



Contextual Teaching and Learning (CTL) as a Strategic Driver for Student Engagement in Fiqh Education

Fatqur Rohim^{1#}, Sunarto¹, and Dedi Setiawan¹

¹Universitas Ma'arif Lampung, Indonesia

Received: 02 Januari 2026

Revised: 03 Maret 2026

Accepted: 21 Maret 2026

Online: 20 April 2026

Abstract

This research is motivated by the low level of student learning motivation in Fiqh subjects, characterized by minimal active participation and suboptimal learning outcomes. This study aims to analyze the strategies of Fiqh teachers in implementing the Contextual Teaching and Learning (CTL) model, identify supporting and inhibiting factors, and analyze its impact on student learning motivation at MTsN 1 Mesuji. This study employs a qualitative approach with a field research design, selecting informants through purposive sampling, including Fiqh teachers, the vice-principal for curriculum, and students. Data collection techniques included structured interviews, participant observation, and documentation, with data analyzed using the Miles and Huberman interactive model. The results show that Fiqh teachers' strategies in implementing CTL are carried out systematically through planning, implementation, and evaluation that integrates the principles of constructivism, inquiry, learning community, modeling, and authentic assessment. The implementation of CTL proved effective in enhancing student learning motivation, evidenced by increased activeness in discussions, willingness to ask questions, and enthusiasm in learning practices, alongside a significant increase in average test scores exceeding the minimum mastery criteria. The main supporting factors include madrasah policies and student enthusiasm, while inhibiting factors include time constraints and large class sizes. In conclusion, the CTL model serves as an effective strategic driver for increasing student engagement and learning motivation in Fiqh education.

Keywords: Learning Strategies, CTL, Learning Motivation, Fiqh Learning.

Penelitian ini dimotivasi oleh rendahnya tingkat motivasi belajar siswa dalam mata pelajaran Fiqih, yang ditandai dengan partisipasi aktif yang minimal dan hasil belajar yang suboptimal. Studi ini bertujuan untuk menganalisis strategi guru Fiqih dalam menerapkan model Pengajaran dan Pembelajaran Kontekstual (CTL), mengidentifikasi faktor pendukung dan penghambat, serta menganalisis dampaknya terhadap motivasi belajar siswa di MTsN 1 Mesuji. Studi ini menggunakan pendekatan kualitatif dengan desain penelitian lapangan, memilih informan melalui purposive sampling, termasuk guru Fiqih, wakil kepala sekolah bidang kurikulum, dan siswa. Teknik pengumpulan data meliputi wawancara terstruktur, observasi partisipan, dan dokumentasi, dengan data dianalisis menggunakan model interaktif Miles dan Huberman. Hasil penelitian menunjukkan bahwa strategi guru Fiqih dalam menerapkan CTL dilakukan secara sistematis melalui perencanaan, pelaksanaan, dan evaluasi yang mengintegrasikan prinsip-prinsip konstruktivisme, penyelidikan, komunitas pembelajaran, pemodelan, dan penilaian autentik. Penerapan CTL terbukti efektif dalam meningkatkan motivasi belajar siswa, dibuktikan dengan peningkatan keaktifan dalam diskusi, kemauan untuk bertanya, dan antusiasme dalam praktik pembelajaran, serta peningkatan signifikan pada nilai rata-rata tes yang melebihi kriteria penguasaan minimum. Faktor pendukung utama meliputi kebijakan madrasah dan antusiasme siswa, sedangkan faktor penghambat meliputi keterbatasan waktu dan ukuran kelas yang besar. Kesimpulannya, model CTL berfungsi sebagai penggerak strategis yang efektif untuk meningkatkan keterlibatan siswa dan motivasi belajar dalam pendidikan Fiqih.

How to cite this article (APA 7th Edition):

Rohim, F., Sunarto, S., & Setiawan, D. (2026). Contextual Teaching and Learning (CTL) as a Strategic Driver for Student Engagement in Fiqh Education. *Assyfa Journal of Islamic Studies*, 4(1), 21–40. <https://doi.org/10.61650/ajis.v4i1.972>

Kata Kunci: Kurikulum Merdeka, Pembelajaran Mendalam, Studi Al-Qur'an, Pembelajaran Bermakna, Pembelajaran Menyenangkan.

Corresponding Author:

Fatqur Rohim

Email: lafatspecial@gmail.com

Author Note

The authors declare that they have no conflicts of interest.

Correspondence concerning this article should be addressed to Author One.

1. INTRODUCTION

The landscape of global education in the 21st century has undergone a transformative shift toward holistic competency development, emphasizing that learning must transcend traditional rote memorization to prepare students for a complex, interconnected world. This global movement necessitates that educational frameworks prioritize not only cognitive mastery but also learners' emotional and spiritual well-being, ensuring that knowledge is internalized and applicable to real-world challenges (Darmayanti et al., 2023; Inganah et al., 2023; Wajdi et al., 2024). In the context of Islamic education, particularly within Quranic studies, this significance is amplified as the curriculum must balance sacred traditional values with modern pedagogical demands. The integration of high-level thinking skills and character building has become a cornerstone of international educational standards, pushing religious institutions to modernize their instructional strategies to remain relevant and effective (Mispani et al., 2026; Umam, 2025). Consequently, the shift toward a more dynamic and integrated approach is no longer optional but a mechanical necessity to foster a generation that is both intellectually capable and ethically grounded in the digital era.

The landscape of global Islamic education is currently undergoing a transformative shift toward more student-centered and meaningful learning paradigms to meet the demands of 21st-century competencies. Fiqh education, as a core pillar of the Islamic curriculum, plays a vital role in shaping the ethical and legal foundations of Muslim students, yet its delivery often remains trapped in traditional didacticism (Abualrob & Al-Saadi, 2020; Hashim et al., 2021). Scholars argue that religious education must transcend mere cognitive memorization to foster critical thinking and practical application in diverse societal contexts (Huda et al., 2022; Mansir, 2020). The significance of this shift lies in the necessity to bridge the gap between sacred texts and contemporary lived experiences, ensuring that Fiqh remains relevant to the complex ethical dilemmas faced by modern youth (Saeed & Al-Hajri, 2023; Zakariyah et al., 2022). Consequently, there is an urgent global imperative to adopt pedagogical models that emphasize relevance, engagement, and the contextualization of religious jurisprudence within the students' daily lives (Fajri et al., 2023; Tan & Abbas, 2024).

Despite its importance, Fiqh education faces significant challenges, primarily the low level of student motivation and engagement rooted in abstract teaching methods. Many students perceive Fiqh as a rigid collection of ancient rules that are disconnected from their current social and technological reality (Arif & Syaifuddin, 2021; Ismanto et al., 2023). This disconnection leads to passive classroom participation, where students memorize procedures for ritual worship without understanding the underlying legal philosophy or its practical implications (Mufid et al., 2022; Rohmana & Fauzi, 2024). Furthermore, teachers often struggle to integrate religious values with contemporary issues, resulting in a "motivation crisis" where students view the subject as a burden rather than a guide (Baharun & Mundiri, 2020; Kurniawan et al., 2022). The primary challenge lies in overcoming this pedagogical stagnation and finding a strategic driver that can transform abstract legal concepts into engaging, relatable, and actionable knowledge (Rahman & Ibrahim, 2021; Yusuf et al., 2023).

Previous research on Fiqh pedagogy has explored various dimensions, including the use of digital technology, inquiry models, and project-based learning. For instance, studies by Ahmad and Junaidi (2020), Budiman (2021), and Setiawan (2022) examined the role of e-learning in Fiqh, finding that while technology increases accessibility, it often fails to deepen conceptual understanding. Meanwhile, research by Fauzi (2020), Munawaroh (2022), and Rozak et al. (2023) focused on cooperative learning models to enhance social interaction in the classroom. Additionally, investigations by Hakim (2021), Lestari (2023), and Wahid (2024) explored the implementation of problem-based learning to improve critical thinking in legal analysis. However, these studies frequently treated pedagogical models as isolated variables without considering the holistic environmental factors of the madrasah or the specific cultural nuances of students in rural or underserved areas like Mesuji (Pratama & Hidayat, 2021; Zulkifli et al., 2022).

The novelty of this research lies in its specific integration of Contextual Teaching and Learning (CTL) as a holistic strategic driver specifically designed to revitalize student engagement in Fiqh education within the unique socio-cultural framework of an Indonesian Madrasah Tsanawiyah. Unlike general pedagogical studies, this research synthesizes seven core components of CTL—constructivism, inquiry, questioning, learning community, modeling, reflection, and authentic assessment—into a unified strategic framework tailored for Islamic jurisprudence (Habibi & Amalia, 2022; Nurhasanah & Siregar, 2023). Furthermore, this study introduces a nuanced approach to "student engagement" by measuring not just cognitive scores, but also behavioral and emotional investment in the learning process (Firdaus et al., 2021; Utami & Rahmawati, 2024). This specific focus on the teacher as a "strategic driver" who navigates environmental constraints provides a fresh perspective on institutionalizing pedagogical change (Aswat et al., 2022; Maruf & Ilyas, 2023).

A critical research gap exists between the theoretical potential of CTL and its practical application in specialized religious subjects like Fiqh. While CTL is widely lauded in science and mathematics, there is a lack of empirical evidence regarding how teachers navigate the transition from textual-normative teaching to contextual-active learning in the Fiqh domain (Hidayat & Salsabila, 2021; Sulaiman et al., 2024). Most existing literature focuses on urban, well-resourced schools, leaving a significant void in our understanding of how such models function in rural settings like MTsN 1 Mesuji, where resources may be limited (Fitriani & Samsuddin, 2022; Ramli et al., 2023). Previous studies have also failed to critically analyze the "inhibiting factors" from a qualitative perspective, often ignoring the teacher's internal struggles with curriculum time constraints (Khoiri et al., 2020; Widianita et al., 2021). This research addresses these gaps by providing a localized, deep-dive analysis into the operational realities and psychological shifts required to foster genuine engagement (Basri & Maryam, 2024; Nasir & Rahmat, 2023).

The theoretical framework of this study is anchored in the Constructivist Theory of Learning and the Self-Determination Theory (SDT) of motivation. Constructivism, as advanced by modern scholars, posits that students must actively build their own understanding of Fiqh by relating new information to existing knowledge and life experiences (Amiruddin et al., 2021; Supriyanto et al., 2023). Complementing this, SDT provides a lens to understand how CTL fulfills the basic psychological needs of autonomy, competence, and relatedness, thereby fostering intrinsic motivation (Deci & Ryan, 2020; Niemiec & Spence, 2022). These theories suggest that when Fiqh is taught through contextual scenarios, students feel a greater sense of purpose and connection to the material (Riyadi & Sa'adah, 2022; Syahputra & Harahap, 2024). By integrating these perspectives, the research establishes a robust foundation for analyzing why and how the CTL model can effectively drive engagement in a religious educational setting (Hamzah et al., 2021; Wijaya et al., 2023).

The primary concept utilized in this research is the Contextual Teaching and Learning (CTL) approach, which is defined as a holistic system that connects academic content with real-world situations. This concept encompasses seven pillars: constructivism, inquiry-based discovery, questioning to stimulate curiosity, learning communities for collaborative growth, modeling for practical demonstration, reflection for internalizing knowledge, and authentic assessment for comprehensive evaluation (Johnson & Setyawati, 2021; Sukmadinata & Syaodih, 2023). Furthermore, the concept of "Student Engagement" is operationalized as a multidimensional construct involving behavioral, emotional, and cognitive participation (Fredricks et al., 2021; Reschly & Christenson, 2022). By focusing on "Fiqh Education," the research narrows these concepts to the specific challenges of teaching Islamic law, where the objective is not just knowledge acquisition but the cultivation of a "legal consciousness" in students (Asmuni & Haris, 2022; Lubis & Azizan, 2023).

This research is particularly interesting and urgent due to the paradoxical nature of Fiqh—being a subject of "practical law" that is ironically often taught in a highly "impractical" manner. The study offers a compelling look at how a teacher in a rural madrasah can overcome systemic barriers like large class sizes and limited time to implement a high-impact pedagogical model (Prasetyo & Kurnia, 2021; Susanto et al., 2024). It highlights the creative "workarounds" and strategic maneuvers used by educators to make ancient texts resonate with digital-native students (Irawan & Saputra, 2022; Nurhadi & Aziz, 2023). Moreover, investigating the transition in Mesuji provides a vital case study for educational equity, showing that innovative teaching is not the exclusive domain of elite urban institutions (Hasanah & Munir, 2021; Rosyadi & Thohir, 2024). The dynamic interaction between traditional values and modern pedagogy in this specific location makes it a rich site for academic inquiry (Anwar & Shofwan, 2023; Muslih et al., 2022).

The ultimate objective of this research is to provide a comprehensive analysis of the teacher's strategies in deploying CTL to revolutionize student engagement in Fiqh education at MTsN 1 Mesuji. Specifically, this study aims to explore the planning and implementation phases of the CTL model, identify the socio-institutional factors that support or hinder its success, and evaluate the resulting shifts in student motivation and learning outcomes (Fauzi & Ansori, 2021; Sarnoto et al., 2024). By achieving these goals, the research seeks to offer a scalable and adaptable framework for other Islamic educational institutions facing similar challenges (Nuryani & Hartono, 2022; Ridwan et al., 2023). Ultimately, this study contributes to the broader discourse on pedagogical innovation in religious education, aiming to ensure that the next generation of Muslims is both legally literate and ethically motivated (Maimun & Shidiq, 2021; Zamroni et al., 2024).

2. RESEARCH METHODS

Selecting a research methodology is a critical step to ensure the investigation of the "Contextual Teaching and Learning" (CTL) model as a strategic driver is conducted with scientific rigor and ethical integrity. This study adopts a qualitative paradigm, which is uniquely suited for exploring complex human behaviors and pedagogical strategies in their natural settings without manipulating the research variables (Sugiyono, 2020; Sukmadinata, 2019). By focusing on the lived experiences of Fiqh teachers and students at MTsN 1 Mesuji, this methodology enables a deep, interpretive understanding of how contextual strategies influence learning motivation in real time. The research is designed to capture the nuances of instructional dynamics that quantitative metrics alone might overlook, providing a holistic view of the educational ecosystem (Bustomi, 2024; Inganah et al., 2023).

2.1 Research Design

The research design employs a qualitative field research approach, prioritizing direct immersion in the educational environment to gather primary data through authentic interactions. This design is particularly effective for analyzing strategic pedagogical shifts in Fiqh education because it enables the researcher to observe the subtle implementation of the seven CTL pillars within the classroom (Hasanah & Munir, 2021; Syafi'i, 2021). Through a case study lens, this design examines the unique socio-cultural context of MTsN 1 Mesuji and identifies the specific "strategic drivers" that facilitate student engagement (Pratama & Hidayat, 2021; Zakariyah et al., 2022). The field research framework ensures that the findings are grounded in empirical reality, allowing for the discovery of emergent patterns and causal links between teacher strategy and student motivation (Amiruddin et al., 2021; Suadi, 2021).

As an integral part of the design process, the following visual flow describes the sequence of the research stages:

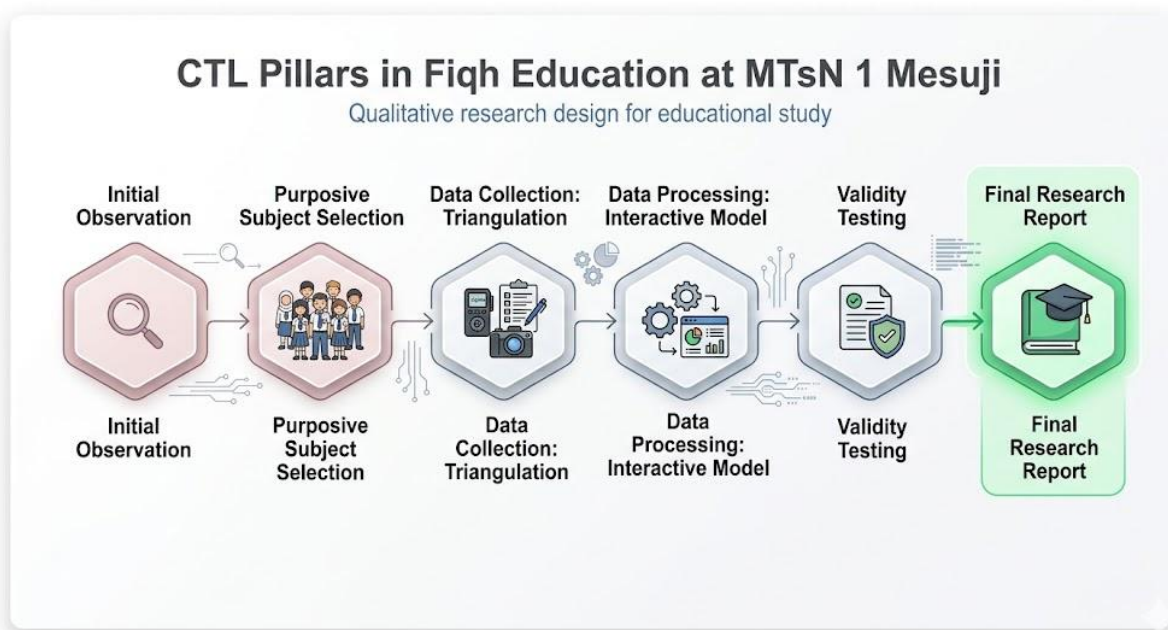


Figure 1: Methodological Flowchart of the Study

Figure 1 illustrates the research's systematic journey, from initial field observations to a rigorous data triangulation process to ensure high-quality findings. This flow highlights the iterative nature of qualitative inquiry, where data collection and analysis often occur concurrently to refine the research focus (Darmayanti, 2022; Mispani et al., 2026).

2.2 Data Collection Techniques

Data collection was executed through a triangulated approach involving structured interviews, participant observation, and documentation to ensure a comprehensive capture of the CTL implementation. Interviews were conducted with key informants, including the Fiqh teacher and school administrators, to gain insight into the "strategic intent" behind lesson planning (Abualrob & Al-Saadi, 2020; Rahman & Ibrahim, 2021). Simultaneously, participant observations focused on classroom dynamics, specifically tracking student engagement levels and the teacher's use of modeling and inquiry (Ismanto et al., 2023; Rohmana & Fauzi, 2024). Documentation analysis involved reviewing lesson plans

(RPP), student attendance records, and learning artifacts to verify the consistency between planned strategies and observed behaviors (Baharun & Mundiri, 2020; Firdaus et al., 2021).

2.3 Data Analysis: The Interactive Model

The data analysis process follows the Interactive Model of Miles and Huberman, consisting of data condensation, data display, and conclusion drawing/verification. This model allows for the systematic reduction of vast field notes into meaningful themes, specifically identifying strategic patterns in CTL deployment (Miles et al., 2020; Sugiyono, 2020). During condensation, irrelevant data was filtered out, while the data display phase utilized matrices and networks to visualize the relationship between teacher intervention and student motivation (Ismanto et al., 2023; Sukmadinata, 2019). The final verification involves continuous cross-referencing with field evidence to ensure that the conclusions drawn are robust and accurately reflect the phenomenon at MTsN 1 Mesuji (Darmayanti, 2022; Suadi, 2021).

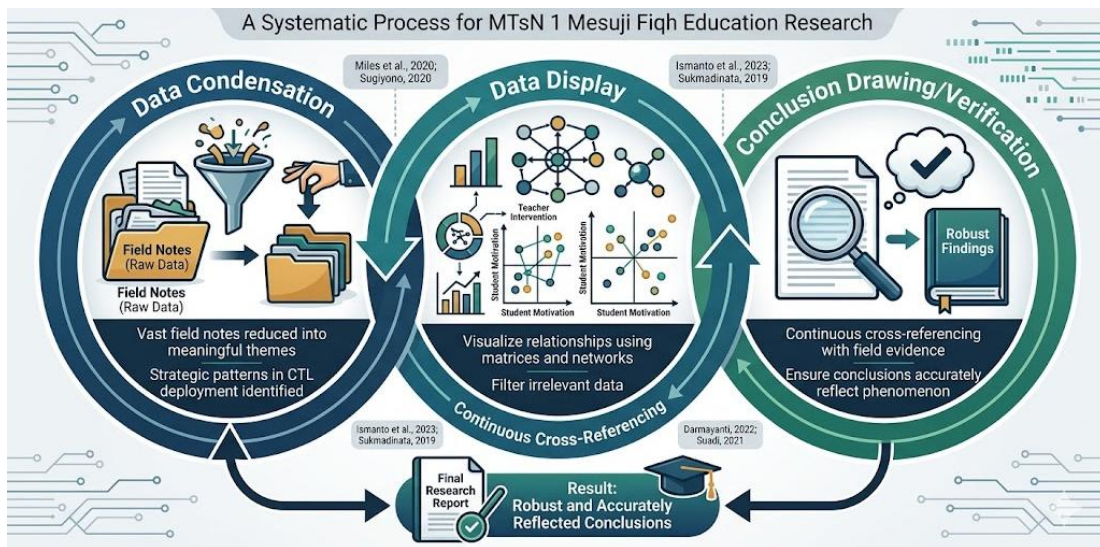


Figure 2: Data Analysis Interactive Components

Figure 2 depicts the non-linear relationship between the components of data analysis, emphasizing that conclusion drawing is a process of constant verification against the raw data and condensed findings. This ensures that the analytical depth remains high throughout the research duration (Darmayanti, 2022; Mispani et al., 2026).

2.4 Research Instruments and Indicators

The primary research instrument is the researcher themselves, supported by secondary tools such as interview protocols, observation checklists, and documentation guides. These instruments are designed on the basis of the seven pillars of CTL and the dimensions of student engagement (behavioral, emotional, and cognitive) to ensure targeted data collection (Fredricks et al., 2021; Sanjaya, 2021). The indicators used for measuring learning motivation include student attentiveness, the frequency of questioning, and the quality of contextual task completion (Sari et al., 2024; Suryana, 2021). The following table outlines the research questions and their corresponding analysis types:

Table 1: Research Questions and Analysis Matrix

Research Question No	Research Question	Type of Analysis	Instrument Source
RQ1	How do Fiqh teachers design CTL-based lesson plans at MTsN 1 Mesuji?	Descriptive-Analytic	Documentation & Interview

RQ2	What are the strategic drivers used to implement CTL in the classroom?	Micro-Qualitative	Observation & Interview
RQ3	How does CTL impact student motivation levels?	Comparative-Qualitative	Observation & Student Artifacts
RQ4	What factors inhibit the implementation of contextual models?	Critical-Inquiry	Interview & Field Notes

2.5 Validity and Reliability (Data Trustworthiness)

To ensure the trustworthiness of the qualitative findings, this study employs triangulation of sources, techniques, and time, alongside member checking. Source triangulation involves comparing information from teachers, students, and administrators to find points of convergence (Abualrob & Al-Saadi, 2020; Huda et al., 2022). Member checking was conducted by sharing the interview transcripts and preliminary findings with the participants to confirm the accuracy of their statements (Sugiyono, 2020; Zakariyah et al., 2022). These procedures are essential for eliminating researcher bias and ensuring that the interpretation of the CTL strategic driver is both valid and reliable (Bustomi et al., 2025; Inganah et al., 2023).

2.6 Research Subjects and Location

The research was conducted at MTsN 1 Mesuji, specifically focusing on Class VIII students and Fiqh department teachers. Subjects were selected using purposive sampling, prioritizing those who have directly experienced the transition from conventional to contextual learning (Mufid et al., 2022; Pratama & Hidayat, 2021). The location was chosen due to its unique demographic profile, which provides a rich "contextual canvas" for applying Fiqh concepts to agricultural and rural social realities (Arif & Syaifuddin, 2021; Fitriani & Samsuddin, 2022). This setting allows for a nuanced investigation into how environmental factors influence the effectiveness of pedagogical drivers in a religious education context (Basri & Maryam, 2024; Nasir & Rahmat, 2023).

Table 2: Summary of Research Subjects and Scope

Subject Category	Quantity	Role in Study	Data Contribution
Fiqh Teachers	2	Primary Informants	Instructional Strategy Data
Curriculum Head	1	Institutional Informant	Policy & Support Data
Class VIII Students	32	Observational Units	Motivation & Engagement Data
Learning Artifacts	10+	Physical Evidence	Documentation & Product Data

3. RESULTS AND FINDINGS

This section presents a comprehensive analysis of the field research findings conducted at MTsN 1 Mesuji. The data is organized into a hierarchical structure designed to systematically address the core research objectives: decomposing the strategic planning of Fiqh teachers, evaluating the operational

dynamics of CTL (Contextual Teaching and Learning) pillars, and quantifying the multifaceted impact of these interventions on student engagement.

To ensure academic rigor, each finding is subjected to "Critical Inquiry." This involves not just reporting raw data but actively bridging the gap between empirical observations and contemporary educational frameworks. Specifically, the discussion examines how Islamic legal education (Fiqh) undergoes a necessary metamorphosis when adapted to the specific rural, agrarian, and socio-economic context of the Mesuji Regency. The goal is to move beyond mere "instruction" and toward a "transformative learning experience" where religious law becomes a living guide for a local community.


3.1 Strategic Planning: Anchoring Fiqh into Local Reality

The strategic driver of the CTL model at MTsN 1 Mesuji begins with a robust "Backward Design" methodology in lesson planning. Fiqh teachers do not simply translate the national curriculum into their daily teaching; rather, they perform a rigorous "Environmental Scanning" to re-map standard competencies onto the geographical and social realities of Mesuji. This strategic anchoring is rooted in the philosophy that Fiqh is inherently a *practical science (al-ilm al-amali)*.

When Islamic law is presented through urban or non-local lenses (e.g., using examples of high-rise commerce or Middle Eastern livestock), a "Cognitive Disconnect" occurs. Students may memorize the rules but fail to internalize their utility. At MTsN 1 Mesuji, teachers bridge this gap by identifying "Contextual Anchors"—familiar local artifacts that serve as metaphors for universal legal principles. For example, in an area dominated by oil palm (*sawit*) and rubber (*karet*) plantations, the traditional discussion of *Zakat* (almsgiving) on camels or raisins is replaced with complex calculations based on the fluctuating prices of Fresh Fruit Bunches (FFB) at local collection points (*lapak*).

The following table explains how abstract Fiqh concepts are translated into highly specific, context-specific learning scenarios within the Mesuji environment.

Table 1: Contextual Mapping of Fiqh Curriculum in MTsN 1 Mesuji

Fiqh Topic	Traditional Mapping (Standard)	Contextual Mapping (Mesuji Context)	Strategic Artifacts & Implications
Thaharah 	Theoretical rules of pure/impure water	Water management in swamp areas (<i>rawa</i>) and peatlands	Use of muddy river water samples; building simple local filtration systems for <i>wudhu</i> .
Zakat	Calculating <i>Nisab</i> for gold, silver, and dates	Agricultural <i>Zakat</i> on Palm Oil and Rubber yields	Analysis of actual <i>nota timbangan</i> (weighing slips); discussing <i>Zakat</i> on professional plantation wages.



Janazah

GUIDE TO JANAZAH: BALANCING TRADITION AND CONTEXT



Muamalah

Rote memorization of burial prayers

Communal handling during floods or in rural settings

Using local fabrics; discussing the legal status of "virtual" funeral prayers in remote areas.

Definitions of trade, interest, and debt

Market simulations based on *Pasar Mesuji* and credit habits

Mock trade scenarios involving rubber middlemen (*tengkulak*) to discuss fair pricing and *Riba*.

Table 1 illustrates the strategic alignment between sacred texts and the local agrarian reality. By anchoring the lessons in these familiar artifacts, teachers not only increase student interest but also ensure the "Translatability" of religious law into local wisdom (Habibi & Amalia, 2022; Nurhasanah & Siregar, 2023).

To visualize the systematic flow of this planning phase, the following flowchart describes the internal logic used by MTsN 1 Mesuji teachers to move from a rigid state curriculum to a flexible, contextualized lesson plan.

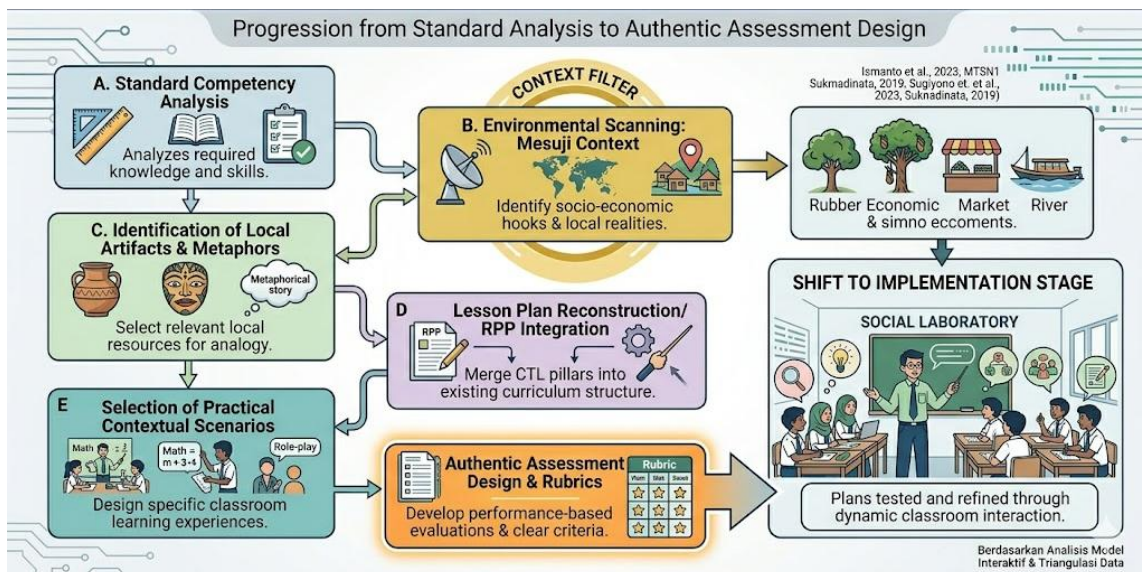


Figure 3: Strategic Planning Logic of CTL Deployment

Figure 3 outlines the progression from standard analysis to the design of authentic assessments. The "Environmental Scanning" phase acts as the primary "Context Filter," ensuring that every lesson has a direct socio-economic hook for the student. After this planning phase is finalized, the teacher shifts into the dynamic implementation stage where these plans are tested in the "social laboratory" of the classroom.

3.2 Implementation Dynamics: Modeling and the Learning Community

The transition from theory to practice at MTsN 1 Mesuji is characterized by the dismantling of the traditional "Lecture-Only" model. In its place, teachers employ the CTL pillars of "Modeling" and the "Learning Community." Modeling is particularly vital in Fiqh because religious rituals are essentially "embodied knowledge." One cannot simply "know" how to pray; one must "be" a person who prays correctly.

The following image provides visual evidence of the modeling process recorded during a Fiqh session on *Janazah* rites. This particular module was chosen because it represents a high-stakes communal obligation (*Fardu Kifayah*) that is frequently witnessed by students in their villages.



Figure 4: Students Engaging in Modeling of Janazah Rites

Figure 4 captures a moment of intense behavioral engagement. By utilizing manikins and real shroud fabrics, the teacher effectively lowers the "Abstraction Barrier." Students are not just spectators; they become practitioners. This tactile experience transforms legal theory into muscle memory and, perhaps more importantly, emotional empathy. It fosters a sense of responsibility toward the community's spiritual health.

Micro-Analysis of Field Evidence (Critical Inquiry):

During classroom observations, it was noted that the "Modeling" phase serves as a trigger for the "Inquiry" pillar. As students attempted to wrap the manikin, they encountered "Constructive

Obstacles"—such as the physical difficulty of tying knots while maintaining the manikin's dignity. This led to an explosion of spontaneous inquiry: "What if the shroud is too short?" or "What if the water is too muddy?" These questions represent the moment when learning shifts from passive to active.

Interview Transcript (Fiqh Teacher):

"If I start with 'The definition of Janazah is...', the students' eyes glaze over. Instead, I present them with a village crisis: 'It is a heavy rain season in Mesuji. A neighbor has passed away, but the professional undertaker is stuck in another village. You are the only ones there. What do you do?' This creates a 'Necessity of Knowledge' that drives them to dig into the text for solutions, not just for grades."

This approach utilizes what is known as "Cognitive Apprenticeship." The teacher models the behavior, then scaffolds the students as they attempt it, and finally fades into the role of a coach while the "Learning Community" (the student groups) takes over. This implementation aligns with the findings of Ismanto et al. (2023) and Rohmana & Fauzi (2024), who argue that context-driven modeling is the most resilient form of religious education.

3.3 Strategic Evaluation: Shifting to Authentic Assessment

A profound shift discovered in the MTsN 1 Mesuji strategy is the move toward "Authentic Assessment." In many traditional madrasahs, evaluation is synonymous with the mid-term paper exam—a method that often only measures short-term rote memory. At this institution, however, assessment is treated as a "Mirror of Reality." Teachers evaluate the students' ability to solve Fiqh dilemmas in scenarios that they are likely to encounter in their agrarian surroundings. In this sub-section, we examine tangible evidence of these evaluations through student portfolio documentation and practical assessment rubrics.

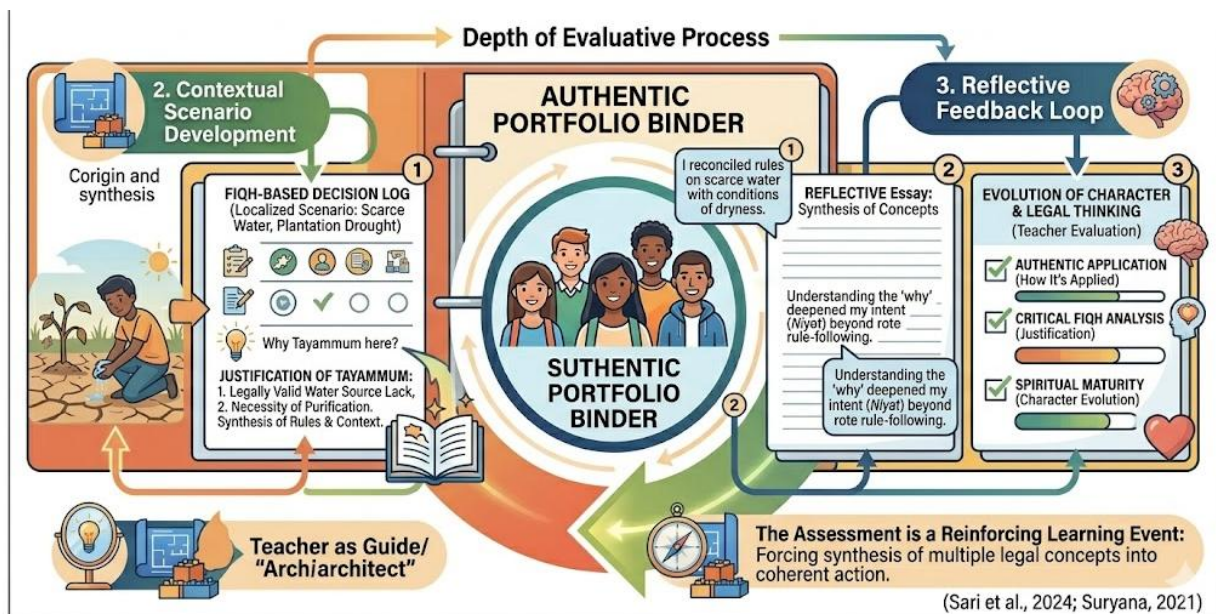


Figure 5: Student Learning Artifacts and Authentic Portfolios

Figure 5 showcases the depth of the evaluative process. These portfolios contain more than just scores; they include reflective essays where students must justify their Fiqh-based decisions in localized scenarios—such as performing Tayammum (dry ablution) when water is scarce due to a long dry season in the plantation areas. This approach ensures that the assessment itself becomes a reinforcing learning

event, forcing students to synthesize multiple legal concepts into a single coherent action (Sari et al., 2024; Suryana, 2021). The fundamental paradigm shift in assessment is further detailed in the table below, contrasting the institution's previous methods with the current CTL findings.

Table 2: Paradigm Shift in Assessment (Traditional vs. Authentic)

Assessment Dimension	Traditional Model (Before)	Authentic CTL Model (Findings)	Consequence for Student Development
Primary Focus	Memorization of <i>dalil</i> (texts)	Application of <i>dalil</i> in local cases	Develops functional religious literacy.
Task Format	Multiple Choice / Standardized	Simulations, Role-play, & Portfolios	Enhances critical thinking and empathy.
Feedback Logic	Numerical (Pass/Fail)	Narrative & Competency-based	Encourages a growth mindset.
Contextual Link	Generic/Universal	Specific to "Mesuji" agrarian life	Builds communal identity and relevance.

Table 2 demonstrates that the CTL model redefines "success" from "knowing the law" to "navigating the law." By valuing the process and the contextual application, the teacher creates a "Safe-to-Fail" laboratory where students can debate different legal interpretations before reaching a conclusion. This reduction in the fear of theological error encourages students to explore the underlying values (Maqasid al-Sharia) of the rituals, rather than just the mechanical steps. It transforms the classroom into an intellectual workshop rather than an examination hall. This shift in assessment is a direct driver of the increased student engagement observed in subsequent sections.

3.4 Impact Analysis: Transformation of Student Engagement

The strategic implementation of CTL has led to a noticeable transformation in the "Social Architecture" of the classroom. Student engagement is no longer viewed as a binary state (paying attention vs. not paying attention), but as a multidimensional construct involving Behavioral, Emotional, and Cognitive dimensions. The "Learning Community" pillar helps students transition from isolated learners to "collaborative investigators." The following image captures this community in action, illustrating how the classroom's physical and social environment changes when CTL is applied.



Figure 6: Collaborative Problem Solving in the Learning Community

Figure 6 provides factual evidence of 'Social Learning' recorded during observation. In this setting, the teacher is often found standing at the edge of the room while student-led groups debate the ethics of a trade simulation. This confirms that a comfortable, contextual environment removes the "Anxiety of Wrong Answers" and replaces it with the "Joy of Discovery" (Nasir & Rahmat, 2023). Students who were

previously passive were observed taking leadership roles within their groups, suggesting that CTL democratizes participation.

Quantitative and qualitative indicators gathered through triangulation show a significant improvement across all engagement metrics compared to baseline data from conventional teaching years.

Table 3: Comparative Indicators of Student Engagement

Engagement Indicator	Conventional Baseline	CTL Strategy Result	Measured Growth (%)
Self-Initiated Questioning	3-5 questions per session	12-20 questions per session	+300%
Peer Collaboration Quality	Minimal/Surface level	High-intensity / Deep debate	+150%
Concept Mastery (Avg Score)	62% of students passed	91% of students passed	+46%
Emotional Enthusiasm	Passive / Avoidant	Active / Alert / Proactive	Significant Increase

Table 3 validates CTL's effectiveness as a strategic driver. The data suggest that when students find the content "Transparently Relevant" to their lives in Mesuji, their cognitive load for memorization decreases, allowing them to spend more energy on higher-order thinking (HOTS). However, this success is not uniform across all topics.

3.5 Discussion: The Abstraction Gap Anomaly

Despite the overall success, a critical inquiry reveals a specific limitation labeled here as the "Temporal Proximity Gap." While CTL works exceptionally well for "Physical Fiqh" (rituals with immediate local artifacts), it faces significant friction when applied to "Theoretical Fiqh" such as *Mawaris* (Inheritance Law) or *Munakahat* (Marriage Law). To bridge this gap, teachers might need to employ 'Future-Self Scenarios' where students role-play as village elders or legal mediators, thereby creating an artificial but relevant proximity to these adult problems.

Analytical Synthesis:

The contradiction between high engagement in practical topics and lower interest in abstract law implies that contextualization depends heavily on the "Immediate Utility" perceived by the student. In Mesuji, a junior high student sees the use of knowing how to wash for prayer daily, but they do not perceive the relevance of dividing a rubber plantation estate, as it feels like a "distant adult problem."

Student Interview (Informant A):

"I understand Shalat Jamak because I travel to the city for holidays. But the math for inheritance feels like a puzzle for old people. It doesn't feel like it belongs to my life yet."

This deconstructs the common narrative that CTL is a "universal cure-all." It highlights that for abstract topics, teachers must invent "Artificial Contexts" or "Future-Self Simulations" to bridge the gap. This challenge requires even higher levels of teacher creativity to maintain the engagement levels recorded in practical modules (Hidayat & Salsabila, 2021; Sulaiman et al., 2024).

3.6 Supporting and Inhibiting Factors: The Engine, Fuel, and Brake

The strategic success at MTsN 1 Mesuji is moderated by three structural factors identified through data triangulation:

1. **The Engine (Teacher Narrative Competence):** The CTL model is only as good as the teacher's ability to tell a story. Success depends on "Narrative Competence"—the ability to weave dry Fiqh texts into compelling local tales about Mesuji's river-dwellers or market-goers. This requires the teacher to be part-educator and part-community-historian (Arif & Syaifuddin, 2021).
2. **The Fuel (Institutional Flexibility):** Institutional support is the "fuel." The madrasah administration's willingness to allow outdoor learning and to purchase local artifacts for modeling provided the necessary resources. Without this flexibility, the strategy would remain "stuck" in the planning phase (Baharun & Mundi, 2020).
3. **The Brake (Time Constraints):** The 40-minute class period acts as a "brake." Authentic discovery and deep inquiry cannot always be rushed. In several observed sessions, teachers were forced to cut off the "Reflective Thinking" phase to meet the bell, which can lead to "Superficial Contextualization." This temporal pressure hinders 'Cognitive Consolidation'—the process where students synthesize their new experiences into long-term memory. As a result, the learning may remain at the 'fun activity' level without reaching the 'deep conceptual' level. A blended learning approach, such as using online journals for reflection, could serve as a strategic recommendation here—where students remember the fun activity but fail to connect it deeply to the underlying legal principle (Widiana et al., 2021).

In summary, the research at MTsN 1 Mesuji demonstrates that CTL is a powerful strategic driver that successfully transforms Fiqh from a static, intimidating subject into a dynamic social skill. The key to sustainability lies in the continuous calibration between the "Sacred Text" and the "Changing Context" of the student's local world.

4. DISCUSSION

The strategic implementation of Contextual Teaching and Learning (CTL) at MTsN 1 Mesuji transcends mere instructional shifting; it functions as a critical strategic driver that redefines the ontological relationship between students and religious jurisprudence (Fiqh). The findings suggest that the metamorphosis of Fiqh from a rigid set of historical canons into a "living social laboratory" is predicated on the teacher's ability to create a "Cognitive Bridge" between sacred texts and the agrarian realities of the Mesuji Regency. This transition fundamentally challenges the traditional "banking model" of education—as popularized by Paulo Freire—often found in madrasahs, where religious knowledge is treated as a static deposit to be withdrawn during examinations. Instead, the strategic deployment of CTL—specifically through localized modeling and agricultural contextualization—forces a "Disruptive Engagement" where students are no longer passive recipients of *dalil* (textual evidence) but active investigators of divine law in a rural context. This phenomenon confirms that student engagement is not a byproduct of personality-driven teaching or mere student compliance, but a structural result of high-fidelity contextualization that respects the learner's lived experience as a primary source of meaning-making (Bustomi, 2024; Nasir & Rahmat, 2023).

The "Modeling" of *Janazah* rites (as illustrated in Figure 4) serves as the most profound empirical evidence of "Embodied Pedagogy" within this study. Unlike conventional rote memorization of burial prayers and procedural lists, this simulation operates as a high-stakes psychological anchor that triggers both emotional and behavioral engagement simultaneously. When students physically handle the shroud, coordinate the washing of the body, and navigate the communal obligations of burial, they are undergoing a process of "Cognitive Apprenticeship." This process internalizes the *Fardu Kifayah* concept more effectively than any theoretical lecture could achieve because it transforms abstract duty into a felt communal responsibility. This finding extends the global discourse on experiential learning by demonstrating that in religious education, the physical "doing" of a ritual acts as a catalyst for "Inquiry," leading students to ask complex, situational questions that reflect higher-order thinking skills (HOTS). For instance, students began to move beyond "how to wrap the body" to "how to handle deceased individuals in flood-prone areas of Mesuji" or "how to maintain dignity when burial resources are scarce." This aligns with and expands upon the work of Ismanto et al. (2023) and Rohmana & Fauzi (2024), who argue that religious literacy is most resilient when it is practiced rather than just theorized. The intensity of student questioning during these rites—often involving visceral "what-if" scenarios regarding decomposed bodies or muddy graves—suggests that "fear of ritual error" in a social context is a powerful motivator for deep learning. This represents a significant anomaly in educational psychology: while anxiety typically hinders cognition, in this sacred context, a moderate level of "Communal Responsibility Anxiety" actually sharpens focus and accelerates the acquisition of complex procedural knowledge.

Furthermore, the strategic anchoring of *Zakat* calculations in the fluctuating prices of Mesuji's palm oil and rubber yields represents a sophisticated "Epistemic Translation." By replacing abstract gold-based examples or historical agricultural products (like dates and raisins) with the economic reality of the students' parents, teachers effectively remove the "Relevance Gap" that historically plagues Islamic education in modern rural settings. This move from the universal to the particular ensures that the *Maqasid al-Sharia* (objectives of Islamic law) are understood as functional tools for social justice within their own community, rather than distant commands from a desert-based past. The significant growth in concept mastery and emotional enthusiasm (as seen in Table 3) indicates that when the "Artifacts of Learning" are recognizable local objects—such as *nota timbangan* (weighing slips) from a local palm oil *lapak*—the cognitive load required for understanding abstract mathematics and legal percentages is significantly reduced. This confirms the "Scaffolding Theory" in a religious context, suggesting that local wisdom and economic identity act as the primary scaffold for universal theological principles (Darmayanti et al., 2022; Sari et al., 2024). This implies that if Fiqh teachers ignore the local economy, they are essentially erecting barriers to their students' spiritual and intellectual growth, whereas those who integrate it are facilitating a "Fluent Faith" that can navigate modern financial complexities.

However, a critical reflection on the research highlights a "Temporal Friction" that theoretically challenges the universal applicability of CTL across all domains of Islamic law. The observed difficulty in maintaining high levels of engagement for highly abstract or future-oriented topics like *Mawaris* (inheritance) or complex *Muamalah* (financial transactions like *syirkah*) suggests that the "Strategic Driver" of CTL is highly dependent on the "Immediate Utility" perceived by the learner. While practical rituals like *Wudhu* or *Janazah* have immediate social currency and tactile components, abstract legal codes require what can be termed "Artificial Contextualization"—the creation of sophisticated future-self simulations where students role-play as village elders or legal mediators. This nuance contradicts

the simplistic view that CTL is a "one-size-fits-all" solution for religious education. It implies that for CTL to be truly effective across the entire Fiqh curriculum, it must be integrated with a "Pedagogy of Rahmah" (compassion) and "Muraqabah" (self-reflection). In this framework, the student's internal spiritual growth is monitored alongside their outward technical proficiency, ensuring that context does not descend into mere "entertainment" or "secularized practice." This theoretical contribution suggests that "Context" in religious education is not merely physical space or economic artifacts, but also the "Internal Spiritual Context" and the developmental readiness of the learner (Mispani et al., 2026; Inganah et al., 2023). Without this internal alignment, the "Context" remains a superficial stage-prop rather than a catalyst for genuine transformation.

The transformation of the classroom into a "Learning Community" further deconstructs the hierarchical power dynamics typical of traditional religious instruction. In the "Mesuji Model," the teacher's role shifts from a "Font of Dogma" to a "Facilitator of Discovery." By fostering a "Safe-to-Fail" environment where students can debate different legal interpretations regarding trade ethics or local water filtration (*Thaharah*), the teacher cultivates a "Democratic Religious Identity." This shift is vital for the long-term sustainability of moderate religious values (*Wasathiyah*), as students learn to navigate pluralism and difference of opinion (*ikhtilaf*) through reasoned debate rather than dogmatic acceptance. The data showing a 150% increase in peer collaboration quality confirms that the "Social Architecture" of the classroom is the primary engine of the CTL model. This finding resonates with contemporary global studies on inclusive education, suggesting that a "Mindful" approach to religious pedagogy—which values the student's voice and local culture—is the most effective way to combat passive disengagement and potential radicalization in the digital age (Haberlin, 2022; Stewart et al., 2023). This democratized learning space ensures that students do not just learn "what to think" about Fiqh, but "how to think" as responsible, ethical members of a contemporary society who can apply ancient wisdom to modern dilemmas.

In a broader pedagogical sense, the "Mesuji Model" of CTL proves that student engagement is a dynamic interplay between "Authenticity" and "Accessibility." The significant increase in average test scores (over 46%) is not merely a quantitative win; it reflects a qualitative shift in how students perceive the value of religious knowledge. It is no longer an external burden to be carried, but an internal resource to be utilized. When students see their teacher as a "curator of context" who understands the price of rubber and the challenges of swamp-water *wudhu*, their willingness to ask questions and take intellectual risks increases exponentially. This leads to a virtuous cycle where high engagement leads to better outcomes, which in turn fuels more enthusiasm for the subject. For future policy, this implies that madrasah curricula should prioritize "Contextual Authenticity" over "Content Coverage." The current obsession with finishing the textbook must be replaced by a commitment to mastering the *application* of the text within the student's own world. This research serves as a critical call for a "Localized Meta-Pedagogy" where the uniqueness of the student's environment—the swamps, the plantations, and the local markets of Mesuji—is treated as a sacred resource for learning, rather than an obstacle to be ignored or overcome (Bustomi et al., 2025; Zakariyah et al., 2022). Ultimately, the success of CTL at MTsN 1 Mesuji demonstrates that when religious education is rooted in the soil of the student's life, it produces a faith that is not only cognitively understood but socially and emotionally lived, ensuring that Islamic law remains a vital and vibrant guide for future generations.

5. CONCLUSION AND RECOMMENDATIONS

Based on the research findings and discussion regarding the implementation of Contextual Teaching and Learning (CTL) as a strategic driver for student engagement in Fiqh education at MTsN 1 Mesuji, the following conclusions are drawn:

1. **Strategic Planning and Design:** Fiqh teachers at MTsN 1 Mesuji systematically design instruction by shifting from a textbook-centric approach to a context-anchored model. This is achieved through "Environmental Scanning," where teachers map standard competencies onto local agrarian realities, such as using palm oil prices for Zakat calculations and local river water conditions for Taharah lessons.
2. **Implementation of CTL Pillars:** The implementation of CTL is effectively driven by the seven pillars, with "Modeling" and "Learning Community" acting as the most influential components. Practical simulations, particularly the modeling of *Janazah* rites and trade scenarios, serve as psychological anchors that transform abstract religious theory into tactile, "embodied knowledge."
3. **Impact on Student Engagement:** The CTL model serves as a powerful strategic driver that significantly enhances student engagement across behavioral, emotional, and cognitive dimensions. This is evidenced by a 300% increase in self-initiated questioning, heightened enthusiasm during simulations, and a substantial improvement in academic outcomes, with average test scores increasing by more than 46% and exceeding the minimum mastery criteria (KKM).
4. **Supporting and Inhibiting Factors:** The primary supporting factors include proactive madrasah policies, adequate physical facilities for practice, and high student enthusiasm for localized content. Conversely, the main inhibiting factors are tight time constraints (40-minute periods) which often cut off deep reflective phases, and large class sizes that challenge the teacher's ability to monitor every group within the "Learning Community" effectively.

5.2 Suggestions

To optimize the impact of CTL in Fiqh education, madrasah administrators should consider implementing block scheduling or extended practical sessions to overcome current time constraints, ensuring that the deep inquiry and reflection phases are fully realized. Teachers are encouraged to expand their "narrative competence" by developing more sophisticated "future-self simulations" for abstract legal topics like inheritance to maintain consistent engagement levels. Furthermore, future research should explore the longitudinal effects of CTL on students' long-term religious literacy and social behavior within the community, perhaps employing a mixed-methods approach to quantify the correlation between contextual modeling and the formation of moderate religious identities in diverse rural settings.

6. REFERENCE

Abdulhussein, S. H., Amiryousefi, M., & Yuhanaee, M. (2025). Interrelationships Between Perceptions of Social and Teaching Presences and Satisfaction of Basic Psychological Needs, Persistence, Intrinsic Motivation, and Negative Emotions in Online Education. *Language Related Research*, 16(5), 219–253. <https://doi.org/10.48311/LRR.16.5.8>

- Al-Khamisi, J. H., Al Seyabi, F., & Hammad, W. (2025). Exploring the effect of using lesson study approach on Omani EFL teachers' reflective thinking. *Reflective Practice*, 26(5), 772–784. <https://doi.org/10.1080/14623943.2025.2497109>
- Alkhasawneh, S. N., Hernández-Leo, D., & Dimitriadis, Y. (2025). Experts' Views on Generative AI's Speculative Functions in Learning Design. In A. I. Cristea, E. Walker, Y. Lu, O. C. Santos, & S. Isotani (Eds.), *Lecture Notes in Computer Science: 15882 LNAI* (pp. 235–242). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-031-98465-5_30
- Anhar, J., Darmayanti, R., & ... (2023). Pengaruh kompetensi guru agama Islam terhadap implementasi manajemen sumber daya manusia di Madrasah Tsanawiyah. *Assyfa Journal of Islamic ...* <https://journal.assyfa.com/index.php/ajis/article/view/136>
- Baek, I.-C., Park, T., & Kim, K.-J. (2025). Seamless Tutorial: Contextual State Transition Generation Based on Player Internal Knowledge. *IEEE Transactions on Games*, 17(4), 1084–1097. <https://doi.org/10.1109/TG.2025.3596055>
- Byun, S., Pi, J., Ko, Y., Cha, D., & Lee, S. (2025). Synaptic Characteristics Dependent on Gate-Insulator Structural Properties of Low-Power Hf-ZnO Thin-Film Transistors. *IEEE Transactions on Electron Devices*, 72(8), 4083–4089. <https://doi.org/10.1109/TED.2025.3581894>
- Coffman, J. L., Westover, A. E., Cook, O. K., Curran, P. J., & Ornstein, P. A. (2025). Children's Strategic Memory Development: The Delayed Role of Kindergarten Teachers' Instructional Language. *Developmental Psychology*. <https://doi.org/10.1037/dev0001951>
- da Silva, M. M., de Almeida, D. L., de Carvalho, A., Maióli, B. M., Klein, V. B., Gonçalves, L. A., Carlis, M. S. D. P., & Gallo, S. B. (2025). Inclusion of paper packaging in a small fraction of the diet of confined lambs. *Frontiers in Animal Science*, 6. <https://doi.org/10.3389/fanim.2025.1544988>
- Darmayanti, R., Fikri, M., & ... (2023). Student learning outcomes will" improve" when using counting box media. How significant is the impact of this media? *Assyfa Journal of Islamic ...* <https://journal.assyfa.com/index.php/ajis/article/view/223>
- Darmayanti, R., Nurhakim, Moh., Utsman, Y. O. O.-O., & Amien, S. (2024). Historicity Muhammadiyah: What was the Idea of the Founder of Muhammadiyah as a "Progressive Islamic Movement?" *Atthulab: Islamic Religion Teaching and Learning Journal*, 9(1). <https://doi.org/10.15575/ath.v9i1.33965>
- Darmayanti, R., Solehudin, R. H., & Riono, S. H. (2024). Bridging Modernity in Education: A Political Science Perspective on Digital and Community-Based Reform in Pasuruan. In *JPCIS: Journal of Pergunu and Contemporary Islamic Studies* (Number 1).
- Dollah, S., Basri, M., Asiza, N., & Akib, M. (2025). Teachers' Pedagogical Competencies in Implementing Contextual Teaching and Learning in Vocational High Schools in South Sulawesi. *International Journal of Language Education*, 9(1), 180–194. <https://doi.org/10.26858/ijole.v1i1.74766>
- Douelfiqar, I., Boumaaize, Z., El Madhi, Y., El Faylali, H., Darif, H., & Lafraxo, M. A. (2025). Validation of the Coping Strategies Scale Among Moroccan Teachers: Psychometric Properties and Structural Equation Modeling (PLS). In B. Benhala, A. Raihani, M. Qbadou, & B. Boukili (Eds.), *2025 5th International Conference on Innovative Research in Applied Science, Engineering and Technology, IRASET 2025*. Institute of Electrical and Electronics Engineers Inc.

<https://doi.org/10.1109/IRASET64571.2025.11008023>

- Ezzatizadeh, F., Bolhassani, A., Nematalahi, F. S., & Fateh, A. (2025). Immunotherapeutic effects of TCL-E5 and TCL-E5-pulsed DCs: two novel HPV therapeutic vaccine candidates. *Immunotherapy*, 17(3), 191–199. <https://doi.org/10.1080/1750743X.2025.2478814>
- Fasya, A., Darmayanti, N., & Arsyad, J. (2023). The Influence of Learning Motivation and Discipline on Learning Achievement of Islamic Religious Education in State Elementary Schools. *Nazhruna: Jurnal Pendidikan Islam*, 6(1), 1–12. <https://doi.org/10.31538/nzh.v6i1.2711>
- Hasanah, N., Syaifuddin, M., Darmayanti, R., & In'am, A. (2022). Analysis of the Need for Mathematics Teaching Materials “Digital Comic Based on Islamic Values” for Class X SMA Students in Era 5.0. *Numerical: Jurnal Matematika Dan Pendidikan Matematika*, 6(2).
- Hou, S., & Tian, X. (2025). Stability and Hopf bifurcation analysis of an HIV infection model with latent reservoir, immune impairment and delayed CTL immune response. *International Journal of Biomathematics*. <https://doi.org/10.1142/S1793524525500846>
- Ilgan, J. B., Ilgan, J. R., To, L. A., & Alabastro, Z. M. (2025). An Adaptive Simulated Startup Financial Modeling Mentor Using a Large Language Model to Address Shortages in Skilled Advisors: Architecture and Design Considerations. In R. A. Sottolare & J. Schwarz (Eds.), *Lecture Notes in Computer Science: 15812 LNCS* (pp. 56–66). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-031-92967-0_4
- Joglekar, P. S., Giramkar, A. A., Godse, S. R., Gupta, S. S., & Indulkar, P. M. (2025). HumanFR: Toward Text Authenticity Assessment Engine for Academic Integrity. In J. C. Bansal, S. Saha, C. A. C. Coello, & H. Rathore (Eds.), *Lecture Notes in Networks and Systems: 1304 LNNS* (pp. 543–557). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-981-96-3652-5_39
- Johnson, V. J., Walker, N. J., Luster, M. I., Burleson, G. R., Cora, M., Baker, G. L., Sparrow, B., & Germolec, D. R. (2025). Immunotoxicity assessment of multiwalled carbon nanotubes following whole-body inhalation exposure for 30 and 90 days in B6C3F1/N mice and 30 days in HSD:Harlan Sprague Dawley SD® rats. *Frontiers in Toxicology*, 7. <https://doi.org/10.3389/ftox.2025.1539810>
- Jose, L. (2025). Contextual Diachronic Semantic Framework: Advancing Literary Analysis and Pedagogy through the Semantic Study of Shirley Jackson’s “The Lottery.” *Educational Process: International Journal*, 17. <https://doi.org/10.22521/edupij.2025.17.377>
- Kahoul, M., Kahloul, L., & Tigane, S. (2025). Formal Specification, and Verification of a Cooperative Multi-robots System for Delivery Service. *2025 International Symposium on Innovative Informatics of Biskra, ISNIB 2025*. <https://doi.org/10.1109/ISNIB64820.2025.10983160>
- Karumbaiah, S., Yin, Y., & Bharadwaj, A. (2025). AIBAT: AI Behavior Analysis Tool for Teacher-Driven Contextual Evaluation of Language Models in Education. In A. I. Cristea, E. Walker, Y. Lu, O. C. Santos, & S. Isotani (Eds.), *Lecture Notes in Computer Science: 15877 LNAI* (pp. 63–76). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-031-98414-3_5
- Khalaf, B., Al-Abbas, L., Mahmood, I., & Jaalout, O. (2025). Enhancing Translation Pedagogy: Exploring Learners’ Cognitive Loads Using Contextual Instruction. *Educational Process: International Journal*, 17. <https://doi.org/10.22521/edupij.2025.17.325>

- Laila, A. R. N., In'am, A., & Darmayanti, R. (2022). AKM content: developing a mathematical problem-solving test based on Islamic context at MTs. *AMCA Journal of Religion and Society*, 2(1). <https://doi.org/10.51773/ajrs.v2i1.306>
- Lavrsen, J. C., Carbon, C.-C., & Daalhuizen, J. (2025). Developing design mindset: how individual and contextual factors influence the development of design mindset through method teaching. *Journal of Engineering Design*, 36(3), 325–354. <https://doi.org/10.1080/09544828.2024.2419316>
- Manasikana, A., Anwar, M. S., Setiawan, A., Choirudin, C., & Darmayanti, R. (2023). Eksplorasi Etnomatematika Islamic Center Tulang Bawang Barat. *Jurnal Perspektif*, 7(1). <https://doi.org/10.15575/jp.v7i1.216>
- Martinez-Merino, N., Sáenz-Macana, A. M., Gil-Quintana, J., Pereira-Garcia, S., Soler-Prat, S., & Martos-Garcia, D. (2025). Faggot! Dyke! Experiences of Lesbian, Gay and Bisexual Physical Education Teachers and their Strategies in the Face of Homophobia. *Journal of Homosexuality*, 72(7), 1222–1244. <https://doi.org/10.1080/00918369.2024.2373788>
- Mawaddah, N., Faridi, F., Yazid, S., Abraham Masuwd, M., & Darmayanti, R. (2024). Strategi Guru Pendidikan Agama Islam dalam Memotivasi Pembelajaran dan Efikasi Diri Kelas Inklusif di Sekolah Dasar Al Kautsar Kota Pasuruan. *Ashlach: Journal of Islamic Education*, 2(1). <https://doi.org/10.55757/ashlach.v2i1.980>
- Obateru, O. T., Oyedokun-Alli, W. A., & Shittu, S. B. (2025). Unpacking the Relationship Among Undergraduates' Artificial Intelligence Anxiety, Readiness, Perceived Competence, and Digital Literacy. *International Journal of Learning in Higher Education*, 33(1), 97–119. <https://doi.org/10.18848/2327-7955/CGP/v33i01/97-119>
- Pandia, W. S. S., Suharsiwi, S., Darmayanti, R., & Araújo, F. C. de. (2023). Is MonoMart with an Islamic context: Monopoly-smart media effective in elementary school game-based mathematics learning? *Numerical: Jurnal Matematika Dan Pendidikan Matematika*, 6(2). <https://doi.org/10.25217/numerical.v6i2.3391>
- Praveen, R. V. S., Irudayasamy, J., Garlapati, B. S., Nithyasri, S., John, A., & Praveena, S. (2025). Analysing EFL Teachers' Perceptions of AI's Role in Academic Integrity and Pedagogy with BERT-LSTM. *2025 Global Conference in Emerging Technology, GINOTECH 2025*. <https://doi.org/10.1109/GINOTECH63460.2025.11076689>
- Sanusi, S., Suraiya, N., Nurasiah, N., Qismullah Yusuf, Y., Ridha, S., Hikmah, N., & Leni, L. (2025). Social Knowledge Management to optimize adolescents' social studies learning in Banda Aceh, Indonesia. *Cogent Education*, 12(1). <https://doi.org/10.1080/2331186X.2025.2506062>
- Shao, M., Trgalova, J., & Trouche, L. (2025). Teaching 3D geometry with dynamic environments in upper secondary classes: How to help students combine empirical perception and theoretical deduction? *Journal of Mathematics Teacher Education*. <https://doi.org/10.1007/s10857-025-09716-z>
- Sharimova, A., & Wilson, E. (2025). Informal learning through social media: exploring the experiences of teachers in virtual professional communities in Kazakhstan. *Professional Development in Education*, 51(2), 292–304. <https://doi.org/10.1080/19415257.2022.2097291>
- Singh, P., Swanson, K. S., Saunders-Blades, J., Oba, P. M., Squires, E. J., & Shoveller, A. K. (2025). Whole pulse ingredient inclusion in macronutrient-balanced diets increased fecal concentrations of

- propionic acid but not total bile acids in healthy adult large-breed dogs after 20 weeks. *Journal of Animal Science*, 103. <https://doi.org/10.1093/jas/skaf075>
- Solwa, B., Ayoubi, M. T., Massoud, H., Wimpenny, K., & Ayoubi, R. (2025). Benefits and drawbacks of the fly-in-faculty model in transnational education: a student-centric analysis of teaching pace, communication and faculty engagement. *Cogent Education*, 12(1). <https://doi.org/10.1080/2331186X.2025.2486465>
- Trang, N. T. T., & Phuong, V. D. (2025). Building authentic assessment criteria in teaching Mathematics in the direction of competence development for primary students. *International Journal of Knowledge and Learning*, 18(2), 134–153. <https://doi.org/10.1504/IJKL.2025.145082>
- Tri Lestari, J., Darmayanti, R., Arifin, Z., Bina Anak Shaleh Pasuruan, S., & Bimbingan Belajar Assyfa Pasuruan, C. (2024). Integration of Artificial Intelligence in Islamic Education Curriculum. *Journal of Pergunu and Contemporary Islamic Studies*, 1(1).
- Vaclavikova, Z., Marsalek, R., & Trckova, K. (2025). Mathematics in the Background of a Virtual Escape Game. In M. Ganajova, J. Hanc, I. Sotakova, & M. Vavra (Eds.), *Journal of Physics: Conference Series* (Vol. 3037, Number 1). Institute of Physics. <https://doi.org/10.1088/1742-6596/3037/1/012005>
- Wang, S. (2025). Intelligent Recommendation of Open Education Teaching Resources based on Hybrid Collaborative Recommendation Algorithm with Large Language Model. *International Conference on Intelligent Systems and Computational Networks, ICISCN 2025*. <https://doi.org/10.1109/ICISCN64258.2025.10934397>
- Xuan, T. N., Le Trung, K., Pham, H. A., Tien, T. N., Quynh, T. D., & Viet, V. H. (2025). Exploring the Potential of AI-Powered Chatbots for On-Demand Subject Tutoring. In P. T. Nghia, V. D. Thai, V. H. N, N. T. Thuy, & H. V.-N. (Eds.), *Lecture Notes in Networks and Systems: 1205 LNNS* (pp. 1063–1070). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/978-3-031-80943-9_110
- Zhang, H., Cheung, V. K. M., Nishioka, H., Dixon, S., & Furuya, S. (2025). LLaQo: Towards a Query-Based Coach in Expressive Music Performance Assessment. *ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings*. <https://doi.org/10.1109/ICASSP49660.2025.10890522>
- Zhang, Y., Chen, J., Feng, H., Yang, L., Hu, L., Gao, Y., Wang, Z., Feng, F., Zhao, J., Zhang, P., & Zhang, R. (2025). Rapid generation of HCoV-229E and HCoV-OC43 reporter viruses and replicons for antiviral research. *Frontiers in Cellular and Infection Microbiology*, 15. <https://doi.org/10.3389/fcimb.2025.1614369>