



## NEGOTIATING THE INTEGRATION OF ISLAMIC STUDIES WITHIN HEALTH SCIENCES EDUCATION: INSIGHTS FROM CURRICULUM DESIGN AND CLASSROOM PRACTICE

Agus Warchman<sup>1</sup> (✉), Abudin Nata<sup>2</sup>, Nirwan Syafrin<sup>3</sup>, Budi Handrianto<sup>4</sup>, Irma Nurbaeti<sup>5</sup>

<sup>1,2,3,4</sup>Universitas Ibn Khaldun Bogor, West Java, Indonesia

<sup>5</sup>Universitas Islam Negeri Syarif Hidayatullah Jakarta, Indonesia

---

### Article History:

Received: June 2025

Accepted: September 2025

Published: December 2025

---

### Keywords:

Classroom Practice, Curriculum Design, Health Sciences Education, Islamic Studies Integration

---

### (✉)Correspondence to:

agus\_warcham@yahoo.com

**Abstract:** Efforts to integrate Islamic studies into health sciences education have become a significant agenda within Islamic universities. However, translating this agenda into curriculum structures and classroom practices remains inconsistent, often influenced by situational and disciplinary factors rather than formal design alone. This study aims to explore how the integration of Islamic studies is negotiated within health sciences education by examining the interplay between curricular intentions and teaching practices in everyday learning contexts. A qualitative case study design was employed. Data were gathered through semi-structured interviews with lecturers and academic managers, complemented by an analysis of curriculum documents and direct observation of classroom activities. The collected data were analyzed thematically to understand how integration decisions are made and implemented. The findings reveal that while Islamic perspectives are formally recognized in curriculum frameworks, their practical application in classroom teaching varies significantly. Lecturers interpret the integration of Islamic studies in diverse ways, balancing religious values with professional competencies, disciplinary standards, and practical teaching constraints. Consequently, integration occurs through selective emphasis, adaptation, and compromise rather than uniform application. The study concludes that integrating Islamic studies into health sciences education should be viewed as a negotiated, dynamic process. Effective and sustainable integration requires institutional strategies that embrace pedagogical diversity and provide support to lecturers in aligning religious perspectives with professional learning goals.

---

### Please cite this article in APA style as:

Warchman, A., Nata, A., Syafrin, N., Handrianto, B., & Nurbaeti, I. (2025). Negotiating The Integration of Islamic Studies Within Health Sciences Education: Insights from Curriculum Design and Classroom Practice. *Edureligia: Jurnal Pendidikan Agama Islam*, 9(3), 364-375.

## INTRODUCTION

The integration of Islamic Studies into health sciences education has increasingly emerged as a significant agenda within Islamic higher education institutions (Berger, 2021; Rashid et al., 2024). This development stems from the growing awareness that health education should not merely produce graduates who are scientifically and clinically competent, but also professionals who demonstrate moral integrity, ethical sensitivity, and spiritual awareness (Arcadi & Filippini, 2025; Hughes, 2025). Within this framework, Islamic Studies is expected to provide a value foundation that ensures professional competence in health practice remains closely connected to orientations of public benefit, responsibility, and ethical service.

Nevertheless, when this integrative agenda is situated within the highly disciplinary environment of health sciences education, its realization does not always follow the intentions articulated in curriculum documents (Gülpınar & Tanrıöver, 2025; Redvers et al., 2023). Health sciences education operates within strict academic standards, accreditation demands, and evidence-based learning traditions that prioritize objectivity and clinical effectiveness (Lu, 2025; Pelland et al., (2022)). At the same time, Islamic Studies carries normative and theological dimensions that require value interpretation and moral reflection. These differing characteristics suggest that integration is more accurately understood as a process of connection and mediation that involves interpretation, adaptation, and pedagogical decision-making at multiple levels, rather than the simple addition of religious content to health-related courses.

This complexity helps explain why much of the existing research on Islamic integration in higher education continues to focus on conceptual and policy-oriented discussions (Arar et al., 2022). Integration is often examined through institutional visions, curriculum frameworks, or statements of learning outcomes, and is framed as an effort to bridge religious and modern sciences while strengthening graduates' ethical and character development (Isaac, 2025; Marshall, 2025). Although this perspective is valuable as a normative foundation, it frequently leaves unanswered a more operational question, namely how integration is actually enacted within classrooms through teaching practices, content selection, and assessment strategies.

The literature on integration offers important directions, yet it also reveals areas that remain underexplored. Amin Abdullah, through his concept of integrative-interconnective thinking, positions integration as an epistemological project that requires sustained dialogue across disciplines, as articulated in his work published in 2006. In a more specific context, Mirza, (2024) highlights the persistent dichotomy between Islam and health sciences and proposes dialogical and integrative relationships as a conceptual response. Studies by Ariani & Anwar (2023), as well as Nurainun & Anwar (2023), further enrich the discussion through literature-based analyses of religious integration with other scientific fields. However, these contributions primarily strengthen conceptual frameworks, while empirical examinations that place the classroom at the center of analysis where

integrative goals are interpreted, implemented, and contested in everyday teaching remain relatively limited in the context of health sciences education.

The limited attention to practice becomes more salient when field observations indicate that integration often unfolds in ways that are neither fully systematic nor consistently standardized at the curricular level (Accurso & Gebhard, 2021; Xu & Lu, 2022). Learning documents such as syllabi, teaching modules, and assessment instruments that explicitly reflect an integrative approach are not always uniformly available, resulting in implementation that largely depends on individual lecturers' initiatives and capacities Ramli et al. (2025). Consequently, students' learning experiences may vary across classes and study programs, and integration does not appear as a uniform package applied consistently. This condition reinforces the view that integration is best understood as a negotiated process, as lecturers must balance institutional expectations regarding values, professional competency requirements in health education, and the practical constraints of curricular design and classroom realities.

To clarify this process of negotiation empirically, this study aims to examine how the integration of Islamic Studies is negotiated within health sciences education through the relationship between curriculum design and classroom practice. Specifically, the study explores how integrative goals are articulated in curriculum documents, how lecturers interpret and translate these goals in instructional planning, and how pedagogical decisions in classroom settings shape the forms of integration actually experienced by students. Through this focus, the study seeks to provide a more nuanced understanding of integration as a dynamic, layered, and continuously constructed educational process, thereby moving the discussion beyond idealized formulations toward a clearer explanation of its mechanisms and variations within the context of health sciences education.

## **RESEARCH METHOD**

This study was designed as a qualitative case study to capture the ways in which the integration of Islamic Studies is negotiated within health sciences education. The case study approach was chosen because the research does not aim to measure the effectiveness of a predefined integration model, but rather to understand how integration is shaped through interactions between curriculum design and everyday teaching practices. By situating the inquiry within a specific institutional context, the study allows for a close examination of integration as a situated and evolving educational process.

Participants in this study included lecturers teaching in health sciences programs and academic staff responsible for curriculum development at an Islamic higher education institution. Lecturers were selected because they play a central role in interpreting curriculum directives and translating them into classroom practices. Academic staff were included to provide insight into institutional intentions and curriculum-level decisions related to integration. Participants were recruited purposively based on their involvement in curriculum

implementation and teaching, ensuring that the data reflected informed perspectives on integrative practices.

Data were generated through multiple qualitative instruments. Semi-structured interview guides were developed to explore participants' understandings of integration, their interpretations of curriculum goals, and the considerations that informed their pedagogical choices. Document analysis focused on curriculum frameworks, syllabi, and lesson plans to identify how integration was formally articulated. Classroom observation guidelines were used to document teaching practices, learning activities, and moments where Islamic perspectives intersected with health-related content.

Data collection was carried out over a defined period to allow sustained engagement with the research setting. Interviews were conducted individually and audio-recorded with participants' consent, enabling accurate transcription and analysis. Relevant curriculum documents and teaching materials were collected concurrently. Classroom observations were conducted during regular teaching sessions to capture integrative practices as they naturally occurred. Throughout the process, detailed field notes were maintained to record contextual information and researcher reflections.

The research procedure unfolded in several interconnected stages. The study began with a review of curriculum documents to identify stated objectives and assumptions regarding integration. This was followed by interviews with academic staff and lecturers to explore how these objectives were understood and negotiated. Classroom observations were then conducted to examine how integration was enacted in teaching practices. Data collection and preliminary analysis were carried out iteratively, allowing insights from earlier stages to inform subsequent observations and interviews.

Data analysis followed a thematic approach. Interview transcripts, observation notes, and documents were read repeatedly to develop a holistic understanding of the data. Meaningful segments were coded to capture recurring patterns related to curriculum interpretation, pedagogical negotiation, and forms of integration. These codes were then refined and grouped into broader themes that reflected the relationship between curriculum design and classroom practice. To enhance credibility, data from different sources were compared and interpreted in relation to one another, ensuring that the analysis was grounded in multiple forms of evidence.

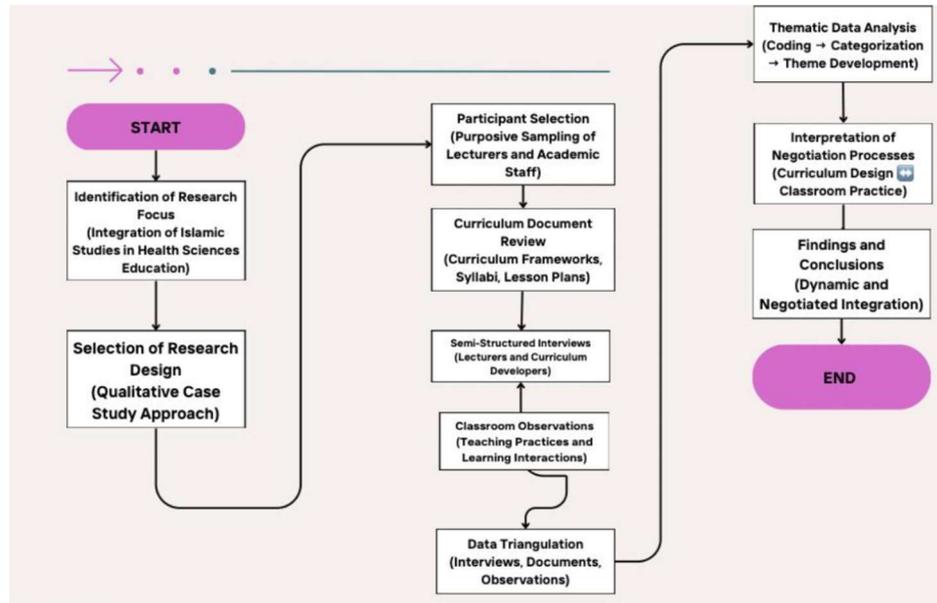


Figure 1. Methodological flow illustrating the phased research process used to examine the negotiated integration of Islamic Studies within health sciences education.

## RESULT AND DISCUSSION

### Result

The findings of this study demonstrate that the integration of Islamic Studies within health sciences education is characterized by diversity in form, depth, and consistency. Rather than operating through a single, standardized mechanism, integration unfolds through interactions between curriculum intentions, lecturers’ interpretive practices, and classroom-level constraints. This section presents the results by tracing how integration is framed at the curriculum level, how it is translated into instructional components, and how it ultimately appears in classroom practice as a negotiated process.

At the curriculum level, analysis of institutional documents indicates that integration is articulated primarily as a normative and aspirational objective. Curriculum frameworks and related policy documents consistently emphasize the importance of Islamic values in shaping ethical, responsible, and spiritually grounded health professionals. However, these documents provide limited operational guidance regarding how integration should be implemented within specific courses, learning activities, or assessment systems. As a result, integration is positioned more as a shared institutional orientation than as a clearly delineated instructional model. This condition creates space for interpretation, but it also contributes to uneven enactment across programs and courses.

Table 1 summarizes the empirical conditions of integration as reflected in the document analysis. The table highlights that while integration initiatives have attracted lecturers’ interest and commitment, they remain largely dependent on individual understanding and initiative. The absence of clearly defined indicators of success, systematic collaboration across disciplines, and explicit mapping of supporting and inhibiting factors suggests that integration has not yet been fully institutionalized at the classroom level. These findings underscore the gap

between curriculum intentions and the mechanisms required to ensure consistent implementation.

**Table 1. Empirical Conditions of Islamic Studies Integration in Health Sciences Education**

<b>Empirical evidence from the document</b>	<b>Description of current practice</b>	<b>Implication for integration</b>
Integration initiatives attract lecturers' interest	Integration is driven mainly by individual lecturers' understanding and commitment	Integration relies on personal agency rather than shared instructional standards
Integration in health-related courses is sporadic	Practices vary across courses and programs	Integration is not consistently institutionalized
Limited collaboration between Islamic studies and health sciences lecturers	Integration occurs within disciplinary boundaries	Cross-disciplinary integration remains limited
Integration concepts and success indicators are unclear	Operational meaning of integration is not specified	Effectiveness cannot be systematically evaluated
Supporting and inhibiting factors are not mapped	Implementation constraints are implicit	Barriers and enablers remain underexplored

Beyond these general conditions, the documents also identify specific curriculum components through which integration is expected to occur. These components include Islamic medical ethics, a holistic understanding of health that incorporates spiritual dimensions, interactive and reflective learning approaches, and assessment strategies aligned with cognitive and professional competencies. However, the translation of these components into classroom practice varies considerably. Ethical and holistic perspectives tend to be more visible in instructional discourse, while assessment-related integration appears more selectively and inconsistently applied.

Table 2 presents the relationship between curriculum-based integration components and their classroom-level expressions. The table shows that while some components, such as ethical reasoning and holistic care, are frequently incorporated into teaching discussions and case-based learning, others, particularly those related to integrated assessment and standardized evaluation, are less consistently realized. This pattern suggests that integration is more readily enacted through pedagogical dialogue than through formal assessment mechanisms.

**Table 2. Curriculum-Based Integration Components and Their Classroom-Level Expression**

<b>Integration component stated in the document</b>	<b>Intended curricular function</b>	<b>Observed classroom-level expression</b>
Islamic medical ethics and bioethics	Ground professional conduct in Islamic values	Ethical case discussions related to patient care
Holistic health perspective (bio-psycho-socio-spiritual)	Incorporate spiritual dimensions into health education	Selective discussion of spiritual care and patient dignity
Interactive and reflective learning approaches	Foster ethical reflection and reasoning	Use of discussion and case-based learning

Integrated aligned with taxonomy	assessment with Bloom's	Make integration and measurable	observable	Uneven application across courses
OSCE scenarios including spiritual care	including	Assess competence in simulations	integrative in clinical	Applied in selected OSCE stations
Cultural and sensitivity	and contextual	Align learning with Muslim contexts	with local	Use of contextualized examples in instruction

At the level of classroom practice, integration takes shape through varied pedagogical strategies that reflect lecturers' interpretations and situational considerations. Interviews and observations indicate that some lecturers adopt explicit forms of integration by directly referencing Islamic teachings when discussing ethical dilemmas or professional responsibilities. Others prefer implicit approaches, emphasizing values such as empathy, accountability, and integrity without explicitly labeling them as religious. Integration also appears selectively, often emerging in sessions where ethical judgment is central, while remaining minimal in technically focused classes.

These variations are summarized in Table 3, which outlines the dominant forms of negotiated integration observed in classroom practice. The table illustrates that integration is not absent, but it is unevenly distributed and contextually shaped. This reinforces the conclusion that integration is best understood as a negotiated process, continuously adjusted in response to curricular expectations, disciplinary norms, time constraints, and student engagement.

**Table 3. Forms of Negotiated Integration Identified in Classroom Practice**

Form of integration	Key characteristics	Typical manifestation
Explicit integration	Direct reference to Islamic teachings	Ethical discussions framed in Islamic terms
Implicit integration	Emphasis on values without religious labeling	Focus on empathy, responsibility, and integrity
Selective integration	Applied only to specific topics	Integration appears mainly in ethics-related sessions
Minimal integration	Limited engagement with Islamic perspectives	Rare or incidental references

Taken together, these results demonstrate that the integration of Islamic Studies within health sciences education is neither absent nor uniformly implemented. Instead, it is constructed through ongoing negotiation between curriculum aspirations, lecturers' interpretive agency, and the practical realities of classroom teaching. This negotiated character explains the diversity of integrative practices observed across courses and provides an empirical basis for understanding why integration remains uneven despite strong institutional commitment.

## Discussion

The findings of this study suggest that the integration of Islamic Studies within health sciences education cannot be adequately explained through a linear or technical understanding of curriculum implementation Rashid et al. (2024). Instead, integration unfolds as a negotiated process in which institutional aspirations, disciplinary traditions, and pedagogical realities intersect (Carter, 2024; Gerhardt & Annon, 2023). This insight reflects the core concern raised in the initial document, namely that despite strong institutional commitment, integration has not yet crystallized into a shared and systematically enacted educational practice.

At the level of curriculum design, integration appears to function primarily as a value-oriented framework rather than as an operational blueprint Elia et al. (2020). Curriculum documents consistently articulate the importance of Islamic values in shaping ethical, responsible, and spiritually grounded health professionals Nadlir et al. (2025). However, these documents tend to emphasize “what should be achieved” rather than “how it should be done.” As a result, integration remains conceptually present but procedurally underdeveloped. This gap between aspiration and operational clarity helps explain why integration is widely acknowledged yet unevenly practiced, a pattern already highlighted in the original document.

The centrality of lecturers in shaping integrative practices further reinforces the negotiated nature of integration Billett (2025). The results indicate that lecturers do not simply implement curriculum directives, but actively interpret and adapt them based on disciplinary norms, teaching experience, and perceptions of relevance within health sciences education. In this sense, lecturers act as translators between institutional ideals and classroom realities. The diversity of integrative approaches observed ranging from explicit engagement with Islamic teachings to more implicit value-based orientations should therefore be understood as a consequence of interpretive work rather than as a failure of compliance. This finding aligns with the document’s observation that integration often depends on personal understanding and initiative, particularly in the absence of clear instructional standards.

Classroom practice provides further evidence that integration is shaped by situational considerations Hora & Lee (2024). Integration tends to surface most clearly in learning contexts that involve ethical judgment, professional responsibility, or patient-centered care Lawson McLean & Lawson McLean (2024). In contrast, in technically oriented sessions where content density and time constraints are more pronounced, integration becomes less visible. This pattern suggests that integration is selectively activated in response to perceived pedagogical opportunities. Such selectivity does not indicate resistance to integration, but rather reflects lecturers’ efforts to balance curricular expectations with the demands of health sciences instruction.

One of the most significant issues emerging from the findings concerns assessment Naruei & Keynia (2022). While the curriculum documents acknowledge the importance of integrated assessment and, in some cases, refer to

mechanisms such as OSCE with spiritual care components, classroom-level assessment practices remain uneven Nieminen et al. (2025). This discrepancy underscores a structural challenge identified in the initial document: integration is easier to articulate in discourse and reflection than to formalize within assessment systems. Without clearer criteria and shared benchmarks, integration risks remaining symbolically valued but pedagogically fragile.

Taken together, these findings highlight that integration within health sciences education is neither absent nor fully institutionalized Iheduru-Anderson & Waite (2022). Rather, it is continuously constructed through negotiation among curriculum intentions, lecturers' interpretive agency, and classroom constraints Javahery (2024). Understanding integration in this way shifts the focus from searching for a single "best model" toward recognizing the conditions under which integrative practices emerge, evolve, and sometimes recede. This perspective provides a more realistic and context-sensitive foundation for strengthening integration, consistent with the concerns and directions articulated in the initial document.

The results of this study point to the need for a more grounded approach to integration within health sciences education at Islamic higher education institutions. While institutional commitment to integration is clearly articulated, the findings suggest that such commitment must be translated into clearer curricular and pedagogical support if it is to move beyond symbolic affirmation. The negotiated character of integration identified in this study implies that lecturers require not only autonomy, but also shared reference points that can guide how Islamic values are meaningfully embedded in disciplinary teaching and assessment. Rather than prescribing a uniform model, institutions may benefit from facilitating collaborative spaces where curriculum designers and lecturers jointly reflect on integrative practices, align expectations, and negotiate feasible strategies. In this sense, integration should be understood as an ongoing institutional learning process rather than a fixed curricular achievement.

This study has several limitations that should be considered when interpreting the findings. The analysis is situated within a single institutional context, which means that the patterns of negotiated integration observed here may reflect specific organizational cultures, disciplinary configurations, and historical trajectories. The qualitative case study design prioritizes interpretive depth, allowing for a detailed examination of curriculum documents and classroom practices, but it does not aim to measure the effectiveness of integration in terms of student outcomes. Moreover, the study focuses primarily on curriculum design and lecturers' practices, leaving students' perspectives and experiences largely unexplored. As a result, the findings illuminate how integration is enacted, but not how it is received or internalized by learners over time.

Future research could build on this study by examining integration from the perspective of students, particularly in relation to how they make sense of ethical, spiritual, and professional dimensions within health sciences learning. Comparative studies involving multiple institutions may also help clarify how

different organizational arrangements and curricular traditions shape the negotiation of integration. From a practical standpoint, further inquiry into assessment practices deserves particular attention, as assessment remains one of the least developed yet most consequential aspects of integration. Exploring how ethical and spiritual competencies can be assessed alongside clinical skills may contribute to more coherent and sustainable integrative practices. Finally, longitudinal studies that trace how integration evolves across curriculum cycles could provide deeper insight into how negotiated practices become stabilized, adapted, or contested over time.

## CONCLUSION

The study concludes that integrating Islamic Studies into health sciences education is less a matter of adding religious topics to the curriculum than an ongoing process of negotiation shaped by institutional aims, lecturers' interpretive work, and the everyday pressures of classroom teaching and assessment. Although the institutional documents signal a clear commitment to integration, the findings indicate that this commitment does not automatically yield uniform practice, because lecturers must continually translate broad curricular intentions into decisions that fit disciplinary standards, professional competencies, and the constraints of time and course objectives. As a result, integration appears in different intensities and forms, sometimes through direct engagement with Islamic perspectives in ethically charged health contexts, and at other times through implicit value-based emphasis that is not overtly framed as religious. Framed in this way, variation should be read as a feature of negotiated enactment rather than simple inconsistency. Overall, the study moves the discussion beyond idealized models by showing how integration is actually produced in practice, and it highlights the need for stronger operational support and clearer assessment alignment at the institutional level while maintaining the flexibility required for context-sensitive teaching in health sciences settings.

## ACKNOWLEDGMENT

I would like to express my sincere gratitude to all the authors who were willing to collaborate and contribute their thoughts to help complete this research, ensuring its perfection. I would also like to thank the journal *Edureligia* for accepting this scientific work.

## REFERENCES

- Accurso, K., & Gebhard, M. (2021). SFL praxis in U.S. teacher education: A critical literature review. *Language and Education*, 35(5), 402–428. <https://doi.org/10.1080/09500782.2020.1781880>
- Arar, K., Sawalhi, R., & Yilmaz, M. (2022). The Research on Islamic-Based Educational Leadership since 1990: An International Review of Empirical Evidence and a Future Research Agenda. *Religions*, 13(1), 42. <https://doi.org/10.3390/rel13010042>

- Arcadi, P., & Filippini, A. (2025). Beyond technique: The ethics of simulation in care education. *Nurse Education in Practice*, 88, 104578. <https://doi.org/10.1016/j.nepr.2025.104578>
- Ariani, R., & Anwar, A. (2023). Integrasi Ilmu Pengetahuan Dalam Islam: Kasus Psikologi Islam. *Jurnal Sains Dan Teknologi*, 5(2), 731–738.
- Berger, M. S. (2021). Shifting Paradigms in Islamic Higher Education in Europe: The Case Study of Leiden University. *Religions*, 12(1), 63. <https://doi.org/10.3390/rel12010063>
- Billett, S. (2025). Constituting integration in work-integrated education and learning. *Studies in Continuing Education*, 47(3), 513–530. <https://doi.org/10.1080/0158037X.2024.2363262>
- Carter, P. L. (2024). Unrealized Integration in Education, Sociology, and Society. *American Sociological Review*, 89(1), 6–30. <https://doi.org/10.1177/00031224231217711>
- Elia, G., Margherita, A., & Secundo, G. (2020). Project management canvas: A systems thinking framework to address project complexity. *International Journal of Managing Projects in Business*, 14(4), 809–835. <https://doi.org/10.1108/IJMPB-04-2020-0128>
- Gerhardt, T., & Annon, P. (2023). Towards conceptual clarity: Pedagogical liminality. *International Journal of Work-Integrated Learning*, 24(2), 209–225.
- Gülpınar, M. A., & Tanrıöver, Ö. (2025). Integration of behavioral, social, and humanities sciences into healthcare and education and their alignment with medical education programs. *Medical Teacher*, 47(5), 842–852. <https://doi.org/10.1080/0142159X.2024.2377384>
- Hora, M. T., & Lee, C. (2024). Does Industry Experience Influence Transferable Skills Instruction? Implications for Faculty Development and Culture Theory. *Innovative Higher Education*, 49(4), 799–820. <https://doi.org/10.1007/s10755-023-09692-3>
- Hughes, A. (2025). Equitable outcomes and indigenous learners of mathematics: Deconstructing Australian education policy. *International Journal of Inclusive Education*, 29(3), 274–290. Scopus. <https://doi.org/10.1080/13603116.2022.2127490>
- Iheduru-Anderson, K., & Waite, R. (2022). Illuminating antiracist pedagogy in nursing education. *Nursing Inquiry*, 29(4), e12494. <https://doi.org/10.1111/nin.12494>
- Isaac, A. M. (2025). Changing the Relation of Science and Religion through Integrated Islamic Curricula: A Theoretical Position on Faith-Based Science Education. *Austral Comunicacion*, 14(2), 1. <https://doi.org/10.26422/aucom.2025.1402.isa>
- Javahery, P. (2024). Prescribed pedagogy: An autoethnographic analysis of coursebook constraints, teacher identity, and power dynamics in Iran through Foucault's lens. *Australian Journal of Applied Linguistics*, 7(3), 2104. <https://doi.org/10.29140/ajal.v7n3.2104>
- Lawson McLean, A., & Lawson McLean, A. C. (2024). Integrating Shared Decision-Making into Undergraduate Oncology Education: A Pedagogical

- Framework. *Journal of Cancer Education*, 39(4), 374–382. <https://doi.org/10.1007/s13187-024-02419-8>
- Lu, W. (2025). Integrating Medical and Traditional Acupuncture Education in the United States: Enhancing Patient Care Through Combined Expertise. *Medical Acupuncture*, 37(2), 112–123. <https://doi.org/10.1089/acu.2024.0140>
- Marshall, H. (2025). Integrating sustainability into religious education. *Journal of Beliefs & Values*, 0(0), 1–20. <https://doi.org/10.1080/13617672.2025.2504983>
- Mirza, U. J. (2024). Islamic Scientific Critical Consciousness as a theoretical framework for Muslim science educators. *London Review of Education*, 22(1), 1–19.
- Nadlir, Mukhlisah, Baihaqi, M., & Huda, H. (2025). Humanizing teacher education for madrasah contexts: A curriculum model integrating ethical reflection on socio-scientific issues. *Cogent Education*, 12(1), 2583513. <https://doi.org/10.1080/2331186X.2025.2583513>
- Naruei, I., & Keynia, F. (2022). Wild horse optimizer: A new meta-heuristic algorithm for solving engineering optimization problems. *Engineering with Computers*, 38(4), 3025–3056. <https://doi.org/10.1007/s00366-021-01438-z>
- Nieminen, J. H., Dollinger, M., & Zou, T. X. P. (2025). Student partnership in assessment: What works, for whom, why, and under what circumstances? *Review of Education*, 13(1), e70059. <https://doi.org/10.1002/rev3.70059>
- Nurainun, N., & Anwar, A. (2023). Integrasi Pendidikan Agama Islam Dengan Sains Dan Teknologi. *Jurnal Sains Dan Teknologi*, 5(2), 696–707.
- Pelland, L., Kolomitro, K., Hopkins-Rosseel, D., & Durando, P. (2022). The Scientific Rigor of the Objective Structured Examination for Competency Assessment in Health Sciences Education: A Systematic Review. *Journal of Physical Therapy Education*, 36(4), 322. <https://doi.org/10.1097/JTE.0000000000000258>
- Ramli, R., Razali, R., Gadeng, A. N., Diana, N., & Hariadi, J. (2025). Integrating Local Knowledge into Higher Education: A Qualitative Study of Curriculum Innovation in Aceh, Indonesia. *Education Sciences*, 15(9), 1214. <https://doi.org/10.3390/educsci15091214>
- Rashid, S. A., Karobari, M. I., & Rahman, S. Z. (2024). “Examining the Incorporation of Islamic Values in Concept Mapping and Curriculum Design for Medical Education: A Holistic Perspective.” *Bangladesh Journal of Medical Science*, 23(4), 984–992. <https://doi.org/10.3329/bjms.v23i4.76507>
- Redvers, N., Guzmán, C. A. F., & Parkes, M. W. (2023). Towards an educational praxis for planetary health: A call for transformative, inclusive, and integrative approaches for learning and relearning in the Anthropocene. *The Lancet Planetary Health*, 7(1), e77–e85. [https://doi.org/10.1016/S2542-5196\(22\)00332-1](https://doi.org/10.1016/S2542-5196(22)00332-1)
- Xu, S., & Lu, C. (2022). Hybridization of curriculum integration and high-stakes testing: Chinese teachers’ experiences and struggles in handling competing

institutional logics. *Teaching and Teacher Education*, 119, 103845.  
<https://doi.org/10.1016/j.tate.2022.103845>