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Successful dimension for evaluating leadership management in Islamic university

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ABSTRACT

This research aims to test the dimensions of success in measuring leadership management and to find the factors that shape leadership in an excellent Islamic university (IU). Respondents totaled 422 participants from leaders and lecturers at six Islamic universities in Indonesia. partial least squares structural equation modeling (PLS-SEM) analysis is used to test 8 dimensions, 35 constructs, and 17 hypotheses. Management leadership is determined by the dominant factor, namely job evaluation (IM4, λ=90.70%), and human resources (OR3, λ=74.40%) is the lowest factor. The ability of the structural model to explain the measurement of IU's leadership management is 79.70%. Furthermore, the 17 hypotheses from 8 dimensions have a positive and significant influence. Measurable dimensions can be used to develop an effective management model to increase the performance and function of leadership. Through the results of this research, higher education management institutions can recommend study substances to comprehensively find out the leadership model to be applied by leaders so they are more skilled and expert in managing institutions in higher education.

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1. INTRODUCTION

The implementation of national higher education that applies in Indonesia is carried out by the government through public and private, official, and religious universities to achieve national education goals [1], [2]. Various levels of education in Indonesia that encourage the achievement of higher-level learning objectives to achieve national education goals are supported by open leadership [3]–[5]. Leadership management is needed to improve the ability of the leadership in carrying out activities to achieve the goals of an organization that is being run. According to Hoekstra and Newton [6], a leader is someone who can influence other people in running the organization.

In Islamic education management terminology, Muslim leaders are represented by certain leadership positions. The leader is responsible for achieving organizational goals through leadership activities. A person's leadership can have a strong impact on the direction and movement of Islamic educational institutions. Islamic education leaders who are able to influence all elements of their educational institutions will find it easier to guide them towards their goals [7], [8]. Leadership is seen as a catalyst for change in developing the quality and success of Islamic education, in both madrasas and Islamic universities. Effective leadership can also activate the innovation process in educational institutions.

Several studies [8], [9] showed through their research results that effective leadership management based on leader leadership is largely determined by good attitudes, skills, strategies, adherence to values, and the ability to motivate a leader toward subordinates. Leadership in Islamic university (IU) is determined by the ability to analyze problems and lead organizations to move forward. IU is the embodiment of religious values to produce perfect human beings [10]. To lead to the realization of the intended leadership, it is very necessary to apply fair education to leadership in IU who occupy positions as university leaders.

From existing data in 2023, there were 49 accredited A with details of public universities (43) and private universities (6), 178 accredited B with details of public universities (150) and private universities (28), while those 80 accredited C with details of public universities (63) and private universities (17) as well as 61 that have not been accredited with details of public universities (47) and private universities (14). To be able to increase the excellence of an IU, a superior leadership management model is needed. Because leadership management is one of the existing problems [11], [12], therefore, to lead an IU, a leadership management model is needed that can advance the institution.

The leadership of a Muslim imitates the leadership of Prophet Muhammad SAW. There are several values that inform Prophet Muhammad SAW's management, namely: quality management, courage and determination, autonomy, patience and perseverance, fairness and equality, personality, and truth and noble intentions [11]. These values are directly modeled and modeled for followers, leading to voluntary compliance and participation. Based on the author's initial observations at various levels of Islamic educational institutions, the leadership process in higher education is unique because the bureaucratic system is more open and appears more academic [12]. The author also focuses more on studies at private Islamic religious colleges, which have greater potential for scientific analysis. Therefore, it is hoped that this discussion will produce new scientific treasures regarding the study of Islamic leadership in IU.

Many IUs have recognized the importance of their place in the academic community, and as a result, they are working to improve the quality of their teaching by strengthening their administrative structures. Two of the universities spread across Yogyakarta are Islamic educational institutions under the auspices of the Ministry of Religion and Education Indonesia, namely the State Islamic University Sunan Kalijaga and Indonesian Islamic University. However, in terms of institutional leadership, there are differences regarding the leadership management model that exists in each institution. The development of these two universities is quite good in terms of governance, independence in achieving academic breakthroughs, and cooperation with organizations and institutions on a national and world scale, that is why they were chosen. There are significant institutional differences between the two universities. Both as a collaborator on educational initiatives and as a fellow community education provider, as well as attracting the attention of prospective students in the higher education market.

To achieve the leader's vision, he must have leaders in the formation of Islamic institutions, both intellectual, human and technological [3], [4]. Conceptual skills are recognized as a means of identifying and managing organizations. Cultural arts are collaboration, motivation, and leadership skills. Technical ability is the ability to learn methods, techniques, and means to complete an operation [13]. To acquire these skills, people responsible for Islamic teachings must feel ready and open to always learning from daily work, especially from teachers and other teachers, complying with administrative policies, and generating verifiable ideas. Shulhan [10] and Supriyanto *et al.* [14] developed a number of leadership quality values needed to build educational institutions, namely vision and symbolism, institutional leaders must pass on societal values to workers and students in the wider community, a practice-oriented leadership style. Educators and leaders must innovate with their workforce and prepare to prevent the disruption that comes with this innovation.

Leadership in IU is still a bit surviving. Leadership in educational institutions does not show strong leadership. There are only a few leadership management at IU, this can be seen in the leadership model of superior IU, namely Universitas Islam Negeri Malang is the leadership of Ulul Albab, while for other IU, there has not emerged a leadership model that will become a reference for other IU in leading higher education institution. IU, the view that IU graduates are less competitive and have lower quality compared to public universities. Graduation from IU is inseparable from the existing learning process, weaknesses in utilizing learning media and technology make graduates from IU unable to compete with others [7]. Theoretically, this research is expected to produce various concepts for the development of leadership management models in IU. Practically, this research is expected to be useful for institutions of Islamic higher education as a guide in the process of developing university organizations in an effort to develop superior IU.

2. RESEARCH METHOD

The sampling method of this research is non-probability sampling using a purposive sampling technique [15]–[17]. The determination of the sample based on specific criteria, where the respondents were leaders and lecturers at six university institutions in Indonesia with a total of 422 participants. Thus, the number of participants meets the partial least squares structural equation modeling (PLS-SEM)

requirements [18], [19]. In this study, the PLS-SEM technique was used to test the structural model because it is very complex with many constructs and indicators, there are eight dimensions, 35 indicators/constructs, and 17 hypotheses. The Likert scale was used in this study with 4 alternative answers 1 (disagree) to 4 (strongly agree) [20]–[22]. Analysis of PLS-SEM data for this research is based on the evaluation of the outer and inner models. The outer model includes factor loading (FL) and average variance extracted (AVE) values. Meanwhile, the inner model includes the values of R2, $f2$, and model fit [23]–[25]. The research instrument is shown in Table 1.

Table 1. Indicators of success dimensions to evaluate management leadership

No	Dimension	Construct	Indicators	References
1	Planning (PL)	PL1	Vision	[4], [26]–[28]
2		PL2	Mission	
3		PL3	Objective	
4		PL4	Needs analysis	
5		PL5	Job analysis	
6		PL6	Communication	
7	Determination (DT)	DT1	Job-description	[9], [13], [29], [30]
8		DT2	Organization structure	
9		DT3	Finance	
10		DT4	Standard setting	
11		DT5	Data and information	
12	Organizing (OR)	OR1	Facility and infrastructure	[10], [11], [13], [28], [31]
13		OR2	Operational costs	
14		OR3	Human resources	
15		OR4	Leadership style	
16		OR5	Management models	
17	Implementation (IM)	IM1	Ease of vision mission	[6], [8], [11], [29]
18		IM2	Deliberation decision	
19		IM3	Performance reports	
20		IM4	Job evaluation	
21	Supervision (SP)	SP1	Procurement of facilities and infrastructure	[4], [5], [14], [31]
22		SP2	Financial management	
23		SP3	Flexibility of leadership styles	
24		SP4	Communication intensity	
25		SP5	Work improvements	
26	Evaluation (EV)	EV1	Leadership roles in the ML model	[7], [14], [26], [27]
27		EV2	The practicality of the ML model procedures	
28		EV3	The feasibility of the ML model	
29	Controlling (CT)	CT1	Component of the ML models	[10], [32], [33]
30		CT2	Characteristics of the ML models	
31		CT3	Clarity of ML model content	
32		CT4	Clarity of ML model steps	
33	Enhancement (EH)	EH1	Leadership model management principles	[8], [12], [30], [34]
34		EH2	The convenience of the ML model	
35		EH3	Aspects of the ML models	

3. RESULTS

3.1. Testing of the measurement model (outer model)

Overall, the FL value for each indicator is >0.70 (0.744-OR3 to 0.907-IM4). The AVE value for each dimensions has a value of >0.50 (0.699-organizing to 0.792-implementation). The most dominant statement indicator represents the success of leadership management at IU, namely IM4 with the statement "leaders make projections based on the results of performance evaluation" in the implementation dimension of 90.70%. While the weakest indicator in measuring the success of leadership management at IU is OR3 with the statement "effective, efficient, and economical university operational costs" in the organizing dimension of 74.40%. In addition to the construct validity test, a consistency test of the estimated reliability was also carried out which was measured using three approaches, namely CR, rho_A, and CA with values above >0.70. The output of SmartPLS shows that all constructs have CA values (0.833-EV to 0.915-PL), rho_A (0.834-EV to 0.915-PL), and CR (0.900-EV to 0.938-IM).

3.2. Testing of the structural model (inner model)

Based on Figure 1, the enhancement dimension obtained an R^2 value of 0.797. That is, the seven dimensions of measurement (planning, determining, organizing, implementing, monitoring, evaluating, and controlling) have an influence on the enhancement dimension of 79.70% and the remaining 20.30% is influenced by other dimensions outside the research model. The effect size (f^2) obtains a value of 0.013 to

0.406 and the average research dimension has an influence of 0.134 in the medium category in measuring the success of leadership management at IU.

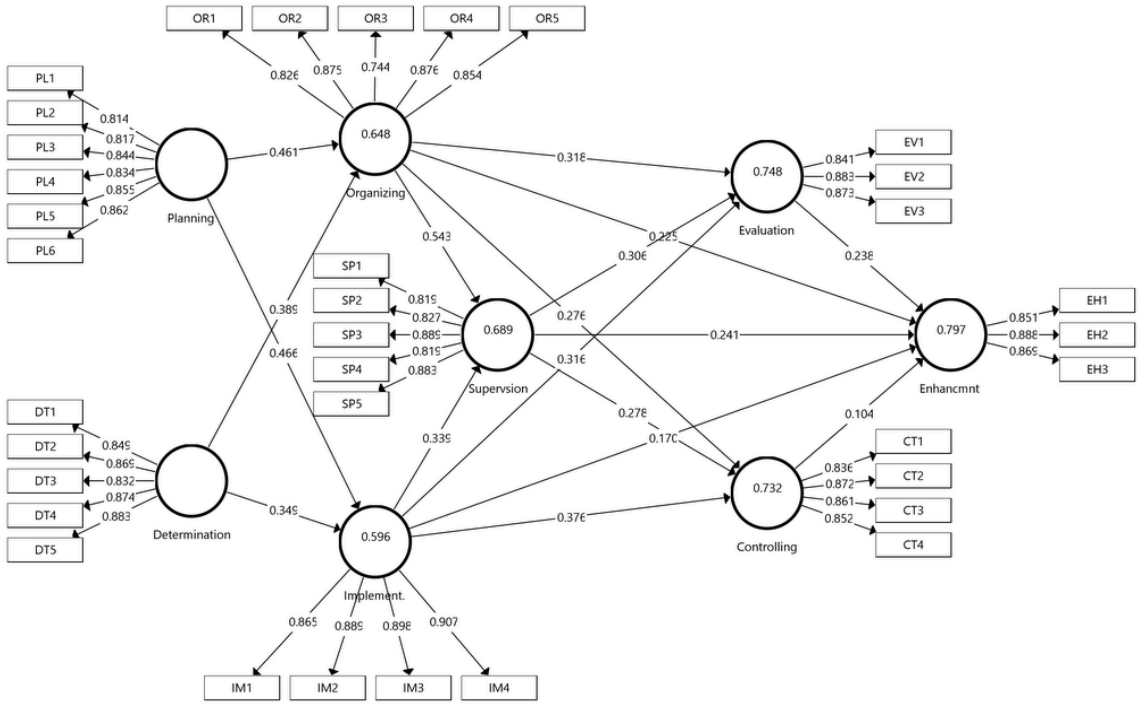

Figure 1. Evaluation model of leadership management in Islamic higher education

3.3. Path analysis and hypothesis testing

Based on Table 2, the HD-1 hypothesis (CT→EH) obtains β-values=0.104 (positive decimal), T-statistics=2.218 (>1.96), and P-values=0.027 (<0.05). This shows that the controlling dimension has a significant and positive effect on the enhancement of leadership management. Furthermore, the seventeen hypotheses HD-1 to HD-17 are stated to have a positive and significant effect on leadership management in IU. In terms of β-values, the highest value is obtained in HD-8 (OR→SP) of 0.543, so the organizing dimension makes the largest contribution to influencing and increasing the success of leadership management. Meanwhile, the lowest β-value is in HD-17 (CT→EH) of 0.104, although the controlling dimension has a positive and significant effect on increasing the success of leadership management, this dimension makes the smallest contribution.

Table 2. Path analysis and hypothesis testing

Hip.	Path analysis	β-values (+/-)	SDV	T-statistics (>1.96)	ρ-values (<0.05)
HD-1	Supervision→Controlling	0.278	0.044	6.381	***
HD-2	Supervision→Enhancement	0.241	0.044	5.436	***
HD-3	Supervision→Evaluation	0.306	0.043	7.169	***
HD-4	Planning→Organizing	0.461	0.044	10.555	***
HD-5	Planning→Implementation	0.466	0.049	9.441	***
HD-6	Determination→Organizing	0.389	0.043	8.962	***
HD-7	Determination→Implementation	0.349	0.050	6.952	***
HD-8	Organizing→Supervision	0.543	0.039	13.991	***
HD-9	Organizing→Evaluation	0.318	0.047	6.706	***
HD-10	Organizing→Controlling	0.276	0.048	5.797	***
HD-11	Organizing→Enhancement	0.225	0.046	4.884	***
HD-12	Implementation→Supervision	0.339	0.039	8.598	***
HD-13	Implementation→Evaluation	0.316	0.042	7.515	***
HD-14	Implementation→Controlling	0.376	0.043	8.722	***
HD-15	Implementation→Enhancement	0.170	0.040	4.255	***
HD-16	Evaluation→Enhancement	0.238	0.046	5.222	***
HD-17	Controlling→Enhancement	0.104	0.047	2.218	0.027**

**p<0.05; ***p<0.001

Model fit tests how well the model represented by the data reflects the underlying theory. In PLS-SEM, the assessment of model fit is carried out by using three criteria, namely standard root mean square residual (SRMR), normed fit index (NFI), and theta of root mean square (RMSTheta) [23], [35]. SRMR is a conclusion if there is a difference between the data tested and the model. So, the competency indicators and constructs are in accordance with the model tested because the SRMR value is 0.045 (≤0.080). The NFI value describes the overall model suitability level reaching 81.70% with the output of the PLS algorithm obtaining a value of 0.817 (>0.500). RMSTheta has an output value of 0.139, which is >0.120 indicating that the model is moderately suitable for determining competency demands. So, all aspects of constructs and indicators that are measured as factors and dimensions of success in industrial partnerships and vocational education meet the fit model criteria.

4. DISCUSSION

Planning is a methodical action regarding what will be achieved, activities to be carried out, steps, techniques, implementation of labor, and so on to carry out activities to achieve goals. The weakest indicators on the planning dimension in measuring the success of leadership management at IU are the PL1 (λ=0.814) and PL2 (λ=0.817) indicators, namely vision which is formulated and socialized so that it is easy to implement. Missions, goals, and objectives have not been formulated clearly and easily understood by all members of the academic community. The results of interviews at several IU stated that the chancellor had seriously worked to realize the vision and mission of the institution democratically and transparently, through personal and group approaches. Furthermore, the vision and mission for compiling program designs through various stages until now integration, and interconnection to become a characteristic must be supported by mastery of social theory as a whole.

In contrast to previous researches [8], [34] that determines the vision and mission of an organization which becomes an idea and goals which will become goals within a certain period. The vision, mission, goals, and objectives have been formulated clearly and are easy to understand but are slow in the process of realizing them. However, this research is consistent with the results of several researches [7], [26] that efforts to realize the vision and mission of institutions democratically and transparently still experience obstacles in personal and group approaches due to their uniqueness. However, in contrast to this study, the vision and mission of compiling program designs through various stages, until now integration, and interconnection to become a feature, have not been supported by mastery of social theory as a whole.

To support the realization of the vision and mission and goals of an institution, a leader who can control an institution is needed, one of which is charismatic. This study reveals some of the characteristics of a charismatic leadership style, namely having natural authority, and having many followers; the attraction towards his followers, occurs unconsciously and irrationally from the actions of his followers, and is not motivated by internal factors, such as physical, economic, health, and good looks. Methodical research that is in line with the conditions of the organization and the availability of resources keeping in mind the vision and mission of the organization is needed for the planning process [13], [32], [33].

Meanwhile, the strongest indicator of the planning dimension in measuring the success of leadership management at IU is PL6 (λ=0.862). This research reveals that the communication built in the interaction of all components of the IU is more flexible and transparent. In the bureaucratic context, communication is more placed in formal-procedural principles according to the position level in the institution, but this research is inconsistent with another research [6], [9], [31], that internal communication is more flexible and open. Furthermore, communication is taken in the form of internal and external conflict resolution institutions, using democratic principles which prioritize collective agreements through deliberations to find policies that are more strategic and effective in resolving the conflicts they face. Meanwhile, other studies [5], [30] stated that the communication between lecturers and students is more professional by social competence which is one of the competencies of a teacher in delivering learning material.

Determination and organizing are the strengths or capital of the institution as an opportunity to develop future management of the institution [4], [6], [30]. The indicators for determining determination are data and information, organizational structure, standard setting, job description, and finance. While the indicators measuring organizing are human resources, operational costs, facilities and infrastructure, leadership style, and management model. Every IU institution has input that is no different. The weakest indicator on the determination dimension is the DT3 indicator (λ=0.832), namely, finances are audited by internal and external auditors. Finance at university institutions still relies on government assistance and donations. This research also reveals that the institution's operational costs are still limited, they still expect assistance from the government and donor agencies, and the institution's operational financing management unit cannot yet be independent in financial management because it still hopes for government assistance.

In line with research by White *et al*. [28] that the institution's operational financing management unit cannot yet be independent in financial management because it still hopes for government assistance. In addition, this research supports studies by several researchers [12], [27] stated that institutions still need subsidized assistance which is realized in the form of scholarships for each student and for the development of lecturers and other education staff. In contrast to the results of Cherkowski *et al*. [29] which stated that the operational costs of independent institutions so that institutions can finance various programs to improve the quality of future management such as curriculum development, research, and community service that are internationally oriented.

The weakest indicator in measuring the dimension of organizing is the OR3 indicator (λ=0.744), which is the increase in human resource performance. This study revealed that human resources absorbed in various work units, both as lecturers and education (administration, cleaning services, laboratory assistants) have been recruited in accordance with applicable procedures and regulations. This is reinforced by previous studies [12], [13] which states that especially lecturers are serious and active in carrying out teaching and learning activities effectively, to meet the targets that have been set. In placing employees in institutional staffing agencies, it has been adjusted to the competence and professionalism of each employee according to the duties carried out [3], [26], [33].

The next weakest indicator in measuring the organizing dimension is the OR1 indicator (λ=0.826), namely the facilities and infrastructure at the university are adequate. Adequate facilities and infrastructure gradually, according to the financial condition of the institution. Furthermore, the results of the interviews revealed that the need for facilities and infrastructure at institutions always follows developments in the demands of higher education in general and specifically at university institutions. This is consistent with several studies [10], [11], that the institution's operational financing management unit always strives for the independence of the institution's operational costs. Furthermore, research by Sudirman and Gemilang [32] confirmed that government subsidies that are realized in the form of scholarship for each student, it has greatly assisted the process of developing lecture progress at universities.

Based on the results of the interviews, the leadership management model for each IU institution is a leader, which provides direction to all subordinates to carry out all policies in implementing the university management process. The implementation starts with facilities with learning for students, and various other operational units such as staffing bureaus, academics, quality assurance institutions, and financial audit institutions. In line with this opinion, this research is consistent with Supriyanto *et al*. [14] which states that the leadership of the chancellor of each IU institution is more of a leader who allows all employees in the institution to carry out all of their mandates or orders. Furthermore, supported the research by several researchers [8], [9], [30], [34], the management model can function to carry out all agreements as a whole in achieving the vision and mission of the institution towards an international standard superior university model.

Another leadership style applied leadership is the paternalistic style, which further emphasizes the nature of protecting and providing comfort to all groups within several institutions at IU. Besides that, it is a form of tolerant Islam "rohmatan lil'alamin", there is respect for fellow believers, so there is harmony. Furthermore, it is also said that there are several leadership models used by several charismatic, delegative, democratic, and visionary leadership styles so that they are not attached to one leadership style. The leadership style used is a participatory style, meaning that it involves division heads and staff in every decision-making with the character of trustworthiness, honesty, hard work, and innovation. However, all of these leadership styles are Islamically shaded by the tolerant "rohmatan lil'alamin" leadership style.

5. CONCLUSION

Factors that shape the leadership of an Islamic university can be identified with a construct that fulfills the dimensions of implementation, supervision, evaluation, controlling, and enhancement of IU programs. The dimensions of successful leadership management at IU are expected to be a reference in developing management models that can be used effectively to increase performance because they carry out leadership functions by applying management principles. The involvement of these eight dimensions can make it easier for leaders of IU to develop superior leadership styles. The results can help leaders of IU as reference material in efforts to improve leadership management models that are more effective and efficient as well as a source of knowledge contribution through literature for prospective institutional leaders and students. Universities managing higher education institutions can recommend learning substances to comprehensively find out leadership models that can be applied by leaders to excel. In addition to developing skilled and expert leadership competencies in managing institutions in higher education. Collaborate with ministries in a country to oversee the quality of higher education institutions through overall evaluation of leadership performance, so that national higher education standards are achieved.

REFERENCES

[1] B. Azhari and I. Fajri, "Distance learning during the COVID-19 pandemic: School closure in Indonesia," *International Journal of Mathematical Education in Science and Technology*, vol. 53, no. 7, pp. 1934–1954, Jun. 2022, doi: 10.1080/0020739X.2021.1875072.

[2] M. Chavan and L. Carter, "Management students–expectations and perceptions on work readiness," *International Journal of Educational Management*, vol. 32, no. 5, pp. 825–850, Jan. 2018, doi: 10.1108/IJEM-10-2016-0219.

[3] N. Forster, "Why are there so few world-class universities in the Middle East and North Africa?," *Journal of Further and Higher Education*, vol. 42, no. 8, pp. 1025–1039, Nov. 2017, doi: 10.1080/0309877X.2017.1349881.

[4] A. Terkamo-Moisio, M. Palonen, H. vaartio-Rajalin, L. M. Peltonen, P. Partanen, H. leino-Kilpi, "Structural and psychological empowerment of students obtaining continuing leadership education in Finland–a national survey," *Nurse Education Today*, vol. 116, no. 1, pp. 1–15, Sep. 2022, doi: 10.1016/j.nedt.2022.105456.

[5] S. N. van den Boom-Muilenburg, C. L. Poortman, K. Schildkamp, S. de Vries, and K. van Veen, "Sustaining data use professional learning communities in schools: the role of leadership practices," *Studies in Educational Evaluation*, vol. 78, no. 1, pp. 1–10, Sep. 2023, doi: 10.1016/j.stueduc.2023.101273.

[6] A. Hoekstra and P. Newton, "Departmental leadership for learning in vocational and professional education," *Empirical Research in Vocational Education and Training*, vol. 9, no. 1, p. 12, Jun. 2017, doi: 10.1186/s40461-017-0057-0.

[7] A. D. Sisson and J. Kwon, "Effectiveness of e-learning as seen by meeting planners," *Journal of Hospitality & Tourism Education*, vol. 33, no. 2, pp. 75–88, Apr. 2021, doi: 10.1080/10963758.2020.1791138.

[8] M. Tintoré, J. Gairín, I. Cabral, J. M. Alves, and R. S. Cunha, "Management model, leadership and autonomy in Portuguese and Spanish public schools: A comparative analysis," *Cogent Education*, vol. 9, no. 1, pp. 1–21, Dec. 2022, doi: 10.1080/2331186X.2022.2105553.

[9] D. Reynolds and J. McKimm, "Educational management and leadership in Wales: promise, performance and potential," *School Leadership & Management*, vol. 41, no. 1–2, pp. 54–72, Mar. 2021, doi: 10.1080/13632434.2020.1816955.

[10] M. Shulhan, "Leadership style in the madrasah in Tulungagung: how principals enhance teacher's performance," *International Journal of Educational Management*, vol. 32, no. 4, pp. 641–651, Jan. 2018, doi: 10.1108/IJEM-08-2017-0218.

[11] R. H. Ahmad, A. J. Salleh, and S. Ghavifekr, "Leadership dimensions and creativity traits of Islamic schools principals: a quantitative analysis," *MOJEM: Malaysian Online Journal of Educational Management*, vol. 5, no. 1, pp.2 9–50, Sep. 2017, doi: 10.22452/mojem.vol5no1.3.

[12] Z. Sholikhah, X. Wang, and W. Li, "The role of spiritual leadership in fostering discretionary behaviors: The mediating effect of organization based self-esteem and workplace spirituality," *International Journal of Law and Management*, vol. 61, no. 1, pp. 232–249, Jan. 2019, doi: 10.1108/IJLMA-04-2018-0081.

[13] M. Ghafar, A. Zarkasyi, and F. M. Adam, "Impacts of openness to experience on learning innovation model the moderating effect of teacher knowledge-sharing*," Cendekia: Jurnal Kependidikan dan Kemasyarakatan*, vol. 20, no. 2, pp.164–180, Dec. 2022, doi: 10.21154/cendekia.v20i2.4960.

[14] A. S. Supriyanto, V. M. Ekowati, W. Rokhman, F. Ahamed, M. Munir, and T. Miranti, "Empowerment leadership as a predictor of the organizational innovation in higher education," *International Journal of Professional Business Review*, vol. 8, no. 2, pp. 1–15, Feb. 2023, doi: 10.26668/businessreview/2023.v8i2.1538.

[15] R. A. Bautista, C. J. S. Orte, J. E. C. Neo, A. M. Parico, M. B. M. Bascon, and M. R. H. Batac, "Work engagement index among nurse-educators in private higher education institutions in Region III, Philippines," *Enfermería Clínica*, vol. 33, no. 1, pp. 71–76, Mar. 2023, doi: 10.1016/j.enfcli.2023.01.013.

[16] A. D. Osman, L. Bradley, and V. Plummer, "Evaluation of resource allocation for undergraduate nursing professional experience placements coordination in Australian Higher Education; A cross-sectional study with descriptive qualitative thematic analysis," *Nurse Education in Practice*, vol. 67, no. 1, pp. 1–13, Feb. 2023, doi: 10.1016/j.nepr.2023.103571.

[17] J. Petchamé, I. Iriondo, O. Korres, and J. Paños-Castro, "Digital transformation in higher education: a qualitative evaluative study of a hybrid virtual format using a smart classroom system," *Heliyon*, vol. 9, no. 6, pp. 1–16, Jun. 2023, doi: 10.1016/j.heliyon.2023.e16675.

[18] S. A. R. Khan, "Assessing the eco-environmental performance: an PLS-SEM approach with practice-based view," *International Journal of Logistics Research and Applications*, vol. 24, no. 3, pp. 303–321, 2021, doi: 10.1080/13675567.2020.1754773.

[19] M. Sarstedt, L. Radomir, O. I. Moisescu, and C. M. Ringle, "Latent class analysis in PLS-SEM: a review and recommendations for future applications," *Journal of Business Research*, vol. 138, pp. 398–407, Jan. 2022, doi: 10.1016/j.jbusres.2021.08.051.

[20] R. Daryono, A. Yolando, A. Jaedun, and N. Hidayat, "Competency of vocational schools required by construction industry in consultants' supervisor," in *Journal of Physics: Conference Series, IOP Publishing*, 2020, p. 012057, doi: 10.1088/1742-6596/1456/1/012057.

[21] H. R. Nur, Z. Arifin, Soeryanto, F. Mutohhari, and R. W. Daryono, "Society 5.0 competency: readiness level of teachers and students in automotive engineering vocational school," *AIP Conference Proceedings*, vol. 2671, no. 1, p. 060009, Mar. 2023, doi: 10.1063/5.0114613.

[22] S. Supriyanto, S. Munadi, R. W. Daryono, Y. A. E. Tuah, M. Nurtanto, and S. Arifah, "The influence of internship experience and work motivation on work readiness in vocational students: PLS-SEM analysis," *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, vol. 5, no. 1, pp. 32–44, 2023, doi: 10.23917/ijolae.v5i1.20033.

[23] D. Al-Fraihat, M. Joy, R. Masa'deh, and J. Sinclair, "Evaluating e-learning systems success: an empirical study," *Computers in Human Behavior*, vol. 102, pp. 67–86, Jan. 2020, doi: 10.1016/j.chb.2019.08.004.

[24] R. W. Daryono, M. A. Ramadhan, N. Kholifah, F. D. Isnantyo, and M. Nurtanto, "An empirical study to evaluate the student competency of vocational education," *International Journal of Evaluation and Research in Education (IJERE)*, vol. 12, no. 2, pp. 1077–1084, Jun. 2023, doi: 10.11591/ijere.v12i2.22805.

[25] V. L. Hariyanto, R. W. Daryono, N. Hidayat, S. H. Prayitno, and M. Nurtanto, "A framework for measuring the level of achievement of vocational students competency of architecture education," *Journal of Technology and Science Education*, vol. 12, no. 1, pp. 157–171, Mar. 2022, doi: 10.3926/jotse.1188.

[26] K. L. Brewer and L. E. Devnew, "Developing responsible, self-aware management: an authentic leadership development program case study," *The International Journal of Management Education*, vol. 20, no. 3, pp. 1–10, Nov. 2022, doi: 10.1016/j.ijme.2022.100697.

[27] Z. Cheng and C. Zhu, "Academic members' perceptions of educational leadership and perceived need for leadership capacity building in Chinese higher education institutions," *Chinese Education & Society*, vol. 54, no. 5–6, pp. 171–189, Nov. 2021, doi: 10.1080/10611932.2021.1990621.

[28] B. A. A. White, C. Bledsoe, R. Hendricks, and A. C. Arroliga, "A leadership education framework addressing relationship management, burnout, and team trust," *Baylor University Medical Center Proceedings*, vol. 32, no. 2, pp. 298–300, Apr. 2019, doi: 10.1080/08998280.2018.1550346.
[29] S. Cherkowski, B. Kutsyuruba, K. Walker, and M. Crawford, "Conceptualising leadership and emotions in higher education: wellbeing as wholeness," *Journal of Educational Administration and History*, vol. 53, no. 2, pp. 158–171, Apr. 2021, doi: 10.1080/00220620.2020.1828315.
[30] J. Kovačević and P. Hallinger, "Finding Europe's niche: science mapping the knowledge base on educational leadership and management in Europe, 1960–2018," *School Effectiveness and School Improvement*, vol. 31, no. 3, pp. 405–425, Jul. 2020, doi: 10.1080/09243453.2019.1692875.
[31] P. Sahlberg and T. Cobbold, "Leadership for equity and adequacy in education," *School Leadership & Management*, vol. 41, no. 4–5, pp. 447–469, Oct. 2021, doi: 10.1080/13632434.2021.1926963.
[32] A. Sudirman and A. V. Gemilang, "Promoting work-based learning as a praxis of educational leadership in higher education," *International Journal of Learning, Teaching and Educational Research*, vol. 19, no. 3, pp. 149–173, Apr. 2020, doi: 10.26803/ijlter.19.3.9.
[33] P. Lappalainen, "Walking and talking sensors: conceptualising restorative leadership to enhance people management education in engineering," *European Journal of Engineering Education*, vol. 45, no. 3, pp. 473–490, May 2020, doi: 10.1080/03043797.2019.1646211.
[34] X. Xu, Y. Zhang, P. Zhou, Y. Lin, and W. Pan, "A modified Delphi study on establishing a curriculum content structure for the leadership and management competency cultivation for future nurse managers in China," *Heliyon*, vol. 8, no. 12, pp. 1–12, Dec. 2022, doi: 10.1016/j.heliyon.2022.e12183.
[35] J. F. Hair, M. C. Howard, and C. Nitzl, "Assessing measurement model quality in PLS-SEM using confirmatory composite analysis," *Journal of Business Research*, vol. 109, pp. 101–110, Mar. 2020, doi: 10.1016/j.jbusres.2019.11.069.

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