



The Five Senses as Sources of Knowledge in Al-Ghazali's Thought: Implementation in the VAKT Learning Approach for Children with Special Needs

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ABSTRACT

Despite the growing adoption of multisensory learning strategies such as VAKT (Visual, Auditory, Kinesthetic, and Tactile) for children with special needs, few studies have grounded this approach in Islamic epistemological frameworks. This study aims to examine Al-Ghazali's views on the five senses as sources of knowledge and their implementation in the VAKT learning approach for children with special needs. The research employs a library research method, with primary data drawn from Al-Ghazali's key works, particularly *Ihya' Ulum al-Din* and *Al-Munqidz Min al-Dlalal* and secondary data from 25 peer-reviewed articles and academic books relevant to Islamic epistemology, VAKT methodology, and special needs education. The findings indicate that Al-Ghazali does not reject the five senses as a source of knowledge; however, their limitations can be complemented by *dzauq al-bathiniyyah* (inner spiritual experience). Accordingly, the implementation of VAKT for children with special needs should not only maximize sensory modalities but also introduce spiritual dimensions from an early age. This study contributes a theoretically grounded framework for VAKT-based learning rooted in Al-Ghazali's epistemological thought. The primary limitation lies in the absence of direct empirical validation; future research is encouraged to conduct field-based studies involving children with special needs directly.

Keywords: Al-Ghazali, Five Senses, Islamic Epistemology, VAKT Learning, Multisensory Learning, Children with Special Needs



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INTRODUCTION

The development of learning approaches for children with special needs has become an important concern in modern education. One approach that has been widely adopted is VAKT (Visual, Auditory, Kinesthetic, and Tactile), which engages multiple sensory modalities simultaneously to optimize the learning process (Basam & Sulfasyah, 2018; Ziadat, 2021). This approach has proven effective in improving learning outcomes for students with various disabilities, including dyslexia, deafness, and moderate intellectual disabilities (Jannah et al., 2024; Susanto & Nugraheni, 2020).

However, the theoretical foundations of VAKT are predominantly rooted in Western cognitive and behavioral psychology, which tends to treat the senses as purely physical instruments for receiving stimuli (Harahap & Salminawati, 2022; Ulum et al., 2023). This perspective has limitations, particularly in Islamic educational contexts, where knowledge is understood not merely as an empirical process but as an integrated spiritual-intellectual journey. In Islam, the senses are not only biological tools they are divine gifts entrusted to human beings, carrying both epistemic and spiritual responsibilities (Fitriani et al., 2022).

In this regard, the Islamic intellectual tradition offers a more comprehensive epistemological framework. Imam Al-Ghazali (1058–1111 AD), one of the most influential Muslim scholars in history, acknowledged the five senses as a valid yet limited source of knowledge. In his view, sensory experience serves as the initial gateway to understanding the physical world, but true knowledge can only be achieved when the senses are guided by reason and ultimately by inner spiritual experience, known as *dzauq al-bathiniyyah* (Al-Ghazali, 1985; Mustofa, 2021). This layered understanding of knowledge is highly relevant to learning approaches that rely on sensory engagement, such as VAKT.

Despite the growing body of research on VAKT for children with special needs, studies that connect this approach with Al-Ghazali's epistemological thought remain absent. Existing research has focused either on the technical effectiveness of VAKT strategies (Ganesan et al., 2024; Mohammed Mahmoud Ghoneim & Elghotmy, 2021) or on Al-Ghazali's educational philosophy in broader contexts (Fadli, 2017; Kolis & Artini, 2022), without exploring the intersection between the two. This gap is significant, particularly for Muslim educators who seek a learning framework that is both practically effective and epistemologically grounded in Islamic thought.

This paper aims to examine Al-Ghazali's view of the five senses as sources of knowledge and analyze how this framework can be implemented in the VAKT learning approach for children with special needs. In particular, this study will discuss: (1) how Al-Ghazali conceptualizes the five senses as instruments of knowledge; (2) how this epistemological framework aligns with the VAKT approach; and (3) what practical implications can be drawn for the learning of children with special needs in an Islamic educational context. Thus, this study offers an alternative theoretical perspective rooted in the Islamic intellectual tradition, contributing to the discourse on holistic and spiritually responsive education.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Biography of Al-Ghazali

Abu Hamid Muhammad ibn Muhammad al-Ghazali (1058–1111 AD), known as Imam Al-Ghazali or *Hujjatul Islam*, is one of the most influential scholars in Islamic intellectual history. His contributions span theology, philosophy, jurisprudence, and Sufism. Among his most significant works are *Ihya' Ulum al-Din* (The Revival of Religious Sciences), which represents the most comprehensive synthesis of Islamic

law and spirituality, and *Al-Munqidz Min al-Dlalal* (Deliverance from Error), an autobiographical account of his intellectual and spiritual journey. These two works serve as the primary sources for understanding his epistemological views, particularly his position on the five senses as instruments of knowledge (Fikri, 2022; Syukur, 2024).

The Five Senses as Sources of Knowledge in Islam

In Arabic, the senses are called *al-hawwās al-Khamsah*, derived from the word *hassayahussu* meaning to know, feel, or discover through sensory perception. According to al-Tahānawī in his encyclopedic work *Kashshāf Iṣṭilāḥāt al-Funūn wa al-'Ulūm*, the five senses are divided into external senses (*al-hiss al-zāhir*) and inner senses (*al-hiss al-bātin*), each functioning to perceive the form (*sūrah*) or matter (*māddah*) of perceptible objects, known as *hissiyyāt* or *mahsūsāt* (Al-Tahānawī, 1996).

Scientifically, the senses function as a means of transmitting data that delivers stimuli through nerves to the brain to be translated. However, in the Islamic view, the function of the senses is interpreted more deeply than merely absorbing information. The senses are a facility for acquiring knowledge that plays an important role in the formation of belief in Allah SWT (Lasamahu et al., 2021).

The origin of the five senses in the Islamic view is explained in Qur'an Al-Insān [76]: 2, where Allah created man from a drop of mixed semen, with the aim of testing him and giving him the ability to hear and see. This shows that the five senses are God's gifts given to man with the potential to understand the signs of His power. However, man's responsibility to the five senses in the Islamic view is not only limited to social and individual legal obligations, but also to spiritual responsibility before Allah. In Qur'an Al-Isrā [17]: 36, Allah commands man not to follow what he has no knowledge about, confirming that the use of the five senses will be held accountable before Allah (Fitriani et al., 2022).

In the study of epistemology, empiricism is one of the branches of acquiring knowledge by using the sensitivity of the senses (Fajrin, 2020). The process of knowledge in the Qur'an can be interpreted through looking and observing (*an-nadzar*). In the Qur'an there are more than 30 verses that explain *nadzara*, one of which is in surah Al-Ghasiyah verse 17: "So, do they not pay attention to how camels are created?" This verse explains the five senses that function as human vision. The following table presents Qur'anic verses that specifically address the human senses:

Table 1. Qur'anic Verses on Human Senses and Their Relevance

No	Sensory Tool	Qur'an Surah	Period	Relevance to Knowledge
1	Vision	Q.S. Al-Balad (90): 8	Makiyyah	Eyes as instruments of observation and reflection
		Q.S. Al-A'raf (7): 179	Makiyyah	Eyes used or neglected in understanding signs of God
		Q.S. An-Nahl (16): 78	Makiyyah	Sight as one of God's gifts for acquiring knowledge
		Q.S. Al-Mulk (67): 23	Makiyyah	Hearing and sight as tools of accountability

		Q.S. Al-Mu'minun (23): 78	Makiyyah	Senses as divine endowments to be used wisely
		Q.S. As-Sajdah (32): 9	Makiyyah	Hearing, sight, and heart as instruments of knowledge
2	Hearing	Q.S. Al-A'raf (7): 179	Makiyyah	Ears as instruments for receiving divine guidance
		Q.S. Al-Isra' (17): 36	Makiyyah	Accountability for what is heard
		Q.S. Yunus (10): 31	Makiyyah	Hearing as evidence of God's provision
3	Smell	Q.S. Yusuf (12): 93-94	Makiyyah	Smell as a means of recognition and sensory knowledge
		Q.S. Ar-Rahman (55): 12-13	Makiyyah	Creation perceived through the senses as signs of God
4	Taste	Q.S. Thaha (20): 27	Makiyyah	Tongue as an instrument of communication and perception
5	Touch	Q.S. An-Nisa (4): 56	Madaniyyah	Skin as a sensory organ with accountability implications
		Q.S. Al-Hajj (22): 19-20	Makiyyah	Physical sensation as a dimension of human experience
		Q.S. Al-An'am (6): 7	Makiyyah	Touch and sight as verification tools for knowledge

The data obtained through the senses, especially vision, is referred to as *al-mahsusat al-zahirah*. According to Abu Hayyān al-Tawhīdī in his philosophical work *Al-Muqābasāt*, the five senses produce *ma'rifah* – specific knowledge that can be elevated into *ilm*, namely general and comprehensive knowledge, with the help of reason. Knowledge from the physical senses is called *musyhadāt* (testimony), while from the non-physical senses it is called *wijdāniyyāt* (innate awareness). These two types of knowledge are interrelated, coming from direct observation and innate awareness (Al-Tawhīdī, 1992; Moh. Efendi, 2022).

Sensory experience plays an important role in Islam, serving as a foundation for understanding reality and knowledge. For example, in the study of hadith, the five senses are crucial to identify *mutawātir* hadith that requires direct testimony. As for worship and *muamalah*, the five senses also play an important role, for example in observing prayer movements before practicing them. However, the five senses still have limitations (Siregar et al., 2021).

Although the senses have limitations, in Islam these limitations are recognized and addressed across different levels of knowledge. The essence of an object remains consistent regardless of the limitations of the senses (Basor & Hidayah, 2023). This

confirms that the essence of an object does not change even though sensory perception is limited.

Fakhr al-Dīn al-Rāzī, in his monumental Qur'anic commentary *Mafātīḥ al-Ghayb*, emphasizes that all human beings are accountable before Allah for the use of their five senses. This view is strongly reinforced by the hadith of the Prophet Muhammad (PBUH), narrated by Abu Hurairah, which states that Allah has decreed for every son of Adam a portion of *zina* that he will inevitably encounter: the *zina* of the eyes is the lustful look, the *zina* of the ears is listening to what is forbidden, and the heart yearns and desires (HR. Muslim, No. 2657-2658; HR. Bukhari, No. 6612; Al-Rāzī, n.d.). This hadith underscores the moral and spiritual responsibility attached to sensory experience in Islam.

Therefore, the proper and conscious use of the senses is important in understanding reality and appreciating God's creation. This whole view defines knowledge as the connection between the knower and the object of knowledge, which is essentially the truth-value of something. Compared to the empiricist tradition in Western philosophy, which tends to treat the senses as the sole and sufficient source of knowledge (Harahap & Salminawati, 2022), the Islamic epistemological framework – as articulated by Al-Ghazali, al-Tawhīdī, and al-Rāzī positions sensory experience as a necessary but insufficient pathway to truth, one that must be complemented by reason and ultimately by spiritual insight.

METHODOLOGY

Research Design and Approach

The research method used in this study is the library research method, which relies on searching and analyzing various literature relevant to the research topic (Maher, 2017). This method was chosen because it is suitable for exploring, studying, and synthesizing the theoretical concepts underlying the relationship between Al-Ghazali's thought on the five senses and the implementation of the VAKT learning approach in children with special needs.

Data Collection Procedures

The data collection process in this study is conducted through a systematic literature review, categorized into primary and secondary sources. The primary data is derived from a deep textual analysis of Al-Ghazali's original works, specifically *Ihya' Ulum al-Din* (The Revival of Religious Sciences) and *Al-Munqidz Min al-Dlalal* (Deliverance from Error), with additional reference to *Mizan al-Amal* in relation to his views on the heart and spiritual knowledge. These primary sources were accessed through verified Arabic editions to ensure textual authenticity, given that Al-Ghazali's works exist in numerous editions and translations that vary in accuracy.

To strengthen the analytical framework, secondary data was gathered from reputable journal articles, books, and academic documents relevant to Al-Ghazali's

epistemology, the VAKT learning approach, and special needs education. The secondary sources were searched from databases including Google Scholar, ERIC, and Sinta, using keywords such as "Al-Ghazali epistemology," "five senses Islamic knowledge," "VAKT learning," "multisensory learning children with special needs," and "Islamic education philosophy." The search was conducted without a strict year restriction, though priority was given to publications from 2013 to 2025 to ensure relevance and currency. A total of 47 sources were identified, of which 35 were selected for analysis after screening for relevance, credibility, and alignment with the research focus.

All collected materials underwent a verification process for authenticity. For Al-Ghazali's primary works, verification was conducted by cross-checking quotations across multiple scholarly editions and secondary interpretations by established researchers in Islamic philosophy. For secondary sources, materials were selected based on their publication in peer-reviewed journals or by reputable academic publishers, and citations within those sources were traced back to their origins where possible to avoid reliance on unverified claims.

Data Analysis Techniques

The data analysis process was carried out in three stages, namely data reduction, data presentation, and conclusion drawing (Miles et al., 2018). In the data reduction stage, the focus was placed on Al-Ghazali's conceptualization of the five senses and the theoretical foundations of the VAKT learning approach in children with special needs. In the data presentation stage, the relevance of Al-Ghazali's epistemological thought to the VAKT framework was systematically analyzed, examining how each sensory modality in VAKT corresponds to Al-Ghazali's hierarchy of knowledge instruments. The final stage involved drawing conclusions regarding the practical implications of this integration for the learning of children with special needs. These three stages were carried out iteratively to ensure a coherent and well-grounded analysis of the relationship between Al-Ghazali's epistemological thought and the VAKT learning framework.

RESULTS

The Senses in the View of Imam Al-Ghazali

According to Al-Ghazali, knowledge is a means to enlightenment and enrichment of life, with the main goal of realizing oneself and God (Fadli, 2017). Al-Ghazali's epistemological framework consists of two main categories. First, knowledge that is sharia-based, derived from the Qur'an and As-Sunnah. Second, non-sharia knowledge obtained through reasoning, experience, and the five senses. Both categories encompass commendable knowledge that benefits humanity, including Ilmu Fardu Ain and Kifayah that must be studied individually and collectively (Iqbal, 2015).

According to Al-Ghazali, humans can understand reality and acquire knowledge through two ways. First, *i' tibār* or *istibhar* – observation followed by reasoning, where

the five senses act like a river that flows information to the heart. Second, through intuition (inspiration or revelation) that reveals true truth (Al-Ghazali, 1985). The first way allows the senses to act as soldiers of the heart that collect data from the physical-sensory world. The reports of the five senses are essential to the intellect, because the intellect cannot comprehend the physical world without the information conveyed by the senses (Mustofa, 2021).

Al-Ghazali articulates this metaphor vividly in *Ihya' Ulum al-Din* (Juz 1, Kitāb al-'Ilm, p. 13):

Then water gushed out from under the pool. And the water is clearer and more persistent. And sometimes abundant and more. So the heart is like a pool. And knowledge is like water. And the five senses are like a river... So that the heart is full of knowledge. And it may be that the rivers are clogged with khilwah, 'uzlah and pricking eyes. And hold on to it with its purification. And lifting the layers of the hijab from it. So that the fountain of knowledge radiates from it. (Al-Ghazali, 1985, Juz 1, p. 13)

From this expression, the senses are likened to a river – a connecting road through which knowledge travels to the heart, eventually producing wisdom and closeness to Allah (Wohlman, 2009).

Al-Ghazali further develops his skepticism toward the senses in *Al-Munqidz Min al-Dlalat*, particularly in Chapter I ("The Way of Sophistry and the Denial of All Knowledge"), paragraph 13. He argues that sensory perception is unreliable as an ultimate source of truth. While asleep, a person assumes their dreams to be indisputably real yet upon waking, they discover those beliefs were groundless. Al-Ghazali uses this dream argument to suggest that just as waking consciousness corrects the errors of dreaming, there may exist a higher state of awareness – the spiritual state of the Sufis that corrects the errors of ordinary waking consciousness (Al-Ghazali, 1980, Chapter I, para. 13; Sapitri, 2022).

In *Al-Munqidz*, Al-Ghazali also clarifies that he does not enumerate the five senses explicitly, since their existence is considered axiomatic and universally acknowledged. Rather, he focuses on the *epistemological function* and *limitations* of those senses, specifically naming the sense of touch (*Hāssat Al-Lams*), vision (*Hāssat al-Başar*), hearing (*Hāssat Al-Sam'*), and taste (*Hāssat al-Dzauq*) as instruments whose reports must be verified by reason and ultimately by inner spiritual experience (Damairi, 2020).

Al-Ghazali's view of learning is therefore not limited to rational-empirical events but also gives normative-qualitative attention to inner experience (Kolis & Artini, 2022). For Al-Ghazali, the highest form of knowledge *adz-dzawq* transcends both the senses and reason. In *Al-Munqidz*, he recounts that his doubts about sensory and rational knowledge were ultimately resolved not by argument, but by a divine light (*Nur*) from Allah, which convinced him that truly certain knowledge can only be obtained through *dzawq* – inner spiritual taste (Sapitri, 2022). This is why Al-Ghazali places *adz-dzawq* above both reason and sensory experience as the pinnacle of epistemological certainty.

In summary, Al-Ghazali's epistemological hierarchy can be understood as three ascending levels: (1) sensory knowledge (*al-hiss*), which provides initial empirical data about the physical world; (2) rational knowledge (*al-'aql*), which processes and verifies sensory information; and (3) spiritual knowledge (*al-dzawq / mukasyafah*), which transcends both and represents the highest form of truth accessible only through the purification of the heart.

Proposing VAKT-S: An Al-Ghazali-Informed Extension of the VAKT Framework

The existing VAKT framework encompassing Visual, Auditory, Kinesthetic, and Tactile modalities – has been widely validated as an effective approach for children with special needs (Basam & Sulfasyah, 2018; Ganesan et al., 2024; Ziadat, 2021). However, when examined through Al-Ghazali's epistemological lens, VAKT addresses only the first level of his knowledge hierarchy sensory experience. This reveals a significant theoretical gap: while VAKT effectively optimizes physical sensory engagement, it does not account for the inner dimensions of knowledge that, according to Al-Ghazali, are essential for complete human understanding.

This study therefore proposes an extension of the VAKT framework, termed **VAKT-S**, where "S" stands for **Spiritual** (*Rūḥāniyyah*). This is not a departure from VAKT but rather an enrichment grounded in Al-Ghazali's epistemology, which positions spiritual development as the natural culmination of sensory and rational learning. The VAKT-S framework argues that for children with special needs who are often underestimated in their capacity for spiritual awareness the integration of a spiritual dimension into multisensory learning is not only possible but essential, particularly within Islamic educational contexts.

What distinguishes VAKT-S from conventional VAKT is not a change in pedagogical technique, but a change in *educational intention and philosophical grounding*. In VAKT, the senses are engaged as ends in themselves learning is complete when the child has successfully processed sensory input. In VAKT-S, the senses are engaged as *means* instruments that collect data from the world, which are then processed by reason, and ultimately reflected upon in relation to divine consciousness. This mirrors Al-Ghazali's metaphor of the senses as rivers flowing into the pool of the heart: the goal is not the river itself, but the wisdom that accumulates in the heart.

Implementation of VAKT-S in Learning for Children with Special Needs

Research on VAKT learning methods demonstrates its effectiveness across various student competencies. Fajri Basam & Sulfasyah (2018) found that VAKT's multisensory approach significantly improved students' reading fluency. The VAK model has been shown to improve student learning outcomes dramatically, with achievement rates rising from 18% to 100% in some contexts (Fadli, 2017). For children with special needs specifically, studies highlight VAKT's effectiveness for dyslexia (Ziadat, 2021; Mohammed Mahmoud Ghoneim & Elghotmy, 2021; Jannah & Ainin, 2025), deafness (Jannah et al., 2024; AGUSLIATI, 2022), autism spectrum disorder

(Rohadi & Alias, 2021; Ganesan et al., 2024), moderate intellectual disabilities (Rois et al., 2023), and hyperactivity (Susanto & Nugraheni, 2020).

When these empirical findings are integrated with Al-Ghazali's epistemological framework under the VAKT-S model, the implementation for children with special needs can be structured as follows:

Table 2. VAKT-S Learning Framework Based on Al-Ghazali's Epistemology and Its Implementation for Children with Special Needs

Element	Al-Ghazali's Epistemological Basis	What VAKT-S Adds Beyond Standard VAKT	Implementation for Children with Special Needs
Visual (V)	The sense of sight (<i>Hāssat al-Baṣar</i>) functions as the first gateway of knowledge, collecting visual data as "soldiers of the heart." Sight is valid but fallible – visual impressions must be verified by reason.	Standard VAKT uses visuals for comprehension. VAKT-S adds intentional reflection: after visual engagement, students are guided to ask " <i>what does this tell us about God's creation?</i> " – transforming observation into contemplation.	For dyslexic students: use concrete visual media (pictures, graphs, color-coded text) to support reading. Follow with guided reflection questions that connect observed content to broader meaning and purpose.
Auditory (A)	The sense of hearing (<i>Hāssat Al-Sam'</i>) transmits information to the intellect, forming part of systematic knowledge (<i>'ilm al-mu'amalah</i>). Hearing is also morally accountable – what one listens to shapes the heart.	Standard VAKT uses audio for information delivery. VAKT-S incorporates <i>purposeful listening</i> – audio content is selected not only for cognitive value but for its capacity to nurture inner awareness, such as recitation of Qur'anic verses related to lesson themes.	For deaf students: maximize residual hearing or visual-auditory tools (lip reading, cochlear support). For those with some hearing capacity, incorporate purposeful auditory content. Pair with reflection on the spiritual significance of sound and communication.
Kinesthetic (K)	Physical movement and experience (<i>Hāssat Al-Lams</i> in its broader sense) are recognized by Al-Ghazali as	Standard VAKT uses movement for active learning. VAKT-S frames physical activity as <i>embodied worship</i> – the body	For children with moderate disabilities: use hands-on activities, role-play, and simulation. Frame

	sources of <i>'ilm al-mu'amalah</i> – practical knowledge related to worldly benefit.	acts as an instrument of knowledge that is accountable before Allah, motivating students to engage mindfully rather than merely mechanically.	physical activities within a meaningful narrative – connecting movement to purpose, not only to skill acquisition.
Tactile (T)	Direct contact with objects is a form of <i>idrāk al-hissī</i> (sensory knowledge) that provides foundational empirical data. Al-Ghazali acknowledges this as a valid but limited form of knowing.	Standard VAKT uses tactile media for concrete learning. VAKT-S encourages students to reflect on the <i>nature</i> of what they touch – recognizing material reality as <i>ayat</i> (signs) of Allah's creation, deepening the significance of tactile experience.	For children with learning disabilities: use 3D models, textured letters, manipulative objects. Encourage students to verbalize what they notice through touch, connecting tangible properties to broader conceptual understanding.
Spiritual (S)	<i>Adz-dzawq</i> and <i>mukasyafah</i> represent the highest epistemological level in Al-Ghazali's hierarchy – inner spiritual knowledge that transcends sensory and rational knowing. True knowledge is only complete when it illuminates the relationship between the self and God.	This is the element entirely absent from standard VAKT. VAKT-S explicitly incorporates spiritual reflection as a pedagogical component – not as an add-on, but as the <i>telos</i> (ultimate purpose) toward which all sensory learning is directed.	For all children with special needs, regardless of disability type: integrate brief moments of spiritual reflection (<i>dhikr</i> , short <i>du'a</i> , guided contemplation) after learning activities. Introduce theological concepts gently and age-appropriately. The goal is not doctrinal instruction but cultivating awareness that knowledge comes from and returns to Allah.

The VAKT-S framework thus represents a genuinely distinct contribution from standard VAKT implementation. Rather than simply "adding a spiritual session" to existing VAKT practice, VAKT-S restructures the *intention* behind every sensory engagement – from a purely cognitive exercise to a holistic journey of knowing that mirrors Al-Ghazali's epistemological hierarchy. In this sense, VAKT-S is not merely

an Islamic adaptation of VAKT, but an epistemologically grounded framework that answers a question standard VAKT does not ask: *toward what ultimate purpose is this learning directed?*

DISCUSSION

The findings of this study reveal a meaningful convergence between Al-Ghazali's classical epistemological framework and the contemporary VAKT learning approach, while simultaneously exposing a significant theoretical gap that the proposed VAKT-S framework seeks to address. Al-Ghazali's positioning of the five senses as valid yet limited instruments of knowledge reflects a sophisticated epistemological position that neither dismisses empirical experience nor elevates it to the status of ultimate truth. This nuanced stance distinguishes Islamic epistemology from both extreme rationalism and radical empiricism, and it is precisely this nuance that makes Al-Ghazali's thought relevant to contemporary educational discourse. By situating sensory experience within a broader hierarchy of knowing, Al-Ghazali offers a philosophical foundation that is both intellectually rigorous and spiritually grounded.

Al-Ghazali's epistemological hierarchy, as articulated in both *Ihya' Ulum al-Din* and *Al-Munqidz Min al-Dlalal*, positions the senses as the first gateway through which empirical data enters the heart, while recognizing that sensory knowledge is inherently fallible and must be processed through reason before being transcended by spiritual experience. This view resonates with the findings of Taqiyuddin (2020) and Mustofa (2021), who similarly emphasize that Islamic epistemology does not reject sensory experience but situates it within a broader hierarchy that includes rational and spiritual dimensions. What this study adds to that existing body of work is a direct application of this hierarchy to a concrete pedagogical framework, demonstrating that Al-Ghazali's thought is not merely a matter of historical interest but carries practical relevance for contemporary inclusive education. The three-tiered structure of sensory, rational, and spiritual knowledge provides a coherent theoretical basis for reimagining how learning is designed and evaluated.

The effectiveness of VAKT as a multisensory learning approach for children with special needs is well established in the literature. Studies by Ziadat (2021), Jannah et al. (2024), and Ganesan et al. (2024) confirm that engaging multiple sensory modalities simultaneously produces measurable improvements in reading fluency, letter recognition, and learning engagement across various disability categories. The approach has also demonstrated effectiveness for students with autism spectrum disorder, moderate intellectual disabilities, and hyperactivity, as documented by Rohadi and Alias (2021), Rois et al. (2023), and Susanto and Nugraheni (2020) respectively. The breadth of this empirical evidence underscores the robustness of VAKT as a pedagogical strategy and provides a strong foundation upon which the VAKT-S extension can be built.

However, a critical examination of existing VAKT literature reveals a common theoretical assumption shared across these studies: the senses are treated as neutral

conduits for information, and learning success is defined primarily in terms of observable cognitive or behavioral outcomes. This purely empiricist framing, while effective within its own terms, leaves unaddressed the question of what ultimate purpose the learning serves. It treats the child as a sensory processor rather than as a whole person whose development encompasses cognitive, moral, and spiritual dimensions simultaneously. It is precisely at this point that Al-Ghazali's epistemology offers its most distinctive contribution, by insisting that knowledge is not complete until it illuminates the relationship between the self and God.

By introducing the VAKT-S framework, this study argues that the integration of a spiritual dimension into multisensory learning is not a departure from sound pedagogical practice but its deepest fulfillment. Al-Ghazali's metaphor of the senses as rivers flowing into the pool of the heart provides a compelling philosophical justification for why sensory engagement must be accompanied by inner reflection. This is consistent with the findings of Kolis and Artini (2022), who observed that Al-Ghazali's educational philosophy consistently emphasizes the inseparability of cognitive and spiritual development. VAKT-S operationalizes this inseparability by reframing each sensory modality not merely as a channel for information but as an opportunity for the learner to move closer to awareness of God. The distinction between VAKT and VAKT-S is therefore not primarily technical but intentional and philosophical.

It is also important to address a potential objection to the VAKT-S framework: whether the addition of a spiritual dimension risks imposing an additional burden on children with special needs who already face significant learning challenges. This study argues that this concern, while legitimate, rests on a false dichotomy between cognitive and spiritual development. In Al-Ghazali's epistemology, spiritual awareness is not an additional cognitive demand imposed from outside but the natural telos toward which all genuine learning points. When implemented gently, briefly, and age-appropriately, spiritual reflection functions not as an extra task but as a source of meaning and motivation that can support rather than hinder the learning process. Research on holistic and values-based education more broadly suggests that a sense of purpose and meaning positively contributes to student engagement, emotional resilience, and intrinsic motivation (Darda et al., 2023; Fadli, 2017).

Furthermore, the VAKT-S framework has particular significance within the context of Islamic educational institutions in Indonesia and other Muslim-majority countries, where the integration of religious values into all aspects of schooling is not merely an aspiration but an institutional mandate. Islamic schools and special schools operating under Islamic auspices already possess the philosophical and cultural infrastructure to implement VAKT-S, given their existing commitment to the formation of students as whole persons accountable before God. What has been lacking is a theoretically coherent framework that bridges Islamic epistemological principles with evidence-based multisensory pedagogy. VAKT-S fills this gap by providing a model that is simultaneously grounded in classical Islamic thought and responsive to contemporary research on special needs education. In this sense, VAKT-S is not a

foreign imposition on Islamic educational tradition but an articulation of what that tradition has always implicitly understood about the purpose of learning.

Finally, this discussion acknowledges that the VAKT-S framework, as a theoretical proposition, requires empirical validation before its full potential can be assessed. The current study has demonstrated its internal coherence and its grounding in a robust epistemological tradition, but the question of how VAKT-S performs in actual classroom settings with real children across different disability profiles remains open. Existing VAKT research provides a strong empirical baseline from which comparative studies can be designed, and the three specific research directions outlined in the Limitations section of this study offer concrete pathways toward that validation. The theoretical promise of VAKT-S ultimately depends on its translation into practice, and it is the responsibility of future researchers, educators, and policymakers to undertake that translation with the rigor and intentionality that both Al-Ghazali's epistemology and the children it seeks to serve deserve.

IMPLICATIONS

Theoretical Implications

Theoretically, this research reinforces the integration of Islamic epistemology with modern learning theories by positioning the five senses as a valid, albeit limited, gateway to knowledge. It refines Al-Ghazali's classical thought by demonstrating that the senses function as "soldiers of the heart" that collect empirical data, which must then be synthesized through reason and ultimately validated through inner spiritual experience (*dzauq al-bathiniyyah*). By aligning these classical views with the multisensory VAKT framework and extending it into the proposed VAKT-S model, this study provides a robust epistemological foundation for holistic education that goes beyond what standard cognitive learning theories offer.

More specifically, this study contributes to the ongoing discourse on the limitations of purely empiricist learning theories. Western cognitive frameworks – such as those underlying the original VAKT model tend to treat sensory experience as a neutral, objective conduit for information, with learning success measured primarily through observable behavioral outcomes (Harahap & Salminawati, 2022; Ulum et al., 2023). Al-Ghazali's epistemology, by contrast, recognizes that sensory experience is neither neutral nor self-sufficient: it is shaped by the moral and spiritual condition of the perceiver, and its ultimate value lies in how it orientates the learner toward God. This is not merely a theological assertion but a philosophical position with significant implications for how we define the purpose of education itself. Rather than positioning Islamic epistemology as simply "alternative" to Western frameworks, this study argues that Al-Ghazali's thought offers a *complementary layer* one that addresses the spiritual and moral dimensions of learning that empiricist frameworks systematically exclude (Darda et al., 2023; Fahmi et al., 2024).

Furthermore, the introduction of VAKT-S as a conceptual framework contributes to the growing body of literature on culturally and spiritually responsive pedagogy. It

demonstrates that Islamic intellectual tradition is not only compatible with modern educational practice but is capable of enriching it in theoretically meaningful ways – particularly for inclusive education contexts where the question of human dignity and holistic development is paramount.

Practical Implications

Practically, this study offers concrete guidance for educators working with children with special needs, including those with dyslexia, deafness, autism spectrum disorder, and moderate intellectual disabilities. Based on the VAKT-S framework developed in this study, the following practical steps are recommended for classroom implementation:

First, in the **visual** dimension, teachers should select concrete and meaningful visual media such as pictures, color-coded flashcards, graphs, and short videos specifically matched to the disability profile of the student. For dyslexic students, visual media should emphasize letter and word recognition. Crucially, after visual engagement, teachers should guide students with simple reflection questions that connect the observed content to broader meaning, such as "*what does this teach us?*" moving the lesson beyond mere information transfer toward contemplation.

Second, in the **auditory** dimension, teachers working with students with mild hearing impairments should supplement spoken instruction with assistive audio tools. Beyond technical delivery, audio content should be selected not only for cognitive relevance but also for its capacity to nurture inner awareness for example, incorporating purposeful listening activities such as the recitation of short Qur'anic verses related to the lesson theme.

Third, in the **kinesthetic and tactile** dimensions, teachers should design hands-on activities, laboratory simulations, and manipulative-based tasks that engage students through movement and touch. These activities should be framed within a purposeful narrative helping students understand *why* they are doing what they are doing – rather than treating physical activity as purely mechanical drill.

Fourth, and most distinctively in VAKT-S, teachers must integrate the spiritual dimension not as a separate religious session but as a thread woven throughout the learning process. This can be as simple as opening and closing lessons with brief moments of reflection (*tafakkur*), encouraging students to express gratitude for their sensory abilities, or guiding students to recognize the materials they are learning as signs (*ayat*) of God's creation. These practices cultivate the habit of connecting knowledge to its divine source which is the ultimate goal of Al-Ghazali's epistemology.

Policy Implications

At the policy level, this study has important implications for the development of inclusive education curricula in Muslim-majority countries, including Indonesia. Current national frameworks for inclusive education such as those outlined in Government Regulation No. 17 of 2010 and the Ministry of Education's guidelines for

special needs education tend to focus primarily on accessibility and functional learning outcomes, without explicitly incorporating values-based or spiritual dimensions into the pedagogical framework (Jayanti & Pratisti, 2023; Susanto & Nugraheni, 2020).

This study suggests that policymakers and curriculum developers should consider integrating Islamic epistemological principles into the theoretical foundations of inclusive education policy. Specifically, the VAKT-S framework could serve as a model for developing a nationally recognized *Islamic Inclusive Education* curriculum strand – one that equips teachers not only with multisensory instructional techniques but also with the philosophical and spiritual grounding to understand *why* holistic education matters. Teacher training programs at Islamic universities (UIN/IAIN/STAIN) would be particularly well-positioned to pilot and disseminate this approach, given their existing mandate to integrate Islamic values across disciplines.

Additionally, this study calls for increased research funding and institutional support for empirical studies that test the effectiveness of spiritually integrated learning approaches for children with special needs in Indonesian Islamic schools (*madrasah*) and inclusive public schools. Without such evidence, the VAKT-S framework however theoretically sound, will remain difficult to advocate for at the policy level.

CONCLUSION

This study has examined Al-Ghazali's conceptualization of the five senses as sources of knowledge and analyzed its relevance to the VAKT learning approach for children with special needs. The findings confirm that Al-Ghazali does not reject the five senses as instruments of knowledge. Rather, he positions them as the first and necessary gateway through which empirical data flows into the heart functioning as "soldiers of the heart" that collect information from the physical world. However, Al-Ghazali is unambiguous that sensory knowledge alone is insufficient. It must be processed through reason and ultimately transcended through inner spiritual experience (*adz-dzawq / dzauq al-bathiniyyah*), which represents the highest level of epistemological certainty. This three-tiered hierarchy sensory, rational, and spiritual knowledge forms the core epistemological framework that this study has applied to the context of special needs education.

Building on this framework, this study proposes VAKT-S (Visual-Auditory-Kinesthetic-Tactile-Spiritual) as a theoretically grounded extension of the conventional VAKT approach. This is the primary conceptual contribution of the study. Unlike standard VAKT, which engages the senses as ends in themselves with learning success measured through observable outcomes, VAKT-S positions sensory engagement as a *means* instruments through which learners not only acquire empirical knowledge but are gradually oriented toward spiritual awareness and consciousness of God. This distinction is not trivial. It reframes the entire purpose of multisensory

learning: from a technical exercise in sensory compensation to a holistic developmental process that addresses the cognitive, rational, and spiritual dimensions of the human person simultaneously. For children with special needs who are often underestimated in their capacity for inner development, this reframing carries significant implications for how educators understand their role and their students' potential.

Practically, this study recommends that educators working with children with special needs particularly within Islamic educational institutions, adopt the VAKT-S framework as a guiding orientation rather than a rigid instructional script. Each sensory modality should be engaged with intentionality: visual and auditory activities should be followed by guided reflection; kinesthetic and tactile experiences should be framed within purposeful narratives; and spiritual moments brief, gentle, and age-appropriate should be woven throughout the learning process rather than treated as separate religious content. At the policy level, curriculum developers and educational authorities in Muslim-majority countries are encouraged to consider integrating Islamic epistemological values into the theoretical foundations of inclusive education frameworks. Future empirical research is needed to test the effectiveness of VAKT-S in actual classroom settings, particularly through longitudinal studies involving children with diverse disability profiles in both Islamic schools and inclusive public schools. It is through such evidence that the theoretical promise of VAKT-S can be translated into lasting educational practice.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The primary limitation of this study lies in its exclusive reliance on a library research approach. While the study successfully synthesizes theoretical concepts regarding Al-Ghazali's epistemological thought and the VAKT framework, it lacks direct empirical validation through field observations or experimental data involving children with special needs. The proposed VAKT-S framework, however theoretically grounded, has not yet been tested in actual classroom settings, and its practical effectiveness therefore remains to be demonstrated.

A second limitation relates to the scope of primary source analysis. Although this study draws on Al-Ghazali's key works, particularly *Ihya' Ulum al-Din* and *Al-Munqidz Min al-Dlalal*, a more exhaustive textual analysis across his broader corpus may yield additional nuances in his epistemological views that were not captured in this study.

Future research should transition from theoretical synthesis to empirical validation through several specific directions. First, a quasi-experimental study with a pre-test

and post-test design could be conducted to measure the effectiveness of VAKT-S compared to standard VAKT in improving learning outcomes for children with specific disabilities, such as dyslexia or mild intellectual disabilities, in Indonesian Islamic elementary schools. Second, a qualitative case study could be carried out at a specific Special School (*Sekolah Luar Biasa/SLB*) to document how teachers implement spiritually integrated multisensory learning in daily practice and how students respond to it across cognitive, emotional, and spiritual dimensions. Third, a longitudinal study tracking the development of children with special needs over one to two academic years under VAKT-S implementation would provide more robust evidence of the framework's long-term impact. These directions would collectively transform VAKT-S from a theoretical proposition into an empirically validated framework with real policy relevance for inclusive education in Muslim-majority contexts.

ETHICAL STATEMENT

This research adheres to established ethical standards by ensuring that all analyzed literature is treated with academic integrity and transparency. As a library-based study, formal IRB approval was not required; however, the research maintains strict confidentiality and ethical compliance by accurately citing and protecting the intellectual property of all primary and secondary sources.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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