamic studies) collected data on the integration of Islam in the material on human body physiology. All authors jointly ensured that the writing of the article was in accordance with the journal's writing guidelines and revised based on the reviewer's notes.

Disclosure Statement

The authors declares that there is no conflict of interest in this research.

Data Availability Statement

The research data are available in full from the corresponding author.

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REFERENCES

Abadi, Ellyani, Siti Raudah, Nina Indriyani Nasruddin, Muji Rahayu, Herlinda Djohan, Mirnawati Salampe, Besse Hardianti, Manogari Sianturi, Rantih Fadhlya Adri, and Fika Tri Anggraini. 2023. *Biomedik Dasar*. 1st ed. Jawa Tengah: Eureka Media Aksara.

Ali, Nur. 2020. "Integrating Science and Religion in the Curriculum of Indonesian Islamic Higher Education: A Case Study of UIN Malang." *International Journal of Innovation, Creativity and Change* 13 (9): 948–60. https://www.ijicc.net/images/vol_13/Iss_9/13972_Ali_2020_E_R.pdf.

Arianto, Bambang. 2024. *Triangulasi Metoda Penelitian Kualitatif*. Balik Papan: Borneo Novelty Publishing.

Arlusi, Nelsa, and A Jauhar Fuad. 2020. "Relasi Nilai Mata Kuliah Tasawuf dengan Akhlak Mahasiswa Institut Agama Islam Tribakti (IAIT) Kediri." *Indonesian Journal of Islamic Education Studies (IJIES)* 3 (1): 96–111. https://ejournal.uit-lirboyo.ac.id/index.php/ijies/article/view/1250.

Asmaldi, Asmaldi, Ilyas Husti, Zamsiswaya Zamsiswaya, and Syafrimen Syafril. 2022. "Integration Between Religion and Science in Islamic Studies in Integrated Islamic Junior High School." *Islamic Studies* 2549: 4783. https://doi.org/10.24036/kjie.v6i2.274.

Asrul, Nur Al Marwah. 2021. "Gambaran Tingkat Pengetahuan Anatomi dan Fisiologi Pada Mahasiswa Program Studi Pendidikan Profesi Ners Angkatan XVI UIN Alauddin Makassar." *Jurnal Kesehatan Pertiwi* 3: 179. https://journals.poltekesbph.ac.id/index.php/pertiwi/article/view/48.

Azzuhriyyah, Imroatus Sholikha, and Achmad Khudori Soleh. 2023. "Konsep Manusia sebagai Al-Basyar dalam Al-Qur'an." *Qolamuna : Jurnal Studi Islam* 08 (02). https://doi.org/10.55120/qolamuna.v8i2.740.

Burga, Muhammad Alqadri. 2019. "Hakikat Manusia sebagai Makhluk Pedagogik." *Al-Musannif* 1 (1): 19–32. https://doi.org/10.56324/al-musannif.v1i1.16.

Caldeira, Sílvia, Amélia S Figueiredo, Ana P d. Conceição, Regina C Ermel, João M G Mendes, Eliane C Chaves, and Emília C d. Carvalho. 2016. "Spirituality in the Undergraduate Curricula of

Nursing Schools in Portugal and São Paulo-Brazil." *Religions*. https://doi.org/10.3390/rel7110134.

Chairudin, Mochamad, and Lestari Widodo. 2024. "Transformasi dan Inovasi Perguruan Tinggi Islam Menjadi Universitas Kelas Dunia." *DAARUS TSAQOFAH: Jurnal Pendidikan Pascasarjana Universitas Qomaruddin* 1 (2): 146–55. https://doi.org/10.62740/jppuqg.v1i2.149.

Fajriani, Uswah Nur, Eva Fariha Nurulhusna, Achmad Syahputra, Sonia Ervinna, Rizhal Hendi Ristanto, Ade Suryanda, and Daniar Setyo Rini. 2021. "Penuntun Praktikum Koin Genetika pada Materi Pewarisan Sifat untuk Peserta Didik Kelas XII: Studi Pengembangan dan Validasi." *Proceeding of Biology Education* 4 (1): 170–80. https://doi.org/10.21009/pbe.4-1.16.

Ferngren, Gary B. 2022. "Science and Religion." In *The Routledge History of American Science*, 200–214. Routledge.

Gao, Jing, Kang Xu, Hongnan Liu, Gang Liu, Miaomiao Bai, Can Peng, Tiejun Li, and Yulong Yin. 2018. "Impact of the Gut Microbiota on Intestinal Immunity Mediated by Tryptophan Metabolism." *Frontiers in Cellular and Infection Microbiology*. https://doi.org/10.3389/fcimb.2018.00013.

Giske, Tove, Annemiek Schep-Akkerman, Bodil B Våga, Pamela H Cone, Britt M Kuven, Wilfred McSherry, Benson Owusu, et al. 2022. "Developing and Testing the EPICC Spiritual Care Competency Self-Assessment Tool for Student Nurses and Midwives." *Journal of Clinical Nursing*. https://doi.org/10.1111/jocn.16261.

Gozali, Mukhtar. 2016. "Agama dan Filsafat dalam Pemikiran Ibnu Sina." *Jaqfi: Jurnal Aqidah dan Filsafat Islam* 1 (2): 22–36. https://journal.uinsgd.ac.id/index.php/jaqfi/article/view/1712.

Hall, John E, and Arthur C Guyton Professor. 2021. *Guyton and Hall Physiology Review: Fourth Edition*. 4th ed. Elsevier.

Hanifah, Umi. 2018. "Islamisasi Ilmu Pengetahuan Kontemporer (Konsep Integrasi Keilmuan di Universitas-Universitas Islam Indonesia." *TADRIS: Jurnal Pendidikan Islam* 13 (2): 273–94. https://doi.org/10.19105/tjpi.v13i2.1972.

Harta, Muh. 2025. "Peranan Kurikulum Lokal Berbasis Agama Dalam Pembentukan Kepribadian Peserta Didik Madrasah Aliyah: The Role of Religion-Based Local Curriculum in Forming Students' Personality of Madrasah Aliyah". *Dirasat Islamiah: Jurnal Kajian Keislaman* 5 (2): 93–104. https://doi.org/10.56324/drs.v5i2.125.

Huda, Ahmat Miftakul, and Suyadi. 2020. "Otak dan Akal dalam Kajian Al-Quran dan Neurosains." *Jurnal Pendidikan Islam Indonesia* 5 (1): 67–79. https://doi.org/10.35316/jpii.v5i1.242.

Hukmiah, Hukmiah, and Mohd Sabri AR. 2025. "Al-Qur'an Antara Teks dan Konteks: The Qur'an Between Text and Context". *Dirasat Islamiah: Jurnal Kajian Keislaman* 5 (1):1-14. https://doi.org/10.56324/drs.v5i1.118.

Irawan, Irawan. 2017. "Ekologi Spiritual: Solusi Krisis Lingkungan." *Scientia: Jurnal Hasil Penelitian* 2 (1): 1–21. https://doi.org/10.32923/sci.v3i2.945.

Kusnawan, Aep and Dadan Suherdiana. 2023. "Virtual Media-Based Da'wah Education and Training: Increasing Public Awareness of the Anatomy and a Healthy Lifestyle." *CEMJP* 31 (1): 372–80. https://doi.org/10.57030/23364890.cemj.31.1.40.

Leeuwen, René v., Lucas J Tiesinga, Berry Middel, Doeke Post, and Henk Jochemsen. 2008. "The Effectiveness of an Educational Programme for Nursing Students on Developing Competence in the Provision of Spiritual Care." *Journal of Clinical Nursing*. https://doi.org/10.1111/j.1365-2702.2008.02366.x.

Lubis, Rahmat Rifai. 2021. "Universitas Islam Negeri (Studi Historisitas, Perkembangan dan Model Integrasi Keilmuan)." *Hikmah* 18 (2): 150–67. https://doi.org/10.53802/hikmah.v18i2.128.

Nugraha, Muhamad Tisna. 2020. "Integrasi Ilmu dan Agama: Praktik Islamisasi Ilmu Pengetahuan Umum di Perguruan Tinggi." *Al-Hikmah: Jurnal Agama dan Ilmu Pengetahuan* 17 (1): 29–37. https://doi.org/10.25299/al-hikmah:jaip.2020.vol17(1).3927.

Nurcholis, Moch. 2021. "Integrasi Islam dan Sains: Sebuah Telaah Epistemologi." *Falasifa : Jurnal Studi Keislaman* 12. https://doi.org/10.36835/falasifa.v12i1.461.

Ojo, Oluwafemi A, Jennifer C Amanze, Abosede I Oni, Susan Grant, Matthew Iyobhebhe, Tobiloba C Elebiyo, Damilare Rotimi, et al. 2022. "Antidiabetic Activity of Avocado Seeds (Persea Americana Mill.) in Diabetic Rats via Activation of PI3K/AKT Signaling Pathway." *Scientific Reports*. https://doi.org/10.1038/s41598-022-07015-8.

Program Studi Keperawatan. 2021. *Kurikulum Program Studi Keperawatan dan Ners*. Makassar: UIN Alauddin Makassar.

Rahmi, Anisa Fadhila, and Rizqi Imelda Putri. 2023. "Meningkatkan Pentingnya Kesadaran Beragama pada Generasi Z." *Journal Islamic Education* 1 (4). https://maryamsejahtera.com/index.php/Education/index.

Rizqiani, Ika Sofia, and Fenty Sukmawaty. 2023. "Pengaruh Mata Kuliah Aqidah Akhlak terhadap Nilai Budaya Islami Mahasiswa di Universitas Muhammadiyah Sukabumi." *AL-ULUM: Jurnal Ilmu Sosial dan Humaniora* 9 (1): 81–94. http://dx.doi.org/10.31602/alsh.v9i1.10139.

Romlah, Sitti, and Rusdi. 2023. "Pendidikan Agama Islam sebagai Pilar Pembentukan Moral dan Etika." *Al- Ibrah* 8. https://doi.org/10.61815/alibrah.v8i1.249.

Rykkje, Linda, Margrethe B Søvik, Linda Ross, Wilfred McSherry, Pamela H Cone, and Tove Giske. 2021. "Educational Interventions and Strategies for Spiritual Care in Nursing and Healthcare Students and Staff: A Scoping Review." *Journal of Clinical Nursing*. https://doi.org/10.1111/jocn.16067.

Suciati, Rizkia, Herawati Susilo, Abdul Gofur, Umie Lestari, and Izza Rohman. 2022. "Millennial Students' Perception on the Integration of Islam and Science in Islamic Universities." *Indonesian Journal of Islam and Muslim Societies* 12 (1): 31–57. https://doi.org/10.18326/ijims.v12i1.31-57.

Sugiyono, Sugiyono. 2019. *Metode Penelitian*. Bandung: Alfabeta.

Suredah, and Usri. 2020. "Kesalehan Ritual, Sosial, dan Spiritual." *ISTIQRA* 7 (2). www.imamsuprayogo.com/07/04/09.

Syafi'i, Imam, and Mardiyah Mardiyah. 2023. "Implementasi Kegiatan Keagamaan dalam Meningkatkan Kecerdasan Spiritual Siswa." *Jurnal Keislaman* 6 (1): 256–67. https://doi.org/10.54298/jk.v6i1.3715.

Tamami, Agus, Saiful Falah, and Syamsul Rizal. 2020. "Hubungan Pembelajaran Mata Kuliah Akhlak Islamiyah dengan Moralitas Mahasiswa." *Al-Mubin: Islamic Scientific Journal* 3 (1): 1–14. https://doi.org/10.51192/almubin.v3i1.65.

Wallace, Meredith, Suzanne Campbell, Sebastian P Grossman, Joyce Shea, Jean Lange, and Theresa T Quell. 2008. "Integrating Spirituality into Undergraduate Nursing Curricula." *International Journal of Nursing Education Scholarship*. https://doi.org/10.2202/1548-923x.1443.

Wang, Zhangyi, Yuan Liu, Haomei Zhao, Yue Zhu, Mengru Liu, Yajun Zhang, Xiao Liang, et al. 2022. "Spiritual Care Perceptions and Empathy of Chinese Nursing Students: The Mediating Roles of Spiritual Well-Being." *Palliative & Supportive Care*. https://doi.org/10.1017/s1478951522001134.

Wijana, Nyoman. 2015. "Pengaruh Pengintegrasian Pendidikan Karakter Berorientasi Kearifan Lokal Ke Dalam Materi Ajar Mata Kuliah Ilmu Lingkungan untuk Meningkatkan Soft Skill Mahasiswa Jurusan Pendidikan Biologi FMIPA UNDIKSHA." *JPI (Jurnal Pendidikan Indonesia)* 4 (2). https://doi.org/10.23887/jpi-undiksha.v4i2.6061.

Zain, Saidi, Zuraida Ahmad, Ahmad Faris Ismail, Machouche Salah, Souad A Mohamad, Nurul Fadzlin Hasbullah, and S F Toha. 2016. "Development of Integrated Curriculum and Teaching Materials for Science/Engineering Courses." *Journal of Education and Social Sciences* 4 (June): 18–25. https://www.jesoc.com/wp-content/uploads/2016/06/KC4_12.pdf.

Zhu, Lingxiao, Xinxia Wang, and Yizhen Wang. 2021. "Roles of FAM134B in Diseases from the Perspectives of Organelle Membrane Morphogenesis and Cellular Homeostasis." *Journal of Cellular Physiology*. https://doi.org/10.1002/jcp.30377.