

From Automation to Ethical Intelligence: The Role of AI in Transforming Digital Services in Islamic Banking

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Abstract

In today's world of fast-changing technology, digital transformation is essential for the Islamic banking sector. However, using artificial intelligence (AI) still has challenges, especially in smaller cities. This study examines how AI enhances digital services at the Semarang branch of Bank Syariah Indonesia (BSI), with a focus on adhering to Shariah principles. The research used observations and looked at documents from both employees and customers. The main findings show that AI greatly improves service efficiency through digital tools, a chatbot named "Hasanah Assistant," and an automated transaction system based on templates. This innovation speeds up services while still keeping to the principles of protecting property and life. However, there are some issues, such as AI not fitting well with local culture, some senior staff resisting digital change, and customers having low digital skills. This shows the need for a mix of technology and a more personalized approach in Islamic banking. What makes this study special is that it focuses on regional areas not often studied in academic research. It also helps to understand AI not just as a tool for automation but as a strategic tool. The study suggests that AI systems should be designed in a way that is ethical, inclusive, and based on Islamic values. It proposes a digital transformation plan that fits local values and Sharia

Makahid to ensure lasting technology growth in Islamic banking.

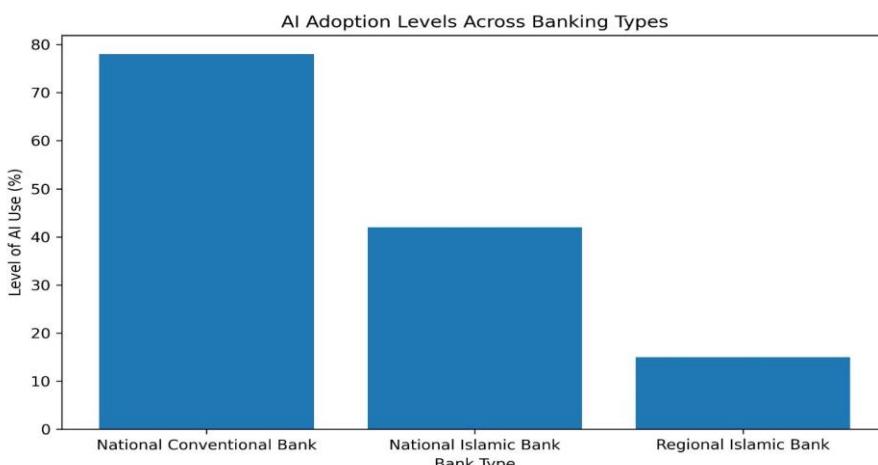
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Introduction

Recent progress in digital technology has caused a major change in many industries, including banking (Zhou and Xu, 2023). With the rapid growth of digitalization, Islamic banking in Indonesia is struggling to adapt and change its services using modern technologies like artificial intelligence (AI) (Suhartanto et al., 2022). AI is seen as a key solution to improve how banks operate, make services faster, and offer more personalized experiences to customers. Bank Syariah Indonesia (BSI), the biggest Islamic financial institution in Indonesia, is actively using AI in its services (Yussaivi et al., 2021).

The use of AI in the banking industry is growing quickly, especially in both customer-facing areas like chatbots and voice assistants, and behind-the-scenes areas such as fraud detection and credit scoring (Abbas & Hafeez, 2021); Pathan, M.S.K 2023. According to data from the Financial Services Authority (2023), over 60% of commercial banks have started using AI in their digital banking services. However, Islamic banks are still using AI at a much slower rate compared to regular banks.

Table 1 shows how much AI is being used in Indonesian commercial and Islamic banks:



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This shows a big difference in how AI is being used between conventional and Islamic banks. Because of this, it is important to look at how AI is starting to change digital banking in Islamic banks, especially at the Semarang branch of Bank Syariah Indonesia. Even though Semarang is not a big city, it has a strong religious community and supports an economy based on Islamic values, which makes it a good place to study this (Rabbani et al., 2023); Pathan, M.S.K 2023. Most previous studies have focused on big cities like Jakarta, Bandung, and Surabaya, so this research fills an important gap.

So far, most research on AI in Islamic finance has been about ideas and numbers (Rinjani et al., 2024). There hasn't been much work on how practical it is to use AI in this area. This gap gives scholars a chance to explore how much AI can help follow Sharia principles in banking, and how ready and willing organizations are to adopt these changes.

The Technology-Organization-Environment (TOE) approach, created by Tornacki and Fleischer, is used in this study to explain the process of digital transformation (Balusamy et al., 2025). This theory helps understand the factors that influence how technology is adopted within an organization, especially when it comes to available technology, the organization's structure, and the outside environment (Olutoin and Flowerday, 2016). TOE is a good tool for looking at the challenges of implementing AI in an Islamic bank, where it's important to balance digital efficiency with Sharia rules.

Many studies have discussed the importance of this topic. For example, Mbaidin et al. (2024) found that using AI chatbots in one national Islamic bank improved customer satisfaction by up to 35%. Alghadi et al. (2024); Pathan, M.S.K 2023 also showed that a bank's digital readiness is important for successfully using new technologies. However, no study has looked into local situations, such as different bank branches in areas with varying digital setups, cultural differences, and customer needs.

AI has great potential to help support Sharia values through better, fairer, and quicker services. In the Shariah Makashid framework, AI can help protect assets through machine

learning systems that detect fraud and also protect people's well-being by reducing the workload on bank staff, lowering the risk of burnout.

Because of these points and the areas where research is missing, the researcher wants to carry out a deep, qualitative study at the Semarang branch of Bank Syariah Indonesia. The goal is to understand how AI-powered services are changing the bank's operations, how employees feel about these changes, and how customers experience them. This study aims to offer ideas for creating digital strategies that are both advanced and meet Sharia standards. It also seeks to explore how AI is changing Islamic banking services at the branch level and how social, cultural, and organizational factors influence how successful these changes are. This study opens new ways to understand how high-tech tools can be used in an environment that follows Islamic values.

Research Method

This study used a qualitative method with a case study approach. The focus was on understanding the experience, perceptions, and social interactions within an organization as it implemented artificial intelligence (AI) at the Bank Syariah Indonesia (BSI) Semarang branch. This method was chosen to better understand how AI is affecting digital Islamic banking services in the local area and how it fits with Sharia Maqashid values.

The data was gathered through in-depth interviews, participant observations, and internal banking documents (Katila et al., 2023); Pathan, M.S.K 2023. Fifteen people were interviewed, including branch managers, IT experts, frontline staff, and customers of different ages and digital skill levels. These people were chosen to make sure the study covered all the important topics. Observations were made on how digital services moved and how AI was used in the branches and mobile banking apps.

The data was analyzed using a thematic approach in three stages: open coding, axial coding, and selective coding. The researchers used NVivo software to help organize and find patterns in the interview notes and field notes. The reliability of the data was

checked through triangulation, comparing the information from interviews, observations, and internal documents (Cogin & Ng, 2016).

The main goal was to gain a deep understanding of the digital transformation process. Because of this, qualitative methods were considered the best way to explore the complex relationship between technology, Sharia values, and social factors in AI-driven financial services at BSI Semarang branches.

Results And Debates

The in-depth interviews with BSI Semarang executives and managers showed that digital adoption has been the biggest change in the past year. Now, customers can open accounts without going in person by uploading documents through a mobile app with optical character recognition (OCR) and biometric verification. This allows identification and verification to happen automatically and quickly (Van Hoai et al., 2021); Pathan, M.S.K 2023.

The introduction of AI into Islamic banking in Indonesia, especially at the BSI Semarang branch, has changed the workflow and organizational culture. This change has led to a mix of positive responses from employees, such as excitement and better efficiency, as well as negative feelings like worry about future job security.

According to interviews and field observations, most employees had a basic understanding of how artificial intelligence is used in their daily work. They knew that AI at BSI is meant to support human work, not replace it entirely. Tools like chatbots, transaction suggestion systems, and digital document checks are examples of how AI helps improve productivity. However, this awareness doesn't always mean they are ready to adapt. Younger employees, especially those under 35, were more open to using the new technology. They felt more interested in learning digital skills and took part actively in BSI's training sessions, particularly those focused on AI in customer service and document automation. On the other hand, senior officials were more doubtful. They worried that AI might make their traditional skills less important over time (Song et al.,

2021).

The growth of AI has changed how customers interact with financial institutions, including Islamic banks (Singh et al., 2024). BSI Semarang, which is one of the country's Islamic banks, has started using AI to improve service efficiency and digital customer experience. Most customers have found AI helpful. They mentioned that features like the Hasanah Assistant chatbot, digital verification during account opening, and an AI-powered notification system have cut down service time and reduced the need for in-person visits, which can be time-consuming. One customer said it takes under 10 minutes to open an account through the BSI mobile app without going to a branch. But not all customers are happy with AI. Older customers or those not used to digital tools find it hard to follow AI-powered services. Some complain about the app's interface being unclear and chatbots not always giving accurate answers. This can be frustrating and lower their satisfaction.

The use of artificial intelligence (AI) at BSI Semarang has greatly improved the efficiency and quality of banking services. However, there are important questions about whether AI aligns with the core values of Shariah Makashid. The study shows that AI is used in different areas such as customer identification, chatbots, and managing transaction data. These uses create different opinions among people involved, including employees and customers.

AI-powered digital transformation is changing the Islamic banking industry, especially at BSI Semarang. This change is mainly happening because of AI technologies. At BSI Semarang, AI is used in several areas, such as making it easier for new customers to open accounts, using virtual assistants to answer common questions, and automating routine customer transactions. The goal of this change is to make the banking process more efficient while still keeping Sharia values in check.

A chatbot named "Hasanah Assistant" uses natural language processing (NLP) to answer customer questions through the BSI app and social media. This chatbot is trained using a

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database of questions related to Sharia products like mudarabaha, murabaha, zakat, and waqf. Most employees say the chatbot helps by reducing the workload of the support team. However, some customers report that the chatbot doesn't understand their questions or doesn't respond well to local language styles from Semarang Pathan, M. S. K. (2022).

BSI Semarang also uses AI features for scheduled payments and notifications. These features suggest payment times and amounts based on customers' past transaction patterns. This helps customers manage their money better according to Islamic financial principles. However, some customers think this is too much. To understand how AI is used in BSI Semarang's digital services, the following table summarizes the types of services, the technologies used, the main benefits, and the challenges faced.

This information comes from processing interview data and field observations.

Table 2.

Transformation of Digital Services at BSI Semarang

Types of AI Services	Main Positive Effects	Challenges They Face
 Digital Input (OCR & Biometrics Verification)	Faster Account Opening Process 	Technical Problems in Document Uploads 
 Virtual Assistant (NLP)	Reduced IT Load & Sharia Product Training 	Regional Language Limitations 
 Automated Transactions (Cognitive AI)	Better Management of Sharia Financing 	Minor Errors in Predictions 

Source: Results of qualitative data processing, 2025

Table 2 shows that AI has helped make Islamic services and product education more efficient. However, there are big challenges, like how well technology can understand local contexts. This shows the need for digital strategies that fit local culture and values, and for combining smart systems with human-centered approaches in Islamic banking. These results show that AI has changed how Islamic banking services are managed, making processes more efficient and improving customer experiences. But local research still has challenges, especially when it comes to adapting AI to different communication styles and regional preferences.

In theory, these results can be built on by using an AI framework in business processes that shows how AI can improve service efficiency, accuracy, and personalization (Adinugraha et al., 2024).

Using digital tools like OCR and biometrics shows how supervised learning technologies are used to make data verification more accurate. NLP in chatbots is a type of machine learning that learns from user inputs. At the same time, automated transactions show how predictive analytics is used in proactive financial services Pathan, M. S. K., 2022; Nezami & Rukham, 2022).

The researchers found that BSI's digital transformation continues to focus on Sharia values, especially in areas like protecting property (hifzh al-mal) and protecting life (hifzh al-nafs).

For example, the digital security system used to enter and automate transactions gives customers a sense of safety. Hasanah Assistant is committed to not giving financial advice that goes against Sharia principles and has filters to stop incorrect contract information from being shared.

This finding is supported by previous research by Aspiranti et al. (2023), which shows that AI can improve user experience in Islamic financial services if the system follows Sharia rules. Also, a study by Rochmad et al. (2024); Pathan, M. S. K. (2022) of Islamic banks in Jakarta shows that AI improves service efficiency and is important for educating

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people about Shariah-based products.

The human role remains important in value-based services in Islamic banking (Kurniawan et al., 2022). Customers in Semarang, who are mostly from religious and traditional communities, still prefer direct interaction. They believe that humans are better at explaining Islamic contracts than AI can ever be (Supriyatni, 2021).

Digital transformation at BSI is not fully completed, but it involves working together with smart systems and making services more human-centered. The development of AI-powered digital services at BSI Semarang shows how technology is adapting to local research and Islamic values. Although AI brings many advantages, its successful use depends on how ready the organization is, how customers accept it, and how well AI can understand the social and cultural aspects of users. This highlights the need for an approach that includes everyone and is sustainable for Islamic banking.

A.A. Employee Reactions and Perceptions of AI Adoption at BSI Semarang Branch.
Digital readiness is a key part of this adaptation process (Nurfadillah et al., 2023; Pathan, M. S. K., 2022). From observations and internal records of BSI training, it is clear that only about 62% of employees feel prepared for the changes brought by AI-driven digital tools. The remaining employees still face both technical and psychological challenges. In some focus groups, senior employees showed passive resistance, feeling left out of decisions about digitalization. Some believed the changes happened too fast and without considering how they would affect their career growth. To better understand how an organization functions internally, it's important to look at how employees react to using AI in their daily work. The table below summarizes the qualitative results related to employees' perceptions, digital readiness, and attitudes toward technological change at the BSI Semarang branch.

Employee Reactions to AI Implementation at BSI

Understanding Artificial Intelligence

Basic AI concepts understood
Chatbots and digital verification

Digital Readiness

62% ready, 38% hesitant
Younger staff adapt faster

Participation

High among junior staff
Senior staff less active

Emotional Response

Enthusiasm vs anxiety
Traditional skills holders concerned

Perception of AI Role

AI as support tool
Concerns over reduced human roles

Source: Results of qualitative data processing, 2025

The data in **Table 3** shows that how much people use AI depends on their age, how much they already know about the technology, and how much support their organization gives for learning. Younger workers are usually excited and quick to adapt, but older workers are more cautious because they worry about their jobs. This means that for a fair and lasting digital change, it's important to include people of all ages and encourage open communication. AI adoption is connected to age, experience, and past use of digital tools. The Technology Adoption Model (TAM) says that people's views on how easy something is to use and how useful it is greatly influence whether they will use a new technology (Sudarsono et al., 2020). Young employees at BSI Semarang think AI makes their work easier and more efficient, so they are more likely to use it. However, older workers find the new system hard to understand and are unsure about its benefits, so they resist change.

In this study, the TOE (Technology-Organization-Environment) and TAM models are

used to understand AI adoption at BSI Semarang.

TOE looks at how ready the organization is for technology, its structure, and the outside environment that influences digital transformation. TAM explains how people and customers see the ease and benefits of AI, which affects their willingness to use it. The qualitative findings show that the organization is well-prepared with technologies like OCR, NLP, and predictive AI, and there is strong organizational support. However, resistance from older workers (organizational factors) and low digital skills among older customers (environmental factors) are challenges. Positive views on service performance (from TAM) encourage more adoption, especially among younger staff. The TOE-TAM approach helps to understand these changes more fully within the context of Sharia values.

From a psychological angle, this can also be looked at through the theory of organizational change, which breaks the change process into three stages: thawing, changing, and refreezing Muhammad, S. K. P., 2023; Michael Hughes et al., 2022).

BSI is in a change phase, but hasn't fully reached the "thaw" stage, where the company needs to create shared awareness and readiness for change. Not having good two-way communication between management and older workers makes it harder to fully accept and internalize new AI-based values.

The confirmation of these results by earlier studies is clear. A study by Anggraeni and Mohammad (2024) at an Islamic bank branch in Yogyakarta found that when employees are involved in the digitalization process, it greatly helps in the successful use of AI. From the start, employees feel a sense of responsibility for the success of new technology. At the same time, a study by Haidar (2024) found that trust and understanding of Sharia values are important for the use of AI in Islamic banking. Employees and customers may quietly reject AI if it goes against Sharia principles or if it's not explained clearly in an ethical way.

This research shows the need for learning that is more relevant and inclusive.

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Officials said that training that is too technical and uses hard-to-understand language is a problem. They suggested a mentoring approach where older and younger employees learn from each other, so that no one feels left out. This method matches the idea of peer-to-peer learning, which has been found to make technological learning more effective in organizations (Chong & Olesen, 2017).

The use of AI at BSI's Semarang branch shows the difficulties of digital transformation in financial institutions that are driven by values.

Technological changes don't only affect the technical parts but also the social, cultural, and spiritual areas of the organization. So, the success of AI depends on both the advanced system and the organization's ability to handle change, create inclusive stories, and encourage learning across generations. This study shows that using AI in the Islamic banking sector is connected to the way the organization is managed, its values, and how it communicates internally. To get a sustainable digital transformation, BSI needs to make sure that the digital process includes everyone equally and respects the different skills of employees as a valuable part of the organization rather than a problem.

A.A. Customer experience with AI-powered services at BSI Semarang

When it comes to trust, most customers say they still feel safe when using AI services at BSI because the bank has a good reputation as a national Islamic bank (Faha et al., 2022)Muhammad, S. K. P. (2023).

However, this trust is more about the bank than the technology itself. Some customers still worry about personal data being misused, especially during the process of biometric verification.

They think the security system hasn't been clearly and completely explained to users, which makes them unsure about how their personal data is protected. To better understand how customers feel about using AI-based services, this study focuses on the main parts of the customer experience. From interviews and observations, these are the key factors that influence how customers use BSI's digital systems.

Customer Experience Insights at BSI Semarang

Ease of Use



✓ High usability among young customers

⚠ Navigation issues for adult users

Satisfaction & Trust



✓ High satisfaction with service speed

✓ Strong trust in the institution, moderate in technology

Concerns & Security



💬 Chatbot responses lack context

⚠ Worries about biometric data safety

Limitations & Needs



⚙ Interface not always user-friendly

🎓 Need for inclusive digital education

Source: Results of qualitative data processing, 2025

The data in **Table 4** shows that most customers find AI services helpful, but there are big differences in how satisfied they are and how easy the services are to use, depending on their age and the digital environment they come from. This shows that it's very important to have a digital strategy that includes everyone and helps people understand new technology so that all groups can use it well.

These findings show that things like age, where people come from digitally, and how

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they feel about digital risks can greatly affect their experience with AI services.

This can be explained by the User Experience in AI Systems framework, which focuses on making sure AI systems are easy to use, trustworthy, and clear in how they work. When people think a system is simple, honest, and secure, they generally have a good experience. For example, the Hasanah Assistant chatbot uses natural language processing (NLP) to help users, but it didn't understand the local language or tricky questions well. According to AI theory, this happens because the training data and NLP tools aren't set up to work well in local cultural and social situations. This matches what Agnihotri and Bhattacharya (2024) found, which shows that chatbots work best when they can understand the meaning and context of conversations clearly.

AI trust theory also helps explain how users build confidence in a system.

It's not just about how well the AI works, but also about the ethical values and open communication from the organization, especially regarding how data is handled and protected. In the case of BSI, even though they use AI based on Sharia principles, customers still need to know clearly how their information is managed and kept safe. Being open about this is especially important for people who care about privacy and ethical use of digital tools.

This aligns with research by Qasim et al. (2024), which looked at how happy customers are with AI services in Islamic banks in Malaysia. Their study found that being clear about how AI works and educating customers are important for getting more people to use AI technology. The results from this study show the same pattern: customers who are given enough information about what AI can do, and its benefits tend to be more satisfied and trust the services more.

This study found a difference between how advanced technology is and how ready people are to accept it. Although artificial intelligence helps make things more efficient, not every customer is ready to use machines instead of talking to real people. Some customers feel more comfortable speaking directly with bank employees, especially when

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explaining Sharia-related contracts or products. They believe that AI isn't yet able to properly understand or convey the spiritual and ethical aspects of these matters. This shows that a mix of technology and human support is important in Islamic banking

Pathan, M. S. K. (2022). The experience of using AI-powered services at BSI Semarang is not simple—it has many layers. The success of AI in digital transformation depends on more than just good technology. It also needs a thoughtful, human-centered approach and respect for local values. Steps like making interfaces more user-friendly, offering digital training for customers, and being clear about AI security and ethics are needed. This research helps explain how customer experience is a key factor in measuring the success of AI in Islamic banking. These findings can also guide the creation of better digital services that are easy to use, based on values, and suited to the needs of Muslim communities in the digital age.

A.A. Using AI in a way that follows the values and principles of Sharia Makashid at the BSI Semarang branch. When it comes to fairness and inclusion, AI systems can help give more people equal access to banking services, especially those who can't easily visit a branch in person.

Customers can open accounts, apply for loans, and do other tasks from their phones using the BSI mobile app. This aligns with the idea of Sharia Makashid, which means offering simple and fair services to everyone without any bias. However, problems come up when AI isn't designed well enough for people who aren't very familiar with technology. Older customers, or those with limited digital skills, often find it hard to understand how to use these systems and complete tasks on their own. This worries people because it could create a digital divide, which goes against the idea of fairness and equal opportunity for all.

Using clear and simple words, the content can be rephrased as follows:

Based on the ideas of transparency and protecting assets (hifzh al-mal), using AI to check transactions and find possible fraud has helped stop customers from losing their money in

the wrong way.

The system can spot unusual patterns in transactions, and the app sends alerts to users, which makes them feel safer. BSI staff stated that the AI system can identify potential fraud more quickly than manual reviews. However, some customers said they weren't given enough details about how AI works, how their data is used, stored, and kept safe. This lack of clarity can make customers less confident in the bank and harm the principle of asset protection, which is very important in Sharia Makashid (Arini et al., 2020); Muhammad, S. K. P. (2023).

With regard to protecting lives (hifzh al-nafs), AI also helps keep people safe and comfortable, especially during and after the pandemic.

By reducing the need for in-person visits, customers can still access services from home. But some people find it hard to connect with technology emotionally or spiritually. They feel more at ease talking to staff who understand Islamic values and can show real empathy, which AI technology cannot fully replace. The heart of Sharia services is the human connection and understanding (Taufik, 2021). To better understand how much AI aligns with the principles of Sharia Makashid, this study uses a qualitative comparison in Table 5. This table shows how AI is used at BSI Semarang Branch, looking at fairness, asset protection, life protection, and transparency, which are key parts of Sharia Makashid.

Table 5. Alignment of AI Implementation with Sharia Maqasid Principles at BSI Semarang Branch

Sharia Maqasid Principle	AI Implementation Practice	Conformity Assessment
Justice	Provision of equitable, efficient, and rapid access to digital banking services	Largely compliant; however, a digital divide persists among vulnerable and less digitally literate groups
Protection of Property	AI-based anti-fraud systems and real-time transaction monitoring	Highly relevant and effective, though greater transparency in data governance is required
Protection of Life	Reduced physical interaction and enhanced security services, particularly during the pandemic	Technically adequate; further emphasis on human-centered and empathetic service delivery is needed
Transparency	Disclosure of AI-driven activities and	Partially sufficient; systematic user education

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	decision-making processes	and institutional accountability mechanisms are necessary
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Source: Results of qualitative data processing, 2025

According to **Table 5**, it can be seen that using AI in BSI Pathan, M.S.K 2023 Semarang has a positive direction in supporting the Sharia values of Makashida. But there are still areas that need to improve, especially in making the system more transparent and including more people in the digital space. These are important for making sure the technology is sustainable and fits with Islamic values. In AI theory, the system used by BSI uses a principle of observable learning to spot unusual transaction activities and also uses natural language processing (NLP) in its chatbot system. These technologies match the way input-based AI works, which is flexible, efficient, and always changing.

But from the view of Shariy Maqashid, the success of AI isn't just about the technical side. It should also affect the main values that make sure things are helpful (maslaha), avoid harm (mafsada), and keep people's lives safe (Taufik et al., 2023); Pathan, M. S. K. (2022). Based on the makahid theory by Al-Ghazali and later developed by Al-Shatibi, all new technologies must be tested to see if they work well in five main areas: protecting religion (Hifz al-Din), the soul (Hifz al-Nafs), reason (Hifz al-Aql), future generations (Hifz al-Nasl), and property (Hifz al-Mal) (Salman, 2023). There is a worry that using AI without thinking about its social, spiritual, and ethical effects might bring some good results now, but could cause hidden problems later. So, AI in Islamic banks should be developed in a way that includes experts, scientists, and the people who will use the technology at the end.

Previous studies by Aisan et al. (2022); Pathan, M.S.K 2023 show that the success of digitalizing Islamic banking services isn't just because of speed or features, but also because Islamic values are maintained in every part of the service. Their work also points out that having clear Islamic guidelines, or fatwas, is important when using digital technology. Ali et al. (2019); Muhammad, S. K. P. (2023) agree, saying that when Islamic financial institutions use AI, they should follow an ethical system based on the goals of

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Islamic teachings, not just technical rules. This idea is also backed by Swain and Gochheit (2022); Muhammad, S. K. P. (2023), who say that AI works well in Islamic banking when there is a focus on education and involving people in creating systems that are both efficient and ethical. More research shows that using AI at BSI Semarang has led to positive changes, but this needs more transparency, a better understanding of digital tools, and stronger inclusion of Islamic values.

The conclusion says that AI's fit with Islamic goals is not fixed or measurable only through technical means. It needs ongoing checks, input from many people, and the willingness to build AI systems that are effective, focused on oil, and sensitive to spiritual needs. Islamic banks will become modern financial and religious institutions that keep using technology within the rules of Islamic values.

Conclusion

This local approach adds fresh insights to the study of how Islam is changing because of digital technology. The research looked closely at a key question: how the use of artificial intelligence (AI) at the Semarang branch of Bank Syariah Indonesia (BSI) affects the way digital services work, and how much Sharia values and rules influence this change. The study found that AI has changed how Islamic banking services are provided through digital tools, interactive chatbots, and automatic transactions, which make services more efficient and easier to use. However, this change hasn't removed cultural differences in the local area or improved digital knowledge among customers and workers. The unique part of this study is that it used a method called phenomenology to understand the views and experiences of employees and clients in this local Islamic banking setting, which hasn't been studied much before. The research also shows that the AI used by BSI helps keep Sharia Makashid principles alive, especially in protecting property and life. But there are still issues with being open and showing understanding, which are important parts of fairness in Islamic services. AI in Islamic banking is seen as a tool that helps make services more efficient and meaningful in a spiritual way. The success of this

digital change depends not only on the technical skills of AI but also on how well the values it brings match Islamic principles. Therefore, keeping this transformation, going needs teamwork between technology, local culture, and Sharia rules. For example, using mixed service models or creating digital literacy programs that are tailored using AI.

References

1. 18(1). <https://doi.org/10.4102/sajim.v18i1.696>
2. Adinugraha, H. H., Kamal, M. R., & Diatmika, T. (2024). Implementing blockchain technology to increase trust and transparency in the halal supply chain: a case study in Indonesia. *Journal of Sports Industry and Blockchain Technologies*, 1(2), 91–101. <https://ndpapublishing.com/index.php/sibt/article/view/80/52>
3. Agnihotri, A., & Bhattacharya, S. (2024). The effectiveness of chatbots in restoring services.
4. Ahmed, F., Ali, Z., Khan, M. S., & Mullazai, M. (2023). A syntactic analysis of compound noun phrase of Balochi within the perspective of X-bar theory. *International Research Journal of Management and Social Sciences*, 4(3), 289-304.
5. Algadi, M. Y., Alcuda, H., Lutfi, A., Ananze, H., Marey, A., Almaia, M. A., & Al-Matari, Y. A. (2024). Improving cyber governance in Islamic banks: the impact of artificial intelligence and the moderate impact of the Covid-19 pandemic. *International Journal of Data and Network Science*, 8(1). <https://doi.org/10.5267/j.ijdns.2023.9.023>
6. Ali, H., Abdullah, R., & Zaki Zaini, M. (2019). Fintech and its potential impact on Islamic banking and the financial industry: Case studies for Brunei Darussalam and Malaysia. *International Journal of Islamic Economics and Finance (IJIEF)*, 2(1). <https://doi.org/10.18196/ijief.2116>
7. Anggraeni, S.F., & Mohammad, R. (2024). Marketing strategy and procedures for the use of the Hassan card in Bank XYZ, Yogyakarta district. *Formosa Journal of Applied Sciences*, 3(2).
8. Ali, K., Parveen, S., Amalia, I., Jalil, M. A., & Merikan, F. M. I. (2023). A bibliometric review of corporate governance by Islamic financial institutions using AI-based tools. *International Journal of Business Professional Reviews*, 8(4). <https://doi.org/10.26668/businessreview/2023.v8i4.1710>
9. Arini, A., Maharani, S. N., & Jugliardi, D. (2020). Impact of the Sustainability Report on the Activities of Makashid Sharia Islamic Commercial Banks in Indonesia. *International Journal of Tourism and Hospitality in Asia, Pacific*, 3(3). <https://doi.org/10.32535/ijthap.v3i3.958>.
10. Aysan, A. F., Belatik, A., Unal, I. M., & Etai, R. (2022). Fintech Strategies of Islamic Banks: A Global Empirical Analysis. *Fintech*, 1(2). <https://doi.org/10.3390/fintech1020016>
11. Balusamy, B., Sharma, W., Agarwal, A., Verma, T., Agarwal, R., & Grima, S. (2025). Examining the impact of uncertainty on business outcomes through strategic management, incorporation, and cost implementation: A case study of agribusiness in and around Punjab, India. *International Journal of Business Performance Management*, 26(1). <https://doi.org/10.1504/ijbpm.2025.10061652>
12. Chong, J. L. L., & Olesen, K. (2017). A technological, organizational, and environmental perspective for eco-efficiency: a meta-analysis. *Australasian Journal of Information Systems*, 21. <https://doi.org/10.3127/ajis.v21i0.1441>
13. Fahy, Y. M., Masruchin, M., & Latifa, F. N. (2022). The impact of religiosity and customer perception on interest in savings. *Indonesian Interdisciplinary Journal of Shariah Economics (IIJSE)*, 5(1). <https://doi.org/10.31538/ijse.v5i1.1803>
14. Finance Services Power (2023). *Laporan Kinerja OJK Stuttgart I 2023*. <https://www.ojk.go.id/berita-dan-kegiatan/info-terkini/Documents/Pages/Laporan-I-2023/OJK> Quarterly Performance Report for the First Quarter 2023.pdf?
15. Haidar, A. (2024). Decoding Feelings: A Study of Islamic Fintech Discourse on Twitter in the Aftermath of the Pandemic. *Perbanas, Journal of Islamic Economics and Business*, 4(1). <https://doi.org/10.56174/pjib.v4i1.244>
16. Haider, T., Paslack, N., & Posega, O. (2023). Ethical management of human-AI interactions: A review of theory developments. In *Journal of Strategic Information Systems* (Vol. 32, Issue 3). <https://doi.org/10.1016/j.jsis.2023.101772>

17. <https://doi.org/10.55927/fjas.v3i2.7748>
18. International team Journal in Information Controls, 76. <https://doi.org/10.1016/j.ijinfomgt.2023.102679>
19. Katila, S., Merilainen, S., & Bell, E. (2023). Handbook on Feminist Research Methodologies in Management and Organizational Studies. In *Handbook on Feminist Research Methodologies in Management and Organizational Studies*. <https://doi.org/10.4337/9781800377035>
20. Khan, M. S., Ali, Z., Burlea-Sciopiu, A., Ilyas, M., Shaikh, M. A., & Malik, M. K. (2024). Integrative Approaches To Complex Optimization: Stochastic Simulation, Multi-Criteria Fuzzy Decision Making, Super Economics, And The Interface Of Mathematical Economics And Nanotechnology. *Kurdish Studies*, 12(3), 311-325.
21. Khan, M. S., Rahpoto, M. S., & Mangnejo, G. M. (2020). The effect of the financial crisis on corporal well-being: Apparent impact matters: Assessment of contagion to developing economies. *Research Journal of Social Sciences and Economics Review*, 1(3), 232-238.
22. Khan, M. S., Rahpoto, M. S., & Talpur, U. (2021). The effect of the financial crisis on corporal well-being: Apparent impact matters. In *Internet of Everything and Big Data* (pp. 25-34). CRC Press.
23. Khoso, A. A. K., Pathan, M. S. K., & Ahmed, M. (2022). Exploring the impacts and aftershocks of COVID-19 on Islamic banking and conventional banking in Pakistan. *International Research Journal of Management and Social Sciences*, 3(1), 179-192.
24. Khoso, A. A., & Pathan, M. S. K. (2021). The role of Islamic banking industry in the perspective of global financial sector and its impact in Pakistan's economic growth. *International Research Journal of Education and Innovation*, 2(2), 81-91.
25. Khoso, A. A., & Pathan, M. S. K. (2023). The mediating role of job satisfaction in the relationship between organizational culture and employee commitment in Islamic banking. *International Research Journal of Management and Social Sciences*, 4(2), 13-30.
26. Khoso, A. A., Ahmed, M., & Pathan, M. S. K. (2022). Customer satisfaction standards according to Islamic and conventional banking system in Pakistan. *International Research Journal of Education and Innovation*, 3(2), 185-194.
27. Khowaja, I. A., Talpur, U., Soomro, S. H., & Khan, M. S. (2021). The non-banking financial institutions in perspective of economic growth of Pakistan. *Applied Economics Letters*, 28(8), 701-706.
28. Kogin, J., & Ng, J. L. (2016). Computer-Based Qualitative Research. In *Guidelines for Qualitative Research Methods for Human Resource Management*. <https://doi.org/10.4337/9781784711184.00027>
29. Kurniawan, M. A., Anwar, M., & Nydar, S. R. (2022). Developing an Islamic Money Market Strategy to Improve the Quality of Islamic Banking Business During the Pandemic in Indonesia 2021. *Quality Access For Success*, 23(190). <https://doi.org/10.47750/QAS/23.190.28>
30. Li, J., Zhou, Y., Yao, J., & Liu, H. (2021). An empirical study of AI trust in a Chinese petrochemical company based on institutional theory. *Scientific Reports*, 11(1). <https://doi.org/10.1038/s41598-021-92904-7>
31. Lyanjani, D., & Sutikno, S. (2021). Restructuring is an attempt to reduce the impact of distressed finance on Griya Ib Hasanah Produce. *Journal of Finance and Banking (KEBAN)*, 1(1). <https://doi.org/10.30656/jkk.v1i1.3969>
32. M. M. (2022). Organizational Understanding Systems as a Determinant of Successful Organizational Change: A Theory-Based Approach. *Minutes of the Annual Meeting of the Society for Human Factors and Ergonomics*, 66(1). <https://doi.org/10.1177/1071181322661249>
33. Mbaidin, H. O., Sbay, N. K., Almubidin, I. O., Chindo, W. M., & Alomari, K. M. (2024). The Role of AI Integration and Management Standards: Improving Financial Reporting in Islamic Banking. *Letters Decision Science*, 13(1). <https://doi.org/10.5267/j.dsl.2023.12.001> Michael Hughes, J., Henning, R. A., & Robertson,
34. Memon, A., & Khan, M. S. (2019). Industry academia linkages of Jamshoro universities: The case of University of Sindh, Mehran University of Engineering and Technology & Liaquat University of Medical and Health Sciences. *Mediterranean Journal of Basic and Applied Sciences (MJBAS)*, 3(3), 13-52.
35. Muhammad, S. K. P. (2023). The influence of organizational culture on employee commitment and turnover intentions: A study of the importance of positive culture for retaining employees. *Global Research Journal of Management and Social Sciences (GRJMSS)*, 1(1), 85-94.
36. Mullazai, M., Ali, Z., Khan, M. S., & Ahmed, F. (2023). Agent and theme theta roles in Balochi: A morphosemantic analysis. *International Research Journal of Management and Social Sciences*, 4(3), 332-347.
37. Nezamy, M. A., & Rookham, R. (2022). A crowdsourced engine for retraining NLP in chatbots. *Lecture Notes on*

Networks and Systems, 322. https://doi.org/10.1007/978-3-030-85990-9_26

38. Olutoyin, O., & Flowerday, S. (2016). Successful IT management in SMEs: Applying Technology–Organization–Environment Theory. *South African Journal of Information Management*,

39. Pathan, M. S. K. (2022). The impact of emotional intelligence on leadership effectiveness. *International Research Journal of Management and Social Sciences*, 3(3), 1-7.

40. Pathan, M. S. K. (2022). The influence of organizational culture on employee commitment and turnover intentions. *International Research Journal of Management and Social Sciences*, 3(4), 34-43.

41. Pathan, M. S. K. (2023). Assessing the mediating role of job satisfaction in the relationship between organizational culture and employee commitment. *International Research Journal of Education and Innovation*, 4(1), 1-11.

42. Pathan, M. S. K., & Khoso, A. A. (2023). Misfortune tragedy findings in Pakistan: A public learning perspective on the virtue of economic recovery mindset. *International Research Journal of Management and Social Sciences*, 4(2), 1-12.

43. Pathan, M. S. K., Khoso, A. A., & Ahmed, M. (2022). Digital model anecdotes through artificial intelligence in socioeconomic and Islamic investments. *International Research Journal of Education and Innovation*, 3(2), 195-209.

44. Pathan, M. S., Ahmed, M., & Khoso, A. A. (2022). Islamic banking under the vision of green finance: The case of development, ecosystem, and prospects. *International Research Journal of Management and Social Sciences*, 3(1), 193-210.

45. Qasim, R. S. R., Zulazli, N. A., & Azman, V. F. A. S. (2024). Do Islamic Fintech Leadership and Technology Adoption Predict the Values of Sustainable Entrepreneurship among FinTech Organizations? *International Journal of Religion*, 5(3), 466–475. <https://ijor.co.uk/ijor/article/view/3458>

46. Rabbani, M. R., Lutfi, A., Ashraf, M. A., Nawaz, N., & Ahmad Vato, W. (2023). The role of artificial intelligence in moderating innovative financial processes in the banking sector: a study based on structural modeling of equations. *Frontiers in Environmental Sciences*, 10. <https://doi.org/10.3389/fenvs.2022.978691>

47. Rahat, S., & Pathan, M. S. K. (2021). Sustainable climate approach and in the context of environmental economy: A classical analysis matters. *Neutron*, 21(1), 40-45.

48. Rinjani, T., Adinugraha, H. H., & Safiya, M. A. (2024). Financial Management Education for Boarding Students Through Digital Investment. *Sports Industry Magazine & Blockchain Technology*, 1(2), 86–90. <https://doi.org/https://doi.org/10.5281/zenodo.14555876>

49. Rochmad, R., Yusuf, A. M., & Mulyana, R. (2024). The impact of e-governance and Shariah-moderated customer relationship quality on loyalty (a study of Islamic banks in Jakarta). *Tazkia Islamic Finance and Business Review*, 17(2). <https://doi.org/10.30993/tifbr.v17i2.337>

50. S., Ye, L., & Lee, S.W. (2021). Use Artificial Intelligence to Improve Quality Control of GI Endoscopy. In *Frontiers in Medicine* (Volume 8). <https://doi.org/10.3389/fmed.2021.709347>

51. Salman, K. R. (2023). Background and consequences of Islamic banks according to the Shariah Makashid Index. *Indonesian Accounting Review*, 13(1). <https://doi.org/10.14414/tiar.v13i1.3015>

52. Security in the Islamic banking sector. *International Conference on Sustainable Islamic Business and Finance 2022, SIBF 2022*. <https://doi.org/10.1109/SIBF56821.2022.9939683>

53. Singh, A., Kanaujia, A., Singh, V. K., & Vinuesa, R. (2024). Artificial Intelligence for Sustainable Development Goals: Bibliometric Models and Concept Evolution Trajectories. *Sustainable Development*, 32(1). <https://doi.org/10.1002/sd.2706>

54. Song, Y. Kyu, Mao, H. L., Zhou, H. Bing, H. S. Kyu., Chen, Y. H., Zhang, L. H., Xu, S. W., Yang, L. L., Tang,

55. Stevens, J. S., & Sokol, M. (2023). Financial Innovation for Climate Justice: Central Banks and the Transformative Creative Shift. *Climate and Development*. <https://doi.org/10.1080/17565529.2023.2268589>

56. Sudarsono, H., Nugrohovati, R. N. I., & Tumewang, Y. K. (2020). Impact of the Covid-19 pandemic on internet banking adoption in Indonesia: Islamic banking and traditional banking. *Journal of Asian Finance, Economics and Business*, 7(11). <https://doi.org/10.13106/jafeb.2020.vol7.no11.789>

57. Suhartanto, D., Sharif, M. E., Chandra Ngraha, A., Suhaieni, T., Mastura, A., & Amin, H. (2022). Millennials' loyalty to AI-powered mobile banking: data from Indonesian Islamic banks. *Journal of Islamic Marketing*, 13(9). <https://doi.org/10.1108/JIMA-12-2020-0380>

58. Supriani, R. (2021). A legal view of the supporting role of human resources in the Islamic banking industry in Indonesia. *International Journal of Criminology and Sociology*, 10. <https://doi.org/10.6000/1929-4409.2021.10.36>

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59. Swain, S., & Gochhaith, S. (2022). ABCD Technologies – AI, Blockchain, Cloud Computing, and Data
60. Tawfik, M. (2021). The development of Sharia Makashid in the Islamic Bank. *Journal of Islamic Finance and Banking*, 3(2). <https://doi.org/10.22515/fib.v3i2.2978>
61. Tawfik, M., Mohammad, R., & Nigraheni. (2023). Determinants and Consequences of Sharia Makashid Application: Evidence from Islamic Banks in Indonesia and Malaysia. *Journal of Islamic Accounting and Business Studies*, 14(8). <https://doi.org/10.1108/JIABR-07-2021-0205>
62. Van Hoai, D., Duong, H. T., & Hoang, V. T. (2021). Text recognition for the Vietnamese ID card based on a network of deep functions. *International Journal of Document Analysis and Recognition*, 24(1–2). <https://doi.org/10.1007/s10032-021-00363-7>
63. Widodo, H. K., Andrean, R., Purwaningsich, S. N., & Perdana, F. (2024). Preparing for the digitalization of higher education: a comparative study of Indonesian universities. *Journal of Sports Industry and Blockchain Technology*, 1(2), 78–85. <https://doi.org/https://doi.org/10.5281/zenodo.14555748>
64. Yusaivi, A. M., Lu, S. Y., Syarif, M. E., & Suhartanto, D. (2021). Millennials' experience with mobile banking and mobile banking is proof of artificial intelligence in Islamic banking. *International Team Journal in Applications Business Research*. <https://doi.org/10.35313/ijabrv3i1.121>
65. Zhou, H., & Xu, L. (2023). Digital banking transformation and business innovation: data from China. *Sustainable Development (Switzerland)*, 15(22). <https://doi.org/10.3390/su152215971>