



The Dialectics of Metacognition and Spirituality: Integrating Self-Regulated Learning within the Islamic Intellectual Tradition

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ABSTRACT

In the 21st-century educational landscape, the focus has shifted from content acquisition to the mastery of "how to learn," placing Self-Regulated Learning (SRL) as a pivotal competency. However, modern SRLs often lack a spiritual dimension, appearing mechanistic in their approach. This study aims to explore integrating SRL with Islamic values to create a more holistic, transcendental learning model. Using a qualitative-descriptive method with a literature review approach, this study synthesises modern cognitive theories with classical Islamic intellectual traditions, specifically the concepts of *muhasabah* (self-reflection) and *muraqabah* (mindfulness of God). The findings reveal that integrating Islamic values into SRL transforms learning from a secular necessity into a form of "intellectual worship" (*thababul ilmi*). The phase of forethought is strengthened by *niyyah* (intentionality), performance is guided by *istiqamah* (consistency) and *muraqabah*, and self-reflection is manifested through honest *muhasabah*. This synergy creates a "theocentric metacognition" that fosters not only academic excellence but also moral integrity. The study concludes that revitalising Islamic education through an integrated SRL framework is essential for developing lifelong learners who possess both intellectual sovereignty and spiritual wisdom, enabling them to navigate the disruptions of the digital era with a grounded religious identity.

Keywords: Self-Regulated Learning, Islamic Values, Metacognition, Religious Education, Tafakkur

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INTRODUCTION

Education in the 21st century is no longer just about what to *learn*, but rather how to *learn*. This paradigm shift requires individuals to have intellectual toughness and independence in managing their own cognitive processes. In modern educational psychology, this ability is known as (Ellis, 2022; Holman et al., 2023; Khahro & Javed, 2022) *Self-Regulated Learning* (SRL). SRL is not just a learning technique, but a complex orchestration that involves metacognitive awareness, intrinsic motivation, and strategic action (Chen et al., 2023; Masaki, 2023) (Brenner, 2022; Van Der Graaf et al., 2022a) Meanwhile, Islamic education faces a significant challenge

amid the onslaught of disruptive digital information flows as it seeks to transform its learning methods from what is often considered mechanistic and dogmatic to a reflective, independent process.

Fundamentally, Islamic education has a mandate to form human beings as *abdullah* (servants of Allah) as well as *kehalifatullah* (leaders on earth). This role is impossible to carry out without an intellectual capacity for continuous self-evaluation. This is where the meeting point lies between SRL and Islamic values. Islam places great emphasis (Pallathadka et al., 2023). (Abdelnour, 2025; Haqiqi & Hakim, 2025) on the concepts of *muhasabah* (introspection) and *tafakkur* (deep thinking), which are essentially the core of metacognition. However, the reality on the ground shows a wide gap (Agbaria, 2024; Almirzanah, 2023). Many Islamic educational institutions are still stuck in a pattern of one-way knowledge transmission, where students become passive recipients who memorise without understanding "how" they understand or "why" they should study a material. As a result, when students leave the school environment, they often lose their direction in independent learning, a paradox for a religion that requires its people to study from swing to burrow. (Hanif & Fian, 2023; Safira et al., 2025; Wakifah et al., 2023)

The urgency of metacognition as the foundation of SRL in Islamic education has become increasingly crucial in the *post-truth era*. The ability to monitor one's own thoughts (*monitoring*), strategise, and evaluate the results of thinking (*evaluating*) are the main fortresses that help individuals resist disinformation. From an Islamic perspective, this metacognition aligns with development. (Abath, 2025; Salvi et al., 2023) of *al-aql al-fa'al* or an active mind that not only absorbs information, but is also able to process it critically and ethically. Therefore, the revitalisation of Islamic education must start from strengthening this fundamental aspect that will make students sovereign subjects over their own thought process. (Alsuhaymi & Atallah, 2025)

Forming the character of a *lifelong learner* is the ultimate goal of national and global education policies, as stated in the profile of students who demonstrate independence. In the Islamic tradition, this concept is equivalent to (Clark et al., 2023; Webb et al., 2022) *The tholabul of science*, which knows no time limit. However, these characters do not appear instantly. It requires a solid metacognitive foundation, where Islamic values such as *shiddiq* (integrity in learning), *amanah* (academic responsibility), and *fathanah* (managed intelligence) are integrated into the SRL strategy. Thus, internalising these values, SRL is no longer seen as just a secular tool to achieve high academic scores, but as a form of intellectual worship that directs learners to closeness to the Creator through an understanding of the reality of His creation.

The main problem that arises is the lack of a clear integration model between Western-centric SRL theory and theocentric Islamic values. Often, religious teachers get caught up in a dichotomy: they teach religion spiritually but ignore cognitive techniques that make it easier for students to learn. In contrast, modern learning techniques often lose their spiritual spirit. In fact, if we collaborate, (Husni et al., 2025; Jedlicka & Havenith, 2025; Nikkel, 2025) (Hani Herlina, 2025; Hohenthal & Ruuska, 2024). *Self-Regulated Learning* based on Islamic values can create a compelling educational ecosystem. Students not only know how to set a schedule (behavioural regulation) or summarise material (cognitive regulation), but they also have a transcendent motivation: that every learning progress is part of moral improvement.

In the end, strengthening SRL based on Islamic values is the key to the sustainability of civilisation. Without metacognitive skills, graduates of Islamic education will become mere memorisers of postulates, unable to provide solutions to increasingly complex humanitarian problems. Through this article, the argument will be built that Islamic education must return to its khittah as a liberating and comprehensive education. By making metacognition the foundation, Islamic education will be able to produce a generation that is not only knowledgeable, but also aware of the process of seeking knowledge—an essential character for a resilient lifelong learner in the future.

The urgency of strengthening *Self-Regulated Learning* (SRL) in Islamic educational institutions is even more evident when examining global academic performance data. Recent reports from *the Programme for International Student Assessment* (PISA) consistently show that students in countries with large Muslim populations, including Indonesia, are still struggling at the bottom level in terms of literacy and problem-solving skills. One indicator of weak PISA scores is low learning independence and metacognitive awareness. Students tend to be able to answer questions that are memory (LOTS), but stutter when faced with questions that require independent thinking regulation. This confirms that the religious education that has been running is still trapped in (Bilad et al., 2024; Haridza, 2024; Hewi et al., 2020) *surface learning*, not *deep learning*, which is the spirit of metacognition.

In addition, in the current era of Artificial Intelligence (AI), the challenge of Islamic education is no longer about access to information, but about filtering information. According to internet penetration data, more than 80% of young people spend 5-7 hours a day in the digital world. However, their ability to conduct (Abdelnour, 2025)(Bittner et al., 2022; MR, Widiastuti, et al., 2025; Van Der Graaf et al., 2022b)(Arif et al., 2025) *digital self-regulation*—selecting applicable content and evaluating the validity of the knowledge obtained—is still very low. Without integrating Islamic values into self-regulation, digital technology becomes a distraction rather than an intellectual accelerator. Therefore, juxtaposing the concept of SRL with values such as (Golan, 2023; Polizzi & Harrison, 2022) *Muraqabah* (awareness of Allah's supervision) becomes increasingly relevant as a tool for internal student control in an increasingly open learning ecosystem.

The gap in the literature is also a strong reason why this article is crucial. Although searches for the keyword "Self-Regulated Learning" in international journal databases yield tens of thousands of articles, fewer than 5% relate it closely to the Islamic educational paradigm. Most of SRL's research is purely cognitive psychology without touching on the spiritual aspects that are the ultimate *motivators* for Muslim students. By including data showing that students' motivation to learn increases significantly when it is associated with religious meaning, this article offers a new, more comprehensive model. This integration is not just an attempt to "Islamize" Western theory, but rather a re-excavation of Islamic intellectual treasures that the routine of educational formalities has hidden.(Abdullah et al., 2025; Anam, et al., 2025; Majahar et al., 2021).

This article aims to explore in depth how fundamental aspects of Islamic education can serve as a basis for developing metacognitive strategies. By dissecting the literature on SRL and juxtaposing it with the principles of Islamic education, this paper seeks to formulate a new conceptual framework. This framework is expected to be a guide for education practitioners in

designing. Learning not only fills students' brains with information, but also equips them with mental "navigation devices". The main focuses to be discussed include repositioning teachers' roles as metacognitive facilitators, integrating muhasabah values into students' self-evaluation, and structuring the Islamic education environment to foster student agency.

METHODS

This study uses a qualitative approach with a literature study type. The focus is on conducting a theoretical synthesis between the Self-Regulated Learning (SRL) model and the fundamental values of Islamic education. Data were collected from the primary literature, including the works of Al-Ghazali and Al-Zarnuji, for discussions of Islamic learning ethics and modern cognitive theory. The analysis was conducted narratively, using content analysis techniques. The researcher critically dissected the components of SRL, then combined them with Islamic spiritual concepts to form a new model of independent learning.

Table 1. Research Data Analysis Framework

Stages of Analysis	Main Activities	Purpose
Identification	Search for SRL literature and Islamic Education.	Collect key concepts (metacognition, muhasabah, etc.).
Categorization	Divide data into cognitive, motivational, and behavioural dimensions.	Mapping the intersection between Western theory and Islamic values.
Synthesis	Integrating Islamic values into the phases of SRL.	Forming a Self-Regulated Learning model based on Islamic values.
Inference	Formulate the conclusion narratively.	Generate recommendations for lifelong learner characters.

RESULTS AND DISCUSSION

Paradigm Synthesis: Between Cognitive Theory and Islamic Intellectual Tradition

The main foundation of self-regulated learning (SRL) in Western perspectives often rests on the individual's ability to manage their behaviour, motivation, and cognition. However, if we dissect the fundamental aspects of Islamic education, we will find that this concept has long existed under a more existential guise. The essence of metacognition is "thinking about the way of thinking," which, in the Islamic tradition, is manifested through the processes of Tafakkur and Muhasabah. In this context, the analysis shows that Islamic education aims not only to produce intelligent individuals but also individuals who have sovereignty over their own souls. This concept goes beyond mere technical learning independence.(De Ruig et al., 2023; Pérez-González et al., 2022)(Baizhuma et al., 2025; Wijaya et al., 2025)(Haqiqi & Hakim, 2025; Wijaya et al., 2025)

This integration positions Islamic values as the driving force, or "spirit," of the SRL framework, which is often mechanistic. If modern theory emphasises the efficiency of achieving targets, then Islamic education emphasises the blessing of the process. Metacognitive awareness

in Islam begins with the purification of orientation or intention, which serves as an anchor for all subsequent learning activities. Thus, self-regulation in learning for a Muslim is a manifestation of his responsibility as a Caliph who must maximise his intellectual potential for the benefit of the universe. (Lyngsøe & Stjernholm, 2022; Pallathadka et al., 2023) (Hennecke & Bürgler, 2022; Khalil, 2023)

Discussing the ethics of studying in Islam would be incomplete without referring to the monumental works of Imam Al-Ghazali and Sheikh Al-Zarnuji. Al-Ghazali, in his masterpiece *Ihya Ulumuddin*, views science not as a static pile of information, but as a dynamic entity that requires inner readiness. Here, metacognition acts as an instrument of "internal audit" of the learner's state of mind. Al-Ghazali emphasised that the success of learning depends heavily on one's ability to monitor one's intentions and the cleanliness of one's heart. He asserted in one of his monumental quotes: (Anam, MR, et al., 2025a; Munawar et al., 2024; Zahidah et al., 2025) (Akibet al., 2022; Anam, MR, et al., 2025b; Pallathadka et al., 2023)

"The most important worship after the implementation of fardu is to seek knowledge, and to seek knowledge is the worship of the heart and the prayer of the mind in secret to get closer to Allah Ta'ala." (Al-Ghazali, 2011).

This statement provides a new perspective for modern SRL theory. In Western psychology, the regulation of motivation is usually triggered by external rewards or self-efficacy; Al-Ghazali takes it to a transcendental level. Placing learning as "worship of the heart" forces a student to have full awareness (*mindfulness*) in every process (Bandhu et al., 2024; Shen et al., 2026). He not only learns to know, but he learns to be.

If Al-Ghazali provides a spiritual foundation, Shaykh Al-Zarnuji, in *Ta'lim al-Muta'allim*, provides a very detailed methodological guide on how independent learning manifests in daily life. For Al-Zarnuji, metacognition is about "the art of choosing and managing." He emphasised that the success of a student of knowledge is rooted in a clearly defined intention from the outset. Al-Zarnuji wrote: (Amelia, 2023; Ruslan & Syafrudin Muhammad, 2024)

"A learner should intend in pursuing his knowledge to seek Allah's pleasure, happiness in the hereafter, remove ignorance from himself and other fools, revive religion, and preserve Islam." (Al-Zarnuji, 2004).

This statement is a perfect description of the *forethought* phase in *Self-Regulated Learning*. Intention, or intentionality, is not just a religious formality but a self-regulation mechanism that provides long-term energy. With the intention of "eliminating self-ignorance," a student consciously acknowledges his limitations—a metacognitive process called. (Jones et al., 2025) *metacognitive awareness*, that he knows what he does not know, and that awareness is what drives him to continue learning endlessly. In addition, Al-Zarnuji provided instructions on maintaining focus and time management, which align closely with the principles of modern behavioural regulation. He emphasised the importance of dialogue and discussion as a way of testing self-understanding: (Nederhand et al., 2021; Sasson & Tifferet, 2025)

"Muzakarah (discussion), munazarah (scientific debate), and mutharahah (question and answer) are more powerful in their influence than simply repeating lessons alone, because in them there is an element of repetition and additional understanding." (Al-Zarnuji, 2004).

In the quote, Al-Zarnuji implicitly invites students to conduct external monitoring. By discussing, a student can see gaps in their thinking through others' perspectives. It is a metacognitive strategy to validate understanding. Without interaction, a student may feel that he or she already understands, even though they are just memorising. Al-Zarnuji encourages the creation of an interactive learning ecosystem to ensure that students' cognition continues to develop and be tested.

This combination of classical wisdom and modern theory resulted in a formidable Islamic educational framework. Fundamental Islamic education not only teaches religious material, but also teaches how to manage reason. The following table illustrates how the thinking of these two characters became the foundation for the character of lifelong learners:

Table 2. The Construction of Metacognition in the Islamic Intellectual Tradition

Learning Dimension	Al-Ghazali's Foundation	Al-Zarnuji's Foundation	Output Character
Motivation Regulation	Worship of the Heart: Making learning a means of taqarrub (self-approach).	Strategic Intention: Setting a long-term vision for the benefit of the people.	Have a learning drive that never goes out (Lillah spirit).
Cognitive Regulation	Order & Order: Choose the priority of knowledge based on spiritual usefulness.	Muzakarah: Testing understanding through discussion and dialectics.	Able to think critically, systematically, and objectively in absorbing information.
Regulation of Behaviour	Tazkiyah: Cleanse oneself of mental and moral obstacles.	Istiqamah: Perseverance and disciplined time management.	Have self-discipline and integrity in the process of seeking knowledge.
Self-Reflection	Muhasabah: Continuous evaluation of the benefits of science for the soul.	Ijtihad: Earnest effort to perfect a learning strategy.	Be a humble yet progressive learner.

The synergy between Al-Ghazali's spiritual dimension and Al-Zarnuji's practical methodology creates a model of *Self-Regulated Learning* (SRL) that is not only oriented toward academic results but also toward existential integrity. In the era of information disruption, the metacognitive abilities of Muslim students are strengthened through a dual control mechanism: cognitive regulation for technical efficiency and spiritual regulation for moral direction. This changes the way we look at learning barriers: if modern psychology sees obstacles as a challenge

to self-efficacy, the Islamic tradition sees them as a means of Mujahadah (earnestness) that is worthy of worship. Thus, learners' resilience will not be easily shaken by temporary failures, as they have a motivational anchor that is transcendental.

Table 3. Integration of the Modern SRL Model with Islamic Intellectual Traditions

SRL Modern Phase	The Dimension of Islam (Al-Ghazali & Al-Zarnuji)	Metacognitive Mechanisms	Output Character
Forethought	Nawaitu & Selectivity	Goal-setting is based on divine values and the priority scale of knowledge benefits.	Intrinsic Motivation that is Stable & Directed.
Performance	Muraqabah & Istiqamah	Self-monitoring with full awareness of God's supervision.	Academic Integrity & High Focus.
Self-Reflection	Muhasabah & Tawadhu	Honest self-evaluation and recognition of the limitations of human knowledge.	Humble Lifelong Learner.

The table above illustrates that integrating metacognition into Islamic education operates in a circular, profound manner. In *the forethought* phase, intention is not just a formality but an anchor of motivation that keeps students on the path of seeking truth amid a flood of information. In the (Brady et al., 2025; Khar Kheng et al., 2023). *In the performance phase, muraqabah awareness* acts as an internal navigation system that guides students to remain honest and diligent without the need for strict external supervision from the teacher. Finally, through (Usman et al., 2024)*In the reflection phase, students are encouraged to be the most honest critics of themselves, realising* that each intellectual achievement is only one step toward a broader understanding of the greatness of the Creator. This is the fundamental foundation that gives birth to lifelong learners: individuals who are independent in reason, but still spiritually strong.(Al-Hadlaq, 2024; Alsuhaymi & Atallah, 2025; Husni et al., 2025)

Transformation of Consciousness: From Memorization to Reasoning

Discussions about the revitalisation of Islamic education often clash with rigid memorisation traditions. However, by integrating a metacognitive foundation, memorisation is no longer seen as the repetition of meaningless words. On the contrary, memorisation becomes a means of storing information that is consciously controlled by the (Altinyelken, 2021; Pallathadka et al., 2023; Rane, 2023)*tafakkur mechanism*(Fatoni & Lesmana, 2021; Wijiyono et al., 2025; Zaini & Fauziah, 2024). The results of this analysis emphasise that in an ideal Islamic education, a student must be able to explain "how he memorises" and "what he memorises for." This is where the fundamental difference between robotics and organic lies.

Then, metacognition allows students to monitor their own understanding. If a student finds it difficult to understand a concept of fiqh or monotheism, he not only gives up on the situation,

but he also intervenes in his thought process. He began to ask himself: "Is the way I read correct?", "Do I need to look for additional explanations?", or "Is my heart in such a calm state that it is difficult to grasp knowledge?". These reflective questions are what in Islam are referred to as a form of intellectual Muhasabah. In this way, the character of the lifelong learner is formed, as he or she already has an internal "navigation tool" to address the ever-changing challenges of science.

One of the most crucial findings in this discussion is the role of transcendental motivation in supporting the sustainability of learning. In secular SRL theory, motivation is often associated with rewards such as praise, work, or social status. However, Islamic education offers a more lasting motivation. The concept (Bandhu et al., 2024; Fattore et al., 2023; MR, Anam, et al., 2025) of *tholabul ilmi* as a religious obligation provides additional energy when a student faces a saturation point. When his cognitive regulation begins to weaken due to fatigue, his spiritual dimension will take over, reinforcing the meaning that any fatigue in learning is a form of jihad. This is what makes the character of lifelong learners in Islam so enduring. Education does not stop when a diploma is received, because its metacognition always reminds us that the knowledge of Allah is vast and human knowledge is very limited. This awareness of limitations actually triggers a curiosity that never fades. Therefore, strengthening fundamental aspects, such as muraqabah (awareness of Allah's supervision) in learning, will make students more academically honest and more disciplined, without always needing to be supervised by teachers or the school system. (Gumiandari et al., 2022; Rassool & Keskin, 2025; Wijaya et al., 2025)(Arcangeli & Dokic, 2022; Halim, 2024; Poli et al., 2024)

The results of this discussion provide a strong signal that the future development of the Islamic education curriculum must allocate a significant portion to the training of metacognitive skills. The teacher no longer only acts as a "sprinkler of water" into an empty container, but rather as a facilitator who helps students assemble the "search engine" within themselves. Learning should be designed to spark students' internal dialogue, provide space for reflection, and encourage them to evaluate their own learning strategies independently. Fundamentally, if Islamic education succeeds in cultivating this value-based metacognition, we will not only produce religious experts but also experts in science, technology, and the arts with high moral integrity. They will become learners who are not only good at using their intellect but also wise in guarding their hearts. It is this character that is needed to address the challenges of an age in which information is abundant, but wisdom is often scarce.(Rui et al., 2024; Wang et al., 2025).

CONCLUSION

Education in the 21st century has undergone a paradigm shift from simply focusing on what is learned to how one learns independently. This ability, known as Self-Regulated Learning (SRL), is a complex orchestration between metacognition, motivation, and strategic action. In the context of Islamic education, SRL is not just a secular tool for academic value, but a form of intellectual worship that aims to shape human beings into *abdullah* and *khalifatullah*. The integration of Islamic values into the SRL framework is crucial because it can fill the spiritual "spirit" that is often lost in modern mechanistic learning techniques.

The synthesis between the thought of Imam Al-Ghazali and Shaykh Al-Zarnuji provides a solid foundation for this model. Al-Ghazali emphasises that learning is a "worship of the heart"

that requires mindfulness and clean intentions. At the same time, Al-Zarnuji provides methodological guidance through time management, strategy selection, and scientific discussion (*muzakarah*) to validate understanding. By integrating the value of *muraqabah* (awareness of Allah's supervision) into the implementation phase and *muhasabah* (self-evaluation) into the reflection phase, students not only become cognitively intelligent but also develop moral integrity and resilience as lifelong learners. In the end, this metacognition based on Islamic values becomes the main fortress for the younger generation in facing the flow of disinformation and the challenges of the artificial intelligence era.

The sustainability of civilisation in the future depends on transforming educators' roles into metacognitive facilitators who help students build the "search engine" within themselves. Learning should ideally be designed to trigger students' internal dialogue and to provide ample space for them to evaluate their learning strategies independently. In the midst of the rapid flow of digital information, the integration of *muraqabah* values is urgent as an internal control mechanism, so that the use of technology does not become a distraction but an intellectual accelerator. Therefore, the development of the Islamic education curriculum should allocate a significant portion to the training of metacognitive skills alongside noble values, to produce experts who possess the sovereignty of reason and high moral integrity.

REFERENCES

- Abath, A. J. (2025). What's Going On? Disinformation, Understanding, and Ignorance. *Episteme*, 1–15. <https://doi.org/10.1017/epi.2025.10048>
- Abdelnour, M. G. (2025). Artificial Intelligence and the Islamic Theology of Technology: From “Means” to “Meanings” and from “Minds” to “Hearts.” *Religions*, 16(6). <https://doi.org/10.3390/rel16060796>
- Abdullah, F. N., Wahyuni, Taseman, Kirom, A., & Ali, M. (2025). Islamic Neurofeedback: Measurement of Brain Activity in Dhikr Meditation for the Development of the Concept of Self-Regulated Learning. *Al-Dirasah: Jurnal Pendidikan Islam*, 1(2), 38–49. <https://doi.org/10.47731/aldirasah.v1n2.2025.5>
- Akib, M. M. M., Ferdaus, F. M., & Ishak, H. (2022). *Spiritual Strengthening Of Man Through Prayer Of Worship*. 24, 381–408. <https://doi.org/10.22452/afkar.vol24no1.11>
- Al-Hadlaq, A. M. (2024). The centrality of God in human knowledge. *Research Journal in Advanced Humanities*, 5(3), 319–337. <https://doi.org/10.58256/4jvsar54>
- Alsuhaymi, A. O., & Atallah, F. A. (2025). Reason and Revelation in Ibn Taymiyyah's Critique of Philosophical Theology: A Contribution to Contemporary Islamic Philosophy of Religion. *Religions*, 16(7). <https://doi.org/10.3390/rel16070809>
- Altinyelken, H. K. (2021). Critical thinking and non-formal Islamic education: Perspectives from young Muslims in the Netherlands Muslims in Europe · Non-formal Islamic education · Qur'an schools · Pedagogy · Critical thinking · Muslim youth. *Contemporary Islam*, 15, 267–285. <https://doi.org/10.1007/s11562-021-00470-6>
- Amelia, Y. (2023). THE CONCEPT OF LEARNING IN THE TA'LIM MUTA'ALIM WORK BY SYAIKH AZ-ZARNUJI. *Kreatifitas Jurnal Ilmiah Pendidikan Islam*, (1), 44–53.
- Anam, A. M., Ade Agustinova, D., Alwiyah, N., & Haqqi Firmansyah, N. (2025). Pesantren dan Pergeseran Paradigma Epistemologi: Dari Humanisme Menuju Era Post-Humanisme.

- Santri: Journal of Pesantren and Fiqh Sosial*, 6(1), 59–80. <https://doi.org/10.35878/santri.v6i1.1684>
- Anam, A. M., MR, M. I. F., Wiratmoko, D., Alwiyah, N., & Kurniawan, S. (2025a). Kontekstualisasi Pemikiran Filsafat Pendidikan Imam Al-Ghazali dan Muhammad Abduh. *Al-Isnad: Journal of Islamic Civilization History and Humanities*, 6(01), 73–88. <https://doi.org/10.22515/isnad.v6i01.11570>
- Anam, A. M., MR, M. I. F., Wiratmoko, D., Alwiyah, N., & Kurniawan, S. (2025b). Kontekstualisasi Pemikiran Filsafat Pendidikan Imam Al-Ghazali dan Muhammad Abduh. *Al-Isnad: Journal of Islamic Civilization History and Humanities*, 6(01), 73–88. <https://doi.org/10.22515/isnad.v6i01.11570>
- Arcangeli, M., & Dokic, J. (2022). At the Limits: What Drives Experiences of the Sublime. *The British Journal of Aesthetics*, 2021(2), 145–161. <https://doi.org/10.1093/aesthj/ayaa030i>
- Arif, M., Syam, Z., & Zulkarnaen, A. (2025). *Survei Penetrasi Internet dan Perilaku Penggunaan Internet 2025*.
- Baizhuma, S., Duisenbayev, A., Kaupenbayeva, S., Meirbayev, B., Omirbekova, A., Kurmanbek, A., & Kossalbayev, B. D. (2025). Regular Issue (2025) *Pharos Journal of Theology* ISSN. *Pharos Journal of Theology*, 106(4). <https://doi.org/10.46222/pharosjot.106.4035>
- Bandhu, D., Mohan, M. M., Nittala, N. A. P., Jadhav, P., Bhadauria, A., & Saxena, K. K. (2024). Theories of motivation: A comprehensive analysis of human behavior drivers. In *Acta Psychologica* (Vol. 244). Elsevier B.V. <https://doi.org/10.1016/j.actpsy.2024.104177>
- Bilad, M. R., Zubaidah, S., & Prayogi, S. (2024). Addressing the PISA 2022 Results: A Call for Reinvigorating Indonesia's Education System. *International Journal of Essential Competencies in Education*, 3(1), 1–12. <https://doi.org/10.36312/ijece.v3i1.1935>
- Bittner, J. V., Christian, ., Roßnagel, S., & Staudinger, U. M. (2022). *Educational self-regulation competence: toward a lifespan-based concept and assessment strategy*. 22, 307–325. <https://doi.org/10.1007/s10775-021-09491-2>
- Brady, A. C., Wolters, C. A., Pasque, P. A., Yu, S. L., & Lin, T. J. (2025). Beyond goal setting and planning: An examination of college students' self-regulated learning forethought processes. *Active Learning in Higher Education*, 26(3 Themed Issue: Active Learning Approaches to Developing Critical Thinking), 557–573. <https://doi.org/10.1177/14697874241270490>
- Brenner, C. A. (2022). Self-regulated learning, self-determination theory and teacher candidates' development of competency-based teaching practices. *Brenner Smart Learning Environments*, 9(3), 1–14. <https://doi.org/10.1186/s40561-021-00184-5>
- Chen, J., Lin, C.-H., Chen, G., & Fu, H. (2023). Individual differences in self-regulated learning profiles of Chinese EFL readers: A sequential explanatory mixed-methods study. *Studies in Second Language Acquisition*, 955–978. <https://doi.org/10.1017/S0272263122000584>
- Clark, S., Gallagher, E., Boyle, N., Barrett, M., Hughes, C., O'Malley, N., Ebuenyi, I., Marshall, K., & O'Sullivan, K. (2023). The International Education Index: A global approach to education policy analysis, performance and sustainable development. *British Educational Research Journal*, 49(2), 266–287. <https://doi.org/10.1002/berj.3842>
- De Ruig, N. J., Peter, ., De Jong, F., Zee, M., & Nl, N. J. D. (2023). Stimulating Elementary School Students' Self-Regulated Learning Through High-Quality Interactions and

- Relationships: A Narrative Review. *REVIEW ARTICLE Educational Psychology Review*, 35, 71. <https://doi.org/10.1007/s10648-023-09795-5>
- Ellis, R. A. (2022). Strategic directions in the what and how of learning and teaching innovation-a fifty-year synopsis. *Higher Education*, 84, 267–1281. <https://doi.org/10.1007/s10734-022-00945-2>
- Fatoni, A., & Lesmana, D. (2021). THE CONCEPT OF ZIKR AND TAFAKKUR-BASED EDUCATION IN IMPROVING THE MORALITY OF THE NATION. *Alim: Journal of Islamic Education*, 3(1), 2021.
- Fattore, L., Micale, V., Sambuco, N., & Weinstein, A. M. (2023). Reward, motivation and brain imaging in human healthy participants-A narrative review. *Front. Behav. Neurosci*, 17, 1123733. <https://doi.org/10.3389/fnbeh.2023.1123733>
- Golan, O. (2023). *Introduction: Digital Youth and Religion*. <https://doi.org/10.3390/rel14060704>
- Gumiandari, S., Madjid, A., Nafi, I., Safii, S., & Hidayat, A. (2022). Islamic Resilience as Spiritual and Psychological Coping Strategies. *Afkar Special Issue on COVID*, 19, 313–348. <https://doi.org/10.22452/afkar.sp2022no1.10>
- Halim, J. A. (2024). *Probing Perceptual Uncertainty to Examine the Relationship between Curiosity and Confidence*. <https://doi.org/10.1523/JNEUROSCI.1787-24.2024>
- Hani Herlina, N. (2025). Religious Education and Jean Baudrillard: What does Postmodernism, Simulacra, and Hyperreality Suggest? *Pharos Journal of Theology*, 106(3). <https://doi.org/10.46222/pharosjot.106.309>
- Hanif, M., & Fian, K. (2023). De-Westernisation of Islamic Education Perspective Syed. *INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND ANALYSIS*, 6(6), 2512–2520. <https://doi.org/10.47191/ijmra/v6-i6-48>
- Haqiqi, M. R. H., & Hakim, S. (2025). Human in the Qur'an, Tafsir Maudu'i. *Jurnal Kajian Islam*, 2(2), 29–32. <https://doi.org/10.56566/jki.v2i2.395>
- Haridza, R. (2024). Exploring the Relationship between Safe Learning Environments and Literacy Skills in Majority Muslim Southeast Asian Nations: Insights from PISA 2022. *Muslim Education Review*, 3(2), 262–303.
- Hennecke, M., & Bürgler, S. (2022). METACOGNITION AND SELF-CONTROL 1 Metacognition and Self-Control: An Integrative Framework. *Psychological Review*.
- Hewi, L., Shaleh, M., & IAIN Kendari, P. (2020). *Refleksi Hasil PISA (The Programme For International Student Assesment): Upaya Perbaikan Bertumpu Pada Pendidikan Anak Usia Dini*. 04(1), 30–41.
- Hohenthal, J., & Ruuska, T. (2024). Disclosing the sacred in technological practices for sustainability. *Acta Borealia*, 41(1), 31–43. <https://doi.org/10.1080/08003831.2024.2334178>
- Holman, D. ; Švejdarová, E., Holman, D., & Švejdarová, E. (2023). The 21st-Century Empowering Wholeness Adaptive (EWA) Educational Model Transforming Learning Capacity and Human Capital through Wholeness Systems Thinking towards a Sustainable The 21st-Century Empowering Wholeness Adaptive (EWA) Educational Mo.... *Sustainability*, 15. <https://doi.org/10.3390/su15021301>

- Husni, H., Bisri, H., Darisman, D., & Syakir Munandar, D. (2025). Beyond the Dichotomy of Science and Religion: Islamic Education in the Shadow of the Interconnected Theology of Fritjof Capra. *Pharos Journal of Theology*, 106. <https://doi.org/10.46222/pharosjot.106.4030>
- Jedlicka, P., & Havenith, M. N. (2025). Religious and spiritual experiences from a neuroscientific and complex systems perspective. In *Neuroscience and Biobehavioral Reviews* (Vol. 177). Elsevier Ltd. <https://doi.org/10.1016/j.neubiorev.2025.106319>
- Jones, C. M., Conner, M., Schüz, B., Ferguson, S. G., & O, D. B. (2025). From mere “stability” to ‘durability’-Revisiting intention dynamics from a self-regulatory perspective with intensive longitudinal methods. *Appl Psychol Health Well-Being*, 17. <https://doi.org/10.1111/aphw.12633>
- Khahro, S. H., & Javed, Y. (2022). Key Challenges in 21st Century Learning: A Way Forward towards Sustainable Higher Educational Institutions. *Sustainability*, 14. <https://doi.org/10.3390/su142316080>
- Khalil, A. (2023). *Atonement, Returning, and Repentance in Islam*. <https://doi.org/10.3390/rel14020168>
- Khar Kheng, Y., Rasyidah Mohd Nordin, N., & Yusop Jani, M. (2023). Extant Corpus on Intentional Learning Skill and Reflective Learning Log. *International Education Studies*, 16(3). <https://doi.org/10.5539/ies.v16n3p8>
- Lyngsøe, M. L., & Stjernholm, · Simon. (2022). Nearness to God: Danish Muslims and Taqwa-infused faith frames. *Contemporary Islam*, 16, 173–191. <https://doi.org/10.1007/s11562-022-00498-2>
- Majahar, F., Ahmad H. Osman, R., Pauzi, S. N. A., & Aziz, S. A. (2021). Learning Motivation from Islamic Perspective. *Al Hikmah International Journal of Islamic Studies and Human Sciences*, 4(Special Issue), 1–26. <https://doi.org/10.46722/hkmh.4.si.a21>
- Masaki, F. (2023). Self-regulated Learning from a Cultural Psychology Perspective: Shifting from Strategy to Process with the Trajectory Equifinality Approach. *Human Arenas*, 8, 131–149. <https://doi.org/10.1007/s42087-023-00326-w>
- MR, M. I. F., Anam, A. M., Wiratmoko, D., Yaacob, N. H., & Alwiyah, N. (2025). Positivism and Ibn Khaldun’s thought: bridging objectivity and social dynamics. *Harmoni Sosial: Jurnal Pendidikan IPS*, 12(1), 26–36. <https://doi.org/10.21831/hsjpi.v12i1.83847>
- MR, M. I. F., Widiastuti, A., Widodo, S. F. A., Marhumah, & Jaya, P. H. I. (2025). Adaptive dynamic pattern of alternative educational institution in Java, Indonesia. *International Journal of Evaluation and Research in Education*, 14(5), 3574–3586. <https://doi.org/10.11591/ijere.v14i5.33654>
- Munawar, T., Naimatullah, M., & Shahbaz Manj, M. (2024). Al-Nasr **اركتل و م ك و العل و اليج** . A Study of Kitāb al-Tafakkur in Iḥyā al-ʿUlūm. *L-Nasr*, 3(1), 31–40 **اطمعل** <https://alnasrjournal.com>
- Nederhand, M. L., Tabbers, H. K., De Bruin, A. B. H., & Rikers, R. M. J. P. (2021). Metacognitive awareness as measured by second-order judgements among university and secondary school students. *Metacognition and Learning*, 16(1). <https://doi.org/10.1007/s11409-020-09228-6>
- Nikkel, D. H. (2025). Challenges from 4e Cognition to the Standard Cognitive Science of Religion Model. *Religions*, 16(4). <https://doi.org/10.3390/rel16040415>

- Pallathadka, H., Ibraheem, S., Al-Hawary, S., Muda, I., Surahman, S. H., Abdel, A., Al-Salami, A., & Nasimova, Z. (2023). The study of Islamic teachings in education: With an emphasis on behavioural gentleness. *HTS Teologiese Studies/Theological Studies*, 79(1), 1–7. <https://doi.org/10.4102/hts.v79i1.8193>
- Pérez-González, J.-C., Filella, G., Soldevila, A., Faiad, Y., & Sanchez-Ruiz, M.-J. (2022). *Integrating self-regulated learning and individual differences in the prediction of university academic achievement across a three-year-long degree*. 1141–1165. <https://doi.org/10.1007/s11409-022-09315-w>
- Poli, F., O'Reilly, J. X., Mars, R. B., & Hunnius, S. (2024). Curiosity and the dynamics of optimal exploration. In *Trends in Cognitive Sciences* (Vol. 28, Number 5, pp. 441–453). Elsevier Ltd. <https://doi.org/10.1016/j.tics.2024.02.001>
- Polizzi, G., & Harrison, · Tom. (2022). Wisdom in the digital age: a conceptual and practical framework for understanding and cultivating cyber-wisdom. *Ethics and Information Technology*, 24, 16. <https://doi.org/10.1007/s10676-022-09640-3>
- Rane, H. (2023). Higher Objectives (maq'as.id) of Covenants in Islam: A Content Analysis of 'ahd and m'ith'aq in the Qur'an. *Religions*, 514(14), 1–25. <https://doi.org/10.3390/rel14040514>
- Rassool, G. H., & Keskin, Z. (2025). Positioning the self (nafs) in Islāmic psycho-spirituality. In *Journal of Spirituality in Mental Health* (Vol. 27, Number 1, pp. 1–10). Routledge. <https://doi.org/10.1080/19349637.2023.2264848>
- Rui, L., Nasri, N. B. M., & Mahmud, N. D. B. (2024). The Role of Self-Directed Learning in Promoting Deep Learning Processes: A Systematic Literature Review. *International Journal of Academic Research in Progressive Education and Development*, 13(4). <https://doi.org/10.6007/ijarped/v13-i4/24374>
- Ruslan, & Syafrudin Muhammad. (2024). Value Education Through the Learning of the Book of Ta'lim Al-Muta'allim in Strengthening Student Religious Behavior (Case Study in Intensive IDIA Prenduan Sumenep 2023). *Values: Jurnal Kajian Islam Multidisiplin*, 1(2), 113–120. <https://doi.org/10.61166/values.v1i2.10>
- Safira, A., Nursanti, D., Fadhilah, A. M., Azis, A., Universitas, S., Karawang, W., & Java, I. (2025). Problematika Dan Tantangan Pendidikan Islam Masa Kini Serta Solusinya Di Era Global. In *Synergy: Journal of Collaborative Sciences* (Vol. 1, Number 2). <https://sinesia.org/index.php/Synergy/index>
- Salvi, C., Barr, N., Dunsmoor, J. E., & Grafman, J. (2023). Insight Problem Solving Ability Predicts Reduced Susceptibility to Fake News, Bullshit, and Overclaiming. *Think Reason*, 29(4), 760–784. <https://doi.org/10.1080/13546783.2022.2146191>
- Sasson, I., & Tifferet, S. (2025). Enhancing Undergraduate Metacognitive Awareness and Self-Efficacy: Effective Instructional Practices for Research Question Formulation. *European Journal of Education*, 60(1). <https://doi.org/10.1111/ejed.12888>
- Shen, L. T., Lan, J. Z., Li, W., Attiq-Ur-Rehman, Ge, M. W., Hu, F. H., Jia, Y. J., Feng, R., Zhong, K., Gao, S. Q., & Chen, H. L. (2026). Self-Efficacy as a Mediator of the Relation Between Motivation and Academic Performance: A Meta-Analysis and Meta-Analytic Structural Equation Model. *Psychology in the Schools*, 63(2), 485–500. <https://doi.org/10.1002/pits.70103>

- Usman, Usman, A. A., Zaman, A., & Azizah, F. P. (2024). THE ROLE OF MURAQABAH IN DEVELOPING PEDAGOGICAL COMPETENCE AMONG ISLAMIC HIGHER EDUCATION LECTURERS. *Jurnal Pendidikan Islam*, 10(2), 43–53. <https://doi.org/10.15575/jpi.v10i2.38650>
- Van Der Graaf, J., Lim, L., Fan, Y., Kilgour, J., Moore, J., Dragan Gašević, ·, Bannert, M., & Molenaar, · Inge. (2022a). The Dynamics Between Self-Regulated Learning and Learning Outcomes: an Exploratory Approach and Implications. *Metacognition and Learning*, 17, 745–771. <https://doi.org/10.1007/s11409-022-09308-9>
- Van Der Graaf, J., Lim, L., Fan, Y., Kilgour, J., Moore, J., Dragan Gašević, ·, Bannert, M., & Molenaar, · Inge. (2022b). The Dynamics Between Self-Regulated Learning and Learning Outcomes: an Exploratory Approach and Implications. *Metacognition and Learning*, 17, 745–771. <https://doi.org/10.1007/s11409-022-09308-9>
- Wakifah, Fatimah, & Sulistiawati, M. (2023). Optimization of Higher-Order Thinking Skills (HOTS) in Islamic Education towards the Era of Society 5.0. *Didaktika: Jurnal Kependidikan*, 17(2), 55–63. <https://doi.org/10.30863/didaktika.v17i2.5485>
- Wang, P., Chen, · Fan, Wang, D., & Chen, · Gaowei. (2025). Enhancing students' dialogic reflection through classroom discourse visualisation. *0123456789) Intern. J. Comput.-Support. Collab. Learn*, 20, 293–315. <https://doi.org/10.1007/s11412-024-09443-2>
- Webb, S., Hodge, S., Holford, J., Milana, M., & Waller, R. (2022). Aligning skills and lifelong learning for human-centred sustainable development. *International Journal of Lifelong Education*, 41(2), 127–132. <https://doi.org/10.1080/02601370.2022.2057167>
- Wijaya, I. S., Tahir, M., Armella, R., & Abdi, A. M. (2025). The Role of Spiritual Intelligence in Developing Individual Emotional Intelligence In Interacting Based on An Islamic Perspective. *Pharos Journal of Theology*, 106. <https://doi.org/10.46222/pharosjot.106.301>
- Wijiyono, E., Tobroni, T., & Widodo, J. (2025). The Foundation of Academic Excellence and Student Achievement Based on Qur'anic Tahfid. *Academia Open*, 10(2). <https://doi.org/10.21070/acopen.10.2025.11696>
- Zahidah, D. K., Norrodia, S., Adawiyah, A., & Madura, U. (2025). *Al-Ghazali's Contribution to Islamic Scientific Ethics: Integration of Moral Values in Science Development*.
- Zaini, M., & Fauziah, M. (2024). In-depth Exploration of 'Tafakkur' Through the Spirit of Quranic Verses. *TAFSE: Journal of Qur'anic Studies*, 9(1), 109. <https://doi.org/10.22373/tafse.v9i1.22572>