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Islamic Mindfulness Among Biology Students at UIN Sunan Kalijaga as a Strategy for Concentration During Learning

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Keywords :

Biology students; concentration during learning; Islamic mindfulness; readiness to learn; spiritual practices.

ABSTRACT

Islamic spiritual practices may serve as personal resources for coping with academic demands, but their use in managing attention needs to be understood through students' experiences. This study aims to describe spiritual practices examined within the framework of Islamic mindfulness, the contexts and reasons for their use, and their relationship with perceived concentration among Biology students at UIN Sunan Kalijaga. A descriptive qualitative design involved six fourth-semester students selected purposively on the basis of their experience with spiritual practices during learning. Data were collected through semi-structured interviews, observations, and documentation and analyzed thematically. Trustworthiness was assessed by comparing different types of data and checking information with participants. The findings indicate the use of prayer, dhikr, basmalah, istighfar, muhasabah, and slow breathing accompanied by spiritual awareness. These practices were used before academic activities and when students experienced anxiety, mental fatigue, or loss of focus. Students reported feeling calmer and more patient, experiencing fewer distractions, and finding it easier to direct attention to learning materials. The findings suggest that spiritual practices are understood as supporting readiness to learn and emotion management. However, these benefits are subjective experiences and do not establish objectively measured improvements in concentration or causal relationships. The data are also insufficient to determine whether all the practices meet the components of mindfulness. This study provides a contextual understanding of the use of spiritual resources in science learning and a basis for further research on the quality of these practices and engagement in learning.

Kata Kunci :

Kesiapan belajar; konsentrasi saat belajar; mahasiswa biologi; praktik spiritual; sadar keislaman.

ABSTRAK

Praktik spiritual Islam dapat menjadi sumber daya pribadi untuk menghadapi tuntutan akademik, namun penggunaannya dalam mengelola perhatian perlu dipahami melalui pengalaman mahasiswa. Penelitian ini bertujuan untuk mendeskripsikan praktik-praktik spiritual yang ditinjau dalam kerangka *mindfulness* (kesadaran penuh) Islami, konteks serta alasan penggunaannya, dan hubungannya dengan persepsi konsentrasi di kalangan mahasiswa Biologi UIN Sunan Kalijaga. Desain kualitatif deskriptif diterapkan dengan melibatkan enam mahasiswa semester empat yang dipilih secara purposif berdasarkan pengalaman mereka melakukan praktik spiritual selama proses pembelajaran. Data dikumpulkan melalui wawancara semi-terstruktur, observasi, dan dokumentasi, kemudian dianalisis secara tematis. Kredibilitas data dinilai dengan membandingkan berbagai jenis data dan melakukan konfirmasi informasi kepada partisipan. Temuan penelitian menunjukkan adanya penggunaan doa, zikir, basmalah, istighfar, muhasabah, dan teknik pernapasan

lambat yang disertai dengan kesadaran spiritual. Praktik-praktik ini dilakukan sebelum memulai aktivitas akademik serta saat mahasiswa mengalami kecemasan, kelelahan mental, atau hilangnya fokus. Mahasiswa melaporkan perasaan lebih tenang dan sabar, berkurangnya gangguan konsentrasi, serta kemudahan dalam mengarahkan perhatian pada materi pembelajaran. Hasil penelitian mengindikasikan bahwa praktik spiritual dipahami sebagai sarana pendukung kesiapan belajar dan pengelolaan emosi. Namun, manfaat tersebut merupakan pengalaman subjektif dan tidak menunjukkan adanya peningkatan konsentrasi yang terukur secara objektif ataupun hubungan sebab-akibat yang pasti. Data yang diperoleh juga belum memadai untuk menentukan apakah seluruh praktik tersebut memenuhi komponen-komponen *mindfulness.* Penelitian ini memberikan pemahaman kontekstual mengenai penggunaan sumber daya spiritual dalam pembelajaran sains serta menjadi landasan bagi penelitian lanjutan terkait kualitas praktik-praktik tersebut dan keterlibatan mahasiswa dalam pembelajaran.

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INTRODUCTION

Concentration is an important aspect of students' learning because it enables attention to be directed toward and sustained on information relevant to academic tasks. However, students encounter various conditions that may interfere with their engagement in learning, including academic pressure, fatigue, and the use of digital media for non-academic purposes. The review by Pascoe et al. (2020) indicates that academic stress is related to learning capacity, motivation, psychological well-being, and academic performance. Meanwhile, Ravizza et al. (2017) found that non-academic internet use during lectures was associated with poorer learning performance. These findings highlight the importance of strategies for managing attention that take students' psychological conditions and learning environments into account.

In Biology learning, the need to manage attention is related to academic activities involving conceptual understanding, observation, laboratory work, and data analysis. Students need to connect theoretical information with empirical evidence, follow procedures, and carefully record and interpret observations. Hofstein and Lunetta (2004) identify laboratory activities as an important setting for science learning and the development of scientific understanding. In this context, readiness to learn includes students' ability to direct attention in accordance with the demands of an activity. Students' experiences of dealing with distractions and preparing themselves before academic activities are therefore relevant issues for investigation.

Mindfulness is one approach that has received attention in research on attention management. In general, mindfulness involves awareness of ongoing experience. Bishop et al. (2004) emphasize the need for a clear operational definition so that mindfulness can be examined as a

psychological construct. Lutz et al. (2008) also discuss attention regulation and monitoring in meditation. These perspectives provide a basis for understanding how individuals recognize that their attention has wandered and redirect it to their current activity. Nevertheless, mindfulness needs to be distinguished from relaxation or a feeling of calmness, as these do not necessarily reflect the same quality of attention.

Empirical support for the potential role of mindfulness in cognitive processes is provided, among others, by Mrazek et al. (2013). In an experimental study involving two weeks of mindfulness training, they found improvements in working memory capacity and reading comprehension performance, accompanied by reduced task-unrelated thought, or mind wandering. Tang et al. (2015) further discuss attention control, emotion regulation, and self-awareness as components of the mechanisms proposed for mindfulness meditation. However, these findings concern particular forms of training and research designs. They cannot be directly used to conclude that all practices described as mindfulness, including everyday spiritual practices, produce the same benefits.

For Muslim students, managing psychological experiences may involve spiritual resources such as prayer, dhikr, istighfar, and muhasabah. These practices carry religious meaning that may be related to how students prepare themselves and cope with academic demands. Naja (2025) developed a conceptual framework for Islamic mindfulness through a literature review of muraqabah, muhasabah, dhikr, and tafakkur. This framework offers a way of connecting awareness of personal experience with a spiritual orientation toward Allah. However, religious recitation alone does not demonstrate the presence of all elements of mindfulness. The quality of attention, awareness of one's internal state, and responses to thoughts and emotions still need to be explored through practitioners' experiences.

The relationships among mindfulness, spirituality, and learning have been examined in several educational contexts. In a qualitative case study involving Arabic Language Education students at UIN Sunan Kalijaga, Fadillah et al. (2025) reported experiences of mindfulness-based learning related to learning focus and spiritual awareness. Meanwhile, R. A. Putri et al. (2025) examined the relationship between habitual dhikr and students' concentration through a narrative literature review. Both studies provide context for further research, but differ in scope and type of evidence. The language-learning study does not explain the use of spiritual practices in Biology-related

academic activities, while the literature review does not provide direct data on students' experiences in the context of the present study.

Against this background, an issue that requires further understanding is how Biology students use and interpret spiritual practices when facing attentional demands during learning. Describing the forms of practice alone is insufficient; an understanding of the contexts of use, reasons for use, and changes experienced by students is also needed. Distinguishing experiences of calmness, perceived concentration, and the quality of awareness during practice is important for using the term Islamic mindfulness appropriately. The research gap concerns the need for a contextual explanation of students' experiences, rather than an assumption that spiritual practices have been shown to improve concentration objectively.

This study aims to describe the practices used by Biology students at UIN Sunan Kalijaga, identify their contexts and reasons for use, and understand their relationship with perceived concentration. Using a descriptive qualitative approach, the study explores students' experiences and interpretations rather than testing the effectiveness of an intervention. Its anticipated contribution is a more contextual understanding of the relationships among spiritual practices, emotion management, and readiness to learn in science education. This understanding may inform academic support and further research using appropriate indicators and designs.

LITERATURE REVIEW

1. Mindfulness and Islamic Mindfulness

Mindfulness is generally understood as an individual's ability to bring conscious, intentional, and nonjudgmental awareness to present experience. In contemporary psychology, mindfulness is used as an approach to help individuals manage stress, improve focus, and develop mental and emotional well-being. It involves being fully present, consciously, intentionally, and without judgment, enabling individuals to understand their internal states more calmly and purposefully (Dalimunthe, Siregar, & Sari, 2025). Mindfulness also has positive effects on mental health, stress reduction, and learners' focus during learning (Fauzan et al., 2025). Thus, mindfulness can be understood as a form of awareness that helps individuals manage thoughts, emotions, and attention more adaptively.

Islamic mindfulness develops the concept of mindfulness by integrating Islamic spiritual values. In this approach, awareness is directed not only toward self-awareness but also toward God-

consciousness and closeness to Allah. According to Safinatun Naja, Islamic mindfulness is an approach to awareness rooted in Sufi concepts such as muraqabah, muhasabah, dhikr, and tafakkur. Islamic mindfulness has a strong theological foundation in the Qur'an and hadith and can provide a holistic psychological approach by bringing together spiritual, emotional, and psychological dimensions (Naja, 2025).

Abdul Muhid explains that Islamic mindfulness is closely related to the values of muraqabah, ihsan, khushu', patience, tawakkul, and tazkiyat al-nafs, expressed through acts of worship such as prayer, dhikr, and self-reflection. Islamic mindfulness helps individuals attain a calm state of mind, supporting focus, concentration, and the management of academic and emotional stress (Qurratina & Muhid, 2025). These views are reinforced by Dalimunthe, Siregar, and Sari (2025), who relate mindfulness in an Islamic perspective to muraqabah, khushu', tadabbur, and dhikrullah as forms of spiritual awareness. Islamic mindfulness can therefore be understood as an approach that integrates Islamic spirituality with psychological self-management to foster inner calm, emotional control, and concentration during learning (Dalimunthe et al., 2025).

Islamic mindfulness is grounded in Islamic teachings, including the Qur'an, hadith, and everyday worship. In Islam, inner calm and spiritual awareness can be cultivated through dhikr, prayer, tafakkur, and tawakkul. Islamic teachings emphasize principles for maintaining psychological well-being, including trust in Allah, patience, gratitude, remembrance of Allah, and balance in life. These practices serve as resources for inner calm, emotional stability, and spiritual strengthening (Zahra & Nursalim, 2024). Acts of worship such as prayer and dhikr also play an important role in psychological recovery by fostering peace, reducing stress, and strengthening optimism. This indicates that Islamic mindfulness concerns not only the management of thoughts but also the strengthening of individuals' spiritual relationship with Allah (D'attira, Luthfia, & Maharani Putri Shanty Salsabilla, 2024).

Islamic mindfulness has several principal characteristics that distinguish it from conventional mindfulness. First, it is oriented toward God-consciousness and the relationship between individuals and Allah. Second, it is developed through spiritual activities such as dhikr, prayer, tafakkur, and muhasabah. Third, it emphasizes a balance between psychological and spiritual well-being. Islam-based mindfulness helps individuals improve emotional management, reduce anxiety, and cultivate gratitude in everyday life (Khairanis & Aldi, 2024). Islamic mindfulness can

also strengthen resilience, psychological well-being, and emotion management among young people through the integration of Islamic spiritual and cultural values. It is therefore holistic in attending to emotional, spiritual, and social dimensions together (Fadhilah & Nurul, 2025).

2. Concentration and the Demands of Biology Learning

Concentration during learning is the ability to direct attention fully toward learning activities so that incoming information can be understood. It is an important contributor to learning success because it involves focus, attention, and the regulation of thoughts in response to distractions. Concentration is a key element of effective learning, contributing directly to understanding, memory, and efficient use of learning time (Narti, 2025). With adequate concentration, students can understand materials more effectively and complete academic tasks efficiently. Concentration can also be understood as students' ability to maintain focus over a period of time during lectures, reading, or laboratory work. In higher education, concentration is particularly important because students face complex academic demands. University learning requires sustained concentration, which is often disrupted by stress, mental fatigue, and academic anxiety (R. A. Putri et al., 2025). The ability to concentrate is therefore one determinant of students' learning success.

Concentration is influenced by both internal and external factors. Internal factors include physical condition, mental health, learning motivation, emotions, and stress levels. External factors include the learning environment, teaching methods, technology use, and the surrounding social atmosphere. Factors affecting concentration include the learning environment, teaching methods, physical health, and technology use (Narti, 2025). Unfavorable environmental conditions, such as noise, inadequate lighting, uncomfortable temperatures, and distractions from digital activities and social interactions, can divert students' attention from academic tasks. Therefore, supporting concentration requires attention to students' physical and psychological readiness, as well as environmental conditions that promote engagement in learning.

During learning, students frequently encounter disruptions that can reduce concentration. These may include academic stress, anxiety, assignment pressure, excessive use of digital media, and physical and mental fatigue. High academic pressure causes excessive anxiety, internal conflict, time-management difficulties, and physical and mental fatigue, with consequences for learning focus (Melati, 2025). Young people in the digital era also face social and academic pressures that can contribute to mental health difficulties such as anxiety and stress. These conditions may make

concentration more difficult, increase distractibility, and reduce learning motivation (Za, Firriyal, Eliza, Khaira, & Lisa, 2024). Approaches that help students maintain psychological and emotional stability are therefore needed to support concentration.

University-level Biology learning emphasizes scientific thinking, conceptual analysis, observation, and practical skills. Biology students are expected not only to understand theory but also to conduct observations, laboratory experiments, field research, and systematic data analysis. These activities demand focus and concentration because Biology involves complex concepts and scientific phenomena requiring careful observation and problem-solving. Concentration is therefore important for understanding biological concepts and applying them in academic and research activities.

Biology students face relatively demanding academic workloads involving theoretical classes, laboratory work, field observations, report writing, and scientific research. These activities often require extended periods of study and adequate physical and mental readiness. High academic pressure can lead to stress, mental fatigue, and difficulty maintaining concentration. Academic stress is a major challenge in students' university experiences (Lidiya & Dewi, 2025). It can affect their ability to manage emotions, maintain focus, and engage effectively in academic activities. High academic pressure may also produce anxiety, internal conflict, physical and mental fatigue, and time-management difficulties (Melati, 2025). Biology students therefore need strategies that help them maintain psychological stability and concentration amid complex academic demands.

Concentration is particularly important in Biology learning because students need to understand detailed and complex scientific concepts. Laboratory activities, observations of organisms, research data analysis, and experiment-based learning require attention and focus to avoid errors during learning or research. Insufficient concentration can make it difficult to understand materials, lead to errors in laboratory work, and reduce academic achievement. University learning requires concentration, but this is frequently disrupted by stress, fatigue, and academic anxiety (R. A. Putri et al., 2025). Students therefore need psychological stability to maintain effective concentration. Mindfulness can also help learners improve focus, reduce psychological pressure, and develop readiness for academic challenges (Fauzan et al., 2025). Biology students thus need approaches to learning that support academic achievement while attending to mental and emotional well-being.

3. Spiritual Practices and Attention Management

Islamic mindfulness is closely related to improved concentration because it helps individuals direct attention to their current activities through the management of thoughts, emotions, and spiritual awareness. In education, Islamic mindfulness functions not only as a relaxation technique but also as a spiritual approach that helps students attain inner calm and maintain focus. In an Islamic perspective, mindfulness is related to muraqabah, khushu‘, tadabbur, and dhikrullah, which shape spiritual awareness (Dalimunthe et al., 2025). Such awareness helps students regulate thoughts and attention and focus on learning. Mindfulness also helps learners improve focus, reduce psychological pressure, and develop readiness to face academic challenges (Fauzan et al., 2025). Islamic mindfulness can therefore be an effective strategy for maintaining concentration amid complex academic pressures.

From an Islamic perspective, spiritual practices such as dhikr, prayer, and tafakkur are believed to foster inner calm that supports focus and concentration. Dhikr is understood not only as worship but also as a means of calming the mind and reducing anxiety that can interfere with learning. Dhikr using the Mind Healing Technique (MHT) approach significantly improves learners’ concentration. The study concerned indicates that dhikr helps learners become calmer, more focused, and more ready to engage in learning (Afifah et al., 2025). Related findings suggest that regular dhikr may calm the mind, reduce academic stress, and improve students’ learning focus (R. A. Putri et al., 2025). The use of silent dhikr in learning is also positively related to inner calm and improved concentration. Islamic spiritual practices thus contribute to psychological conditions that support students’ learning (Sadat et al., 2024).

University students often face academic pressures involving assignments, laboratory work, research, and expectations of high achievement. These conditions may lead to stress, anxiety, and mental fatigue that reduce concentration. In this context, Islamic mindfulness offers an approach to managing stress through spiritual strengthening and self-awareness. Mindfulness helps students manage academic stress by enhancing self-awareness and emotional control (Lidiya & Dewi, 2025). High academic pressure may also cause anxiety, internal conflict, and mental fatigue that affect learning focus (Melati, 2025). Islamic mindfulness is therefore important as a means of helping students attain inner calm and emotional stability when facing academic demands.

Islamic mindfulness can be incorporated into learning through habitual spiritual activities such as dhikr before studying, self-reflection (muhasabah), emotion management, and learning activities that cultivate spiritual awareness. This approach supports students' academic, emotional, and spiritual development. Mindfulness-based learning helps students improve concentration, reduce distractions, and strengthen spiritual awareness (Fadillah et al., 2025). Mindfulness in learning can also increase engagement, reduce stress, and help learners connect religious values with everyday life (Imami et al., 2025). For Biology students at UIN Sunan Kalijaga, Islamic mindfulness is relevant because their academic activities demand focus, including laboratory work, field observations, and scientific analysis. Islamic mindfulness may therefore support a balance among intellectual development, mental health, and spirituality in university learning.

In this study, the relationship between spiritual practices and concentration is used as a framework for interpreting students' experiences. Prayer, dhikr, and muhasabah may be understood as Islamic mindfulness when they involve awareness of present experience, attention management, and a spiritual orientation. Religious recitation alone is insufficient to demonstrate the presence of all elements of mindfulness. The analysis therefore needs to distinguish habitual worship, experiences of calmness, and the ability to sustain attention during learning.

METHODS

1. Design and Participants

This study used a descriptive qualitative design to explore Islamic spiritual practices used by Biology students at UIN Sunan Kalijaga during learning and their relationship with perceived concentration. This design was chosen because the study sought to describe participants' experiences, actions, and interpretations in everyday contexts. Descriptive qualitative research allows findings to remain close to the data and participants' language without requiring the development of a new theory or an in-depth phenomenological interpretation (Sandelowski, 2000).

The study was conducted in the Biology Study Program at UIN Sunan Kalijaga, Yogyakarta. Participants comprised six fourth-semester students, with two students each from classes A, B, and C. Purposive selection was based on the relevance of students' experiences to the research focus. Eligibility criteria included being an active student, having experience using Islamic spiritual practices during learning, and being willing to provide information about those experiences.

Involving students from three classes was intended to obtain experiences from different classroom contexts rather than achieve statistical representativeness.

Participants' experiences were the primary source of information. The number of participants was not used as a basis for claiming population representativeness or data saturation. Malterud et al. (2016) explain that the adequacy of information in qualitative interview research is related to the study aim, sample specificity, quality of dialogue, use of theory, and analysis strategy. In this study, the scope of conclusions was limited to the experiences of the six participating students and the completeness of the available information.

2. Data Collection

Data were collected through semi-structured interviews, observations, and documentation. Interviews explored students' experiences and interpretations of spiritual practices during learning. Observations provided context for learning behaviors and activities, while documentation served as supporting material.

The interview guide covered students' understanding of Islamic mindfulness, the forms and frequency of practice, contexts of use, reasons for use, perceived changes in attention and emotions, and difficulties in implementation. Interviews focused on students' experiences with prayer, dhikr, basmalah, istighfar, muhasabah, and breathing accompanied by spiritual awareness. Interview information was documented in interview notes for analysis.

Observations focused on habitual prayer before studying, the use of dhikr when students experienced learning difficulties, engagement in academic activities, and responses to distractions. Observational information helped contextualize participants' statements. Calmness and concentration were not inferred solely from students' outward appearance, but considered alongside their accounts of their experiences.

Documentation included interview notes, records of research activities, and supporting documents related to learning activities. Each type of data was used according to its function. Records of research activities provided contextual information but were not treated as direct evidence of improved concentration. The literature review was used to develop the conceptual foundation and discuss findings, rather than replace participants' empirical data.

3. Data Analysis and Trustworthiness

Data were analyzed thematically to identify patterns of experience related to spiritual practices during learning. Thematic analysis was used to identify, organize, and explain patterns of meaning in qualitative data (Braun & Clarke, 2006). Materials for analysis included interview notes, observational information, and documentation relevant to the research focus.

The analysis involved reviewing the data, reducing information in accordance with the research focus, assigning codes, grouping codes into themes, and interpretation. Review focused on relationships among the forms of practice, contexts of use, students' reasons for choosing the practices, and perceived changes. Participants' statements formed the basis for presenting themes, while the literature supported interpretation in the discussion.

The findings were presented in three thematic groups: forms of spiritual practice, contexts and reasons for use, and perceived changes in attention and emotions. Interview quotations illustrated the empirical basis of the findings. Statements about calmness, focus, and ease of understanding learning materials were treated as accounts of subjective experience rather than objective measurements of concentration or academic achievement.

Trustworthiness was assessed by comparing interview, observational, and documentary information and by checking information obtained from participants. These comparisons assessed the consistency and completeness of information relevant to the research focus. The literature helped explain the findings conceptually, but was not used to verify the truth of individual participants' experiences.

Interpretation was limited to the available information. Similarities across participants' experiences were not used to conclude that all students experienced the same benefits. The study also did not establish causal relationships between spiritual practices and changes in concentration, as it employed neither an experimental design nor objective attention measurements.

4. Research Ethics

The researcher sought participants' consent before conducting interviews and observations. Students participated on the basis of their willingness to provide information about their experiences. Data collection was conducted without pressuring participants.

Participants' identities were kept confidential through the use of codes in reporting findings. Information obtained was used for academic purposes. Interview quotations were presented without personal details that could identify participants.

Reporting maintained the distinction between participants' statements and the researcher's interpretations. Information that was unavailable was not added as a research fact. This principle ensured accurate reporting and avoided claims that exceeded the empirical evidence.

RESULTS AND DISCUSSION

The findings are presented in three themes: forms of spiritual practice, contexts and reasons for use, and perceived changes in concentration and emotions. Interview excerpts are identified as M1–M5 according to participant numbering. This presentation describes experiences of using spiritual practices during learning without establishing the frequency of practice in the student population.

1. Forms of Practice Used

Students reported using prayer before studying, brief dhikr, basmalah, istighfar, muhasabah, and slow breathing accompanied by spiritual awareness. These practices were incorporated into academic activities to prepare for learning and respond to difficulties arising during the learning process. They were not presented as a uniform sequence of exercises, but as actions used according to students' circumstances.

The use of prayer and dhikr is directly illustrated by M1's statement:

> "I usually say a prayer before studying and briefly recite dhikr when I feel that my mind is beginning to lose focus".

This statement reveals two different contexts of use. Prayer takes place before learning begins, whereas dhikr is used when the student recognizes that attention is becoming distracted. Spiritual practices thus occur both during preparation and while learning is underway. The word "usually" indicates that the practice is part of M1's routine, but does not provide measurable information about its frequency or duration.

The interview summary also describes the use of basmalah to establish an intention before beginning academic activities. Students understand learning as an activity with religious value. Meanwhile, istighfar is used when students feel anxious, mentally fatigued, or have difficulty

concentrating. In the reported experiences, both practices are related to the need to prepare oneself and attain calmness.

Muhasabah and breathing accompanied by spiritual awareness appear in the interview accounts as forms of reflection and attempts to calm oneself. However, these practices are not described as fully as prayer and dhikr. The findings therefore indicate a variety of practices, but do not yet allow comparisons of their implementation, consistency of use, or respective benefits.

2. Contexts and Reasons for Use

Spiritual practices are used in situations involving preparation for academic tasks and responses to difficulties during learning. During preparation, students use prayer or dhikr before working on assignments and taking examinations. M2 stated:

> "I often do it before working on assignments or when I am about to take an exam, so that I feel calmer".

M2's stated aim is to attain calmness before academic activities. This statement describes the use of spiritual practices to manage one's internal state, without claiming that the practice directly improves grades or success in completing assignments.

Once learning is underway, practices are used when attention becomes distracted or students experience anxiety and mental fatigue. M1's statement about dhikr when the mind loses focus indicates that its use is related to recognition of one's internal state. Students notice attentional difficulties and select an action that they believe may help on the basis of their experience.

The interview summary identifies accumulating assignments, laboratory work, presentations, and examinations as contexts for spiritual practice. These situations provide the background to students' need to feel calmer and ready to continue. The available information does not indicate that every participant uses all forms of practice in all of these situations.

Reasons for use are also related to emotional experiences following practice. M3 explained that after reciting dhikr, they felt calmer and were less likely to panic while studying. This account indicates that calmness is a meaningful benefit for the participant and helps explain the use of dhikr in academic activities.

In addition to seeking calmness, students interpret prayer and dhikr as ways of maintaining their relationship with Allah during their studies. Reasons for use therefore encompass both the need to cope with learning situations and the spiritual meaning attached to those activities. Both dimensions appear in students' accounts, although their contributions to changes in attention cannot yet be separated.

3. Perceived Changes in Concentration and Emotions

Students reported finding it easier to focus, experiencing fewer distractions, feeling calmer, and becoming more patient while studying. M4 stated:

> "I feel more focused when trying to understand the material and am less distracted by other things".

This statement reveals two aspects of perceived attention: focus on learning materials and reduced interference from other things. The phrase "I feel" identifies the account as a subjective appraisal of the learning experience. The data do not specify the types of distraction, the duration for which attention can be sustained, or the accuracy of understanding.

M5 reported feeling calmer and more patient and finding it easier to understand course materials. This response brings together emotional experience and perceptions of learning. Calmness describes an emotional state, patience concerns responses to difficulties, and ease of understanding materials represents an appraisal of cognitive experience. All three are reported together, but the study has not established their temporal order or causal relationships.

The observational account provides supporting information that students appeared calmer and better able to manage emotional responses during laboratory work or presentations. This information contextualizes learning behavior. However, because details of observation episodes and attention indicators are unavailable, the observations cannot independently establish improvements in concentration.

Thematically, the findings indicate connections among spiritual practice, experiences of calmness, and perceived ease of directing attention to academic activities. These connections emerge from accounts by different participants and cannot be combined into a single, definite sequence of individual change. The findings indicate benefits perceived by students, without

providing evidence of the magnitude of changes in concentration, improved academic achievement, or the causal effectiveness of the practices.

4. Implications for the Integration of Academic Knowledge and Islamic Perspectives

The findings provide a basis for understanding the integration of academic knowledge and Islamic perspectives through students' learning experiences. Integration can bring together the spiritual meaning of a practice and psychological analysis of its use in academic activities. Prayer and dhikr have religious value for students, while attention, emotions, and task engagement can be investigated scientifically. These perspectives help explain the same experience while maintaining conceptual clarity and appropriate standards of evidence.

At a conceptual level, integration requires a distinction among the value of worship, subjective experience, and empirical claims. The religious value of prayer does not depend on evidence that it improves concentration scores. Conversely, claims of improved concentration require appropriate evidence even when the practice has strong spiritual meaning. This distinction allows religious experience to be respected while preserving the accuracy of scientific explanation.

At the instructional level, integration can involve providing opportunities for students to prepare themselves before beginning a task. For example, before laboratory work begins, a lecturer may allow a brief pause for students to check their internal states and direct attention to the forthcoming activity. Students may use this opportunity to pray, reflect, or calm themselves according to their preferences. This can then be followed by an explanation of objectives, checks of students' understanding of instructions, and implementation of laboratory procedures.

This example illustrates that spiritual support needs to be connected with concrete academic actions. Calmness becomes relevant to learning when it helps students return their attention to a task, understand instructions, or continue working. Spiritual practices still need to be accompanied by subject knowledge, time management, skills, and adherence to safety procedures. Integration therefore goes beyond adding religious recitations before an activity and also considers how students engage in learning.

At the evaluation level, lecturers need to distinguish students' acceptance of an activity, perceived benefits, and changes in learning behavior. Students may enjoy a reflective pause without demonstrating clear changes in attention. An activity may also help some students while being less suitable for others. Evaluation may explore these experiences through brief reflection or

observations of task engagement. This proposal represents a potential development in teaching and cannot yet be regarded as an intervention whose effectiveness has been established by this study.

Implementation needs to be voluntary and attentive to students' diverse preferences and psychological conditions. Concentration difficulties must not be used to judge the quality of worship or the degree of religiosity. Students who continue to experience difficulties after using spiritual practices may need adjustments to learning strategies, improved rest, academic support, or professional assistance. Educational responses should be based on students' identifiable needs rather than assumptions about spiritual shortcomings.

The principal implication is therefore the need for an approach to learning that accommodates students' spiritual resources while maintaining scientific rigor. These qualitative findings may inform exploration and the design of context-sensitive support. Further development needs to clarify the quality of practice, the diversity of experiences, and indicators of learning engagement before conclusions are drawn about effectiveness or a program is applied to all students.

To clarify the overall findings, the following table summarizes the forms of spiritual practice, contexts and reasons for their use, and perceived changes in attention and emotions. The summary presents participants' experiences and the limits of the available evidence without concluding that the practices are causally effective.

Table 1. Summary of Research Findings

Aspect	Brief Summary	Basis of Information
Forms of practice	Prayer, dhikr, basmalah, istighfar, muhasabah, and breathing accompanied by spiritual awareness.	Quotation from M1 and the interview summary; descriptions of muhasabah and breathing lack detail.
Contexts of use	Before studying, assignments, or examinations, and when experiencing loss of focus, anxiety, or mental fatigue.	Statements by M1–M2 and the interview summary.
Reasons for use	Seeking calmness, preparing oneself, reducing panic, and maintaining a spiritual relationship with Allah.	Statements by M2–M3 and students' interpretations.
Perceived changes	Greater focus, fewer distractions, more calmness and patience, and perceived ease of understanding materials.	Statements by M4–M5; subjective appraisals.
Limits of the findings	No established objectively measured improvements in concentration or academic achievement, or causal relationships.	No objective measurements or sufficiently detailed observations.
Implications for teaching	Spiritual practices may be considered resources for readiness to learn through voluntary reflective pauses,	Interpretation and proposed development, rather than an

	accompanied by academic strategies and safety procedures.	intervention with demonstrated effectiveness.

TRANSFORMATIVE CONTRIBUTION

The author thanks the Biology students at UIN Sunan Kalijaga, Yogyakarta, who agreed to participate and openly share their experiences. Their contributions provided an important basis for understanding the use of Islamic spiritual practices during learning. The author appreciates the time, involvement, and trust provided throughout data collection. All analyses, interpretations, and conclusions in this article are the author's responsibility.

CONCLUSION

This study indicates that Biology students at UIN Sunan Kalijaga use Islamic spiritual practices as personal resources for coping with learning demands. Reported practices include prayer, dhikr, basmalah, istighfar, muhasabah, and breathing accompanied by spiritual awareness. They are used before academic activities and when students experience anxiety, mental fatigue, and difficulty sustaining attention. Reasons for use include seeking calmness, preparing oneself, and maintaining spiritual meaning in learning activities.

Students perceived benefits including calmness, patience, fewer distractions, and greater ease in directing attention to learning materials. These findings indicate connections among spiritual meaning, emotional experience, and readiness to learn at the level of participants' experiences. However, these benefits are subjective accounts and do not establish objectively measured improvements in concentration or causal relationships. The data are also insufficient to determine whether all reported practices meet the components of mindfulness.

The study contributes a contextual understanding of spiritual practices in science learning. Its findings may inform academic support that accommodates students' spiritual resources while maintaining conceptual accuracy and scientific assessment of their benefits.

LIMITATION AND RECOMMENDATION

The study is limited to six students from a single study program selected on the basis of their experience with spiritual practices. This selection may capture the experiences of practitioners more fully than those of students who do not use such practices. The findings depend on subjective accounts and observational descriptions that lack detail. The absence of a comparison group and objective concentration measures limits conclusions about effectiveness.

Inconsistent interview dates and incomplete reporting of transcription, coding, and data adequacy also require correction before publication.

Students may consider spiritual practices consistent with their beliefs and preferences as resources for readiness to learn, alongside time management, rest, and distraction reduction. Lecturers and study programs can provide academic support and opportunities for voluntary reflection. Further research should include more diverse participants, describe the contexts and duration of practice, present quotations for each theme, and use relevant attention measures when the aim is to test effectiveness. Longitudinal or experimental designs may be used to assess changes in concentration more rigorously.

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