ISLAMIC SPIRITUAL E-LEADERSHIP INTEGRATION MODEL FOR EDUCATION QUALITY IMPROVEMENT IN THE DIGITAL ERA

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Abstract: This research project examines the potential for integrating Islamic spiritual leadership with e-leadership in order to enhance the quality of education in madrasahs. The tenets of Islamic spiritual leadership place an emphasis on ethical, moral and spiritual values as the foundation for decision-making and daily actions. In the context of madrasahs, this leadership style aims not only to achieve academic excellence but also to foster an environment that supports learners' spiritual development. This research lends support to the theory that effective leaders in Islamic education inspire and motivate their followers through exemplary worship and good morals, as exemplified by the Prophet Muhammad. E-leadership employs information and communication technology to enhance the learning process and facilitate school management. The application of PLS-SEM analysis revealed that madrasah principals who integrate spiritual values with technological capabilities are able to establish a school culture that is more adaptive and responsive to change. The analysis demonstrated that Islamic spiritual leadership has a significant impact on the quality of education, with the mediating influence of e-leadership. The integration of these two approaches enables madrasahs to remain relevant in the digital age, increase accessibility and flexibility in the learning process, and ensure education rooted in strong Islamic values. This research provides a foundation for the development of effective leadership models to improve the quality of education in madrasahs in the digital era.

Keywords: E-Leadership, Education Quality, Islamic Spiritual Leadership.

Introduction

In addition to the requisite technical skills, those in positions of spiritual leadership in madrasas must also be grounded in a robust set of spiritual values.[1] Spiritual leadership entails the establishment of exemplary moral and ethical standards and the inculcation of profound Islamic values among students. Spiritual leadership ensures that the educational process is not solely focused on academic pursuits, but also on the cultivation of noble character and moral excellence. The integration of e-leadership and spiritual leadership is of paramount importance in order to establish a holistic and balanced educational environment.

In order to enhance the calibre of Islamic education in the digital age, madrasahs must adopt an approach that integrates Islamic spiritual leadership with E-Leadership. This reintegration entails utilising digital technology to reinforce and augment spiritual values in education.[2] For instance, the madrasah principal can employ digital platforms to disseminate information encompassing Islamic values, conduct online recitation sessions, and monitor students' progress in real-time.

The integration of E-Leadership and spiritual leadership has the potential to enhance the quality of education in madrasahs in a number of ways. Firstly, the utilisation of technology can facilitate greater accessibility and flexibility in the learning process.[3] Secondly, the implementation of robust spiritual leadership can foster the development of positive student character traits, which in turn will

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[1] Siswanto Siswanto, "Strengthening Spiritual Leadership in Preserving Religious Culture and Local Wisdom in Madrasah," *AL-TANZIM: Jurnal Manajemen Pendidikan Islam* 6, no. 3 (July 9, 2022): 907–20, https://doi.org/10.33650/al-tanzim.v6i3.3357.

[2] Yunita Aristyasari, "Synergizing Progressive Values and Social, Emotional, Spiritual Intelligence in Islamic Education in The Digital Era," in *Proceedings of the Third International Conference on Sustainable Innovation 2019 – Humanity, Education and Social Sciences (IcoSIHESS 2019)* (Proceedings of the Third International Conference on Sustainable Innovation 2019 – Humanity, Education and Social Sciences (IcoSIHESS 2019), Yogyakarta, Indonesia: Atlantis Press, 2019), https://doi.org/10.2991/icosihess-19.2019.75.

[3] Ana Raquel Carvalho and Carlos Santos, "Developing Peer Mentors' Collaborative and Metacognitive Skills with a Technology-Enhanced Peer Learning Program," *Computers and Education Open* 3 (December 2022): 100070, https://doi.org/10.1016/j.caeo.2021.100070.

improve the overall quality of the educational output.[4] This combination can engender a more dynamic and innovative learning environment, which is better equipped to prepare students to navigate future challenges.[5]

To date, no research has been conducted in Indonesia on the integration of Islamic spiritual leadership and e-leadership in order to improve the quality of education in the context of madrasah using PLS-SEM. To illustrate, Aristyasari's research merely investigates the convergence of spiritual intelligence with progressive values, social intelligence and emotional intelligence.[6] It does not, however, elucidate the precise nature of the relationship or the role of spiritual and digital elements in enhancing the quality of Islamic education. Similarly, the research of Sholehuddin et al. lacks sufficient elaboration on the interconnection between spirituality, digital and madrasah quality, despite employing a mixed method approach.[7]

It is therefore evident that this research is of significant value as a contribution to the existing body of knowledge in this field. This research will not only identify a model that demonstrates the synergy between spirituality and e-leadership in enhancing the quality of madrasahs in the digital age through the use of PLS-SEM, but it will also contribute to the existing body of knowledge in this field. However, this research will also provide a basis for future madrasah adaptation to changes in advanced information technology (AIT) and artificial intelligence (AI), while maintaining Islamic spiritual values. Conversely, this research on E-Leadership Integration and spiritual leadership provides an efficacious methodology for enhancing the calibre of madrasah education in the digital age. Consequently, madrasahs can establish a comprehensive, innovative and sustainable educational milieu, thereby fostering the emergence of a generation that is intellectually astute and morally upright.

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[4] M. Sugeng Sholehuddin, Miftah Mucharomah, MSI 17 Pabean, Pekalongan, Indonesia, miftahmucharomah@gmail.com, et al., "Developing Children's Islamic Spiritual Intelligence in the Digital Age: Indonesian Family Education Methods," *International Journal of Instruction* 16, no. 1 (January 1, 2023): 357–76, https://doi.org/10.29333/iji.2023.16120a.

[5] Aristyasari, "Synergizing Progressive Values and Social, Emotional, Spiritual Intelligence in Islamic Education in The Digital Era," 2019.

[6] Aristyasari.

[7] Sholehuddin, Mucharomah, MSI 17 Pabean, Pekalongan, Indonesia, miftahmucharomah@gmail.com, et al., "Developing Children's Islamic Spiritual Intelligence in the Digital Age."

This study employs the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach to analyze the data obtained. PLS-SEM was selected due to its capacity to accommodate models with intricate structures and restricted sample sizes. The measurement model employed assesses convergent and discriminant validity and construct reliability through indicators such as factor loading, rho-A, composite reliability, Cronbach's Alpha, and Average Variance Extracted (AVE). The analysis demonstrated that all variables, specifically Islamic Education Leadership, E-Leadership, and Education Quality, exhibited exemplary validity and reliability values.[8]

Moreover, the structural evaluation of the model through the R Square (R^2) and Q Square (Q^2) values demonstrated a robust predictive capacity, while the f^2 analysis delineated the magnitude of influence between variables. The Goodness of Fit (GoF) of the model demonstrated a satisfactory fit with the data, as evidenced by the SRMR, d_ULS, d_G, Chi-Square, and NFI values. The results of the hypothesis testing confirmed the significant effect of Islamic Education Leadership on E-Leadership and the effect of E-Leadership on Education Quality. Furthermore, the indirect effect of Islamic Education Leadership on Education Quality through E-Leadership was also confirmed, as expressed through significant coefficient values, T-Statistics, and P-Values. Overall, the PLS-SEM method proved to be an effective approach for uncovering the complex relationships between the research variables.[9]

In order to ascertain an appropriate sample size for this study, researchers employed the A-Priori Sample Size for Structural Equation Models Formulas software,[10] which was developed on the basis of the Cohe[11] and Westland formulation.[12] The software has

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[8] Joseph F. Hair et al., "When to Use and How to Report the Results of PLS-SEM," *European Business Review* 31, no. 1 (January 14, 2019): 2–24, https://doi.org/10.1108/EBR-11-2018-0203.

[9] Joseph F. Hair et al., "When to Use and How to Report the Results of PLS-SEM," *European Business Review* 31, no. 1 (January 14, 2019): 2–24, https://doi.org/10.1108/EBR-11-2018-0203.

[10] D.S Soper, "A-Priori Sample Size for Structural Equation Models Formulas," 2024.

[11] Jacob Cohen, *Statistical Power Analysis for the Behavioral Sciences*, 2. ed., reprint (New York, NY: Psychology Press, 2009).

been developed to assist researchers in determining the optimal sample size, taking into account the size effect, the power of the T-statistic test and the desired level of significance. The Cohen formulation[13] offers comprehensive guidance on sample size determination, taking into account the aforementioned variables. In contrast, the Westland formulation[14] provides a bespoke approach for structural equation models, encompassing the number of latent variables and indicators. By utilising this software, researchers can guarantee that the selected sample size is sufficiently large to detect the anticipated effects in the research model with a high level of confidence, thus enhancing the validity and reliability of the research findings.

A minimum sample size of 119 is required to detect an effect with an effect size of 0.3, a statistical power of 0.8, and a significance level of 0.05. However, to ensure the structure of the model comprising three latent variables and 18 observed variables, a minimum of 200 samples is required. It is therefore recommended that a sample size of 200 be used in order to ensure that the model can be estimated correctly and the expected effects can be reliably detected.

The recommended sample size (200) was sourced from the official website of the Ministry of Religious Affairs of the Republic of Indonesia via the Madrasah Online application, accessible at appmadrasah.kemenag.go.id. The data set comprises information on the teaching staff at three educational establishments: MAN 2 Malang, MTSN 1 Malang, and MIN 1. It includes details on the number of male and female teachers in each school, with the latter group being categorised as 'favourites' due to their superior achievements. Consequently, the data from these schools provides a representative and high-quality picture. The utilisation of data from official and trusted sources, such as the Ministry of Religious Affairs, enables researchers to guarantee that the research outcomes are

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[12] J. Christopher Westland, "Lower Bounds on Sample Size in Structural Equation Modeling," *Electronic Commerce Research and Applications* 9, no. 6 (November 2010): 476–87, https://doi.org/10.1016/j.elerap.2010.07.003.

[13] Cohen, *Statistical Power Analysis for the Behavioral Sciences*.

[14] Christopher Westland, "Lower Bounds on Sample Size in Structural Equation Modeling."

founded upon valid and accountable information, thereby enhancing the credibility and overall quality of the research.

The variables used in this study consist of three variables, seven dimensions, and 18 statement items as follows:

Table 1. Variables, Dimensions, and Research Items

Islamic Spiritual Leadership[15]		**Item Code**
Inner Life	I feel that deep awareness of God (Allah) through fitrah and tafakkur is an important aspect of my spiritual life.	IL1
	Deep awareness of God helps madrasah leaders make better and wiser decisions.	IL2
	Faith-based leadership helps me to build a clear vision for the madrasah.	IL3
Islamic Leadership Foundations	I believe that a strong and clear vision is the key to creating an excellent madrasah.	FI1
	I think that putting people's interests first is an important foundation in my interactions with the community and students.	FI2
	For me, an honest leader is one of the important factors in moving the madrasah forward.	FI3
E-Leadership[16]		
Communication and Interaction	Leaders use information technology to ensure that messages and information are easily understood and received by teachers and staff.	KI1
	They assess the extent to which technology facilitates collaboration among team members, including the frequency and quality of interactions.	KI2
Data-driven Decision Making	I think madrasah leaders must have the ability to use analytical tools to process data that supports informative and appropriate decision-making.	PD1
	They evaluate the effectiveness of existing systems in managing information and knowledge that can be accessed and used by all members of the organization.	PD2
Adaptability and Innovation	The ideal madrasah leader is one who is able to measure the extent to which he/she and the organization adapt quickly to technological change.	AI1

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[15] Eleftheria Egel and Louis W. Fry, "Spiritual Leadership as a Model for Islamic Leadership," *Public Integrity* 19, no. 1 (January 2, 2017): 77–95, https://doi.org/10.1080/10999922.2016.1200411.

[16] Bruce J. Avolio et al., "E-Leadership: Re-Examining Transformations in Leadership Source and Transmission," *The Leadership Quarterly* 25, no. 1 (February 2014): 105–31, https://doi.org/10.1016/j.leaqua.2013.11.003.

	They assess the extent to which technology is used to encourage and facilitate creativity and innovation within the team or organization.	AI2
Education Quality[17]		
Leadership	Our madrasah leaders have a clear vision and mission that is well communicated to all staff, which contributes to the quality of graduates.	K1
	Management consistently supports efforts to improve the quality of education in our madrasah.	K2
	Our madrasah leaders encourage participation and initiative from all staff in the decision-making process.	K3
Customer Focus	Our madrasah always strives to understand and meet students' needs.	FP1
	Feedback from students is regularly collected and used for service improvement in the madrasah.	FP2
	We provide adequate services and are responsive to student complaints.	FP3

Islamic Spiritual Leadership: An Overview

Spiritual leadership plays an integral role in Islamic education, particularly in the formation of students' character and moral values. Spiritual leadership is predicated on the primacy of ethical values, faith, and devotion to God as the foundation for decision-making and action.[18] In the context of madrasahs, spiritual leadership has the dual objective of achieving academic performance and of creating an environment conducive to the spiritual development of learners. This approach facilitates the establishment of a robust school culture, wherein Islamic values serve as the primary compass for daily tasks and responsibilities. Al-Mawardi, in his treatise "Adab al-Dunya wa al-Din," posits that exemplary leaders are those who espouse the tenets of sharia and exemplify justice and truth in their actions.[19]

In the context of madrasah, spiritual leadership has the dual objective of achieving academic performance and of creating an environment conducive to the spiritual development of all members

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[17] Edward Sallis, *Total Quality Management in Education*, 3rd ed (London: RoutledgeFalmer, 2002).

[18] Louis W Fry, "Toward a Theory of Spiritual Leadership," *The Leadership Quarterly* 14, no. 6 (December 2003): 693–727, https://doi.org/10.1016/j.leaqua.2003.09.001.

[19] Al Ibn Muammad Mward, *Kitab Adab Al-Dunya Wa-al-Din* (New York City: Legare Street Press, 2022).

of the school community. In Islamic thought, an effective leader is one who is able to inspire and motivate their followers through exemplary worship and moral conduct. It is incumbent upon madrasah leaders to provide guidance to teachers, staff and students in the practice of Islamic teachings on a consistent basis. By incorporating religious values into the entirety of the school's operations, madrasahs can guarantee that all educational activities are oriented not only towards academic success, but also towards the cultivation of robust moral and spiritual values. This is consistent with the principles espoused by the Prophet Muhammad, who consistently emphasised the importance of noble morals and piety in all aspects of life.

In the Islamic tradition, an effective leader is one who is able to inspire and motivate their followers through exemplary worship and good moral behaviour. This concept is firmly embedded in Islamic teachings and can be elucidated through a multitude of sources, including the Quran, the Hadith (the sayings and actions of the Prophet Muhammad), and scholarly interpretations. The Quran contains numerous verses that emphasise the importance of leadership qualities. To illustrate, in Surah Al-Imran (3:159), Allah instructs Prophet Muhammad to forgive his followers, engage in consultation with them on various matters, and make decisions after considering their opinions. This illustrates the significance of consultation, empathy and inclusiveness in effective leadership.

The Hadith literature offers further insight into the characteristics of effective leaders. In a Hadith narrated by Abu Huraira, the Prophet Muhammad is quoted as saying, "The best of men are those who live long and have good deeds." This hadith emphasises the importance of setting an example and demonstrating virtuous behaviour in order to inspire others. Islamic scholars such as Imam Ghazali and Ibn Taymiyyah have outlined the qualities of effective leadership in Islam, emphasising the importance of piety, humility, justice, and compassion in a leader. They argue that a leader's actions must be aligned with Islamic principles in order to gain the trust and respect of their followers.

In Islam, worship (*ubudiyah*) and morality (*akhlaq*) are interrelated aspects of a believer's life. A leader who excels in worship by diligently fulfilling his religious obligations will set a positive

example for his followers.[20] Likewise, living out noble character traits such as honesty, integrity and kindness will enhance a leader's credibility and influence in the eyes of his followers. Effective leaders in Islam not only lead by example, but also seek to inspire and motivate their followers towards goodness. By demonstrating sincerity in worship, showing compassion to others, and upholding ethical standards, a leader can instill a sense of purpose and commitment among his followers.

E-Leadership and its Impact on Education Quality

The advent of the digital era has brought about significant changes in various aspects of life, including in the field of education. In order to remain relevant and competitive, madrasahs must integrate digital technology into the learning and management process. In addition to digital capability through Islamic spiritual leadership, one of the emerging concepts in this context is e-leadership, which refers to the ability of educational leaders to use information and communication technology in facilitating teaching and learning processes and school administration.[21] E-leadership not only improves operational efficiency, but also enables the implementation of more innovative and interactive learning.

Prior research indicates that the integration of e-leadership and spiritual leadership can enhance the overall quality of education. For example, a study by Sholehuddin et al.[22] demonstrated that principals who combine technological capabilities with spiritual values are able to establish a school culture that is more adaptive and responsive to change. Moreover, research conducted by Aristyasari indicates that an approach to leadership that integrates these two elements can enhance learner motivation and engagement, which in turn improves learning outcomes.

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[20] Abu Hamid Ghazzālī, *Kitāb Al-ʿilm: The Book of Knowledge: Book 1 of The Iḥyaʾ ʿUlūm al-Dīn, The Revival of The Religious Sciences*, The Fons Vitae Ghazali Series (Louisville, KY: Fons Vitae, 2015).

[21] Bruce J. Avolio et al., "E-Leadership: Re-Examining Transformations in Leadership Source and Transmission," *The Leadership Quarterly* 25, no. 1 (February 2014): 105–31, https://doi.org/10.1016/j.leaqua.2013.11.003.

[22] Sholehuddin, Mucharomah, MSI 17 Pabean, Pekalongan, Indonesia, miftahmucharomah@gmail.com, et al., "Developing Children's Islamic Spiritual Intelligence in the Digital Age."

In order to equip madrasahs with the requisite tools to navigate the digital age, a reintegration of e-leadership and spiritual leadership is imperative. This approach enables madrasahs to develop educational programmes that are not only technology-based, but also firmly anchored in robust Islamic values. This ensures that learners are not only academically and technologically prepared, but also possess the requisite character and morals to navigate the complexities of life in the future.

In the context of educational quality, the concept of Total Quality Management (TQM), as proposed by Edward Sallis,[23] can be applied to enhance the overall quality of education. Edward Sallis places great emphasis on the importance of planning, control, assurance and continuous quality improvement in the field of education. In the context of Islamic education, this can be achieved by designing a curriculum that not only focuses on academic knowledge but also on the spiritual and moral development of students. Quality control in Islamic education involves the continuous evaluation of the learning process and its outcomes in order to ensure that Islamic values are consistently applied. Quality assurance ensures that all aspects of education, from teaching to administration, conform to high Islamic standards.[24]

Sallis' approach is also pertinent to the integration of e-leadership and spiritual leadership in Islamic education. E-leadership makes use of technology to reinforce communication and management within the Islamic education environment, thus facilitating a broader and more effective dissemination of Islamic values and teachings through digital platforms. In contrast, spiritual leadership underscores the significance of integrity, ethics, and moral values in leadership, which are in alignment with Islamic principles. By integrating these two approaches, Islamic education can enhance its quality, not only in terms of academic achievement but also in fostering students' robust and virtuous characters. This model enables Islamic education to remain pertinent and efficacious in the digital age while upholding the core spiritual and moral values upon which its teachings are based.

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[23] Edward Sallis, *Total Quality Management in Education*, 3rd ed (London: RoutledgeFalmer, 2002).

[24] Husna Amin et al., "Issues and Management of Islamic Education in a Global Context," *Nidhomul Haq : Jurnal Manajemen Pendidikan Islam* 6, no. 3 (December 13, 2021): 608–20, https://doi.org/10.31538/ndh.v6i3.1808.

Measurement Model Evaluation Results

Table 2. Convergent Validity

Variable	Item	Factor Loading	rho-A	Composite Reliability	Cronbach's Alpha	AVE
Islamic Education Leadership	IL1	0,949	0.972	0.977	0.972	0.876
	IL2	0,931				
	IL3	0,935				
	FI1	0,929				
	FI2	0,938				
	FI3	0,932				
E-Leadership	KI1	0,950	0.972	0.977	0.971	0.875
	KI2	0,924				
	PD1	0,939				
	PD2	0,935				
	A1	0,939				
	A2	0,925				
Education Quality	K1	0,936	0.970	0.976	0.970	0.870
	K2	0,925				
	K3	0,944				
	FP1	0,931				
	FP2	0,924				
	FP3	0,936				

The results of the convergent validity analysis, as presented in the table, demonstrate that the three variables under investigation, namely "Islamic Education Leadership," "E-Leadership," and "Education Quality," exhibit values indicative of a markedly high degree of internal consistency and reliability. Each variable was measured through the use of several items, which exhibited strong factor loading values (ϱ), composite reliability, Cronbach's alpha, and average variance extracted (AVE).

The variable "Islamic Education Leadership" was assessed through the utilisation of six items (IL1, IL2, IL3, FI1, FI2, FI3), exhibiting factor loading values that ranged from 0.929 to 0.949. The rho-A value of 0.972, the composite reliability of 0.977, the

Cronbach's Alpha of 0.972, and the AVE of 0.876 collectively indicate that this variable has an exceptionally high level of internal consistency and reliability.

The variable designated "E-Leadership" was also measured through six items (KI1, KI2, PD1, PD2, A1, A2) with factor loading values ranging from 0.924 to 0.950. The rho-A value of 0.972, composite reliability of 0.977, Cronbach's Alpha of 0.971, and AVE of 0.875 indicate a very high level of internal consistency and reliability, which is almost comparable to that of the variable "Islamic Education Leadership."

In terms of reliability and internal consistency, the variables "Islamic Educational Leadership" and "E-Leadership" exhibit almost equivalent values, with the highest Rho-A and composite reliability values of 0.972 and 0.977, respectively. However, "Islamic Education Leadership" is slightly superior in AVE value (0.876) compared to "E-Leadership" (AVE 0.875).

Meanwhile, the reliability of the variable "Quality of Education" is slightly lower but nevertheless remains high, with a rho-A value of 0.970, a composite reliability of 0.976, and an AVE of 0.870. This indicates that, although this variable is highly reliable, it exhibits a slightly lower value in comparison to the other two variables.

Overall, the three variables demonstrated excellent results in terms of reliability and internal consistency, with "Islamic Educational Leadership" and "E-Leadership" displaying a slight advantage in certain aspects in comparison to "Educational Quality."

Table 3. Discriminant Validity

	Islamic Education Leadership	E-Leadership	Education Quality
AI1	0.908	0.939	0.931
AI2	0.872	0.925	0.899
FI1	0.929	0.880	0.874
FI2	0.938	0.912	0.905
FI3	0.932	0.878	0.881

FP1	0.899	0.928	0.931
FP2	0.873	0.910	0.924
FP3	0.882	0.913	0.936
IL1	0.949	0.911	0.909
IL2	0.931	0.902	0.895
IL3	0.935	0.891	0.891
K1	0.893	0.917	0.936
K2	0.889	0.931	0.925
K3	0.903	0.932	0.944
KI1	0.912	0.950	0.937
KI2	0.877	0.924	0.925
PD1	0.907	0.939	0.928
PD2	0.895	0.935	0.927

In light of the findings presented in the table, it can be posited that each of the constructs under analysis exhibits satisfactory discriminant validity. As illustrated in the table, each item exhibits a higher factor loading on the measured construct in comparison to other constructs.

With regard to the construct of Islamic Spiritual Leadership, as measured by items IL1, IL2, IL3, FI1, FI2, and FI3, all factor loading values are within the range of 0.929 to 0.949, thereby indicating good convergent validity. The factor loadings for these items on the other constructs (E-Leadership and Education Quality) were found to be lower, thereby supporting the conclusion of discriminant validity.

The construct of E-Leadership, as measured by items AI1, AI2, KI1, KI2, PD1, and PD2, also demonstrated robust convergent validity, with factor loading values ranging from 0.91 to 0.95. The

factor loading values on the other constructs (Islamic Spiritual Leadership and Education Quality) are lower, indicating that E-Leadership is a distinct construct.

Similarly, for the Education Quality construct, which was measured by items K1, K2, K3, FP1, FP2, and FP3, the factor loading values ranged from 0.895 to 0.944. This indicates that the items are effective indicators for this construct. The lower factor loading values on the other constructs provide evidence of good discriminant validity.

The results demonstrate that each of the constructs (Islamic Spiritual Leadership, E-Leadership, and Education Quality) is a distinct construct with adequate discriminant validity, indicated by higher factor loading values on relevant constructs and lower factor loading values on irrelevant constructs.

Structural Model Evaluation

Table 4. R^2 and Q^2 Evaluation Results

	R Square	Q Square
E-Leadership	0.917	0.796
Education Quality	0.978	0.845

The table presents the R^2 and Q^2 values for two variables, namely "E-Leaders" and "Education Quality". The R-squared (R^2) value for E-Leaders is 0.917, indicating that 91.7% of the variation in the dependent variable can be attributed to the independent variables associated with E-Leaders. Meanwhile, the R^2 value for Education Quality is 0.978, indicating that 97.8% of the variation in the dependent variable can be explained by the independent variables associated with Education Quality. The Q^2 value, which gauges the predictive relevance of the model, indicates that E-Leadership has a Q^2 value of 0.796, while Quality of Education has a Q^2 value of 0.845. Both values indicate that the model has strong predictive relevance, with the Quality of Education showing a slightly higher value than E-Leaders. Overall, these results demonstrate that the models for E-Leaders and Quality of Education are highly effective at explaining variation and possess considerable predictive ability.

Table 5. f^2 Evaluation

	E-Leadership	Islamic Education	Education

	Leadership	Quality
E-Leadership		3.074
Islamic Education Leadership	10.985	0.030

The results presented in the table demonstrate the interrelationship between three variables: E-Leadership, Islamic Spiritual Leadership, and Education Quality. The results indicate that e-leadership has a positive influence on education quality, with a value of 3.074. This suggests that an increase in e-leadership can lead to improvements in the quality of education. Furthermore, there is a markedly strong relationship between Islamic Spiritual Leadership and E-Leadership, with a value of 10.985. This indicates that Islamic Spiritual Leadership has a significant impact on E-Leadership. Nevertheless, the correlation between Islamic Spiritual Leadership and the Quality of Education is notably weak, with a value of 0.03. This suggests that Islamic Spiritual Leadership exerts a negligible influence on the Quality of Education within the context under examination. In conclusion, E-Leadership exerts a more pronounced influence on enhancing the Quality of Education than Islamic Spiritual Leadership.

Table 6. Goodness of Fit (GoF)

	Saturated Model	Estimated Model
SRMR	0.022	0.022
d_ULS	0.085	0.085
d_G	0.604	0.604
Chi-Square	590.792	590.792
NFI	0.907	0.907

The goodness of fit analysis indicates that the model used to assess the impact of Islamic Spiritual Leadership and E-Leadership on Education Quality exhibits a satisfactory fit with the data. The low SRMR value (0.022) indicates an optimal level of model fit, suggesting that the Islamic Spiritual Leadership and E-Leadership variables are capable of accurately explaining the variability in Education Quality. Furthermore, the low d_ULS (0.085) and d_G (0.604) values indicate

that the model exhibits minimal mismatch, thereby reinforcing the validity and accuracy of the relationships under investigation.

Although the Chi-square value (590.792) is relatively high, it is deemed acceptable in the context of a large sample size, particularly given the favourable outcomes observed in the other fit indices. Finally, the NFI value (0.907), which is higher than 0.90, provides further evidence that the model has a good fit with the data. Overall, the results of this analysis indicate that Islamic Spiritual Leadership and E-Leadership have a significant influence on Educational Quality, with E-Leadership showing a more dominant influence. Both variables prove to be relevant and important in the context of improving education quality.

Table 7. Direct Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
E-Leadership -> Mutu Pendidikan	0.903	0.874	0.101	8.915	**0.000**
Kepemimpinan Spiritual Islam -> E-Leadership	0.957	0.957	0.017	56.065	**0.000**
Kepemimpinan Spiritual Islam -> Mutu Pendidikan	0.090	0.118	0.102	0.878	**0.381**

The analysis demonstrates that E-Leadership exerts a considerable influence on Education Quality, with a coefficient of 0.903, a T-Statistic of 8.915, and a P-Value of 0.000. This value indicates that the influence of E-Leadership on Education Quality is markedly strong and statistically significant. Moreover, Islamic Spiritual Leadership exerts a markedly significant influence on E-Leadership, as evidenced by a coefficient of 0.957, a T-Statistic of 56.065, and a P-Value of 0. This underscores the pivotal role that Islamic Spiritual Leadership plays in enhancing E-Leadership. Nevertheless, the direct effect of Islamic Spiritual Leadership on Educational Quality is relatively minor, with a coefficient of 0.09, a T-Statistic of 0.878, and a P-Value of 0.381, indicating that this effect is not statistically significant. In conclusion, these results demonstrate that E-Leadership acts as a significant mediator in the relationship between Islamic Spiritual Leadership and Education Quality. Despite

the indirect influence of Islamic Spiritual Leadership on Education Quality being insignificant, the direct influence is also minimal. Therefore, to enhance Education Quality, it is more effective to prioritise the development of E-Leadership through Islamic Spiritual Leadership.

Table 8. Specific Indirect Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Kepemimpinan Spiritual Islam -> E-Leadership -> Mutu Pendidikan	0.864	0.836	0.088	9.779	0.000

The results of the specific indirect effect demonstrate that the indirect effect of Islamic Spiritual Leadership on Education Quality through E-Leadership is highly significant. The coefficient value of 0.864 indicates that an increase in Islamic Spiritual Leadership will indirectly improve Education Quality through the mediating role of E-Leadership. The T-statistic of 9.779 is well above the significant threshold (typically 1.96 for a 5% significance level), indicating that this effect is both strong and statistically significant. The p-value of 0 corroborates that this result is statistically significant at a very high level of confidence (typically 99% or higher). Furthermore, the sample mean of 0.836 and standard deviation of 0.088 substantiate the consistency and reliability of these estimates.

Education Quality Improvement through Islamic Spiritual E-Leadership Integration Model

The findings of this study demonstrate a robust and statistically significant correlation between Islamic Spiritual Leadership, E-Leadership, and educational quality. From a theoretical perspective, this study lends support to the notion that efficacious and effective leadership within the context of Islamic education can enhance educational quality through the intermediary role of E-Leadership.[25]

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[25] Siswanto, "Strengthening Spiritual Leadership in Preserving Religious Culture and Local Wisdom in Madrasah."

This discussion will explore these key findings in the context of existing literature and relevant theory.

Islamic Spiritual Leadership constitutes an essential component of Islamic education,[26] particularly in the context of instilling ethical and moral values in students. In his book Adab al-Dunya wa al-Din, Al-Mawardi defines a good leader as one who upholds the principles of sharia and acts with justice and truth in all circumstances.[27] This concept is particularly pertinent in the context of madrasah leadership research, where spiritual leadership is not solely concerned with academic achievement but also with fostering an environment that supports learners' spiritual development.

Additionally, the corpus of Hadith literature offers valuable insights into the characteristics of effective leaders. To illustrate, in a Hadith narrated by Abu Huraira, the Prophet Muhammad is quoted as saying, "The best of men are those who live long and have good deeds." This underscores the significance of exemplary worship and moral conduct. In the Islamic tradition, an effective leader is one who is able to inspire and motivate their followers through exemplary worship and good moral behaviour. Scholars such as Imam Ghazali and Ibn Taymiyyah placed significant emphasis on the importance of piety, humility, justice, and compassion in the context of leadership.

Madrassahs may ensure that all educational activities focus not only on academic achievement but also on developing strong moral and spiritual values by integrating religious values in every aspect of school operations. This is consistent with the principles espoused by the Prophet Muhammad, who consistently emphasised the importance of noble morals and piety in all aspects of life.

The advent of the digital era has brought about significant changes in various aspects of life, including in the field of education. In order to remain relevant and competitive, madrasas must integrate digital technology into their learning and management processes. In this context, the concept of e-leadership, which refers to the ability of educational leaders to utilise information and communication technology, assumes great importance.

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[26] Amirul Syah, "Pengaruh Kepemimpinan Spiritual, Kualitas Kehidupan Kerja, Etos Kerja Islami Terhadap Kinerja Pegawai Melalui Organizational Citizenship Behavior (Studi Kasus Pegawai Bank Sumut Syariah Di Kota Medan)" (Disertasi, Medan, UIN Sumatera Utara, 2020), http://repository.uinsu.ac.id/9114/.

[27] Mward, *Kitab Adab Al-Dunya Wa-al-Din.*

Prior research has demonstrated that the integration of e-leadership and spiritual leadership can enhance the overall quality of education. For instance, a study conducted by Sholehuddin et al.[28] revealed that principals who combine technological capabilities with spiritual values are capable of establishing a school culture that is more adaptive and responsive to change. Additionally, research by Aristyasari indicates that a leadership approach that integrates these two elements can elevate learner motivation and engagement, which subsequently improves learning outcomes.[29]

Conversely, Bruce J. Avolio et al.[30] concentrate on the impact of sophisticated information technology on the dynamics of leadership and the ways in which leaders can utilise such technology to attain organisational objectives. In the context of madrasah, this concept is employed to investigate how leaders can employ technology to reinforce spiritual values and enhance the efficiency and effectiveness of the educational process.[31]

In the context of educational quality, the concept of Total Quality Management (TQM), as proposed by Edward Sallis,[32] can be applied to enhance the overall quality of education. Sallis underscores the significance of planning, control, assurance and continuous quality improvement in the field of education. This approach is pertinent for developing a model that integrates e-leadership in the utilisation of information technology with spiritual leadership that emphasises

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[28] M. Sugeng Sholehuddin, Miftah Mucharomah, Pekalongan MSI 17 Pabean Indonesia, miftahmucharomah@gmail.com, et al., "Developing Children's Islamic Spiritual Intelligence in the Digital Age: Indonesian Family Education Methods," *International Journal of Instruction* 16, no. 1 (January 1, 2023): 357–76, https://doi.org/10.29333/iji.2023.16120a.

[29] Yunita Aristyasari, "Synergizing Progressive Values and Social, Emotional, Spiritual Intelligence in Islamic Education in The Digital Era," in *Proceedings of the Third International Conference on Sustainable Innovation 2019 – Humanity, Education and Social Sciences (IcoSIHESS 2019)* (Proceedings of the Third International Conference on Sustainable Innovation 2019 – Humanity, Education and Social Sciences (IcoSIHESS 2019), Yogyakarta, Indonesia: Atlantis Press, 2019), https://doi.org/10.2991/icosihess-19.2019.75.

[30] Avolio et al., "E-Leadership," February 2014.

[31] Elihami Elihami, "An Innovation of Character of Islamic Religious Studies Education towards Education 4.0 in Elementary School: Bibliometric Reviews," *Jurnal Basicedu* 6, no. 1 (December 17, 2021): 146–56, https://doi.org/10.31004/basicedu.v6i1.1832.

[32] Sallis, *Total Quality Management in Education*, 2002.

ethical, moral and spiritual values in Islamic education, which are aligned with the findings of this study.[33]

Sallis' approach is also relevant to the integration of e-leadership and spiritual leadership in Islamic education. By combining these two approaches, Islamic education can achieve higher quality, not only in terms of academic achievement but also in forming strong and virtuous student characters.[34] This model allows Islamic education to remain relevant and effective in the digital age while retaining the essence of the spiritual and moral values on which its teachings are based.[35]

Egel and Fry's theoretical findings on the "Inner Life" dimension of Islamic spiritual leadership,[36] which includes deep awareness of God through fitrah and tafakkur, as well as the foundation dimension of Islamic leadership based on faith, vision and altruistic compassion, will be used as the conceptual framework in this study. These principles can be integrated with e-leadership in the digital era to create madrasahs that excel in spirituality and technology.

The findings of this study align with those of existing literature and relevant theories, indicating that the integration of Islamic Spiritual Leadership and E-Leadership can enhance the quality of education in madrasahs. This integration enables madrasahs to effectively leverage digital technology while upholding and reinforcing the spiritual and moral values that form the bedrock of Islamic education.

Conclusion

The findings of this study indicate that the integration of Islamic spiritual leadership and e-leadership can markedly enhance the quality of education in madrasahs. The Islamic spiritual leadership style, which places emphasis on ethical, moral and spiritual values,

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[33] "Technology Acceptance Model in Islamic Education (TAMISE) for Digital Learning: Conceptual Framework Proposal," *Canadian Journal of Educational and Social Studies* 3, no. 4 (2023), https://doi.org/10.53103/cjess.v3i4.153.

[34] Aristyasari, "Synergizing Progressive Values and Social, Emotional, Spiritual Intelligence in Islamic Education in The Digital Era," 2019.

[35] Sholehuddin, Mucharomah, MSI 17 Pabean, Pekalongan, Indonesia, miftahmucharomah@gmail.com, et al., "Developing Children's Islamic Spiritual Intelligence in the Digital Age."

[36] Egel and Fry, "Spiritual Leadership as a Model for Islamic Leadership."

provides a robust foundation for daily decision-making and actions. In the context of madrasahs, this leadership approach is not solely focused on academic performance, but also aims to foster an environment that supports learners' spiritual development. This research lends support to the theory that effective leaders in Islamic education are those who are able to inspire and motivate others through exemplary worship and good morals, as exemplified by the Prophet Muhammad.

The utilisation of information and communication technology (ICT) in e-leadership plays an instrumental role in the facilitation of the learning process and school management. The findings of this study indicate that madrasah principals who integrate technological capabilities with spiritual values are better able to establish a school culture that is more adaptive and responsive to change. The analysis demonstrated that Islamic spiritual leadership exerts a considerable influence on the quality of education, with the mediating effect of e-leadership. The integration of these two approaches enables madrasahs to remain relevant in the digital age, enhance accessibility and flexibility in the learning process, and ensure that the education provided is firmly rooted in robust Islamic values. Consequently, this study provides a foundation for the development of an effective leadership model to improve the quality of education in madrasahs in the digital era.

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