The Influence of Islamic Leadership on Employee Innovative Capability

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Abstract

Employee innovative capability has been the main concern especially among the public servants. A lot of effort has been taken to heighten the level of innovative capability among the employees but the effect can be said unsatisfactorily. One of the reasons is that the job of public servants is less competitive as compared to those working in the private sector. Realizing the need to identify factors that can increase public servants' innovative capability, the present study was undertaken by focusing on employees working in the selected public organizations as samples. A total of 400 self-reported questionnaires were distributed to respondents and 314 sets were returned but 290 sets were usable for analysis. The results of a multiple regression analysis show that leaders' consistency, consultation (syura), expressing gratitude, eloquence and sovereignty are significant to influence employees' innovative capability. The implications of the study are discussed in detail in this paper.

Keywords: *Islamic Leadership, Consistency, Consultation, Gratitude, Eloquence, Sovereignty, Innovative Behavior*

INTRODUCTION

Employee innovative capability is of great importance in the public sector for several reasons. First, innovation in the public sector leads to the development of new and improved services, making them more efficient, effective, and tailored to meet the needs of citizens (Chen et al., 2021). This can result in better public services across various domains, such as healthcare, education, transportation, and others. Second, innovative solutions often lead to cost savings in the long run (Bloom et al., 2019). By encouraging employees to come up with creative ideas and solutions, the public sector can find more cost-effective ways of delivering services and managing resources.

Third, innovation fosters a culture of problem-solving within public sector organizations (Schröer, 2021). When employees are encouraged to think outside the box, they are more likely to identify and address complex challenges faced by the government and society. Fourth, innovative approaches can lead to streamlined processes and workflows, which can boost overall productivity within public sector departments (Treiblmaier & Sillaber, 2020). This, in turn, enables agencies to accomplish more with the same or fewer resources. Lastly, innovative solutions can enhance transparency and accountability in public service delivery (Valle-Cruz, 2019). When citizens see the government implementing innovative practices, it can foster greater trust in public institutions.

Innovation in the public sector can face several challenges and issues, which can hinder its effective implementation and impact. Public sector organizations are often characterized by bureaucratic structures and complex decision-making processes. This can slow down the approval and implementation of innovative ideas, leading to frustration among employees and stifling creativity (Van der Voet & Lems, 2022). The public sector is generally risk-averse due to the nature of its responsibilities and the potential consequences of failure. Fear of negative outcomes can discourage employees from proposing or implementing innovative solutions (Javed et al., 2021).

Budget constraints and limited resources can hinder the adoption of innovative practices (De Coninck et al., 2023). Lack of funding, technology, or expertise may prevent public sector organizations from exploring and implementing innovative ideas. Innovative initiatives may face resistance from within the organization. Employees and managers comfortable with traditional practices may be hesitant to embrace new methods,

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leading to a reluctance to change (Carlgren & BenMahmoud-Jouini, 2022). The lack of collaboration and communication between different departments or agencies can create silos, hindering the flow of ideas and innovative practices (Roper, 2021).

To overcome these challenges and foster a culture of innovation in the public sector, it is essential to address these issues through reforms, supportive policies, training programs, and leadership commitment and actions.

Effective leadership plays a crucial role in resolving issues related to innovation in the public sector. Leadership should articulate a clear vision for innovation and communicate its importance throughout the organization (Mascareño et al., 2020). This vision should align with the broader mission of the public sector entity and inspire employees to contribute their ideas and efforts towards innovative solutions. In the Islamic term, leaders who are eloquent in their communication will be able to inspire their followers to be innovative (Usman, 2020). This discussion will lead to the following hypothesis:

Hypothesis 1: Eloquent leaders will increase innovative capability among employees in the public sector.

Leaders should be consistent in their words and actions (Ajzenman et al., 2020). They practice what they preach. Once decisions are made, they wiill stick to those decisions regardless of the circumstances. Any changes will be discussed with their followers before a new decision is made. This shows that the leaders have the right qualities to motivate their subordinates to have innovative capability required to engage in innovative behaviors (Iqbal et al., 2020). This discussion will lead to following hypothesis:

Hypothesis 2: Leaders who are consistent in their words and actions will increase innovative capability among employees in the public sector.

Leaders should empower and delegate tasks to employees. Providing employees with the autonomy and authority to propose and implement innovative ideas, avoiding micromanagement and encouraging a culture where employees feel empowered to take calculated risks and experiment with new approaches will motivate them to engage in innovative efforts (Tian & Zhang, 2020). However, the leaders must be accountable for the results of the practice. Only then the employees are willing to take risks (Oshodi et al., 2019). This discussion will lead to following hypothesis:

Hypothesis 3: Accountable leaders will increase innovative capability among employees in the public sector.

Leaders should encourage risk-taking and learning from failures. Leaders should foster a culture that views failure as an opportunity for learning and improvement rather than a reason for punishment (Bertram Gallant & Stephens, 2020). Encouraging employees to take calculated risks and sharing lessons learned from both successful and unsuccessful attempts at innovation will create a learning culture. Islam also encourages the followers to continuously learn to improve themselves from time to time (Komariah & Nihayah, 2023). This discussion will lead to the following hypothesis:

Hypothesis 4: Leaders who encourage continuous learning will increase innovative capability among employees in the public sector.

To promote innovation, leaders should be able to allocate adequate resources for innovation, including funding, time, and technology, to support innovation initiatives (Linde et al., 2021). This will ensure that innovation efforts are not hampered by resource constraints. Besides, leaders are expected to uphold justice in their actions (Novitasari et al., 2020); setting targets, providing resources, and acknowledging or rewarding staff achievements. Leaders are also expected to ensure justice is practiced at all times (Shields & Hesbol, 2020). This discussion will lead to the following hypothesis:

Hypothesis 5: Leaders who practice justice will increase innovative capability among employees in the public sector.

Leaders should promote collaboration and cross-functional teams between different departments and agencies to break down silos and promote the exchange of ideas (de Waal et al., 2019). Besides, they should create cross-functional teams to work on innovative projects, bringing together diverse perspectives and expertise. In the Islamic terms, these leadership practices are known as consultation or syura or participative leadership

(Elsetouhi et al., 2021). Decisions are made in consultation with other members, not by the leader alone. This discussion will lead to the following hypothesis:

Hypothesis 6: Leaders who practice consultation (syura) will increase innovative capability among employees in the public sector.

Leaders should establish innovation incentives and recognition to promote innovation among their followers (Soleas, 2020). Recognizing and rewarding employees for their innovative contributions, and considering implementing incentive programs, awards, or acknowledgment schemes will motivate employees to actively participate in innovation (Nguyen & Malik, 2020). In the Islamic term, it is known as expressing gratitude for employees' achievements. This discussion will lead to the following hypothesis:

Hypothesis 7: Leaders who express gratitude on employee achievements will increase innovative capability among employees in the public sector.

Leaders should be brave to remove bureaucratic hurdles in order to streamline decision-making processes and reduce bureaucratic red tape to expedite the approval and implementation of innovative ideas (Schwartz, 2020). Leaders should simplify regulations when possible to encourage experimentation. Besides, leaders should advocate for innovation in policy and regulation. They are willing to address legal and regulatory barriers that hinder the adoption of innovative practices (Ullah et al., 2021). These leaders will be perceived as sovereign or having the authority to initiate change. This discussion will lead to the following hypothesis:

Hypothesis 8: Leaders who are perceived as sovereign will increase innovative capability among employees in the public sector.

By embracing these approaches, leadership or Islamic leadership in particular can create a culture that fosters innovation, enhances the public sector's ability to tackle complex challenges, and delivers better services to citizens.

RESEARCH METHODOLOGY

The present study is correlational in design as it is meant to test the hypotheses developed earlier based on the review of the existing relevant literature on Islamic leadership and employee innovative capability. The focus of this study is on employees working in various public organizations in Malaysia. Therefore, four selected public organizations were chosen as representations of the population. From each selected organization, 100 sets of questionnaires were distributed to the employees that accumulated to 400 sets of questionnaires distributed. After the lapse of the allocated time for data collection, 314 sets of the questionnaire were returned, but only 290 sets were usable for analysis.

The respondents were asked to rate their immediate leaders on the items assessing the eight dimensions of Islamic leadership known as consistency (6 items), consultation (syura) (6 items), continuous learning (6 items), express gratitude (5 items), accountability (6 items), eloquence (6 items), sovereignty (5 items), and justice (6 items). Employee innovative capability was measured using 5 items developed for this study. All items measuring the intended factors are highly reliable with the Cronbach's alpha values above 0.9.

Table 1: Respondents' profile

Respondent Profile		Frequency	Percent
Gender	Male	136	46.9
	Female	154	53.1
Race	Malay	228	7836
	Indian	41	14.1
	Chinese	10	3.4
	Others	11	3.8
Age	20 – 30 Years Old	36	12.4
	31 – 40 Years Old	126	43.4
	41 – 50 Years Old	110	37.9
	51 and above	18	6.2

Marital Status	Married	204	70.3
	Single	75	25.9
	Other	11	3.8
Education Background	Bachelor Degree	207	71.4
	Master	81	27.9
	PhD	2	.7
Working Experience	Less than 3 Years	39	13.4
	3 – 10 Years	93	32.1
	10 – 20 Years	117	40.3
	More than 20 Years	41	14.1
Years of Service in Current Office	Less than 1 years	95	32.8
	1 – 5 Years	120	41.4
	4 – 10 Years	53	18.3
	More than 10 Years	22	7.6

Demographic data were gathered from section A and became the first part of the instrument. Only respondents who are civil servants with grades in the range of 41 to 54 categories can answer the questionnaires. In the demographic section, the information such as gender, race, age, marital status, education background, working experience and years of service in the current office. These demographic details are important to distinguish respondents from the rest of civil servants in terms of length of their educational background, working experience and years of service. Descriptive statistics were used to demonstrate the distinctions. The finding of the respondent's background is presented in the form of frequency and percentage as tabulated in the following table.

First, frequency can be interpreted as a set of data organized by summarizing the frequency of specific values of a variable. In other words, frequency refers to the frequency of occurrence of different subcategories of a given phenomenon, from which the percentage of their occurrence can be easily calculated. This analysis was done according to the sections provided in the questionnaire. Each of the questions in the questionnaire is analyzed to show the respondent's views on the topic under the study. All the data will be shown in a frequency table with a simple tabulation that indicates the frequency of respondents' answers and percentages. Following are the analysis and the elaboration on the respondents' demographic information.

Based on the analysis, most of the respondents are female (53.1%) while 46.9% are male. Majority of respondents are Malay with 78.6%, Indian 14.1%, Chinese 3.4% and other races 3.8%. Among these respondents, 12.4% of the respondents aged 20-30 years old, followed by 43.4% who aged between 31- 40 years old, 37.9% of the respondents aged between 41-50 years old and 6.2% aged 51 and above. In terms of marital status, 70.3% of respondents are married, 25.9% are single and 3.8% represent other status. The descriptive analysis also shows that 71.4% of the respondents hold a bachelor degree, followed by those holding a post-graduate master degree (27.9%) and the remaining 7% of the respondents have a PhD.

In terms of working experience, most of the respondents (40.3%) indicated that they have working experience between 10-20 years, followed by 32.1% of those with 3-10 years of experience, 14.4% have more than 20 years of working experience 13.4% represent those with less than 3-year experience. Lastly, most of the respondent (41.4%) indicated that they have years of service in the current office between 1-5 years, followed by those with less than 1 year of experience or 32.8%, 18.3% of respondents have 5-10 years of working experience and the remaining 7.6% respondents have more than 10 years of service in the current office.

The data were then analyzed using correlation analysis to examine the interrelationship of the factors in the study.

Table 2: Results of descriptive statistics, correlation and reliability analyses

No	Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1	Consistency	4.46	.55	(.93)								
2	Syura	4.38	.78	.795**	(.97)							
3	Continuous Learning	4.32	.72	.746**	.716**	(.97)						
4	Express Gratitude	4.42	.74	.640**	.682**	.642**	(.96)					
5	Accountability	4.33	.76	.689**	.733**	.605**	.632**	(.96)				
6	Eloquence	4.51	.64	.679**	.675**	.607**	.586**	.826**	(.96)			
7	Sovereignty	4.38	,77	.649**	.591**	.485**	.543**	.814**	.791**	(.95)		
8	Justice	4.39	.72	.619**	.685**	.648**	.634**	.805**	.827**	.764**	(.96)	
9	Innovation Capability	6.03	1.00	.642**	.686**	.496**	.588**	.567**	.468**	.572**	.506**	(.95)

** Correlation is significant at the 0.01 level (1-tail

For Islamic leadership behavior, the highest mean score (based on 5-point Likert Scale) is Eloquence (M=4.51, SD = .64) and the lowest mean score is continuous learning (M=4.32, SD = .74). The mean score (based on 7-point Likert Scale) of innovation capability (M=6.03, SD=1.00) and employee readiness (M=5.92, SD=.88). It shows that the mean scores for all variables are at the level of satisfactory. It shows high agreement of the respondents on the items used to measure each construct.

As presented in Table 2, the Cronbach's alpha for the independent and dependent variables are in the range of .932 and .969. The figures indicate that the measures of Islamic leadership behavior dimensions have high internal consistency and stability namely, consistency (α = .932), consultation (Syura) (α = .969), continuous learning (α = .969), express gratitude (α = .963), accountability (α = .957), eloquence (α = .956), sovereignty (α = .952) and justice (α = .959). Accordingly, the dependent variable that is innovation capability is also highly reliable (α = .947).

The result of correlation analysis (as shown in Table 2) indicates that all variables are highly correlated with each other. The highly correlated variables indicate correlation coefficients of greater than 0.5 which should be highly considered in explaining the phenomena. All Islamic leadership behaviors (consistency, consultation (syura), continuous learning, express gratitude, accountability, eloquence, sovereignty and justice) are significantly correlated with each other as the lowest correlation is between sovereignty and continuous learning (r = .485, p < .01) and the highest correlation is between justice and eloquence (r = .827, p < .01).

Significant correlation is also found between Islamic leadership behavior and innovation capability. The highest correlation is between syura and innovation capability (r = .686, p < .01) and the lowest correlation is between eloquence and innovation capability (r = .468, p < .01). Meanwhile, consistency is also significantly correlated with innovation capability (r = .642, p < .01), together with other Islamic leadership behaviors comprising continuous learning (r = .496, p < .01), express gratitude (r = .588, p < .01), accountability (r = .567, p < .01), sovereignty (r = .572, p < .01) and justice (r = .506, p < .01).

In general, the results of the correlation analysis suggest that all variables are significantly correlated with each other indicating moderate and strong relationship. Next, the variables are submitted for subsequent analysis in order to see the direct effects and the interaction effects between the independent and moderating variables and their influence on the dependent variable.

Findings from the multiple regression analysis between Islamic leadership behavioral dimensions and innovation capability are tabulated in Table 3. It is found that R^2 is .574, in which all of the independent variables (consistency, consultation (syura), continuous learning, express gratitude, accountability, eloquence, sovereignty and justice) explained 57.4% of the variance (R square) in innovation capability, with sig. F value of <.001. Plus, Durbin Watson value is 2.119, which is good as it is between 1.5 and 2.5, indicating the absence of autocorrelation problems in the regression model. Collinearity statistics indicated that the results meet the requirements for multiple regression with the values of VIF<10 and Tolerance <1.

Table 3: Results of multiple regression analysis

Model Variables	Standardized Coefficient Beta	T	Collinearity Statistics	
			Tolerance	VIF
Consistency	.193*	2.448	.245	4.075
Consultation (Syura)	.475**	6.195	.259	3.867
Continuous Learning	-.079	-1.166	.334	2.993
Express Gratitude	.199**	3.429	.448	2.230
Accountability	-.021	-.242	.197	5.064
Eloquence	-.314**	-3.761	.218	4.578
Sovereignty	.389**	4.972	.248	4.039
Justice	-.035	-.4222	.218	4.584
R Square	.574			
Adjusted R Square	.561			
R Square Change	.574			
F change	47.234			
Sig. F Change	<.001			
Durbin -Watson	2.119			

The analysis revealed that consultation (syura) is the most influential factor of Islamic leadership behavior on innovation capability (β=.475, p<.01). Consecutively, sovereignty is found to be the second variable that has the greatest influence on employee innovation capability with the p-value of lesser than 0.01 and β value of .389. Following this are consistency, express gratitude and eloquence which have the p-values of less than 0.01 and 0.05 (β=.193, β=199, β=-.314, respectively). Continuous learning, accountability and justice are found to have no significant influences toward innovation capability. Therefore, it can be summarized that based on this analysis, it was found that consultation (syura), sovereignty, eloquence, express gratitude and consistency significantly contributed to predicting employee innovation capability.

Therefore, hypotheses 1, 2, 6, 7 and 8 are supported while hypotheses 3, 4 and 5 are not supported.

DISCUSSION

Islamic leaders are expected to practice consultation (syura), consistency, have sovereignty, eloquence, and express gratitude to employee achievements in order to motivate their subordinates to engage in innovative behaviors. The present study has provided the required empirical evidence to support the claims. This is also consistent with the findings from previous studies (Elsetouhi et al., 2021; Iqbal et al., 2020; Nguyen & Malik, 2020; Oshodi et al., 2019; Shields & Hesbol, 2020; Usman, 2020). Leaders who practice syura, consistent in their words and actions, have authority, good in communication, and recognize employee contributions will motivate their subordinates to innovate.

The present study also found non-significant results for continuous learning, accountability and justice. The most plausible reason for this finding is that these three factors do not pose an immediate effect to employees. Continuous learning, for example, takes time to materialize. Similarly, accountability and justice are very intangible in nature and it is based on the perception of people based on the limited knowledge that they have on the person they assess.

IMPLICATIONS OF THE STUDY

Leaders in public organizations should do the following in order to motivate their staff to engage in innovative behaviors:

Practice consultation (syura) in their management so that employees feel ownership of the decisions made and they will ensure that the decisions will be executed as planned.

Leaders must demonstrate that they are willing to go the extra mile to change the existing conditions such as policies, rules and regulations that hinder the implementation of innovative behaviors among the employees.

Leaders must ensure clear communication regarding the expectations and process and procedures, and the benefits that the employees will enjoy when they engage in innovative behavior.

Any achievements by the staff, regardless of their size, must be recognized and rewarded by the leaders. These will further motivate them to produce more innovative ideas in the future.

Leaders must show consistency in their words and actions. They practice what they preach. Employees will perceive these leaders as having high credibility in leading the organization towards excellence.

The present study can be considered as one of the early efforts to promote Islamic leadership. There are a lot to be done before the model can be established. The following are some suggestions for future research:

More similar research should be conducted to confirm the findings of the present study. More studies will lead to establishment of the theory that can be applied in the extended context.

Studies can also be conducted not only among employees in the public sector but also among those working in the private sector so that comparison can be made in terms of similarities and differences of the effect of Islamic leadership.

The direct effect of Islamic leadership on the outcome variable does not always come about. In most situations, the relationship between Islamic leadership and employee innovative behavior is influenced by other factors such as employee expertise and experience. These factors should be considered in studying the influence of islamic leadership and employee innovative behavior.

CONCLUSION

The relationship between Islamic leadership and employee innovative behavior is critical to be explored especially among those working in the public organizations. It is because public organizations are offering various services to citizens including health, educational, transportation services and many more. These services need to be improved from time to time based on the changing public requirements. In this study, it is expected that leaders can influence employee innovative behaviors through their actions. Based on 290 data collected from civil servants, the results of multiple regression analysis reveal that consultation (syura), consistency, sovereignty, eloquence, and express gratitude are the significant factors that lead to employee innovative behavior. Continuous learning, accountability and justice are not the significant predictors of employee innovative behavior. Leaders in public organizations must practice consultation (syura), consistency, sovereignty, eloquence, and expressing gratitude in their daily actions and behaviors in order to motivate their followers to engage in innovative behaviors.

REFERENCES

Ajzenman, N., Cavalcanti, T., & Da Mata, D. (2020). More than words: Leaders' speech and risky behavior during a pandemic. Available at SSRN 3582908.

Bertram Gallant, T., & M. Stephens, J. (2020). Punishment is not enough: The moral imperative of responding to cheating with a developmental approach. Journal of College and Character, 21(2), 57-66.

Bloom, N., Van Reenen, J., & Williams, H. (2019). A toolkit of policies to promote innovation. Journal of Economic Perspectives, 33(3), 163-184.

Carlgren, L., & BenMahmoud-Jouini, S. (2022). When cultures collide: What can we learn from frictions in the implementation of design thinking?. Journal of Product Innovation Management, 39(1), 44-65.

Chen, T., Guo, W., Gao, X., & Liang, Z. (2021). AI-based self-service technology in public service delivery: User experience and influencing factors. Government Information Quarterly, 38(4), 101520.

De Coninck, B., Gascó-Hernández, M., Viaene, S., & Leysen, J. (2023). Determinants of open innovation adoption in public organizations: A systematic review. Public Management Review, 25(5), 990-1014.

de Waal, A., Weaver, M., Day, T., & van der Heijden, B. (2019). Silo-busting: Overcoming the greatest threat to organizational performance. Sustainability, 11(23), 6860.

Elsetouhi, A. M., Mohamed Elbaz, A., & Soliman, M. (2023). Participative leadership and its impact on employee innovative behavior through employee voice in tourism SMEs: The moderating role of job autonomy. Tourism and Hospitality Research, 23(3), 406-419.

Iqbal, Z. A., Abid, G., Contreras, F., Hassan, Q., & Zafar, R. (2020). Ethical leadership and innovative work behavior: The mediating role of individual attributes. Journal of Open Innovation: Technology, Market, and Complexity, 6(3), 68.

Javed, B., Fatima, T., Khan, A. K., & Bashir, S. (2021). Impact of inclusive leadership on innovative work behavior: the role of creative self-efficacy. The Journal of Creative Behavior, 55(3), 769-782.

Komariah, N., & Nihayah, I. (2023). Improving the personality character of students through learning Islamic religious education. At-Tadzkir: Islamic Education Journal, 2(1), 65-77.

Linde, L., Sjödin, D., Parida, V., & Wincent, J. (2021). Dynamic capabilities for ecosystem orchestration A capability-based framework for smart city innovation initiatives. Technological Forecasting and Social Change, 166, 120614.

Mascareño, J., Rietzschel, E., & Wisse, B. (2020). Envisioning innovation: Does visionary leadership engender team innovative performance through goal alignment?. Creativity and Innovation Management, 29(1), 33-48.

Nguyen, T. M., & Malik, A. (2020). Cognitive processes, rewards and online knowledge sharing behavior: the moderating effect of organizational innovation. Journal of Knowledge Management, 24(6), 1241-1261.

Novitasari, D., Siswanto, E., Purwanto, A., & Fahmi, K. (2020). Authentic leadership and innovation: what is the role of psychological capital?. International Journal of Social and Management Studies, 1(1), 1-21.

Oshodi, T. O., Bruneau, B., Crockett, R., Kinchington, F., Nayar, S., & West, E. (2019). Registered nurses' perceptions and experiences of autonomy: a descriptive phenomenological study. BMC Nursing, 18, 1-14.

Roper, L. (2021). Encouraging interdisciplinary collaboration: A study of enablers and inhibitors across silos in higher education. Interdisciplinary Journal of Partnership Studies, 8(1), 1-25.

Schröer, A. (2021, March). Social innovation in education and social service organizations. Challenges, actors, and approaches to foster social innovation. In Frontiers in Education (Vol. 5, p. 555624). Frontiers Media SA.

Schwartz, M. (2020). The delicate art of bureaucracy: Digital transformation with the monkey, the razor, and the sumo wrestler. IT Revolution.

Shields, C. M., & Hesbol, K. A. (2020). Transformative leadership approaches to inclusion, equity, and social justice. Journal of School Leadership, 30(1), 3-22.

Soleas, E. K. (2020). Leader strategies for motivating innovation in individuals: a systematic review. Journal of Innovation and Entrepreneurship, 9, 1-28.

Tian, G., & Zhang, Z. (2020). Linking empowering leadership to employee innovation: The mediating role of work engagement. Social Behavior and Personality: An International Journal, 48(10), 1-8.

Treiblmaier, H., & Sillaber, C. (2020). A case study of blockchain-induced digital transformation in the public sector. Blockchain and Distributed Ledger Technology Use Cases: Applications and Lessons Learned, 227-244.

Ullah, F., Sepasgozar, S. M., Thaheem, M. J., & Al-Turjman, F. (2021). Barriers to the digitalisation and innovation of Australian Smart Real Estate: A managerial perspective on the technology non-adoption. Environmental Technology & Innovation, 22, 101527.

Usman, M. (2020). Transformational leadership and organizational change: In the context of today's leader. International Business Education Journal, 13(1), 95-107.

Valle-Cruz, D. (2019). Public value of e-government services through emerging technologies. International Journal of Public Sector Management, 32(5), 530-545.

Van der Voet, J., & Lems, E. (2022). Decision-Makers' Generation of Policy Solutions amidst Negative Performance: Invention or Rigidity?. Public Administration Review, 82(5), 931-945.