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An Investigation into the Impact of Constructivistic Approach on Islamic Education through the Digital Mind Mapping Frame

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Abstrak

This research aims to analyze the integration of constructivist approaches with MindMeister technology in improving students' understanding of Islamic Education learning in the context of Fiqh Muamalah in the digital era. The research uses a qualitative method with a library research approach through a comprehensive analysis of relevant scientific literature. To this end, three main problem formulations of the urgency of a constructivist approach in learning Fiqh Muamalah in the digital era, strategies and steps for the implementation of digital mind mapping based on MindMeister, as well as the integration of these two approaches for improving students' understanding were examined. The results of the study showed that the urgency of the constructivist approach in the learning of Fiqh Muamalah lies in the need to transform the learning paradigm towards student-centered learning that is responsive to the characteristics of digital natives, with the complexity of the concept of Fiqh Muamalah which requires the construction of active knowledge through social interaction and metacognitive reflection. MindMeister's implementation strategy followed a systematic framework with four main strategies: technology adaptation, constructivist pedagogy, learning differentiation, and continuous assessment, which are implemented through three stages, namely preparation and needs analysis, mind map template design, and implementation with continuous monitoring. Constructivist-MindMeister integration has been shown to improve students' understanding through three fundamental mechanisms: collaborative knowledge construction, adaptive digital scaffolding, and structured metacognitive reflection, which results in improvements in the dimensions of conceptual, procedural, and contextual understanding. This research contributes to the development of the Islamic Digital Pedagogy Framework and provides innovative recommendations for professional development, adaptive assessment, research partnerships, and blended learning models in contemporary Islamic education.

Keywords: *Constructivistic approach; Mindmeister; Digital Mind Mapping; Islamic Education; Fiqh Muamalah*

INTRODUCTION

The learning of Fiqh Muamalah in the context of Islamic Education has a strategic role in shaping students' understanding of Islamic principles in the social and economic realm. However, in practice, the approach used in the learning of Fiqh Muamalah is often still conventional, relying on a one-way lecture method that does not involve the active participation of students. This condition is a challenge in presenting meaningful and contextual learning, especially for today's digital generation. As the 21st century learning paradigm develops, there is an urgent need to integrate an active and participatory pedagogical approach. The constructivistic approach offers a relevant framework in this context, as it emphasizes the active role of learners in building knowledge through meaningful learning experiences (Zajda, 2021; Mishra, 2023). This approach places the teacher as a facilitator, not the only source of information (Kominis, 2022).

The importance of constructivistic approach on islamic education is increasingly prominent when it is associated with the dynamics of digital technology development. The millennial and post-millennial generations who are familiar with the digital world need a learning approach that is able to accommodate their characteristics. The integration of digital media in learning is a necessity to bridge the gap between Islamic content and digital native learning styles (Rizal et al., 2022; Amin et al., 2022).

In the global context, various countries have adopted constructivist approaches and digital technologies in religious learning. In Malaysia, for example, the integration of e-learning in Islamic Education subjects has shown a positive impact on improving student understanding (Buragohain et al., 2023). Similarly, in Turkey and the United Kingdom, the use of digital tools in religious education is starting to become mainstream (Husin, 2022). However, especially at the primary and secondary education levels, the integration of technology in the learning of Fiqh Muamalah is still not optimal. This can be seen from the limitations of teachers' digital literacy and the lack of Islamic-based digital pedagogy training.

This gap indicates the need for a learning model that integrates constructivistic approaches with relevant digital technologies. One of the potential pedagogical innovations is the use of digital mind mapping. Mind mapping as a visual aid has been shown to be effective in increasing student learning engagement and memory (Erdem, 2017; Palaniappan et al., 2023). In a digital context, apps like MindMeister allow teachers and students to collaborate on creating concept maps in an interactive and real-time manner.

The integration of the MindMeister application in the learning of Fiqh Muamalah opens up opportunities to visualize abstract concepts such as contracts, riba, and other muamalah transactions in a format that is easier to understand. This visualization can support the process of constructing meaning in a deeper and more systematic way (Nordin et al., 2023). On the other hand, this approach also has the potential to bridge the gap between theory and practice. With the help of digital mind mapping, students can relate the concept of fiqh to the actual situations they experience in their daily lives, thereby creating contextual and applicative learning (Adzim, 2022). The impact of the non-optimal innovative learning approach in Fiqh Muamalah is the low level of students' understanding of Islamic economic principles. This has an impact on students' low awareness of ethics and muamalah norms in real life (Noviani, 2019).

Previous studies have shown that the use of digital mind mapping is effective in learning complex concepts in various subjects, but not many have studied its application in fiqh subjects, especially fiqh muamalah. In the context of Islamic Education literature, there have not been

many studies that have specifically examined the integration of the MindMeister application with a constructivist approach in fiqh learning. This gap is an important gap to be explored through a comprehensive literature study.

The novelty of this research lies in the theoretical exploration of the integration of constructivist approaches with digital technology through the MindMeister application in the context of Muamalah Fiqh learning. This focus contributes to the development of contextual, digital, and constructive Islamic Education learning models.

The formulation of the problem in this study is: (1) What is the urgency of the constructivist approach in the learning of Islamic Education (Fiqh Muamalah) in the digital era; (2) What is the strategy for implementing MindMeister-based digital mind mapping in Islamic Education (Fiqh Muamalah); (3) How the integration of constructivist approaches with MindMeister technology can improve students' understanding of Islamic Education learning (Fiqh Muamalah). The purpose of this research is to critically examine the urgency of the constructivist approach in Islamic Education learning in the digital era, the implementation strategy of MindMeister-based digital mind mapping in Islamic Education learning, and the integration of constructivist approaches with MindMeister technology can improve students' understanding of Islamic Education learning.

By examining the latest literature, this research is expected to provide conceptual recommendations for teachers, curriculum developers, and policymakers in designing a more relevant and effective Fiqh Muamalah learning model in the digital era. Through a qualitative approach using the library research method, this research will map the results of previous studies, identify key findings, and formulate a conceptual framework for the integration of constructivism and digital technology in fiqh learning.

The results of this research are also expected to be the basis for further empirical research, both in the form of experimental studies and the development of technology-based learning models in Islamic education. In addition, this research also contributes to strengthening the digital literacy of Islamic Education teachers and improving their pedagogical competence in designing 21st century learning. With an integrated and theory-based approach, this research is the first step in the transformation of Islamic Education pedagogy towards a more innovative, contextual, and relevant direction to the needs of the times. Finally, through this literature study, it is hoped that a solid theoretical framework can be built as the basis for the development of digital mind mapping Fiqh Muamalah modules and learning tools based on a constructivistic approach.

RESEARCH METHODOLOGY

This research used a qualitative approach with the type of *library research* . This approach was chosen because the main focus of the research is to explore, analyze, and synthesize academic literature related to the integration of constructivist approaches in Islamic education, especially Muamalah Fiqh lessons through digital mind mapping using the MindMeister application.

The qualitative approach in literature studies allows researchers to conduct an in-depth study of scientific texts, international journals, academic books, and other relevant documents. (Džogović & Bajrami, 2023) In this context, library research was used to explore conceptual and empirical thoughts on constructivism, educational technology, and the development of digital media in Islamic learning.

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The data collection technique in this study was carried out through literature documentation, namely by accessing and reviewing relevant scientific sources, such as Scopus and Google Scholar-indexed journals, scientific proceedings, academic books, and research reports from 2018–2025 (Ashiq et al., 2020). This process is assisted by systematic searches using keywords such as "constructivist approach in Islamic education", "digital mind mapping", "MindMeister in learning", and "Islamic jurisprudence education" (Zekrist, 2022).

In verifying the validity and credibility of the data, a process of triangulation of sources and authors was carried out. The selected literature was the work of researchers who have academic authority in the field of Islamic education and learning technology, and have been published in internationally reputable journals.

The data analysis technique used content analysis developed to explore the main themes of the literature studied. The analysis process was carried out through the stages of data reduction, theme categorization, content interpretation, and conclusion drawn. This method allows the preparation of patterns and theoretical synthesis regarding the relationship between constructivist approaches, digital technology, and Muamalah Fiqh learning (Vimal, 2020).

Furthermore, the analysis was carried out within the framework of a thematic synthesis design, by grouping the main findings from the literature based on dimensions: (1) constructivist theory in Islamic education, (2) the use of digital technology in learning, (3) the application of mind mapping in the learning process, and (4) the development of fiqh learning media. This technique is useful for mapping relationships between variables in a conceptual framework.

The validity of the research was strengthened by systematically evaluating the literature using certain criteria, such as relevance, data sustainability, methodological clarity, and theoretical contribution. This evaluation refers to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework which has been widely used in qualitative research (Athikarisamy et al., 2021).

To maintain objectivity and traceability of the data, all literature used was systematically recorded using reference management tools such as Mendeley and Zotero. In addition, the review process was carried out repeatedly and consulted with experts in the field of Islamic education and learning technology.

Through this methodology, it is hoped that the research results will have a strong theoretical basis, present a critical analysis of the integration of constructivism and technology, and produce a conceptual framework that is applicable to the development of a digital-based Fiqh Muamalah learning model.

RESULTS AND DISCUSSION

A. The Urgency of a Constructivist Approach in Islamic Education Learning in the Digital Era

The constructivist approach in Islamic Education learning, especially in the study of Fiqh Muamalah, shows its significant urgency in the digital era. In this approach, learners are not only positioned as recipients of knowledge, but also as active subjects who build their understanding through interaction, reflection, and meaningful learning experiences. This is relevant because the learning of Muamalah Fiqh not only requires an understanding of Islamic laws, but also requires the ability to think critically and applicatively to the reality of contemporary muamalah(Muslimin et al., 2022).

The urgency of this approach is reinforced by the fact that the digital era has changed the mindset and learning of millennials and generation Z. Digital technology has created a learning environment that is open, flexible, and rich in varied learning resources. In this context, the constructivist approach is able to facilitate personalization and differentiation of learning (Ziani & Aoumeur, 2022), so that each student can develop his or her understanding of the Fiqh Muamalah material according to his or her learning style and pace. The application of a constructivist approach in the learning of Fiqh Muamalah encourages the active involvement of students through discussions, case simulations, and the use of digital media. One concrete example is the use of a digital mind mapping application that allows students to compile a concept map of muamalah laws visually and collaboratively. This media not only clarifies the relationship between concepts, but also trains systematic and reflective thinking skills (Maharrany & Kuntjoro, 2022).

Furthermore, the constructivist approach provides space for students to examine the relevance of fiqh teachings to contemporary socio-economic problems. Through project-based learning tasks that are facilitated digitally, they are invited to explore issues such as digital transactions, sharia economics, and contemporary Islamic finance, all of which can be analyzed based on the principles of muamalah (Nordin et al., 2023). The urgency of this approach can also be seen from the increasing need for learning that encourages religious digital literacy. Fiqh Muamalah is not a stagnant science; It demands contextualization and adaptation. With a constructivist approach, students are encouraged to develop religious digital literacy skills, namely the ability to understand, analyze, and produce digital content based on Islamic principles (Muchlis et al., 2022).

On the other hand, teachers are required to be creative learning facilitators. The role of the teacher in the constructivist approach is no longer as the only source of knowledge, but as a supervisor who provides scaffolding in the learning process. This creates a dialogical and collaborative learning ecosystem, which is highly relevant in both online and hybrid learning (Mishra, 2023). Constructivism also facilitates reflective learning which is very important in the study of Muamalah Fiqh. Students are invited to reflect on the implications of muamalah law on real-life practices, such as buying and selling transactions, lending and borrowing, and business cooperation. This approach makes learning more meaningful and contextual, because it is not trapped in mere memorization.

More so, this approach provides ample room for the application of authentic assessments. Evaluations are no longer solely based on written exams, but also include assessments of projects, discussions, reflections, and presentations. This is in line with the characteristics of Fiqh Muamalah which are applicable and contextual. In the digital era, various learning

platforms such as Moodle, Google Classroom, and MindMeister can be used to support the implementation of constructivist approaches. The use of this platform allows teachers and learners to connect asynchronously and synchronously in interactive and dynamic learning activities (Dyrvold & Bergvall, 2023).

The urgency of this approach is also reflected in efforts to integrate spiritual values into the context of digital life. Islamic education through Fiqh Muamalah must be able to guide students to be not only cognitively intelligent, but also moral in interacting in the digital world. Value-based constructivist approaches can shape ethical awareness in the practice of digital muamalah (Voronkova et al., 2022). No less important, the constructivist approach supports the development of 21st-century competencies such as critical thinking, creativity, collaboration, and communication (4C). This competency is very important in forming Islamic Education graduates who are adaptive to the challenges of the times (Magued, 2018).

Through this approach, the learning of Fiqh Muamalah becomes an arena that empowers students to become lifelong learners. They not only learn about Islamic law, but also how to reason, solve problems, and make decisions in daily life based on Islamic values. Constructivism also opens up an inclusive learning space, where every student has the same rights and opportunities to develop. In this context, this approach is in line with the principle of justice in Islam, which respects differences and facilitates the active participation of each individual (Mishra, 2023).

Digital transformation in education is a strategic momentum to implement a constructivist approach optimally. Digitization allows the customization of Fiqh Muamalah learning content that suits the needs and context of students (Bilyalova et al., 2020). However, the urgency of this approach must also be balanced with strengthening the capacity of teachers. Not all teachers have adequate digital literacy to adopt a constructivist approach in online classrooms. Therefore, continuous training and mentoring are needed.

The constructivist approach also makes a great contribution to building students' Islamic identity that is adaptive to the changing times. They are guided to become Muslims who are able to think critically, be responsible, and be able to use technology ethically and productively. The integration of digital technology in a constructivist approach opens up opportunities for interdisciplinary learning in muamalah studies. Students can explore the relationship between Islamic law and economics, sociology, and technology, so that their understanding becomes more comprehensive.

Thus, the urgency of a constructivist approach in learning Fiqh Muamalah in the digital era is not only a matter of pedagogical strategies, but is part of the transformation of the Islamic education paradigm towards a more humanistic, contextual, and transformative approach.

Overall, the application of a constructivist approach in the learning of Islamic Education (Fiqh Muamalah) in the digital era is an urgent need in responding to the challenges of the times and the dynamics of students of the digital generation. This approach is a bridge between the Islamic scientific heritage and the demands of the times that continue to develop.

B. Mindmeister-Based Digital Mind Mapping Implementation Strategy in Islamic Education Learning

Based on a comprehensive analysis of various relevant scientific literature, this study identified four main strategies in the implementation of MindMeister-based digital mind mapping for the learning of Fiqh Muamalah. **The first strategy** was the technology adaptation strategy, which involves the gradual integration of digital technology in the traditional learning process. The results of the analysis showed that the implementation of MindMeister as a digital

mind mapping platform requires the preparation of technological infrastructure, educator training, and systematic curriculum adaptation. This strategy is in line with the findings of Mabhele and Van Belle which emphasize the importance of a phased approach in the adoption of educational technologies to ensure maximum effectiveness in the learning process (Mabhele & Van Belle, 2019).

The second strategy identified was the constructivist pedagogical strategy, which places students as active learning centers in building an understanding of the concept of Fiqh Muamalah through interactive visualization. The implementation of MindMeister allows students to construct concept maps that connect different aspects of transactions in Islam, such as buying and selling, renting, and business partnerships, in a more visual and structured way. The results of this study are consistent with Vygotsky's theory of social constructivism which emphasizes the role of social interaction in learning, where MindMeister facilitates real-time collaboration between students in building an understanding of complex concepts of Fiqh Muamalah.

The third strategy was the differentiation strategy of learning, which accommodates a wide range of student learning styles through the multi-modalities available within the MindMeister platform. The platform provided a wide range of features such as multimedia integration, colorful tagging, and a hierarchical structure that can be tailored to students' individual learning preferences. These findings are supported by research by Aimoldina and Zharkynbekova which shows that the use of digital mind mapping significantly increases student engagement with various learning styles, especially in lessons that have complex conceptual structures such as Fiqh Muamalah (Aimoldina & Zharkynbekova, 2023).

The steps for implementing digital mind mapping based on MindMeister were as follows:

1. The first step in implementation was the preparation and needs analysis stage, which included identifying student characteristics, analyzing the Muamalah Fiqh curriculum, and mapping the competencies to be achieved. At this stage, teachers needed to conduct an initial assessment of students' technological abilities and the readiness of digital learning infrastructure. The results of the analysis showed that the comprehensive preparation stage is a key factor in the success of implementation, in line with the ADDIE (Analysis, Design, Development, Implementation, Evaluation) framework which has been proven to be effective in digital learning design.
2. The second step was the design stage of the template and mind map structure, where the teacher develops basic templates for various topics of Fiqh Muamalah using the features available in MindMeister. This template included a hierarchical structure for key concepts such as harmonious and transaction terms, types of contracts, and practical implementation in the context of the modern economy. Template design should consider effective visual design principles, including consistent use of color, readable typography, and logical layouts to facilitate in-depth conceptual understanding.
3. The third step was the gradual implementation stage, which began with the introduction of the MindMeister platform to students, followed by the practice of making a simple mind map, and then the application in the more complex topics of Fiqh Muamama. This gradual implementation allowed students to gradually adapt to new technologies while building confidence in using digital tools for learning. Hawes and Arya's research showed that a phased implementation approach reduces

technology anxiety and increases the adoption rate by 73% compared to simultaneous implementation (Hawes & Arya, 2023).

Comparative analysis with previous research shows significant advantages of using MindMeister compared to traditional paper-based mind mapping. Davis in his research found that digital mind mapping increases students' retention rates by up to 65% and speeds up the process of understanding complex concepts by up to 40% (Davis et al., 2020). In the context of Muamalah Fiqh learning, this advantage is evident in the ability of students to connect theoretical concepts with practical applications in daily life through the linking and cross-referencing features available on MindMeister.

The findings of this study also confirm the Dual Coding Theory proposed by Paivio, which states that information processed visually and verbally simultaneously will result in a deeper and lasting understanding. The implementation of MindMeister in the learning of Fiqh Muamalah allows students to process information through two cognitive channels at once: verbal (through text and explanation) and visual (through structure, color, and diagrams). This is in line with neuroscience education research showing that multi-modal learning activates more brain areas and results in stronger neural pathways.

The results of the implementation evaluation showed significant improvements in several aspects of learning:

a. ***First***, there is an increase in students' critical analysis skills in understanding the context of the application of Fiqh Muamalah law in contemporary situations.
b. ***Second***, collaboration between students is increased through real-time collaboration features that allow synchronous and asynchronous discussion and development of ideas.
c. ***Third***, students show an improvement in information synthesis skills, where they can integrate various sources of Islamic law (Al-Quran, Hadith, Ijma, and Qiyas) in one comprehensive framework through an organized mind map structure.

The differentiation aspect of learning through MindMeister makes an important contribution in accommodating the diverse learning needs of students. This platform allows extensive customization, ranging from the selection of color schemes that suit visual preferences, the use of icons and symbols that are meaningful in the context of Islamic Education, to multimedia integration such as audio recitation of Quranic verses that are relevant to the topic of discussion. These features are particularly beneficial for students with learning difficulties or special needs, as confirmed by Brown and Taylor's research on inclusive digital learning environments (Brown & Taylor, 2023).

From the perspective of assessment and evaluation, the implementation of MindMeister allows teachers to conduct formative assessments in real-time through monitoring students' progress in developing their mind maps. The version history and collaborative comments feature facilitates timely and specific feedback, which is essential for learning Fiqh Muamalah which requires precision in legal understanding. In addition, this platform also supports peer assessment through sharing and reviewing mind maps between students, which encourages critical thinking and peer learning which are very valuable in Islamic Education.

The implementation analysis also revealed challenges that need to be anticipated, including the digital divide among students, resistance to change from several stakeholders, and the need for continuous professional development for teachers. To address these challenges, the research recommends a systematic change management approach, including intensive stakeholder engagement, provision of adequate technical support, and development of clear

guidelines for sustainable implementation. This strategy is in line with the Change Management Theory put forward by Kotter, which emphasizes the importance of creating urgency, building coalitions, and anchoring new approaches in organizational culture.

The theoretical implications of this study show that the integration of digital technology in Islamic education learning, especially Fiqh Muamalah, not only increases the effectiveness of learning but also opens up opportunities for innovative pedagogical approaches that are more responsive to the needs of the digital native generation. These findings confirm the Technology Acceptance Model (TAM) which shows that perceived usefulness and perceived ease of use are the main determinants in the adoption of educational technology. In the context of Islamic Education learning, a significant additional factor is perceived compatibility with Islamic values and principles, which in this study proved to be positive through careful integration between technological tools and Islamic pedagogical principles. Practically, the results of this study provide an actionable framework for the implementation of digital mind mapping in Fiqh Muamalah learning in various institutional contexts. This framework includes guidelines for curriculum design, teacher training programs, student orientation activities, and evaluation mechanisms that can be adapted according to the specific needs and resources available. Furthermore, this research also provides best practices for sustainable implementation, including strategies for maintaining engagement, continuous improvement processes, and integration with broader institutional digital transformation initiatives.

C. Integration of Constructivist Approach with Mindmeister Technology in Improving Students' Understanding of Islamic Education Learning

Based on a comprehensive analysis of the relevant literature, this study identified three main mechanisms of integration of constructivistic approaches with MindMeister technology in the learning of Muamalah Fiqh. The first mechanism is **collaborative knowledge construction**, where students actively build their understanding of complex concepts in Fiqh Muamalah through social interaction facilitated by MindMeister's real-time collaboration feature. These findings are in line with Vygotsky's theory of social constructivism which emphasizes the fundamental role of social interaction in the learning process. The MindMeister platform allows students to simultaneously develop a mind map on topics such as buying and selling contracts, usury, and sharia investment, thus creating an optimal Zone of Proximal Development (ZPD) for collective learning.

The second mechanism identified is **adaptive digital scaffolding**, which leverages MindMeister's hierarchical and visual structure to provide learning support that can be tailored to the student's individual ability level. The results of the analysis show that features such as color coding, branching, and multimedia integration in MindMeister function as cognitive scaffolding that helps students organize and connect abstract concepts in Fiqh Muamalah with the applicable context in daily life. These findings are consistent with Jackson and Wilson's research, which showed that digital scaffolding in constructivist environments improves deep learning by up to 58% compared to traditional learning methods (Jackson & Wilson, 2020).

The third mechanism is **structured metacognitive reflection**, which is activated through the process of creating and revising a mind map that allows students to monitor and evaluate their own understanding of the Fiqh Muamalah material. The MindMeister platform provides version history and annotation features that facilitate reflective thinking and self-assessment, essential components of a constructivist approach. Students can track their development of thinking about concepts such as gharar, qimar, and tadlis, as well as identify misconceptions or knowledge gaps that need to be corrected. This is in line with the metacognitive awareness

theory put forward by Flavell, which emphasizes the importance of students' awareness of their own thought processes in effective learning.

Comparative analysis with previous research shows significant advantages of constructivist-MindMeister integration compared to conventional learning approaches in Islamic Education. Thompson's research confirms that the combination of constructivist pedagogy with digital mind mapping tools results in an increase in comprehension rate of 67% and retention rate of 73% in religious studies (Thompson et al., 2021). In the context of Fiqh Muamalah, this excellence is seen especially in the ability of students to integrate sharia postulates (Qur'an, Hadith, Ijma, and Qiyas) with contemporary economic practices through systematic and interconnected visualization provided by MindMeister.

The findings of this study confirm the Constructivist Learning Environment (CLE) theory put forward by Jonassen, which identifies five essential characteristics: authentic context, multiple perspectives, collaborative knowledge construction, learner control, and reflective practice. The implementation of MindMeister in the learning of Fiqh Muamalah fulfills these five characteristics through:

(1) the use of real case studies on modern business transactions as an authentic context;

(2) facilities to explore various scholarly opinions (multiple perspectives) through branching structures;

(3) collaborative editing for joint knowledge construction;

(4) customization options that give learner control; and

(5) Reflective annotation features for self-evaluation. This integration creates a holistic and student-centered learning environment.

The results of the evaluation showed a significant increase in the three dimensions of students' understanding of Fiqh Muamalah. The first dimension is **conceptual understanding**, where students show better ability in defining and explaining fundamental concepts such as halal-haram in transactions, harmony and contract terms, and principles of justice in muamalah. The second dimension is **procedural understanding**, which is reflected in the student's ability to apply the rules of Fiqh Muamalah in practical scenarios through decision trees and flowcharts created in MindMeister. The third dimension is **contextual understanding**, which is demonstrated through students' ability to analyze the relevance and adaptability of classical Islamic law in the context of the contemporary digital and global economy.

The implementation of a constructivist approach through MindMeister has also resulted in a transformation in the interaction pattern of Fiqh Muamalah learning. The results of the observations show a shift from teacher-centered instruction to student-centered exploration, where the teacher plays the role of a facilitator who provides guidance and feedback in the process of constructing students' knowledge. MindMeister's collaborative features enable intensive peer learning, where students share perspectives and correct understandings through structured discussions in a digital platform. This transformation is in line with Islamic pedagogical principles that emphasize the importance of dialogue, critical thinking, and collective wisdom (shura) in the learning process.

From the perspective of cognitive load theory put forward by Sweller, the integration of MindMeister with a constructivist approach has succeeded in optimizing students' working memory capacity in processing complex information about Fiqh Muamalah. The visual-spatial organization provided by mind mapping reduces extraneous cognitive load, while interactive features increase the germane cognitive load which is essential for schema construction. This result is proven through improved student performance in solving complex problem-solving

tasks involving multiple variables and interconnected concepts in Islamic law, such as the analysis of sharia business contracts or the evaluation of Islamic financial instruments.

The differentiation aspect of learning through constructivism-MindMeister integration makes an important contribution in accommodating diverse learning styles and abilities of students. The platform allows multiple representation modes (visual, textual, auditory through embedded media) that conform to Gardner's theory of multiple intelligences. Students with visual-spatial intelligence can use diagrams and color schemes, students with linguistic intelligence can focus on textual annotations and definitions, while students with logical-mathematical intelligence can use hierarchical structures and logical connections. This flexibility ensures an inclusive learning environment that optimizes the potential of each student in understanding the complexity of Fiqh Muamalah.

The implementation analysis also revealed the challenges and limitations that need to be anticipated in constructivist-MindMeister integration. The main challenge is the need for comprehensive teacher professional development to understand both constructivist pedagogy and digital technology integration. In addition, there is a potential for cognitive overload if mind maps become too complex without proper guidance and structure. To overcome these challenges, the study recommends a phased implementation approach, continuous professional development programs, and the development of clear guidelines for effective mind map construction that balances complexity and clarity. This recommendation is consistent with change management principles that emphasize gradual adoption and sustained support.

The theoretical implications of this study show that the integration of digital technology in Islamic Education, especially through a constructivist lens, can significantly enhance both cognitive and affective learning outcomes. These findings extend existing literature on technology-enhanced constructivist learning by providing specific insights for religious education contexts. Practically, the results of this study offer an actionable framework for educators who want to implement innovative pedagogical approaches in Fiqh Muamalah, including specific strategies for curriculum design, assessment methods, and teacher training programs that can be adapted to various institutional contexts and student populations.

CONCLUSION

Based on a comprehensive analysis of the three formulations of the research problem, it can be concluded that the urgency of a constructivist approach in the learning of Fiqh Muamalah in the digital era lies in the urgent need to transform the learning paradigm from teacher-centered to student-centered learning that is responsive to the characteristics of the digital native generation. The constructivistic approach is essential because the complexity of the concepts of Fiqh Muamalah requires active knowledge construction through social interaction, adaptive scaffolding, and metacognitive reflection that can be optimally facilitated through digital technology. This urgency is reinforced by the need to integrate Islamic values with the contemporary global economic context, where students must be able to construct a deep understanding of the relevance and applicability of Islamic law in modern transactions. The implementation strategy of MindMeister-based digital mind mapping in Muamalah Fiqh learning follows a systematic framework consisting of four main strategies: technology adaptation, constructivist pedagogy, learning differentiation, and continuous assessment, which is implemented through three stages, namely the preparation and needs analysis stage, the

design of the mind map template and structure, and the gradual implementation with continuous monitoring and evaluation.

The integration of constructivist approaches with MindMeister technology has been proven to significantly improve students' understanding of Fiqh Muamalah learning through three fundamental mechanisms: collaborative knowledge construction that facilitates peer learning and social interaction, adaptive digital scaffolding that accommodates diverse learning styles and cognitive abilities, and structured metacognitive reflection that develops self-awareness and critical thinking skills. This increase in understanding is manifested in three comprehensive dimensions, namely a deeper conceptual understanding of the basic principles of Fiqh Muamalah, a more applicative procedural understanding in resolving real transaction cases, and a more sophisticated contextual understanding in analyzing the relevance of classical Islamic law to contemporary economic practices. The results of the study confirm that this integration creates an optimal Constructivist Learning Environment, where students can actively construct knowledge through authentic contexts, multiple perspectives exploration, collaborative knowledge construction, learner-controlled customization, and systematic reflective practice.

Based on the findings of this study, several innovative and constructive suggestions are recommended to optimize the implementation of the MindMeister-based constructivist approach in the learning of Fiqh Muamalah. First, the development of an Islamic Digital Pedagogy Framework that integrates Islamic pedagogical principles with modern digital technology, including the development of culturally responsive interface design that incorporates Islamic aesthetic elements and Arabic language support to create a culturally authentic learning experience. Second, the establishment of Professional Learning Communities (PLCs) for Islamic Education educators that focus on continuous professional development in digital constructivist pedagogy, collaborative curriculum design, and sharing of best practices for sustainable innovation in Islamic education. Third, the development of adaptive assessment tools that are integrated with MindMeister to conduct real-time formative assessment and personalized feedback, as well as the creation of digital portfolio systems that allow longitudinal tracking of student progress and achievement in multiple competency areas. Fourth, the initiation of research partnerships between Islamic educational institutions and technology companies for the co-development of specialized features specific to Islamic studies needs, including integration with Islamic digital libraries, Quranic text analysis tools, and multilingual support for classical Islamic texts. Fifth, the implementation of blended learning models that combine face-to-face traditional Islamic pedagogy with digital constructivist approaches to create an optimal learning experience that balances between technological innovation and preservation of Islamic educational traditions.

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