

ENHANCING GREEN PROACTIVE BEHAVIOR: VISIONARY LEADERSHIP A CRUCIAL ROLE IN SHAPING LEARNING BEHAVIOR

Nur Izzaty MOHAMAD

*School of Humanities, Universiti Sains Malaysia, Penang, Malaysia
nurizzatymohamad@gmail.com*

Maryam Jamilah ASHA'ARI

*Graduate School of Business, Universiti Kebangsaan Malaysia, Bangi, Malaysia
maryamjamilah@ukm.edu.my*

Suhaila ABDULLAH

*School of Humanities, Universiti Sains Malaysia, Penang, Malaysia
aila@usm.my*

Nurshahira IBRAHIM

*Academic of Islamic Contemporary, Universiti Teknologi MARA, Pahang Campus, Malaysia
shahiraibrahim@uitm.edu.my*

Haslin HASAN

*Faculty of Business, Information System and Human Sciences
Infrastructure University of Kuala Lumpur, Malaysia
haslin@iukl.edu.my*

Abstract

Recent studies about effective leader behavior reveal that the ability of managers to perform a clear vision in daily work will strongly evoke employee learning behavior and consequently lead to higher green proactive behavior. This study investigate the direct and indirect effects of this visionary leadership towards both employee learning behavior and green proactive behavior. This survey using cross sectional design using data of 226 leaders were gathered from the Policy Makers in Peninsular Malaysia. The Statistical Package for the Social Sciences (SPSS) and SmartPLS are used to analyze the findings. The results show that learning behavior is able to act as an effective mediating variable in the relationship between visionary leadership (effective communication and feedback) with green proactive behavior. In conclusion, this study reports that a leader's ability to demonstrate effective visionary leadership can enhance employees' commitment to mastering new learning diligently. As a result, this learning behavior can also positively enhance green proactive behavior within the studied organization.

Keywords: visionary leadership, green proactive behavior, learning behavior, leaders

1. INTRODUCTION

Coming into the 21st century, with the globalization of the market and the rapid development of science and technology, the competitive environment faced by organisations is becoming more complex and dynamic. In the workplace, decision-making has recently been identified as a critical topic in leadership behavior study (Albejaidi et al., 2020; Hallo et al., 2023). Leaders need to help organisations develop a greater sense of purpose by linking efforts to successful outcomes. Effective leaders typically combine strategy with leadership while making formal and informal decisions (Leino, 2022; Lee & Ip, 2023). In a formal decision-making style, leaders use authority to control employees' career progression, provide management with improvements, and

establish communication that emphasizes directives and hierarchical protocol-driven relationships (Leino, 2022; Wilaphan et al., 2023). In contrast, in an informal decision-making method, leaders use authority to create and strengthen excellent connections with group members by involving them in all of the organisation's specific requests and ad hoc concerns. Both leadership styles are equally vital and complement each other in dealing with uncertain situations by developing and strengthening positive task relationships, increasing personal and professional credibility, adapting to the environment, and satisfying future expectations (Lee & Ip, 2023; Joo et al., 2023).

Recently, the concepts of strategy and leadership have been integrated into a strategic vision in organisational decisions to retain a competitive, adaptive, creative, and innovative edge. Strategic vision decision-making often involves three stages (Selart, 2010; Cai, Fan, & Wang, 2023). First, strategic decisions (which affect the organization's general direction, long-term goals, philosophy, and values) are made at the highest level. Second, tactical decisions are taken at the middle level (for example, to support medium-importance strategic decisions with medium impact). Third, operational decisions (for example, supporting tactical judgments with short-term repercussions) are made at the most basic level. For example, CEOs in the top 500 US firms use extensive decision-making procedures to create and implement human resource development at all levels. To support this decision, managers are invited to attend a series of decision-making workshops led by in-house trainers and professional consultants. This course will help you develop several types of strategies for uncertain scenarios, be creative when making business decisions that line with organizational strategy, and use problem-solving skills to satisfy customer demands and expectations.

In a recent review of leadership behavior literature, visionary leadership has been acknowledged as a strategic imperative for successful organisations. This perspective explains how well organisations have formulated decision-making styles and attend the training, they will not be able to achieve their objectives if leaders do have not a clear vision (Mohamad et al., 2020; Karwan et al., 2021; Mubashar & Fida, 2023). According to Ateş et al. (2018), Taylor et al., (2014), and Klösel (2021), visionary leadership refers to managers who have sufficient capabilities to implement communication and feedback. Undoubtedly, some further studies about effective leader behavior circulated in the 21st century of global transformation reveal that the ability of managers to perform a clear vision in daily work will strongly evoke green learning behavior. Consequently, this behavior may lead to higher green proactive behavior (Isbahi, 2023; Karwan et al., 2021). Although this relationship has extensively been investigated, the effective size and nature of employees' learning behavior as a vital mediating variable are largely ignored in the leadership behavior research literature (Aboramadan et al., 2022; Bernards, 2023; Sahaya, 2012; Udin, 2023).

To address these gaps, most researchers argue that this situation is attributed to several reasons. First, most past studies have used an objectivist thinking approach that emphasizes non-human factors, such as organisational policies, standards, and work procedures. This thinking approach has not sufficiently elaborated the role of leaders in making effective decisions to support their organisations' strategic missions (Mohamad et al., 2020; Crans et al., 2022; Mai et al., 2022; Mubashar & Fida, 2023). Second, the majority of past studies have conceptually discussed the characteristics of learning behavior, such as definitions, dimensions and importance of this construct in private and public organisations (Bernards, 2023; Sahaya, 2012; Udin, 2023). Third, most previous studies have developed hypotheses based on a simple causal relationship, by assessing the association between a) visionary leadership and learning behavior (Cai, Fan, & Wang, 2023), b) visionary leadership and green proactive behavior (Ateş et al., 2018; Miharja & Hayati, 2021; Taylor et al., 2014) and c) learning behavior and green proactive behavior (Ateş et al., 2018; Miharja & Hayati, 2021; Taylor et al., 2014). This relationship has been tested using simple behavior statistical tools (e.g., descriptive statistics and bivariate analysis) and the results of this statistical analysis have only explained the degree of strength and nature of the association between the variables. Conversely, the mediating role of employees' learning behavior is ignored in the model testing (Anshar, 2017; Bernards, 2023; Klösel, 2021; Mubashar & Fida, 2023). As a result, the study approach yields general findings and may not offer sufficient recommendations to be used by practitioners to understand diverse perspectives of learning behavior construct and plan high-quality of the relationship between leaders and members to maintain and enhance their organisations' strategies and objectives.

This study provides four significant contributions. First, it underscores the importance of examining the literature on visionary leadership dimensions, namely effective communication and feedback as a crucial predictor of employees' learning behavior and green proactive behavior. Second, the study expands the literature on employee attitudes and behavior by identifying visionary leadership and employee's learning behavior as important determinants of green proactive behavior. Third, this study attempts to demonstrate that learning behavior can play a crucial mediating role in the relationship between visionary leadership and green proactive behavior.

Finally, this study has specifically applied the principal meaning of Bandura's Social Cognitive Theory (Bandura & National Inst of Mental Health, 1986) in the public sector, in which it predicts that effect of visionary leadership on green proactive behavior is mediated by employees' learning behavior. This prediction can be proven by testing the causal relationship in the study model. Therefore, the insufficiency of existing empirical studies inspires the researchers to explore this study by simultaneously testing the inclusion and exclusion of employees' learning behavior as a mediating variable in the relationship between visionary leadership and green proactive behavior.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Visionary Leadership

According to various definitions, visionary leadership is characterised by inspiring followers through the expression of a clear vision, impacting leadership assessments (Awamleh & Gardner, 1999, Kirkpatrick & Locke, 1996) as well as employee attitudes, behavior and performance. It also involves providing significance and direction to the tasks performed within the organisation (Nanus, 1992; Sashkin, 1992; Bligh & Kohles, 2013; Ate et al., 2018). It develops strategic plans and equips team, organisational, and individual personnel to carry them out (Busch, Kearney, Noureen, & Gandhi, 2023; Saher & Ayub, 2020). This type of leadership frequently incorporates responsiveness, external variables, sound organisational practices and has the power to improve an organisation's capacity to meet customer needs. This accomplishment relates to the organisational management of visionary leadership (Cai, Fan & Wang, 2023).

Visionary leadership in successful businesses is largely dependent on effective communication and feedback in the workplace (Aboramadan et al., 2022; Bernards, 2023; Sahaya, 2012; Udin, 2023; Westley & Mintzberg, 1989. According to Ayub et al. (2014) and Bernards (2023), effective leadership communication involves getting employees to share task-related information, making sure everyone understands, clearing up confusion, and dealing with uncertainties and misunderstandings to motivate, meet needs, and achieve organisational goals. Meanwhile, feedback is an official approach to evaluating an employee's performance. Effective leaders generally come up with ways to evaluate performance, issue basic awards, and choose promotion candidates. Thus, modern visionary leadership research emphasizes that strong communication and feedback are essential and help each other succeed, especially when employees take initiative (Bernards, 2023; Rizvi & Popli, 2021).

2.2. Green Proactive Behavior

In the workplace, a green proactive behavior is a positive behavior that originates within an individual who is optimistic, change-focused, and future-oriented in all environmentally sustainable behaviors implemented by employees in the workplace (Chang et al., 2022; Segarra-Ciprés, 2019). Previous studies show that green proactive behavior is a kind of prosocial behavior that can improve organisational performance and promote organisational change (Chang et al., 2022; Nguyen et al., 2020). This ensures that personnel managing and executing tasks inside and outside the organisation can adapt to difficult tasks, comprehend task objectives, and generate new ideas (Chang et al., 2022; Nguyen et al., 2020). This behavior is essential for improving employees' skills, knowledge, and positive attitudes in their fields of work, providing meaningful experiences, increasing employees' awareness and motivation, and promoting effective behavior to achieve organisational goals (Chang et al., 2022; Nguyen et al., 2020). Moreover, recent research shows that green proactive behavior is key to developing a positive leadership style.

2.3. Learning Behavior

Learning behavior is frequently linked to an individual's self-efficacy and strong drive to acquire new skills and knowledge in order to accomplish their objectives. People who are highly motivated to learn at work typically have a strong desire to organise and carry out tasks efficiently (Crans et al., 2022; Mai et al., 2022). Conversely, those who lack workplace learning motivation frequently show poor motivation when it comes to leading and carrying out organisational tasks. It's a reaction to their behavior as a whole or as a function of their performance (Bandura & National Inst of Mental Health, 1986; Gist & Mitchell, 1992). On the other hand, individuals with strong learning motivation are more likely to act wisely and effectively, which improves worker performance in all tasks (Crans et al., 2022; Mai et al., 2022).

2.4. Direct Effect Relationship: Visionary Leadership and Green Proactive Behavior

The relationship between visionary leadership and green proactive behavior in line with Leithwood's leadership model (1994). This model explains the components of leadership through six (6) main dimensions which are building organisational vision and goals, providing intellectual stimulation, offering individual support, being an example of important organisational values, showing high work performance, building a creative organisational culture and develop structure and encourage involvement in the decision-making process. All dimensions of Leithwood's leadership lead to organisational change and provide a wide space for communication between leaders and followers as individuals. The application of this theory in leadership shows that the concept in leadership model is often associated with visionary leadership. This theory receives support from a literature review related to leadership.

Empirical studies show that there is a positive correlation between visionary leadership and green proactive behavior. For example, the study of the perception of 136 managers involving two organisations (Ateş et al., 2018), 300 samples of employees at a regional bank in Indonesia (Miharja & Hayati, 2021), 135 executive organisational leaders, 221 samples of subordinates were collected from 52 diverse nonprofit organisations across the United States (Taylor et al., 2014), 399 samples in 11 small and medium-sized companies across Europe and across different industries (e.g; industries represented include insurance, retail, energy, manufacturing, engineering, chemicals, and a variety of other services) and 272 employees and 75 corresponding supervisors from eleven companies operating in different industries in China (Cai, Fan & Wang, 2023).

The findings of these empirical studies suggest that the ability of leaders who practice effective communication (such as conveying accurate and honest information through technological media, face-to-face interaction, and giving effective instructions, showing high concern and clear awareness) and giving feedback (such as reporting performance fairly, evaluating performance based on competence, giving positive evaluations and reporting performance according to the set time) has increased green proactive behavior. Thus, the following hypotheses are proposed in this study:

H1 *Effective communication is positively associated with green proactive behavior.*

H2 *Feedback communication is positively associated with green proactive behavior.*

2.5. Direct Effect Relationship: Visionary Leadership and Learning Behavior

The relationship between visionary leadership and learning behavior is in line with the charismatic theory by House (1977). He was the first to present an integrated theoretical framework and propositions that explain charismatic leader behavior (the emotional interaction that occurs between followers and their leader). This theory focuses on the psychological effect of charismatic leaders on followers through the achievement of the leader's goals and values based on the vision of the task. The ability of charismatic leaders to adopt behavior (such as emotional interaction, motivation, inspiration, and persuasion skills) can influence their followers. House agreed that this type of leader is an effective role model for bringing about social change in organisations. These leadership characteristics are seen when a leader is smart in conveying a vision clearly, focusing on carrying out responsibilities and understanding the strengths of each member of the organisation so that the organisation's goals can be developed. The application of this theory in leadership shows that the

charismatic concept is often associated with visionary leadership. This theory is supported by a literature review related to leadership.

Empirical studies show that there is a positive correlation between visionary leadership and learning behavior. Many previous studies have used different sample sizes to evaluate the effects of this relationship such as the perception of a two-wave longitudinal field study of 114 Hong Kong employees (Law & Choi-Ping Lau, 2020), 584 paper questionnaires were distributed to nearly 50 companies in Chengdu, China (Wang et al., 2022) and 242 fully completed and matched responses (60 managers and 182 team members) (Nyfoudi, Shipton, Theodorakopoulos & Budhwar, 2023). According to these studies, visionary leadership practiced in an organisation (e.g., effective communication and feedback) is one of the most important factors in enhancing learning behavior. Thus, the following hypotheses are proposed in this study:

H3 *Effective communication is positively associated with learning behavior.*

H4 *Feedback is positively associated with learning behavior.*

2.6. Indirect Effect Relationship: Visionary Leadership, Learning Behavior and Green Proactive Behavior

The impact of learning behavior mediation in the relationship between visionary leadership and green proactive behavior is consistent with the essence of Bandura's Social Cognitive Theory (Bandura & National Inst of Mental Health, 1986). It states that learning behavior refers to most human behavior is learned observationally through modeling. Social learning theory explains human behavior in terms of continuous reciprocal interaction between cognitive, behavioral, and environmental influences (Bandura, 1997). When individuals have confidence in their abilities, it regulates their efforts, resilience, and perseverance in carrying out daily tasks. The main idea of this theory discusses how individuals' positive behavior are influenced by learning that occurs through observing others who are considered role models. This observation involves social learning influenced by three elements: the environment (closest leaders, other individuals, and peers), cognitive factors (language, imagination, and logic), and behavior (cheerfulness, anger, compassion, assertiveness, patience, and other positive behavior). Furthermore, this process involves four main aspects. First, observe specific behavior or actions that are to be emulated. Second, is retention, which involves remembering the observed behavior and storing the observation in memory. Third, reproduction, which is replicating the observed behavior based on what was seen before. This behavior can also be used as practices and implementations in the future. Fourth, reinforcement and motivation, refer to the rewards obtained to strengthen newly adopted behaviors (Bandura & National Inst of Mental Health, 1986).

Past studies on leadership have shown that employees with good workplace motivation tend to have clear goals, allocate greater effort, work diligently, persevere in the face of task challenges, strive to complete difficult tasks, seek new competencies, and consistently aim to achieve shared goals. They are willing to shoulder significant responsibilities within the organisation (Crans et al., 2022; Mai et al., 2022). Conversely, employees with low learning motivation lack clear goals and are less inclined to take proactive actions to become successful workers (Herzberg et al., 1959). Furthermore, there are recent studies on leadership that emphasize that learning behavior is an essential outcome inherent in the nature and relationship between visionary leadership and green proactive behavior. It can act as an effective mediating variable in that relationship.

Several further studies have utilized an indirect effects model to assess the influence of learning behavior on the relationship between visionary leadership and green proactive behavior using different sample sizes. These include studies based on the perceptions of 914 professionals in 101 Dutch public-sector teams (Bernards, 2023), 400 respondents from 100 firms in the Stock Exchange of Thailand (Sahaya, 2012), and 64 samples involving all permanent employees who work in the community health centre sector on the island of Riau, Indonesia and 227 academic staff working in the Palestinian higher education institutions (Aboramadan et al., 2022). These surveys discovered that the ability of leaders to implement visionary leadership practised in an organisation (e.g., effective communication and feedback) which strongly stimulates learning behavior. Consequently, this sense of empowerment was found to lead to green proactive behavior. Thus, the following hypotheses are proposed in this study:

H5 Learning behavior acts as a mediating variable between effective communication and green proactive behavior.

H6 Learning behavior acts as a mediating variable between feedback and green proactive behavior.

The theoretical and empirical evidence had been used as a foundation to formulate the study model, as exhibited in Figure 1.

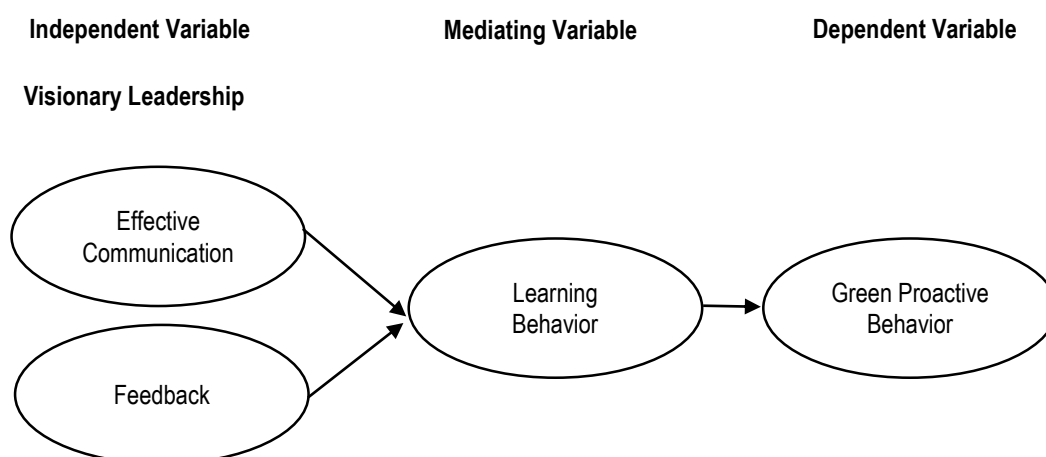


FIGURE 1 - RESEARCH FRAMEWORK

3. RESEARCH METHODOLOGY

3.1. Research Design

A cross-sectional technique has been used in this study. This strategy was chosen because it helps researcher incorporate important data from surveys, pilot studies, and organisational leadership literature. By using this approach, researchers can improve the of data, decrease biases, and collect data with greater accuracy (Cresswell, 2012; Sekaran & Bougie, 2010).

3.2. Participants

The initial sample consisted of 345 employees from various service and professional groups within different units/sections/divisions of the organisation in the Policy Makers in Peninsular Malaysia which were recruited using a purposive sampling technique. Specifically, this sampling technique was chosen because the organisational management could not provide a complete list of employees due to confidentiality reasons and the desire to protect corporate reputation and image.

Therefore, this situation did not allow the researcher to use a random method for selecting study respondents. Out of the total number of distributed questionnaires, only 226 (77.10%) fully completed questionnaires were returned to the researcher. All these respondents voluntarily and without any coercion answered the questionnaire. The majority of respondents aged 34 to 39 years old (36.8%), Malay (89.8%), female (63.9%), married (71.8%), bachelor's degree education (56.4.%), grade 41 to 44 (49.6.%), permanent position (87.6%), and length of services 6 to 10 years (30.8%).

3.3. Instruments

The questionnaire in this study consists of three main sections: Firstly, visionary leadership is assessed based on 16 items adapted from leadership-related literature (Antonakis & House, 2014; Carless, 2000; Madanchian et al., 2017). Visionary leadership is measured using two dimensions: effective communication (8 items) and feedback (8 items). Secondly, learning behavior is assessed based on 5 items adapted from organisational learning literature (Guterresaa et al., 2020).

Thirdly, green proactive behavior is assessed based on 6 items adapted from performance-related studies (Creon & Schermuly, 2022). All items were rated on a 7-point response scale, ranging from "strongly

disagree/very dissatisfied” (1) to “strongly agree/very satisfied” (7). Specifically, this measurement scale was chosen in this study as it is capable of maximizing optimal reliability in assessing respondent reactions (Lewis & Smith, 1993), yielding more neutral and improved responses (Cox, 1980). Respondent demographic characteristics in this study are utilized as control variables, as the study exclusively focuses on employees’ attitudes.

3.4. Procedure

At the first stage, the research data were analyzed using the Statistical Package for the Social Sciences (SPSS) software, aiming to assess the data quality. At the second stage, the study was analyzed using the SmartPLS software package, which aimed to assess the structural model and test the research hypotheses (Hair et al., 2017).

4. RESEARCH RESULTS AND DISCUSSIONS

4.1. Assessment for Measurement Model

Table 1 reports that the constructs used in this study have an outer loadings value that exceeds 0.708 (Henseler et al., 2009) and recorded an AVE value higher than 0.5 (Hair et al., 2017), indicating that the constructs of this study have met the proposed convergent validity criteria. Furthermore, all study constructs have composite reliability values greater than 0.8 (Hair et al., 2017), indicating a high level of internal consistency.

TABLE 1 - CONVERGENT VALIDITY ANALYSIS

Constructs	Outer Loading	Composite Reliability	Average Variance Extracted (AVE)	Cronbach Alpha
Visionary Leadership				
Effective Communication		0.968	0.789	0.962
A1	0.858			
A2	0.899			
A3	0.895			
A4	0.903			
A5	0.895			
A6	0.910			
A7	0.901			
A8	0.843			
Feedback		0.970	0.800	0.964
B1	0.882			
B2	0.900			
B3	0.894			
B4	0.893			
B5	0.909			
B6	0.891			
B7	0.898			
B8	0.887			
Learning Behavior		0.928	0.720	0.903
C1	0.839			
C2	0.877			
C3	0.856			
C4	0.863			
C5	0.806			
Green Proactive Behavior		0.942	0.732	0.927
D1	0.862			
D2	0.807			
D3	0.867			
D4	0.875			
D5	0.849			
D6	0.872			

Table 2 reports the value of the Heterotrait-Monotrait Correlation Ratio (HTMT) used to evaluate all study constructs. This analysis confirmed that all study constructs have values less than 0.85 (Hair et al., 2017), indicating that they have met the criteria for discriminant validity.

TABLE 2 - HTMT ANALYSIS

Constructs	Effective Communication	Feedback	Learning Behavior
Effective Communication			
Feedback	0.880		
Learning Behavior	0.559	0.572	
Green Proactive Behavior	0.568	0.616	0.751

Table 3 shows cross-loading analysis results. According to the report, all indicator values for each construct are higher than indicator values for other constructs. This indicates that the study's items met the required level of discriminant validity (Hair et al., 2017).

TABLE 3 - CROSS LOADING

Effective Communication	Feedback	Learning Behavior	Green Proactive Behavior
0.858	0.717	0.476	0.492
0.899	0.713	0.434	0.468
0.895	0.745	0.446	0.482
0.903	0.754	0.468	0.475
0.895	0.749	0.450	0.443
0.910	0.798	0.474	0.503
0.901	0.803	0.480	0.498
0.843	0.742	0.491	0.454
0.755	0.882	0.472	0.529
0.789	0.900	0.503	0.526
0.778	0.894	0.485	0.523
0.773	0.893	0.434	0.498
0.780	0.909	0.415	0.511
0.714	0.891	0.482	0.514
0.741	0.898	0.504	0.551
0.743	0.887	0.549	0.521
0.438	0.439	0.839	0.498
0.409	0.413	0.877	0.547
0.442	0.452	0.856	0.583
0.457	0.452	0.863	0.634
0.469	0.516	0.806	0.658
0.457	0.490	0.589	0.862
0.472	0.513	0.571	0.807
0.465	0.563	0.599	0.867
0.490	0.506	0.622	0.875
0.418	0.443	0.547	0.849
0.453	0.475	0.633	0.872

Table 4 presents the means for the study constructs, ranging from 0.593 to 0.782. These values suggest that participants' perceptions of effective communication, feedback, learning behavior, green proactive behavior range from a high level (4) to the highest level (7). Furthermore, the variance inflation factor values for the

associations between the study constructs are all below 5.0. This indicates that the data is not significantly influenced by collinearity issues (Hair et al., 2017).

TABLE 4 - VIF AND DESCRIPTIVE CONSTRUCTS ANALYSIS

Constructs	VIF Values		SD*	Mean
	Learning Behavior	Green Proactive Behavior		
Effective Communication	3.570		5.784	0.758
Feedback	3.570	1.410	5.795	0.782
Learning Behavior		1.410	6.090	0.593
Green Proactive Behavior			5.998	0.624

*SD= standard deviation; VIF= variance inflation factor

4.2. Structural Model

The structural model is evaluated based on testing the cause and effect relationship between the constructs. This measurement is assessed using several important criteria such as the path coefficient, determination coefficient (R^2), effect size (f^2), and blindfolding (Q^2) (Chin, 1998; Hair et al., 2017). According to Cohen (1988), R^2 values of 0.26, 0.13, and 0.02 are considered large, moderate, and small, respectively. The R^2 assessment refers to the overall prediction accuracy of the model (Hair et al., 2017). On the other hand, the effect size (f^2) calculates the change in R^2 when an exogenous construct is removed from the model, indicating whether the omitted construct has a significant impact on the endogenous variable (Hair et al., 2017). Following Cohen (1988), f^2 values of 0.02, 0.15, and 0.35 represent small, moderate, and large effects, respectively.

Blindfolding was conducted to generate Q^2 values. Blindfolding is a sample reuse technique that involves omitting every data point in the indicators of the endogenous constructs (Hair et al., 2017). The measurement of Q^2 is performed based on a criterion greater than zero, meaning that the construct has reached the specified level of prediction accuracy (Hair et al., 2017).

Table 5 reports the results of the structural model. The R^2 value recorded a value of 0.541 for green proactive behavior followed by learning behavior which is a value of 0.302. These values are greater than 0.26 meaning that the study model has a large effect. Next, f^2 analysis shows that learning behavior has a value of 0.023 and green proactive behavior 0.046. These values are smaller than 0.15 meaning that the construct model of this study has a small effect. While the Q^2 value for learning behavior is 0.214 and green proactive behavior is 0.390. These values are greater than zero, meaning that the construct has reached the specified level of prediction relevance (Hair et al., 2017).

TABLE 5 - R^2 AND Q^2 OF ENDOGENOUS CONSTRUCTS

Constructs	R^2	Predictive Accuracy	f^2	Q^2
Learning Behavior	0.302	Large	0.023	0.214
Green Proactive Behavior	0.541	Large	0.046	0.390

The bootstrapping technique (5,000 subsamples, one-tailed significance) was employed to estimate the statistical significance of the parameter. Table 6 presents the findings of direct effect hypothesis. The results of the analysis revealed four important findings. First, effective communication is positive and significant with green proactive behavior (H1, $\beta = 0.239$; $t = 2.238$; $p = 0.000$). Second, feedback is positive and significant with green proactive behavior (H2, $\beta = 0.336$; $t = 3.114$; $p = 0.000$). Third, effective communication is positive and significantly with learning behavior (H3, $\beta = 0.295$; $t = 5.084$; $p = 0.000$). Fourth, feedback is positive and significantly with learning behavior (H4, $\beta = 0.536$; $t = 10.106$; $p = 0.000$). Therefore, H1, H2, H3, and H4 were supported.

TABLE 6 - THE RESULTS OF THE DIRECT HYPOTHESIS TESTING OF THE RESEARCH MODEL

Relationship	Original Sample (O)	T Statistics (O/STDEV)	Decision
H1: Effective Communication → Green Proactive Behavior	0.239	2.238	Supported
H2: Feedback → Green Proactive Behavior	0.336	3.114	Supported
H3: Effective Communication → Learning Behavior	0.295	5.084	Supported
H4: Feedback → Learning Behavior	0.536	10.106	Supported

Table 7 presents the findings of the indirect effect hypothesis. The results of the analysis revealed two important findings. First, effective communication and learning behavior are positive and significant with green proactive behavior (H5, $\beta = 0.128$; $t = 2.179$; $p = 0.000$). Second, feedback and learning behavior are positive and significant with green proactive behavior (H6, $\beta = 0.180$; $t = 2.850$; $p = 0.000$). Therefore, H5 and H6 were supported. These results show that learning behavior can act as a partial mediating variable in this relationship.

TABLE 7 - THE RESULTS OF THE INDIRECT HYPOTHESIS TESTING OF THE RESEARCH MODEL

Relationship	Original Sample (O)	T Statistics (O/STDEV)	Decision
H5: Effective Communication → Learning Behavior → Green Proactive Behavior	0.128	2.179	Supported
H6: Feedback → Learning Behavior → Green Proactive Behavior	0.180	2.850	Supported

This study confirms that learning behavior can function as a significant mediating variable in the relationship between visionary leadership (effective communication and feedback) and green proactive behavior. In the context of the study, the majority of respondents felt that the level of visionary leadership and green proactive behavior was very high. This situation shows that the leader's ability to be actively involved in effective communication (such as guidance in tasks, suggesting the latest skills, providing advisory services, expressing ideas, having positive discussions and showing high feedback and communication skills) and providing feedback (such as reporting the latest performance of employees, giving positive views, evaluating performance based on the latest training competencies and making evaluations fairly) can able to improve learning behavior (such as being highly motivated, learning new knowledge, committing to tasks and deepening the latest skills). Next, this positive situation can increase green' proactive behavior (such as respecting each other, giving ideas to complete tasks, expressing opinions, adapting to task challenges and being able to make good decisions). This study has been supported by previous studies based on leadership in organisations such as Aboramadan et al. (2022), Bernards (2023), and Sahaya (2012). This study confirms that learning behavior can function as a significant mediating variable in the relationship between visionary leadership (effective communication and feedback) and green proactive behavior.

Hence, this study presents several suggestions for forthcoming studies. For example, some participants' features, especially age, types of services, education and length of services should be included in future studies because it may highlight differences and similarities in their attitudes toward the study issues. Secondly, a longitudinal method may be considered in future studies if we plan to compare subsamples in different timeframes. Thirdly, three specific features of visionary leadership such as goal setting, action planning, building self-awareness, emotional intelligence, providing feedback and accountability can be examined further due to their important determinants of employee outcomes. Fourthly, elements of green proactive behavior such as innovative behavior, engagement and job satisfaction should be evaluated in future studies as they are emphasized in diverse organisational contexts. Finally, three essential dimensions of learning behavior such as extrinsic factors, intrinsic factors, psychological empowerment, constructive voice behavior and communication (formal and informal). The above suggestions should be appropriately considered to strengthen future studies.

In terms of theoretical implications, this study acknowledges three significant findings: First, visionary leadership (e.g; effective communication and feedback) has been an essential antecedent of green proactive behavior. Second, visionary leadership (e.g; effective communication and feedback) has been an essential antecedent of learning behavior. Third, learning behavior has mediated the relationship between visionary leadership (e.g; effective communication and feedback) and green proactive behavior. This finding is in line with the notion of Bandura's Social Cognitive Theory (Bandura & National Inst of Mental Health, 1986) which learning occurs through observation, imitation, and modeling and is influenced by factors such as attention, motivation, attitudes, and emotions (Bandura, 1997). The main idea of this theory states that human function emphasizes the critical role in self-confidence that gives priority to self-systems that allow individuals to use a measure of control over their thoughts, feelings, and actions (such as social norms, access to community and ability to change the environment). This finding is consistent with visionary leadership research articles, which previously revealed that the effects of visionary leadership were mediated by learning behavior (Sahaya, 2012; Aboramadan et al., 2022; Bernards, 2023). Regarding the robustness of the research methodology, the collected survey questionnaire data have met the standards of validity and reliability analyses. This condition may drive the production of accurate and reliable study results.

5. CONCLUSIONS

This study's findings have ramifications for Asia's public sector and growth in sustainable development. In terms of practice, this study contributes to the Policy Makers in Peninsular Malaysia such as leaders and employees should practice effective communication in managing and carrying out tasks. This situation can help create good support and create positive emotions between both parties. Second, leaders should provide constructive performance feedback to employees. Employee evaluation is not just a measure to determine incentives, but it should focus on how they can contribute more results in their tasks and performance. Third, training programs based on communication skills should be refined to improve the leadership skills of leaders to achieve employee motivation and organisational goals. Fourth, leaders with high coaching skills should engage in collaborative efforts with employees to foster the development of ideas and implement joint plans. This process is important for fostering the active involvement of leaders and employees, the setting of common goals, the setting of organisational strategies and the effective implementation of commitments. Therefore, various techniques (such as observational and experiential learning, blended learning, and active learning through both face-to-face and online modes) should be used to effectively inspire, facilitate, guide and exemplify the concept of interaction.

This study examines the developed conceptual framework based on the literature review of organisational leadership. The results of factor validation analysis indicate that the measurement scale used in this study meets high standards of validity and reliability. Hypothesis testing results using SmartPLS confirm that learning behavior can act as an effective mediating variable in the relationship between visionary leadership and green proactive behavior. These findings are also consistently supported by several articles grounded in organisational leadership, aimed at helping disseminate leadership-based studies, most of which have been examined in Western and Asian countries. In conclusion, this study reports that a leader's ability to demonstrate effective visionary leadership can enhance employees' commitment to mastering new learning diligently (such as being highly motivated, acquiring new knowledge, committing to tasks, and deepening the latest skills). As a result, this learning behavior can also positively enhance green proactive behavior (such as mutual respect, contributing ideas to complete tasks, expressing opinions, adapting to task challenges, and making sound decisions) within the studied organisation.

ACKNOWLEDGMENT

The authors would like to would like to express our deepest gratitude to the Universiti Sains Malaysia, Penang, Malaysia, Universiti Kebangsaan Malaysia, Bangi, Malaysia, Universiti Teknologi MARA, Pahang Campus, Malaysia and Infrastructure University of Kuala Lumpur, Malaysia to supporting this research.

REFERENCES

- Aboramadan, M., Dahleez, K. A., & Farao, C. (2022). Inclusive leadership and extra-role behaviors in higher education: Does organizational learning mediate the relationship?. *International Journal of Educational Management*, 36(4), 397–418. <https://doi.org/10.1108/IJEM-06-2020-0290>
- Albejaidi, F., Kundi, G. M., & Mughal, Y. H. (2020). Decision making, leadership styles and leadership effectiveness: An AMOS-SEM approach. *African Journal of Hospitality, Tourism and Leisure*, 9(1), 1-15.
- Anshar, M. (2017). The impact of visionary leadership, learning organization and innovative behavior to performance of customs and excise functional. *International Journal of Human Capital Management (IJHCM)*, 1(02), 52-60. <https://doi.org/10.21009/IJHCM.01.02.07>
- Antonakis, J., & House, R. J. (2014). Instrumental leadership: Measurement and extension of transformational–transactional leadership theory. *The Leadership Quarterly*, 25(4), 746–771. <https://doi.org/https://doi.org/10.1016/j.leaqua.2014.04.005>
- Ateş, N. Y., Tarakci, M., Porck, J. P., & F. Groenen, P. J. (2018). The dark side of visionary leadership in strategy implementation: Strategic alignment, strategic consensus, and commitment. *Journal of Management*, 46(5), 637-665. <https://doi.org/10.1177/0149206318811567>
- Awamleh, R., & Gardner, W. L. (1999). Perceptions of Leader Charisma and Effectiveness: The Effects of Vision Content, Delivery, and Organizational Performance. *The Leadership Quarterly*, 10(3), 345–373. [https://doi.org/10.1016/S1048-9843\(99\)00022-3](https://doi.org/10.1016/S1048-9843(99)00022-3)
- Ayub, S. H., Manaf, N. A., & Hamzah, M. R. (2014). Leadership: Communicating strategically in the 21st Century. *Procedia - Social and Behavioral Sciences*, 155, 502–506. <https://doi.org/https://doi.org/10.1016/j.sbspro.2014.10.330>
- Bandura, A., (1997). *Self-efficacy: The exercise of control*. W H Freeman/Times Books/ Henry Holt & Co.
- Bandura, A., & National Inst of Mental Health. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.
- Bernards, B. (2023). “Do visionary and servant leaders reduce cognitive uncertainty of professionals? A study of team-based settings in public organizations”, *Public Management Review*, vol. 25, No. 6, pp. 1059–1081. <https://doi.org/10.1080/14719037.2021.2005326>
- Bligh, M. C., & Kohles, J. C. (2013). *Do I trust you to lead the way? Exploring trust and mistrust in leader-follower relations*. In H. S. Leonard, R. Lewis, A. M. Freedman, & J. Passmore (Eds.), *The Wiley-Blackwell handbook of the psychology of leadership, change, and organizational development*. Wiley Blackwell. <https://doi.org/10.1002/9781118326404.ch5>
- Buss, M., Kearney, E., Noureen, R., & Gandhi, N. (2023). Antecedents and effects of visionary leadership: When and how leader work centrality is linked to visionary leadership and follower turnover intentions. *Journal of Leadership & Organizational Studies*, 30(4), 413-427. <https://doi.org/10.1177/15480518231203637>
- Cai, W., Fan, X., & Wang, Q. (2023). Linking visionary leadership to creativity at multiple levels: The role of goal-related processes. *Journal of Business Research*, 167, 1-14. <https://doi.org/10.1016/j.jbusres.2023.114182>
- Cannella, A., & Monroe, M. (1997). Contrasting Perspectives on Strategic Leaders: Towards a More Realistic View of Top Managers. *Journal of Management*, 23, 213-237. <http://dx.doi.org/10.1177/014920639702300302>
- Carless, S. A., Wearing, A. J., & Mann, L. (2000). A short measure of transformational leadership. *Journal of Business and Psychology*, 14(3), 389–405. <https://doi.org/10.1023/A:1022991115523>

- Chang, C., Ma, G., & Lin, Y. (2022). Inclusive leadership and employee proactive behavior: A cross-level moderated mediation model. *Psychology Research and Behavior Management*, 15, 1797-1808. <https://doi.org/10.2147/PRBM.S363434>
- Chin, W. W. (1998). The partial least squares approach for structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research*. (pp. 295-336). Lawrence Erlbaum Associates Publishers.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Routledge. <https://doi.org/10.4324/9780203771587>
- Cox, E. P. (1980). The optimal number of response alternatives for a scale: A review. *Journal of Marketing Research*, 17(4), 407-422. <https://doi.org/10.2307/3150495>
- Crans, S., Aksentieva, P., Beusaert, S., & Segers, M. (2022) Learning leadership and feedback seeking behavior: Leadership that spurs feedback seeking. *Frontiers in Psychology*, 13, 890-861. <https://doi.org/10.3389/fpsyg.2022.890861>
- Creon, L. E., & Schermuly, C. C. (2022). A new path to training transfer: Transformational trainers and psychologically empowered training participants. *International Journal of Training and Development*, 26(2), 228-244. <https://doi.org/https://doi.org/10.1111/ijtd.12256>
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.
- Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *The Academy of Management Review*, 17(2), 183-211. <https://doi.org/10.2307/258770>
- Guterres, L. F. D. C., Armanu, A., & Rofiaty, R. (2020). The role of work motivation as a mediator on the influence of education-training and leadership style on employee performance. *Management Science Letters*, 10, 1497-1504. <https://doi.org/10.5267/lj.msl.2019.12.017>
- Hair, J., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). SAGE Publications Inc.
- Hallo, L., Nguyen, T., Gorod, A., & Tran, P. (2020). Effectiveness of leadership decision-making in complex systems. *Systems*, 8(5), 1-21. <https://doi.org/10.3390/systems8010005>
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In R. R. Sinkovics & P. N. Ghauri (Eds.), *New Challenges to International Marketing*, 20, 277-319. [https://doi.org/10.1108/S1474-7979\(2009\)0000020014](https://doi.org/10.1108/S1474-7979(2009)0000020014)
- Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The motivation to work*. John Wiley and Sons.
- House, R. J. (1977). *A 1976 Theory of Charismatic Leadership*. Faculty of Management Studies, University of Toronto.
- Isbahi, M. B. (2023). Optimizing Educational Leadership: Building Sustainable Education in the 5.0 Era. *Anjasmoro: Islamic Interdisciplinary Journal*, 1(1), 43-66.
- Joo, M. K., & Cruz, K. S. (2023). Formal Mentoring and Protégés' Leadership Development: The Roles of Protégés' Informal Mentoring Networks, Political Skill, and Gender. *Group & Organization Management*, 0(0), 1-45. <https://doi.org/10.1177/10596011221150869>
- Karwan, D. H., Hariri, H., & Ridwan, R. (2021). Visionary leadership: What, why, and how. *European Union Digital Library*. 1-22 <https://doi: 10.4108/eai.16-10-2020.2305217>.
- Kirkpatrick, S. A., & Locke, E. A. (1996). Direct and Indirect Effects of Three Core Charismatic Leadership Components on Performance and Attitudes. *Journal of Applied Psychology*, 81(1), 36-51. <https://doi.org/10.1037/0021-9010.81.1.36>
- Klösel, K. (2021). Visionary and empowering leadership in SMEs. *Journal of the International Council for Small Business*, 2(4), 340-346. <https://doi.org/10.1080/26437015.2021.1938750>

- Law, K. K., & Choi-Ping Lau, S. (2020). Online or offline? Coaching media as mediator of the relationship between coaching style and employee work-related outcomes. *Australian Journal of Management*, 46(2), 326-345. <https://doi.org/10.1177/0312896220914383>
- Lee, D. H. L., & Ip, N. K. K. (2023). The influence of professional learning communities on informal teacher leadership in a Chinese hierarchical school context. *Educational Management Administration & Leadership*, 51(2), 324-344.
- Leino, T. (2022). Informal leadership: An integrative view and future research. In H. Katajamäki, M. Enell-Nilsson, H. Kauppinen-Räsänen, H. and Limatius (Eds.), *Responsible Communication*, VAKKI Publications, 14, 118-136. <https://vakki.net/index.php/2022/12/15/responsible-communication/.ISBN978-952-69732-1-0>.
- Leithwood, K. (1994). Leadership for School Restructuring. *Educational Administration Quarterly*, 30(4), 498-518. <https://doi.org/10.1177/0013161X94030004006>
- Lewis, A., & Smith, D. (1993). Defining higher order thinking. *Theory Into Practice*, 32(3), 131-137. <https://doi.org/10.1080/00405849309543588>
- Madanchian, M., Hussein, N., Noordin, F., & Taherdoost, H. (2017). Leadership effectiveness measurement and its effect on organization outcomes. *Procedia Engineering*, 181, 1043-1048. <https://doi.org/https://doi.org/10.1016/j.proeng.2017.02.505>
- Mai, N. K., Do, T. T., & Phan, N. A. (2022). The impact of leadership traits and organizational learning on business innovation. *Journal of Innovation & Knowledge*, 7(3), 1-9. <https://doi.org/https://doi.org/10.1016/j.jik.2022.100204>
- Miharja, R., & Hayati, N. (2021). The Importance of visionary leadership and talent management to improve the employee performance. *HOLISTICA – Journal of Business and Public Administration*, 12(2), 93-101. <https://doi.org/doi:10.2478/hjbpa-2021-0016>
- Mohamad, N. I., Ismail, A., Ahmad, N. N., Mohamad, N. M., & Ibrahim, N. S. (2020). Role of online training content in enhancing job motivation. *International Journal on Emerging Technologies*, 11(3), 1027-1032.
- Mubashar, T., & Fida, M. K. (2023). Authentic leadership practices in organizations: Development and validation of authentic leadership practices scale in Pakistan. *The Journal of Behavioral Science*, 18, (2), 32-49. <https://so06.tci-thaijo.org/index.php/IJBS/article/view/260149>
- Nguyen, T. N. T., Bui, T. H. T., & Nguyen, T. H. H. (2020). Improving employees' proactive behaviors at workplace: The role of organizational socialization tactics and work engagement. *Journal of Human Behavior in the Social Environment*, 31(6), 1-16. <https://doi.org/10.1080/10911359.2020.1803172>
- Nyfoudi, M., Shipton, H., Theodorakopoulos, N., & Budhwar, P. (2023). Managerial coaching skill and team performance: How does the relationship work and under what conditions?. *Human Resource Management Journal*, 33(2), 328-345. <https://doi.org/10.1111/1748-8583.12443>
- Rizvi, I. A. and Popli, S. (2021). Revisiting leadership communication: A need for conversation. *Global Business Review*, 1-18, <https://doi.org/10.1177/09721509211061979>
- Sahaya, N. (2012). A learning organization as a mediator of leadership style and firms' financial performance. *International Journal of Business and Management*, 7(14), 96-113. <https://doi.org/10.5539/ijbm.v7n14p96>
- Saher, A., & Ayub, U., (2020). Visionary leadership and organizational change: Mediating role of trust in the leader. *Paradigms*, 14(2), 8-17 <https://paradigms.ucp.edu.pk/static/uploads/2021/03/1441.pdf>
- Segarra-Ciprés, M., Escrig-Tena, A., & García-Juan, B. (2019). Employees' proactive behavior and innovation performance: Examining the moderating role of informal and formal controls. *European Journal of Innovation Management*, 22(5), 866-888. <https://doi.org/10.1108/EJIM-02-2019-0041>
- Sekaran, U., & Bougie, R. (2010). *Research methods for business: A skill-building approach* (5th ed.). John Wiley & Sons.

- Selart, M. (2010). *A leadership perspective on decision making*. Oslo: Cappelen Academic Publishers.
- Singh, S., Mohanty, R. P., Mangla, S. K., & Agrawal, V. (2023). Critical success factors of additive manufacturing for higher sustainable competitive advantage in supply chains. *Journal of Cleaner Production*, 425, 1-18. <https://doi.org/10.1016/j.jclepro.2023.138908>
- Taylor, M. C., J. Cornelius, C., & Colvin, K. (2014). Visionary leadership and its relationship to organizational effectiveness. *Leadership & Organization Development Journal*, 35(6), 566-583. <https://doi:10.1108/lodj-10-2012-0130>
- Thornhill-Miller, B., Camarda, A., Mercier, M., Burkhardt, J. M., Morisseau, T., Bourgeois-Bougrine, S., & Lubart, T. (2023). Creativity, Critical Thinking, Communication, and Collaboration: Assessment, Certification, and Promotion of 21st Century Skills for the Future of Work and Education. *Journal of Intelligence*, 11(3), 54.
- Udin, U (2023). Linking transformational leadership to organizational learning culture and employee performance: The mediation-moderation model. *International Journal of Professional Business Review*, 8(3), 1-17. <https://doi.org/10.26668/businessreview/2023.v8i3.1229>
- Wang, J., Gu, Y., Luo, Y., Huang, Y., & Liao, L. (2022). The mechanism of the influence of coaching leadership behavior on subordinate's sense of gain at work. *Leadership & Organization Development Journal*, 43(4), 638-652. <https://doi.org/10.1108/LODJ-07-2021-0342>
- Westley, F., & Mintzberg, H. (1989). Visionary leadership and strategic management. *Strategic Management Journal*, 10(S1), 17-32. <https://doi.org/https://doi.org/10.1002/smj.4250100704>
- Wilaphan, K., Noawanit, S., & Ngudgratoke, S. (2023). Transformative leadership and innovative behavior in medical education: Mediating effects of psychological empowerment and creative self-efficacy. *The Journal of Behavioral Science*, 18(2), 50-69. <https://so06.tci-thaijo.org/index.php/IJBS/article/view/261784>