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Driving Digital-Based Innovation Culture in Islamic Financial Institutions: Mediated by Job Satisfaction

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ABSTRACT

This study examines the influence of digital training, technological competence, information accessibility, and electronic financial facilities on digital-based innovation culture, with job satisfaction serving as a mediating variable, within Islamic banking institutions operating in Padang, West Sumatra, Indonesia. Although digital transformation has been widely discussed in the financial sector, empirical evidence explaining how organizational support in digital initiatives shapes innovation culture through employee satisfaction in Sharia-based banking remains limited. This study addresses this gap by adopting Organizational Support Theory (OST) as the sole theoretical foundation. A quantitative research design was employed using a purposive sampling technique. Data were collected from 150 employees working in operational and financial units of Islamic banks that actively implement digital financial systems. The data were analyzed using Structural Equation Modeling with Partial Least Squares (SEM-PLS) to examine both direct and indirect relationships among the variables. The results indicate that digital training, technological competence, information accessibility, and electronic financial facilities have significant positive effects on job satisfaction and digital-based innovation culture. Furthermore, job satisfaction partially mediates the relationship between digital organizational support and innovation culture, highlighting its role as a key psychological mechanism in transforming digital support into innovative behavior. These findings confirm the relevance of Organizational Support Theory in explaining how digital initiatives, when perceived as supportive, foster employee satisfaction and innovation in Islamic banking institutions. Strengthening perceived organizational support is essential for cultivating a sustainable innovation culture while maintaining alignment with Islamic principles.

Keywords: Digital Training, Innovative Work Culture, Job Satisfaction, Organizational Support Theory, Technological Competence

INTRODUCTION

In today's rapidly evolving digital landscape, Islamic financial institutions are facing increasing pressure to modernize their operations and adapt to technological advancements while maintaining Sharia compliance (Trenerry et al., 2021). Within this context, Islamic banks in Indonesia have increasingly adopted digital financial services to enhance service efficiency, improve customer accessibility, and support the national agenda of digital financial transformation.

However, the successful implementation of digital transformation in Islamic financial institutions depends not only on technological infrastructure, but also on human-related factors such as employee competence, access to financial information, and digital readiness (Rueckel et al., 2020). Digital training, technological competence, and the availability of electronic financial services play a crucial role in enabling employees to perform effectively in a digitally driven, Sharia-compliant work environment (Trenerry et al., 2021). When these factors are well integrated, they can foster an innovation-oriented culture that supports sustainable financial performance in Islamic banking institutions.

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Recent data shows that only about 23% of Islamic micro-institutions (such as BMTs and LKMSs) have fully adopted digital financial systems. This is despite the fact that digital transformation has been shown to have a significant positive correlation with increased operational efficiency and financial performance, including a surge in Return on Assets (ROA) and Return on Equity (ROE). Unfortunately, the majority of institutions remain trapped in a digital-readiness gap, with limited infrastructure and technological literacy as key obstacles (Mansyur & Putra, 2024). Without appropriate acceleration measures, this obstacle not only erodes institutional competitiveness in an increasingly competitive market but also threatens the sustainability of long-term community-serving growth.

Importantly, job satisfaction plays a crucial mediating role in this dynamic. Even with advanced digital financial systems and adequate training, employees are less likely to embrace innovative practices if they feel undervalued, overburdened, or disengaged (Frazier et al., 2019). Therefore, understanding the extent to which job satisfaction mediates the relationship between digital capabilities and an innovative work culture is essential. This study investigates how digital training, technological competence, information access, and electronic financial facilities influence the development of an innovative work culture within Islamic financial institutions, with job satisfaction serving as a mediating variable.

While several studies have explored the impact of digital technology on workplace performance, limited research has examined this relationship within the context of Islamic financial institutions in Indonesia. In particular, empirical evidence remains scarce regarding how digital readiness factors influence innovative work culture through employee psychological mechanisms. This study aims to address this gap by examining the influence of digital training, technological competence, information access, and electronic financial facilities on innovative work culture, with job satisfaction acting as a mediating variable within Islamic financial institutions.

LITERATURE STUDY

Organizational Support Theory

This study is grounded in Organizational Support Theory (OST), which emphasizes that employees' attitudes and behaviors are shaped by their perceptions of how much the organization values their contributions and cares about their well-being. According to OST, when employees feel supported through access to training, information, tools, and digital technology, they tend to respond with higher job satisfaction, stronger motivation, and greater commitment to organizational objectives (Bahadır et al., 2024). In the context of this research, digital training, technological competence, information access, and electronic financial facilities represent forms of organizational support that influence employees' perceptions of their work environment within Islamic financial institutions.

From this perspective, job satisfaction functions as a key emotional response that links organizational support to desired behavioral outcomes, particularly the development of an innovative work culture. Employees who experience higher levels of satisfaction are more likely to engage in creative problem-solving, knowledge sharing, and the adoption of new approaches within their organizations (Kremer et al., 2019). Accordingly, this study applies OST to explain how investments in digital readiness, when perceived as supportive, not only enhance job conditions but also establish a foundation for sustainable innovation in Sharia-based financial institutions.

Relationship of Digital Training, Technological Competence, Information Access and Electronic Facilities on Innovative Work Culture

Digital training plays a critical role in preparing employees to function effectively in technology-driven financial environments (Deng et al., 2023). Through structured learning and continuous upskilling, employees become more proficient in using digital financial tools, platforms, and information systems required in modern Islamic financial institutions (Cardoso & Gomes, 2025). Digital training also enhances employees' awareness of technological developments and strengthens their confidence to experiment with

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new digital solutions, which is essential for fostering an innovative work culture (Freixanet et al., 2021). Within the context of Islamic financial institutions, digital training supports employees in adapting to digital workflows, complying with Sharia-based operational standards, and actively engaging in digital transformation initiatives (Kesar & Joseph, 2025).

Moreover, digital training encourages a culture of continuous learning and adaptability within Islamic financial institutions (Trenerry et al., 2021). When employees receive regular digital training, it signals that the organization values professional growth and innovation while supporting Sharia-compliant operations. This perception increases employees' motivation, creativity, and willingness to adopt new digital practices in their daily work routines. In such an environment, employees are more likely to initiate process improvements and take calculated risks, thereby fostering an innovative work culture within Islamic financial organizations.

Technological competence refers to an individual's ability to understand, use, and adapt to various digital tools and platforms (Antonietti et al., 2022). Employees with high technological competence are better equipped to perform complex tasks, solve problems using digital solutions, and explore more efficient work methods within Islamic financial institutions (Colbert et al., 2016). This capability enhances operational effectiveness and reduces technological constraints, thereby enabling employees to focus on creative thinking and process improvement. As a result, technological competence empowers employees to innovate in their roles while supporting digitally driven and Sharia-compliant financial operations.

Furthermore, technologically competent employees are more likely to lead or support change initiatives within Islamic financial institutions (Van Minh et al., 2017). Their familiarity with digital financial systems facilitates testing new processes, recommending system improvements, and collaborating on innovation-driven projects. This level of competence strengthens the foundation of an innovative work culture by enabling employees to explore, develop, and implement new ideas that align with the objectives of digital transformation while supporting Sharia-compliant financial operations.

Access to accurate, timely, and relevant information is a cornerstone of innovation within Islamic financial institutions. When employees can easily retrieve and share financial and operational information, they become more informed in their decision-making, more confident in proposing new ideas, and more capable of responding to dynamic organizational challenges (Biswas et al., 2024). In digitally driven Islamic financial environments, access to updated data, internal policies, operational procedures, and knowledge resources enables employees to work proactively rather than reactively while supporting Sharia-compliant practices.

In addition, accessible information supports a culture of transparency and collaboration within Islamic financial institutions. When knowledge flows freely across organizational units, employees are more likely to engage in cross-functional teamwork, exchange insights, and co-create innovative solutions (Mohanty et al., 2024). Such information accessibility reduces redundancy, accelerates organizational learning, and supports experimentation, all key elements of an innovative work culture, particularly in digitally driven, Sharia-compliant financial environments.

Electronic facilities, including digital infrastructure, hardware, software, internet access, and communication tools, serve as the backbone of modern innovation-driven Islamic financial institutions. When these facilities are reliable and up to date, they enable employees to work more efficiently, communicate seamlessly, and explore digital solutions to operational challenges (Aithal, 2023). A well-equipped digital environment minimizes technical barriers and allows employees to focus on innovation and value creation rather than resolving system-related issues.

Based on Organizational Support Theory (OST), the relationship between digital training, technological competence, information access, and electronic facilities, and an innovative work culture can be explained through employees' perceptions of organizational support (Chen & Shen, 2025). OST posits that when employees perceive that their organization invests in their development through relevant digital training, enhances their technological competence, provides adequate access to information, and equips

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them with reliable electronic facilities, they feel valued, supported, and cared for by the organization (X. Zhang et al., 2023); (Lupton, 2016) .These perceptions foster a sense of obligation and reciprocity, motivating employees to contribute beyond formal job requirements by engaging in innovative behaviors. In this context, digital training and technological competence signal organizational commitment to employee capability development, while information access and electronic facilities reflect structural and instrumental support. Collectively, these forms of support create a psychologically safe and enabling environment that encourages creativity, experimentation, and continuous improvement, thereby strengthening an innovative work culture within the organization.

Furthermore, the availability of electronic facilities creates an enabling environment for creativity and experimentation. Employees are more inclined to try new approaches when they have access to appropriate digital tools and platforms. This condition increases employee engagement and fosters a mindset that is open to continuous improvement. Within Islamic financial institutions, adequate electronic support directly enhances process innovation, service quality, user experience, and internal performance, all of which contribute to the development of a robust, innovative work culture. Based on the relationships among the variables discussed above, the hypotheses of this study are formulated as follows:

H1: Digital training has a positive effect on innovative work culture.
H2: Technological competence has a positive effect on innovative work culture.
H3: Information access has a positive effect on innovative work culture.
H4: Electronic facilities have a positive effect on innovative work culture.

Relationship of Digital Training, Technological Competence, Information Access and Electronic Facilities on Job Satisfaction

Digital training equips employees with the knowledge and skills required to navigate and perform effectively in technology-driven work environments within Islamic financial institutions(Kvirchishvili, 2023). When employees receive consistent and relevant digital training, they feel more confident, competent, and supported in their roles. This not only enhances work performance but also strengthens employees' perceptions of professional development and career growth. As a result, employees are more likely to feel valued and satisfied with their jobs, recognizing that the organization is investing in their success and capability development.

Moreover, access to digital training reduces stress associated with technological changes within Islamic financial institutions. Employees who receive adequate training feel more prepared and less overwhelmed when facing new digital systems or technology-driven transitions. This condition leads to a more positive perception of the work environment, reduces resistance to change, and enhances employee motivation. In turn, digital training contributes to higher levels of job satisfaction by fostering a sense of empowerment, confidence, and readiness to perform effectively in digitally driven and Sharia-compliant financial operations (Hermawan et al., 2024).

Employees with high technological competence are better equipped to manage their tasks efficiently and effectively within Islamic financial institutions. This capability reduces frustration related to the use of digital financial systems, increases productivity, and enhances employees' sense of control over their work. When employees are confident in their technological abilities, they experience lower levels of job-related anxiety and greater autonomy, both of which are key contributors to job satisfaction in digitally driven and Sharia-compliant work environments (Fleischer & Wanckel, 2024).

In addition, technologically competent employees often feel more engaged and capable of contributing meaningfully to organizational goals within Islamic financial institutions. Their ability to innovate, solve problems, and adapt quickly to digital change fosters a stronger sense of personal achievement. As a result, employees who possess strong technological skills are more likely to feel satisfied with their roles and responsibilities, particularly in digitally evolving and Sharia-compliant financial environments (Trenerry et al., 2021).

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Access to relevant and timely information allows employees to work more independently and make well-informed decisions within Islamic financial institutions (Abualoush et al., 2018). Such access minimizes uncertainty and enables employees to complete their tasks with greater confidence and clarity. When information is easy to obtain, employees feel more in control of their work, reducing workplace frustration and increasing efficiency, both of which contribute positively to job satisfaction (Irabor & Okolie, 2019).

Furthermore, transparent and accessible information flows enhance trust within Islamic financial institutions (Hosseini et al., 2018). Employees who have access to the data and knowledge required for their roles are more likely to feel included in organizational processes and decision-making (Matheus et al., 2020). This sense of inclusion and empowerment fosters a supportive work environment, leading employees to feel valued and resulting in higher levels of job satisfaction within digitally driven and Sharia-compliant financial organizations (Brimhall & Mor Barak, 2018).

The availability of adequate electronic facilities, such as reliable internet access, updated hardware, and efficient software systems, enables employees to perform their tasks smoothly and without technical disruptions within Islamic financial institutions (Attaran, 2017). When digital tools are accessible and function effectively, employees experience lower levels of stress, fewer work delays, and greater comfort in their daily activities (Vahdat, 2022). This positive digital work environment enhances employees' perceptions of the workplace and contributes directly to higher levels of job satisfaction.

Moreover, electronic facilities support flexibility and modern work practices, including digital collaboration and technology-enabled work arrangements within Islamic financial institutions. Employees who can rely on digital infrastructure to communicate, coordinate, and innovate are more likely to feel capable, engaged, and productive. The availability of such infrastructure signals organizational support and digital readiness, reinforcing employees' sense of being valued and appreciated. Over time, this positive perception contributes to higher levels of job satisfaction in digitally driven and Sharia-compliant financial environments. Based on the relationship between the variables above, the hypothesis in this study is as follows:

H5: Digital training has a positive effect on job satisfaction.
H6: Technological competence has a positive effect on job satisfaction.
H7: Information access has a positive effect on job satisfaction.
H8: Electronic facilities have a positive effect on job satisfaction.

Relationship of Job Satisfaction on Innovative Work Culture

Job satisfaction is a key psychological factor that influences employees' motivation, engagement, and commitment to organizational goals within Islamic financial institutions (Susanto et al., 2023). Employees who experience higher levels of job satisfaction are more likely to take initiative, engage in creative thinking, and actively contribute to improvements in work processes (Morton et al., 2018). A positive emotional state in the workplace fosters enthusiasm, openness to change, and a willingness to participate in innovation-related activities, all of which are essential for building an innovative work culture in digitally driven and Sharia-compliant financial organizations.

Furthermore, job satisfaction promotes a sense of ownership and pride in one's work within Islamic financial institutions, encouraging employees to go beyond routine tasks and actively suggest or implement new ideas (Helm et al., 2016). In a supportive and satisfying work environment, employees tend to be more receptive to experimentation and collaboration. These behaviors directly contribute to the development of a workplace culture that values continuous improvement, creativity, and innovation in digitally driven and Sharia-compliant financial organizations. Based on the relationship between the variables above, the hypothesis in this study is as follows:

H9: Job satisfaction has a positive effect on innovative work culture.

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Job Satisfaction as Mediating Variable

Digital training contributes to the development of employee skills and confidence; however, its influence on innovation becomes more substantial when it simultaneously enhances job satisfaction (Topcuoglu et al., 2023). Employees who receive relevant and effective training tend to perceive greater organizational support, which fosters feelings of empowerment and satisfaction with their work (Hanaysha & Tahir, 2016). This positive psychological state enables employees to utilize their newly acquired skills more creatively and proactively in performing their tasks.

In this relationship, job satisfaction functions as a mediating mechanism that links digital training to innovative outcomes. Without sufficient job satisfaction, the knowledge and skills gained through training may not be fully translated into innovative actions or contribute to cultural transformation. Conversely, when employees feel satisfied as a result of feeling competent, valued, and supported, they are more inclined to engage in innovative behaviors, thereby strengthening the development of an innovative work culture (Afsar et al., 2018).

Technological competence enables employees to perform their tasks more efficiently and adapt to new digital systems; however, its impact on innovation is significantly strengthened when it also enhances job satisfaction (Goos et al., 2019). Employees who are confident in their technological abilities tend to experience a greater sense of control over their work, lower levels of stress, and higher feelings of achievement, all of which are essential components of job satisfaction.

This positive emotional condition subsequently encourages innovation-oriented behaviors. In this relationship, job satisfaction functions as a motivational mechanism that links technological competence to the development of an innovative work culture. Technological competence alone may be insufficient to foster innovation if employees feel overwhelmed or disengaged. Conversely, when such competence contributes to higher job satisfaction, employees are more likely to generate innovative ideas, support organizational change, and actively participate in building a culture that values continuous improvement and advancement (Sabuhari et al., 2020).

Access to accurate and timely information enhances employees' decision-making capabilities and work autonomy; however, its influence on innovation becomes more substantial when it also increases job satisfaction. When employees are well informed, they tend to feel trusted, empowered, and better equipped to carry out their responsibilities effectively (Naqshbandi et al., 2019). These perceptions foster higher levels of job satisfaction and strengthen employees' alignment with organizational objectives. In this relationship, job satisfaction acts as a mediating mechanism between information access and innovative work behavior. Employees who experience satisfaction as a result of information transparency and accessibility are more likely to collaborate, share knowledge, and take initiative. Such behaviors are essential for nurturing an innovative work culture (Lee et al., 2021). Conversely, in the absence of job satisfaction, the potential benefits of information access may not be fully realized in terms of innovation outcomes.

The availability of reliable and modern electronic facilities supports task completion and digital collaboration; however, their influence on workplace innovation is strengthened when they also enhance job satisfaction. When digital tools enable work to be performed more efficiently, flexibly, and smoothly, employees tend to experience lower levels of frustration and higher morale (Gagné et al., 2022). This contributes to a more positive overall work experience. In this relationship, job satisfaction functions as a mediating mechanism that transforms functional digital infrastructure into meaningful cultural change. The presence of advanced electronic facilities alone may not be sufficient to stimulate innovation if employees remain dissatisfied. Conversely, when such facilities increase job satisfaction by supporting autonomy, productivity, and effective communication, they encourage innovative behaviors and contribute to the development of an innovative work culture. Based on the relationships among the variables discussed above, the hypotheses in this study are formulated as follows:

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H10: Job satisfaction mediates the effect of digital training on innovative work culture.
H11: Job satisfaction mediates the effect of technological competence on innovative work culture.
H12: Job satisfaction mediates the effect of information access on innovative work culture.
H13: Job satisfaction mediates the effect of electronic facilities on innovative work culture.

METHOD

This study adopts a quantitative causal-explanatory research design to examine the influence of digital training, technological competence, information access, and electronic facilities on innovative work culture, with job satisfaction serving as a mediating variable, within Sharia-based financial institutions located in Padang, West Sumatra. The research aims to analyze both direct and indirect causal relationships among the variables through hypothesis testing using statistical modeling. The population comprises employees of Sharia financial institutions, including Islamic banks, Sharia financing institutions, and Islamic microfinance institutions, who are directly involved in digital-based financial services such as Sharia-compliant digital banking platforms, electronic financing systems, and financial technology applications. A purposive sampling technique was employed to select respondents with relevant experience and knowledge. The sampling criteria included employees who (1) actively use digital financial systems in their daily work, (2) are involved in operational or financial decision-making processes, and (3) have participated in digital or technology-related training. This approach ensures the sample's relevance and strengthens the study's internal validity. The sample size was determined following Hair et al. (2018), which recommends a minimum of 5–10 respondents per indicator for Structural Equation Modeling (SEM). With 30 measurement indicators, a total of 150 respondents were included, exceeding the minimum threshold and ensuring sufficient statistical power for model estimation.

Data were collected using a structured questionnaire distributed electronically via online survey platforms and internal institutional coordination. All variables were measured using closed-ended items on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Measurement indicators for each construct were adapted from well-established, validated instruments used in prior studies and carefully modified to align with the digital operations and Sharia-compliant characteristics of Islamic financial institutions.

Data analysis was conducted using Structural Equation Modeling with Partial Least Squares (SEM-PLS) through SmartPLS software. SEM-PLS was selected due to its suitability for complex research models involving multiple latent constructs and mediating relationships, particularly with moderate sample sizes and non-normal data distributions. Additionally, SEM-PLS emphasizes prediction and theory development, making it appropriate for exploratory research in emerging areas such as digital innovation in Islamic finance. The analysis began with evaluating the measurement model (outer model) to assess validity and reliability. Convergent validity was examined through factor loadings and Average Variance Extracted (AVE), with acceptable thresholds of loadings ≥ 0.70 and AVE ≥ 0.50. Discriminant validity was assessed using the Fornell–Larcker criterion and cross-loading analysis. Reliability was evaluated using Cronbach's alpha and composite reliability; values exceeding 0.70 indicated satisfactory internal consistency. Indicators that did not meet these criteria were reviewed and removed where necessary.

After confirming the adequacy of the measurement model, the structural model (inner model) was evaluated by examining path coefficients, coefficient of determination (R^2), effect sizes (f^2), and the significance of indirect effects to test the mediating role of job satisfaction. This comprehensive analytical approach enables a robust assessment of the proposed hypotheses and provides a clear understanding of the strength and explanatory power of each relationship within the model.

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Table 1. Variables Indicators

Variable	Indicators	References
Digital Training (X1)	Frequency of digital training related to Sharia financial systems	(Romero-Tena et al., 2020)
	Training relevance to work	
	Usefulness of training	
	Opportunities to ask questions	
	Confidence after training	
Technological Competence (X2)	Confidence using digital tools	(Dahri et al., 2023)
	Ability to learn new Sharia financial applications	
	Skill in solving tech issues	
	Use of technology to improve work	
	Awareness of tech updates	
Information Access (X3)	Ease of accessing information	(Wu et al., 2015)
	Accuracy of information	
	Access to work documents	
	Clarity of information flow	
	Flexibility in accessing info	
Electronic Facilities (X4)	Availability of digital tools supporting Sharia financial services	(Bolaji & Adeoye, 2022)
	Quality of internet and systems	
	Speed of tech support	
	Suitability of software	
	Access to collaboration tools	
Job Satisfaction (Z)	Satisfaction with job tasks	(Molla, 2015)
	Feeling appreciated	
	Satisfaction with work tools	
	Motivation to work	
	Willingness to recommend the organization as a workplace	
Innovative Work Culture (Y)	Encouragement to innovate in Sharia financial services	(Widmann et al., 2016)
	Support for new ideas	
	Openness to suggestions	
	Team-based innovation	
	Innovation as core culture	

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RESULTS AND DISCUSSION

Results

The results of the reliability test are in Table 2 below:

Table 2. Reliability Test Result

Construct	AVE	Composite Reliability	Cronbach's Alpha
Digital Training (X1)	0.681	0.882	0.835
Technological Competence (X2)	0.703	0.899	0.861
Information Access (X3)	0.726	0.91	0.877
Electronic Facilities (X4)	0.658	0.872	0.821
Job Satisfaction (Z)	0.748	0.918	0.885
Innovative Work Culture (Y)	0.732	0.915	0.879

Table 2 presents the results of the reliability test for all constructs in the study, including the values of Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha. The AVE values for all variables are above the minimum threshold of 0.50, indicating that each construct has adequate convergent validity. The highest AVE is found in the Job Satisfaction variable (0.748), while the lowest is in Electronic Facilities (0.658), both of which are still considered acceptable. Furthermore, the Composite Reliability (CR) values for all constructs exceed the recommended minimum of 0.70, confirming the presence of good internal consistency among the indicators. The CR values range from 0.872 (Electronic Facilities) to 0.918 (Job Satisfaction), suggesting that each variable is measured reliably by its respective indicators. Similarly, the Cronbach's Alpha values for all constructs are also above the acceptable threshold of 0.70. This indicates a strong level of reliability and internal consistency within the instrument. The Cronbach's Alpha ranges from 0.821 (Electronic Facilities) to 0.885 (Job Satisfaction), further supporting the conclusion that the measurement items used in this study are dependable. Overall, these results demonstrate that the research instrument is both valid and reliable, and thus suitable for further analysis using Structural Equation Modeling (SEM-PLS). Furthermore, the coefficient of determination test is in table 3 below:

Table 3. Evaluate the R-Square Value

Variables	R- Squared	R- Squared Adjusted
Job Satisfaction (Z)	0.652	0.611
Innovative Work Culture (Y)	0.718	0.703

Table 3 presents the coefficient of determination (R^2) for the two endogenous variables in this study: Job Satisfaction (Z) and Innovative Work Culture (Y). The R-Square value for Job Satisfaction is 0.652, indicating that 65.2% of the variance in job satisfaction can be explained by the independent variablesdigital training, technological competence, information access, and electronic facilities. The adjusted R-Square value of 0.611 further confirms the model's predictive accuracy after accounting for the number of predictors.

Meanwhile, the R-Square value for Innovative Work Culture is 0.718, which suggests that 71.8% of the variance in innovative work culture is explained by both the independent variables and the mediating variable, job satisfaction. The adjusted R-Square value of 0.703 indicates a very strong explanatory power, confirming that the structural model has substantial predictive relevance. According to Chin (1998), R^2 values of 0.67 or higher are considered substantial, which reinforces the robustness of the model in this research.

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Table 4. Direct Test Result

Hypothesis	Path	β Coefficient	t-Value	p-Value	Result
H1	Digital Training → Innovative Culture	0.204	3.221	0.001	Supported
H2	Tech Competence → Innovative Culture	0.167	2.832	0.005	Supported
H3	Info Access → Innovative Culture	0.145	2.411	0.016	Supported
H4	Electronic Facilities → Innovative Culture	0.118	1.992	0.047	Supported
H5	Digital Training → Job Satisfaction	0.311	4.59	0.000	Supported
H6	Tech Competence → Job Satisfaction	0.226	3.009	0.003	Supported
H7	Info Access → Job Satisfaction	0.198	2.887	0.004	Supported
H8	Electronic Facilities → Job Satisfaction	0.157	2.112	0.035	Supported
H9	Job Satisfaction → Innovative Culture	0.366	5.117	0.000	Supported

The following details of Direct Effect and indirect Effect are presented in Table 5.

Table 5. Indirect Test Result

Hypothesis	Mediation Path	Indirect β	t-Value	p-Value	Mediation Type	Result
H10	Digital Training → Job Satisfaction → Innovation	0.114	3.102	0.002	Partial	Supported
H11	Technological Competence → Job Satisfaction → Innovation	0.083	2.745	0.006	Partial	Supported
H12	Info Access → Job Satisfaction → Innovation	0.073	2.608	0.009	Partial	Supported
H13	Electronic Facilities → Job Satisfaction → Innovation	0.057	1.973	0.049	Partial	Supported

Discussion

H1–H4: Direct Effects on Innovative Work Culture

The direct effect analysis was conducted to examine the relationship between each independent variable and the dependent variable using the path coefficient (β), t-statistic, and p-value as reference points. The results, presented in Table 4, indicate that all nine hypotheses (H1–H9) were statistically significant with p-values below 0.05, and therefore supported.

First, digital training has a significant positive effect on innovative work culture (β = 0.204, t = 3.221, p = 0.001), supporting H1. This implies that training initiatives aimed at digital competencies enhance employees' ability to participate in innovation. Similarly, technological competence significantly

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influences innovative work culture (β = 0.167, t = 2.832, p = 0.005), supporting H2, which suggests that employees proficient in digital tools are more likely to contribute to organizational innovation.

Information access (β = 0.145, t = 2.411, p = 0.016) and electronic facilities (β = 0.118, t = 1.992, p = 0.047) also positively affect innovative work culture, validating H3 and H4, respectively. These findings underscore the importance of accessible information and sufficient technological infrastructure in fostering a culture of innovation.

The results confirm that digital training (H1), technological competence (H2), information access (H3), and electronic facilities (H4) each have a positive and significant effect on innovative work culture within Sharia-based financial institutions. These findings indicate that employees who receive adequate digital training related to Sharia financial systems, possess strong technological competence, have access to accurate and relevant financial information, and are supported by reliable digital infrastructure are more likely to demonstrate innovative behaviors in their daily work activities. Such behaviors include improving service processes, proposing new digital financial solutions, and adapting Sharia-compliant products to evolving customer needs. These results suggest that digital readiness is a critical driver of innovation in Sharia financial institutions, where operational complexity and compliance requirements demand both technological efficiency and adaptability. Digital training enhances employees' ability to utilize Sharia-compliant digital platforms effectively, while technological competence increases confidence and efficiency in applying digital solutions to financing, customer service, and internal operations (Akther & Rahman, 2022).

Based on Organizational Support Theory (OST), employees who perceive strong organizational support through digital training, technological competence, information accessibility, and adequate electronic facilities tend to reciprocate with positive attitudes and behaviors, including innovative work practices. When such support is viewed as the organization's commitment to employee well-being and performance, it fosters a psychological climate that encourages creativity, idea generation, and the development of an innovative work culture.

In addition, access to timely, accurate information on Sharia regulations, product structures, and operational procedures enables employees to make informed decisions and collaborate more effectively across organizational units. Furthermore, the availability of adequate electronic facilities, such as reliable information systems, digital transaction platforms, and communication tools, ensures that employees can perform their tasks without technical disruption. This technological support allows employees to focus on value-adding and innovation-oriented activities rather than operational constraints. Collectively, these digital capabilities create an organizational environment that encourages creativity, problem-solving, and continuous improvement, which are essential for sustaining an innovative work culture in Sharia financial institutions. Overall, the findings reinforce previous studies highlighting the role of digital capability in fostering organizational innovation (Shanker et al., 2017); (Naranjo-Valencia et al., 2016); (Novitasari et al., 2022).

H5–H8: Direct Effects on Job Satisfaction

On the other hand, all four digital factors also demonstrated a significant direct effect on job satisfaction. Digital training (β = 0.311, t = 4.590, p < 0.001), technological competence (β = 0.226, t = 3.009, p = 0.003), information access (β = 0.198, t = 2.887, p = 0.004), and electronic facilities (β = 0.157, t = 2.112, p = 0.035) were all significant predictors of job satisfaction, supporting H5–H8. These results suggest that employees' perceptions of digital support positively contribute to their satisfaction at work.

The analysis further demonstrates that digital training (H5), technological competence (H6), information access (H7), and electronic facilities (H8) each have a positive and significant effect on job satisfaction among employees of Sharia-based financial institutions. These findings indicate that when employees are adequately supported through digital skill development and reliable technological infrastructure, they are more likely to experience higher levels of satisfaction in their work roles. A digitally

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supportive work environment not only enhances employees' ability to perform their tasks efficiently but also strengthens their sense of empowerment, professional competence, and intrinsic motivation. Within the context of Sharia financial institutions, digital training plays a crucial role in equipping employees with the skills needed to operate Sharia-compliant financial systems and digital service platforms. Such training reduces uncertainty associated with technological change and increases employees' perceptions of organizational support (Trenerry et al., 2021; Molino et al., 2020;Charoensukmongkol & Phungsoonthorn, 2021). Similarly, technological competence enables employees to address operational challenges more independently, thereby enhancing their sense of control, confidence, and personal achievement in delivering Sharia-based financial services.

Based on Organizational Support Theory (OST), digital training, technological competence, information access, and electronic facilities represent tangible forms of organizational support that signal the organization's concern for employees' needs and effectiveness. When employees perceive this support, they are more likely to feel valued and cared for, which directly enhances their job satisfaction and positive emotional attachment to the organization.

Moreover, access to clear and timely information related to Sharia regulations, financial products, and operational procedures supports effective decision-making and role clarity, which helps minimize work-related frustration. In addition, the availability of adequate electronic facilities, including reliable internet connectivity, updated software, and efficient digital devices, contributes to a smoother and more comfortable work experience. Collectively, these digital support factors create a work environment in which employees feel valued, well-equipped, and supported, ultimately leading to higher levels of job satisfaction. These findings are consistent with previous studies that emphasize the importance of digital resources and organizational support in enhancing employee satisfaction (Nyabvudzi & Chinyamurindi, 2025); (McIlveen et al., 2021); (Wan & Duffy, 2022).

H9: Job Satisfaction's Effect on Innovative Work Culture

Job satisfaction has a strong and statistically significant influence on innovative work culture ($\beta = 0.366$, $t = 5.117$, $p < 0.001$), supporting H9. This confirms the critical role of job satisfaction in bridging digital capability and innovative behavior, establishing it as a key psychological factor within the model. Hypothesis H9 confirmed that job satisfaction has a significant positive effect on innovative work culture. This finding underscores the critical role of employees' emotional and psychological well-being in driving innovation within organizations. When individuals feel satisfied with their job, whether due to recognition, meaningful work, supportive environments, or adequate resources, they are more likely to engage in creative thinking, share new ideas, and participate in efforts that improve processes and outcomes.

A satisfied employee tends to develop a stronger sense of belonging and commitment to the organization, which in turn encourages proactive behavior and openness to change within Sharia-based financial institutions (Chada et al., 2022; Wan & Duffy, 2022;Pradhan et al., 2019). In such an environment, innovation is perceived not as a risk but as a valued contribution that supports service improvement and organizational sustainability. Job satisfaction also fosters higher levels of motivation, collaboration, and mutual trust among employees, all of which are essential for sustaining an innovative work culture in Sharia-compliant financial settings. Beyond technical and structural enablers, innovation in Sharia financial institutions thrives when employees feel content, empowered, and meaningfully engaged in their roles. In this context, job satisfaction functions as a key psychological mechanism that transforms digital capabilities into innovative organizational outcomes. These findings validate the mediating role of job satisfaction in linking digital training, technological competence, information access, and electronic facilities to the development of an innovative work culture. This result is consistent with previous studies highlighting the importance of employee satisfaction in fostering innovation (Raziq & Maulabakhsh, 2015); (Taheri et al., 2020).

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H10–H13: Mediating Role of Job Satisfaction

Mediation analysis was conducted to determine whether job satisfaction serves as a mediating variable in the relationship between digital support factors and innovative work culture. As shown in Table 5, all indirect hypotheses (H10–H13) were statistically significant, with p-values below 0.05, indicating that job satisfaction plays a meaningful mediating role in the model.

Specifically, H10 confirms that job satisfaction partially mediates the relationship between digital training and innovative work culture ($\beta = 0.114$, $t = 3.102$, $p = 0.002$). This result suggests that digital training enhances innovation not only directly, but also indirectly by increasing employee satisfaction. Similarly, H11 shows that technological competence influences innovation through job satisfaction ($\beta = 0.083$, $t = 2.745$, $p = 0.006$), implying that digital skills boost both satisfaction and a willingness to innovate.

The findings also support H12, in which information access has an indirect effect on innovative work culture via job satisfaction ($\beta = 0.073$, $t = 2.608$, $p = 0.009$). When employees have access to accurate and timely information, they experience higher job satisfaction, which in turn encourages innovation. Lastly, H13 indicates that electronic facilities also influence innovative culture indirectly through job satisfaction ($\beta = 0.057$, $t = 1.973$, $p = 0.049$), even though this mediation effect is relatively weaker compared to other paths.

All four mediations are classified as partial mediations, meaning the independent variables also have a significant direct effect on innovative work culture alongside the indirect effect via job satisfaction. These findings underscore the dual role of digital infrastructure: while it directly enhances innovation, its impact is magnified when employees feel satisfied and supported in their work.

The results of the mediation analysis provide valuable insights into the indirect relationships between digital support factors and innovative work culture through the mediating role of job satisfaction. Hypotheses H10 through H13 demonstrate that digital training, technological competence, information access, and electronic facilities each influence innovative work culture not only directly, but also indirectly through job satisfaction, confirming the presence of partial mediation in all cases.

Based on Organizational Support Theory (OST), job satisfaction functions as an emotional response arising from employees' perceptions of organizational support in the form of digital training, technological competence, information access, and electronic facilities. When employees feel satisfied and supported, they are more likely to reciprocate through positive behaviors such as creativity, initiative, and openness to change, thereby mediating the relationship between organizational support and innovative work culture

Firstly, the indirect effect of digital training on innovation through job satisfaction highlights the importance of emotional and psychological readiness in translating skills into behavior. Training programs may successfully enhance technical capabilities, but unless they also foster a sense of value, confidence, and motivation in employees, the impact on innovation may be limited (Sung & Choi, 2018). When employees in Sharia financial institutions feel satisfied as a result of meaningful and supportive digital training, they are more inclined to apply their acquired skills creatively and productively, thereby strengthening an innovation-oriented work culture (Y. Zhang, 2024).

Similarly, technological competence influences innovative work culture indirectly through job satisfaction. Employees who are confident in their ability to operate digital financial systems tend to experience higher levels of autonomy, lower work-related stress, and stronger engagement in their roles, all of which contribute positively to job satisfaction (Breaugh, 2021). This satisfaction then becomes a platform for innovation, as individuals who are content with their roles are more likely to explore new ideas, propose changes, and participate actively in organizational improvement efforts (Brem et al., 2019). In this context, competence alone is not enough; it must be accompanied by the emotional readiness to innovate, which is nurtured through satisfaction.

Furthermore, the mediating effect of information access reinforces the role of job satisfaction as a psychological bridge between digital resources and innovation. Access to accurate and timely information related to Sharia regulations, financial products, and operational procedures enables employees to work

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more efficiently and make informed decisions (Hannola et al., 2018). However, it is the positive emotional response of feeling trusted, informed, and supported that triggers innovation-oriented behavior (Yang et al., 2021). Satisfied employees are more willing to take initiative, collaborate with others, and propose innovative solutions, especially when they believe they are operating within a transparent and information-rich environment.

Lastly, the availability of electronic facilities impacts innovative work culture indirectly through job satisfaction. While infrastructure such as reliable internet, modern devices, and functional software is essential for performance, it is the convenience, speed, and ease these tools bring that contribute to a more satisfying work experience. When employees feel that their organization provides them with everything needed to work effectively, they are more likely to feel supported and motivated (Prabowo et al., 2021). This sense of support fosters deeper work engagement and encourages employees to continuously seek improvements, which are key characteristics of an innovative work culture in Sharia-based financial institutions.

In summary, these findings confirm that job satisfaction serves as a critical mediating mechanism linking digital enablement to innovative work culture (Inuwa, 2016). In the context of Sharia financial institutions, digital investments alone are insufficient to foster innovation. Organizations must also ensure that employees feel emotionally supported, appreciated, and empowered. Only under these conditions can digital transformation efforts translate into a sustainable, innovative, and forward-looking organizational culture aligned with the values of professionalism and service excellence.

CONCLUSION

This study examined the effects of digital training, technological competence, information access, and electronic facilities on innovative work culture, with job satisfaction as a mediating variable, in Sharia-based financial institutions. The findings demonstrate that all digital capability variables have significant positive effects on both job satisfaction and innovative work culture. Moreover, job satisfaction plays a significant mediating role, indicating that digital readiness contributes more strongly to innovation when employees feel satisfied and supported in their work roles. The results confirm that innovation in Sharia-based financial institutions is not driven by technology alone, but also by employees' psychological engagement. Consistent with Organizational Support Theory (OST), digital resources and infrastructure function as perceived organizational support that enhances job satisfaction, which in turn translates digital investments into innovative behavior. This highlights the importance of integrating human-centered approaches into digital transformation strategies to achieve sustainable innovation aligned with Sharia principles.

From a practical perspective, the study suggests that Sharia financial institutions should prioritize continuous digital training, strengthen employees' technological competence, improve access to organizational and Sharia-related information, and ensure adequate electronic facilities, while simultaneously managing job satisfaction as a strategic organizational asset. These efforts can enhance employees' readiness to innovate and support long-term organizational performance. Despite its contributions, this study has limitations. The use of self-reported questionnaire data raises the potential for common method bias, and the focus on a specific institutional context may limit generalizability. Future research is encouraged to incorporate objective performance measures, longitudinal designs, and additional variables such as leadership style, organizational culture, or regulatory factors, as well as to extend the analysis to a broader range of Sharia financial institutions.

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