

INVESTIGATING THE INFLUENCE OF PERSONAL SKILLS ON STUDENTS' LEADERSHIP DEVELOPMENT IN HIGHER EDUCATION

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Abstract: *This quantitative research study had investigated the influence of personal skills on the development of students' leadership models in higher education. The study specifically focused on personal skills such as self-enhancement, presentation skills and self-confidence, adopting technology, decision making and problem solving, responsibility and commitment, time management, communication and collaboration, and motivating and inspiring others. The sample are undergraduate students from various disciplines in Universiti Teknologi MARA, through a purposive sampling technique. The data were collected through a structured questionnaire designed to measure the students' self-reported levels of personal skills and their perceived impact on leadership development. The research objectives included: (1) assessing the levels of personal skills, (2) examining the relationship between personal skills and the development of students' leadership models, and (3) identifying the most influential personal skills in shaping students' leadership models. The data analysis were involved a descriptive statistics to determine the distribution of personal skills among the participants, as well as inferential statistics to explore the relationships between personal skills and leadership development. This study had contributed to the existing literature on leadership development in higher education by highlighting the significance of personal skills in shaping students' leadership models. The findings had provided valuable insights for educational institutions, curriculum designers, and student development practitioners to enhance leadership education programs and foster the cultivation of effective leadership skills among students.*

Keywords: *student leadership model, leadership development, personal skills, higher*

Introduction

Leadership development is a crucial aspect of higher education, as it prepares students for future professional roles and responsibilities. Numerous studies have explored the factors influencing leadership development among students, with a focus on both external factors (e.g., educational programs, institutional support) and internal factors (e.g., personal skills, traits, and characteristics). This study aims to contribute to the existing body of knowledge by specifically investigating the influence of personal skills on students' leadership development in higher education.

Personal skills encompass a range of abilities and competencies that individuals possess, which play a significant role in their leadership effectiveness and success (Judge, Piccolo, & Kosalka, 2009; Nemanich & Keller, 2007). These skills include self-enhancement, presentation skills and self-confidence, adopting technology, decision making and problem solving, responsibility and commitment, time management, communication and collaboration, and motivating and inspiring others. While the influence of personal skills on leadership development has been recognized, limited research has been conducted to specifically explore this relationship in the context of higher education.

This study is particularly relevant to Universiti Teknologi MARA (UiTM) Kelantan branch, as it provides insights into the development of students' leadership models within the university setting. UiTM is one of Malaysia's leading universities, known for its focus on producing competent and well-rounded graduates. By investigating the influence of personal skills on students' leadership development at UiTM, this research can inform the university's student development initiatives, curriculum design, and overall educational strategies.

Understanding the impact of personal skills on students' leadership development can also have broader implications for the higher education sector. Educational institutions worldwide are increasingly recognizing the importance of equipping students with leadership skills to navigate complex challenges in their future careers (Bolden, Petrov, & Gosling, 2008). By identifying the most influential personal skills in shaping students' leadership models, this study can provide valuable insights for curriculum designers, educational policymakers, and student development practitioners to enhance leadership education programs and support the cultivation of effective leadership skills among students.

Therefore, this study aims 1) to assess the levels of personal skills (such as self-enhancement, presentation skills and self-confidence, adopting technology, decision making and problem solving, responsibility and commitment, time management, communication and collaboration, motivating and inspiring others) among UiTM students, 2) to examine the relationship between personal skills and the students' leadership development in higher education and 3) to identify the most influential personal skills that shape students' leadership models in UiTM.

Literature Review

Theoretical frameworks on personal skills and leadership development

Social Cognitive Theory: The social cognitive theory, developed by Albert Bandura, posits that personal skills and traits are acquired and developed through a continuous interaction between individuals, their environment, and their behaviour (Bandura, 1986). This theory emphasizes the role of observational learning, self-efficacy beliefs, and self-regulation in shaping personal

skills and their impact on leadership development. According to this framework, individuals who observe others successfully demonstrating personal skills in leadership contexts are more likely to develop and adopt those skills themselves.

Trait Theory: Trait theory suggests that certain personal characteristics and skills are innate and relatively stable, making individuals more predisposed to leadership effectiveness (Judge, Bono, Ilies, & Gerhardt, 2002). This theory posits that specific traits, such as self-confidence, assertiveness, conscientiousness, and extraversion, contribute to leadership potential and success. By examining the relationship between personal skills and leadership development, this framework provides insights into how specific traits can influence the development of leadership models in higher education.

Transformational Leadership Theory: The transformational leadership theory emphasizes the role of personal skills and behaviours in inspiring and motivating others towards shared goals (Bass & Riggio, 2006). This theory highlights the importance of personal skills such as communication, collaboration, inspiring others, and self-confidence in fostering transformational leadership behaviours. By adopting this framework, the study can explore how personal skills contribute to the development of transformational leadership models in higher education settings.

Self-Determination Theory: Self-determination theory posits that individuals are driven by the innate need for autonomy, competence, and relatedness (Deci & Ryan, 2000). According to this theory, personal skills and competencies contribute to individuals' sense of competence, which in turn influences their motivation and engagement in leadership roles. By investigating the relationship between personal skills and leadership development within the context of self-determination theory, the study can shed light on how the fulfilment of these psychological needs influences the development of students' leadership models in higher education.

These theoretical frameworks provide a conceptual basis for understanding the relationship between personal skills and leadership development. By adopting one or a combination of these frameworks, the study can explore the underlying mechanisms through which personal skills influence the development of students' leadership models in higher education.

Previous empirical studies on the influence of personal skills on leadership development

Avolio, Waldman, and Einstein (1988) had examined the relationship between personal skills and transformational leadership behaviours among military officers. The findings revealed that personal skills, such as communication, self-confidence, and problem-solving, significantly predicted the extent to which officers exhibited transformational leadership behaviours. This finding is consistent with Chan, Snape, and Redman (2009) who explored the influence of personal skills, including self-confidence, communication, and problem-solving, on the leadership effectiveness of managers in the hospitality industry. The results indicated that higher levels of personal skills were associated with greater leadership effectiveness and employee satisfaction.

Impact of personal skills, such as self-confidence, communication, and time management, also important in the leadership performance of retail managers. There is positive relationship between personal skills and leadership performance, suggesting that individuals with higher levels of personal skills were more effective leaders (Hinkin & Tracey, 1999).

While, Judge, Bono, Ilies, and Gerhardt (2002) applied a meta-analytic study had examined the relationship between various personal skills and leadership effectiveness across multiple industries. The findings indicated that personal skills, including self-confidence, communication, problem-solving, and motivation, were positively associated with leadership effectiveness.

In multinational corporation context, Lowe, Kroeck, and Sivasubramaniam (1996) had investigated the influence of personal skills, such as communication, decision-making, and problem-solving, on leadership performance. The results demonstrated that higher levels of personal skills were associated with greater leadership performance and effectiveness. These empirical studies provide evidence for the positive influence of personal skills on leadership development and effectiveness across various industries and contexts. By building upon these previous findings, the proposed research can further explore the specific influence of personal skills on students' leadership development in the higher education setting, contributing to the existing body of knowledge on this topic.

Conceptualizing personal skills and their relevance to leadership development

Personal skills refer to the individual abilities, competencies, and characteristics that influence an individual's behavior, performance, and effectiveness in various domains, including leadership (Judge, Piccolo, & Kosalka, 2009; Nemanich & Keller, 2007). These skills are often considered as internal factors that contribute to an individual's leadership potential and effectiveness.

In the context of leadership development in higher education, personal skills play a crucial role in shaping students' leadership models. These skills enable students to effectively navigate the challenges and complexities of leadership roles, both during their academic journey and in their future professional careers. The following personal skills have been identified as particularly relevant to leadership development:

Self-enhancement: Self-enhancement skills involve the ability to build self-confidence, develop a positive self-image, and maintain a sense of personal worth and efficacy (Judge et al., 2009). Students with strong self-enhancement skills are more likely to exhibit self-assured and assertive leadership behaviours.

H1: Self-enhancement (SE) has positively influenced leadership capability (LC).

Presentation skills and self-confidence: Presentation skills encompass the ability to communicate effectively, deliver compelling presentations, and engage and persuade others (Duff, 2019). Coupled with self-confidence, these skills empower students to articulate their ideas, inspire others, and gain support for their vision as leaders.

H2: Self-confidence (SC) has positively influenced leadership capability (LC).

Adopting technology: In today's digital age, the ability to adapt to and leverage technology is crucial for effective leadership. Students who possess technology adoption skills can harness digital tools, platforms, and resources to enhance communication, collaboration, and problem-solving within their leadership roles (Kane & Piazza, 2018).

H3: Decision making and problem solving (DM) have positively influenced leadership capability (LC).

Decision making and problem solving: Effective leaders must possess strong decision-making and problem-solving skills to navigate complex challenges and make informed choices (Nemanich & Keller, 2007). These skills involve the ability to analyze situations, consider multiple perspectives, and generate creative and effective solutions.

H4: Responsibility and commitment (RC) have positively influenced leadership capability (LC).

Responsibility and commitment: Leadership requires a sense of responsibility, accountability, and commitment towards goals, tasks, and team members. Students with strong skills in responsibility and commitment demonstrate reliability, dedication, and a willingness to take ownership of their leadership roles (Judge et al., 2009).

H5: Time management (TM) has positively influenced leadership capability (LC).

Time management: Effective time management skills enable leaders to prioritize tasks, set goals, and allocate resources efficiently. Students who possess strong time management skills are better equipped to handle the demands and responsibilities of leadership roles while maintaining balance and avoiding burnout (Bolden et al., 2008).

H6: Adopting technology (AT) has positively influenced leadership capability (LC).

Communication and collaboration: Leadership involves effective communication and collaboration with team members, stakeholders, and other key individuals. Students with strong communication and collaboration skills can foster a positive and inclusive team environment, build relationships, and facilitate successful teamwork (Bolden et al., 2008).

H7: Communication and collaboration (CC) have positively influenced leadership capability (LC).

Motivating and inspiring others: Leaders need to motivate and inspire others towards shared goals and objectives. Students with skills in motivating and inspiring others can effectively influence and energize their team members, leading to higher levels of engagement, productivity, and commitment (Judge et al., 2009).

H8: Motivating and inspiring others (MI) have positively influenced leadership capability (LC).

The relevance of these personal skills to leadership development lies in their ability to enhance students' leadership capabilities and effectiveness. By developing and honing these skills, students can cultivate a strong foundation for their leadership journey, enabling them to lead with confidence, adapt to changing environments, make sound decisions, and inspire others towards positive outcomes.

Gaps in the literature and the need for the current study

While there is existing literature on leadership development in higher education, there is a notable gap in specifically exploring the influence of personal skills on students' leadership development within this context. Previous studies have mainly focused on external factors such as educational programs and institutional support, neglecting the examination of personal skills as internal factors that contribute to leadership development. Therefore, there is a need for the

current study to address this gap and provide insights into the importance of personal skills in shaping students' leadership models in higher education.

By investigating the influence of personal skills, such as self-enhancement, presentation skills and self-confidence, adopting technology, decision making and problem solving, responsibility and commitment, time management, communication and collaboration, and motivating and inspiring others, the current study can contribute to the existing literature in several ways.

First, it can provide a deeper understanding of how personal skills interact with leadership development processes, shedding light on the specific personal skills that have the greatest impact on students' leadership models. This knowledge can inform the design and implementation of leadership education programs in higher education institutions, ensuring that the development of these crucial skills is incorporated into the curriculum.

Second, the current study can provide empirical evidence on the relationship between personal skills and leadership development in the unique context of Universiti Teknologi MARA (UiTM). The findings can serve as a benchmark for other institutions and contribute to the generalizability of the results in diverse higher education settings.

Finally, by identifying the personal skills that significantly influence leadership development, the study can guide student development practitioners and educational policymakers in allocating resources and designing interventions that enhance these skills. This can ultimately contribute to the overall development of effective leaders in higher education and prepare students for future professional roles and responsibilities.

In summary, the current study addresses the gap in the literature by specifically investigating the influence of personal skills on students' leadership development in higher education. By filling this gap, the study can contribute to the existing knowledge, inform educational practices, and empower students to become effective leaders in their future endeavours.

Research Framework

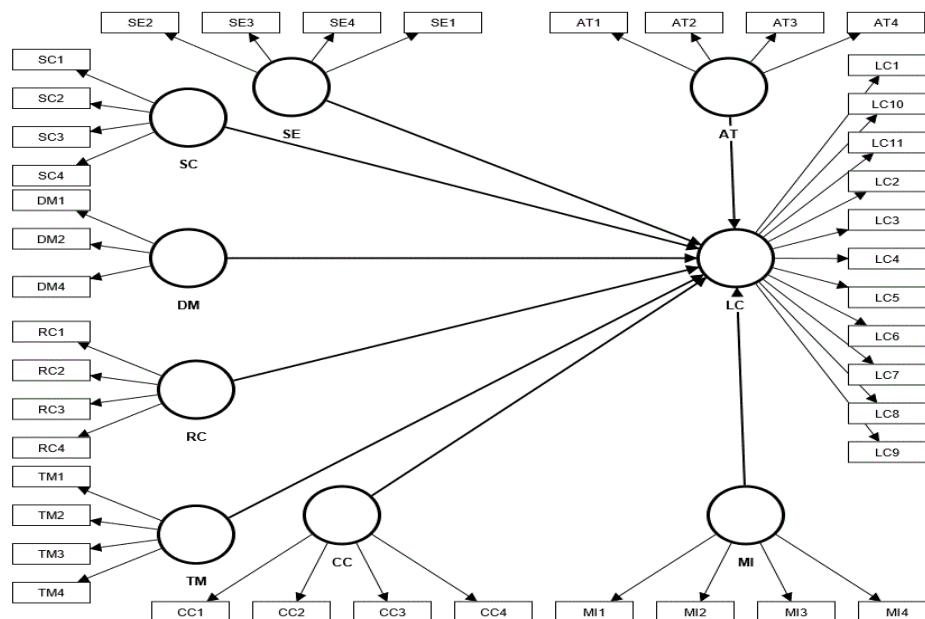


Figure 1: Research Framework

Research Methodology

The study was quantitative in nature to investigate the influence of personal skills on students' leadership development in higher education. The data in this study was collected using questionnaire. The unit of analysis is students from Universiti Teknologi MARA (UiTM) in Malaysia. The sample size of 219 students was determined using sample size calculation for a statistical test which we suggested by Cohen (1988). G*Power software is used to determine the minimum sample size by examining the model's maximum number of regressions to identify the number of predictors involved. This is to ensure that a sufficient number of students with diverse personal talents and leadership experiences are represented. Purposive sampling technique was employed for undergraduate students' selection from various disciplines within the university. The sample consisted of students who have actively engaged in leadership roles and activities within the university. SmartPLS version 4.0.9.5 was used to analyse the data to answer the objectives of the study.

The collected data had gone through the process of validation before testing the hypothesis. Two types of validation were used, which are convergent validity by looking at the values of loading (≥ 0.5), composite reliability (≥ 0.7), and AVE (≥ 0.5). After all values pass the process of convergent validity, discriminant validity then been tested by looking the value of Heterotrait-Monotrait Ratio of Correlations (HTMT), the values of the correlation should be exceeded 0.90 (Hair et al., 2014).

Analysis and Findings

Since the data were gathered from a single source, thus suggesting the data may suffered the issue of the common method bias (Halimi et al., 2021). Common method bias which caused by the way the data were collected, could provide doubtful result of the study (Nghah et al., 2021; Podsakoff et al., 2012). As proposed by Kock (2015) the study used the full-collinearity testing to ensure that the data were free from the common method bias issue. As suggested by Hair et al. (2017), VIF should be ≤ 5 . Table 1 illustrated the result of full collinearity analysis, shows that all the VIF values were lower than 5, suggesting that the study was free from common method variance.

As the study applied structural equation modelling with Smart Partial Least Squares, the study followed guidelines setup by Anderson and Gerbing (1991), proposed that the study must established the measurement model prior to the structural model. To establish the measurement model, the study must pass the convergent and discriminant validity. Convergent validity will be established if the loadings value is ≥ 0.5 , average variance explained (AVE) is ≥ 0.5 and the composite reliability is ≥ 0.7 (Hair et al., 2013). Even all the items meet has loading value higher than 0.5, however, few items were deleted due to cross-loading issue. Table 1 illustrates the result of the convergent validity analysis. Since all related values meet the requirements of the threshold values setup by literature, suggesting that the convergent validity has been established for the study.

Table 1: Convergent Validity

Constructs	Items	Loading	CR	AVE
Adopting Time	AT1	0.838	0.893	0.747
	AT2	0.893		
	AT3	0.891		
	AT4	0.832		

Constructs	Items	Loading	CR	AVE
Communication and Collaboration	CC1	0.908	0.927	0.817
	CC2	0.899		
	CC3	0.929		
	CC4	0.878		
Decision Making and Problem Solving	DM1	0.897	0.869	0.763
	DM2	0.916		
	DM4	0.803		
Leadership Capability	LC1	0.780	0.936	0.604
	LC2	0.802		
	LC3	0.817		
	LC4	0.788		
	LC5	0.788		
	LC6	0.806		
	LC7	0.692		
	LC8	0.781		
	LC9	0.853		
	LC10	0.786		
	LC11	0.636		
Motivating and Inspiring	MI1	0.846	0.890	0.750
	MI2	0.887		
	MI3	0.876		
	MI4	0.855		
Responsibility and Commitment	RC1	0.854	0.930	0.814
	RC2	0.917		
	RC3	0.923		
	RC4	0.912		
Self-Confidence	SC1	0.796	0.833	0.661
	SC2	0.805		
	SC3	0.859		
	SC4	0.789		
Self-Enhancement	SE1	0.821	0.884	0.725
	SE2	0.843		
	SE3	0.869		
	SE4	0.871		
Time Management	TM1	0.837	0.865	0.710
	TM2	0.883		
	TM3	0.823		
	TM4	0.825		

Note : DM3 was deleted due to cross-loading

For the discriminant validity, the study used the Hetro-Trait Mono-Trait ratio analysis as proposed by Sarstedt and Cheah (2019). The discriminant validity will be established if all the value for the HTMT ratio is ≤ 0.9 . Since the highest value of the HTMT is 0.9, which is still in the acceptable range, thus, the study is confirmed that the discriminant validity was established for the study. Table 2 shows the result for the HTMT analysis.

Table 2: Discriminant validity: HTMT ratio

Constructs	AT	CC	DM	LC	MI	RC	SC	SE	TM
AT									
CC	0.690								
DM	0.731	0.687							
LC	0.729	0.772	0.753						
MI	0.734	0.703	0.739	0.657					
RC	0.670	0.680	0.860	0.659	0.676				
SC	0.744	0.592	0.787	0.737	0.519	0.688			
SE	0.673	0.601	0.835	0.600	0.671	0.727	0.690		
TM	0.785	0.756	0.884	0.767	0.679	0.881	0.818	0.717	

Bootstrapping analysis with 5,000 resampling technique will be applied for the hypothesis testing since the smart PLS assume that the data were not normally distributed (Hair et al., 2019; Tuan Mansor et al., 2021). Hypothesis of the study will be claimed as supported if the beta value is aligned with the direction of the hypothesis, $t\text{-value} \geq 1.645$, $p\text{-value} \leq 0.05$ and the confidence interval bias corrected has no zero in between the lower level (LL) and upper level (UL) (Hair et al., 2019; Ngah et al., 2021). Table 3 and Figure 3 illustrates the summary of the hypothesis testing analysis.

Prior to the hypothesis testing, it is crucial to ensure the data also free from the multi-collinearity issue. The data is free from the multi-collinearity issue if the VIF value ≤ 5 (Hair et al., 2017). Table 3 illustrates the result of the VIF values. Since all the VIF values were lower than 5, thus confirming that the multi-collinearity issue was not serious of the study.

There are eight hypotheses developed for the study, all 8 hypotheses intended to test the direct effect. Firstly, for the direct effect of personal skills (SC, DM, CC and AT) on LC, whereby the R^2 was 0.666, indicating the SC, DM, CC and AT explained 66.6% of the variance on LC. Table 3 illustrates all the results of the analysis for the hypothesis testing. For H1, it is hypothesized that SE positively related to LC. The finding shows that there are not significant relationships between SE and LC ($\beta = -0.069$, $p = 0.142$), RC and LC ($\beta = -0.033$, $p = 0.309$), TM and LC ($\beta = -0.078$, $p = 0.168$), MI and LC ($\beta = -0.070$, $p = 0.123$), hence the H1, H4, H5, and H8 are not supported. Meanwhile for the H2, SC→LC, as expected, the study found there is a positive relation between SC→LC ($\beta = 0.231$, $p = 0.00$), thus justified to support the H2.

As for the third hypothesis, between DM→LC, the analysis indicated that ($\beta = 0.189$, $p < 0.003$), thus confirming the positive relationship between them. Hence H3 was supported. For the next hypothesis (H6 and H7), AT→LC and CC→LC, the study found there are positive relationships for those hypothesis ($\beta = 0.138$, $p = 0.012$), ($\beta = -0.356$, $p = 0.000$). Hence H6 and H7 are supported in this study.

For effect size, based on Cohen (1992), who categorized the effect size as small (0.02), medium (0.15) and large (0.35), all the supported hypotheses managed to have small to medium effect size. CC has the medium effect size (0.166) among all the supported hypothesis of the study. It also showed that the most influential factor Communication & Collaboration (beta 0.356), followed by Self-Confident (beta 0.231), Decision Making (beta 0.189) and Adopting Technology (beta 0.138).

Table 3: Structural model

Hypothesis	Relationship	Beta	SE	Tvalue	Pvalue	BCI LL	BCI UL	f2	VIF
H1	SE ->LC	-0.069	0.063	1.081	0.140	-0.173	0.035	0.006	2.283
H2	SC ->LC	0.231	0.070	3.309	0.000	0.123	0.353	0.067	2.714
H3	DM ->LC	0.189	0.069	2.744	0.003	0.074	0.301	0.030	3.528
H4	RC -> LC	-0.033	0.066	0.500	0.309	-0.142	0.078	0.001	3.997
H5	TM -> LC	0.078	0.081	0.961	0.168	-0.048	0.217	0.005	2.392
H6	AT -> LC	0.138	0.061	2.253	0.012	0.036	0.237	0.021	2.361
H7	CC -> LC	0.356	0.049	7.283	0.000	0.271	0.430	0.166	2.380
H8	MI -> LC	0.070	0.060	1.162	0.123	-0.029	0.167	0.006	3.320

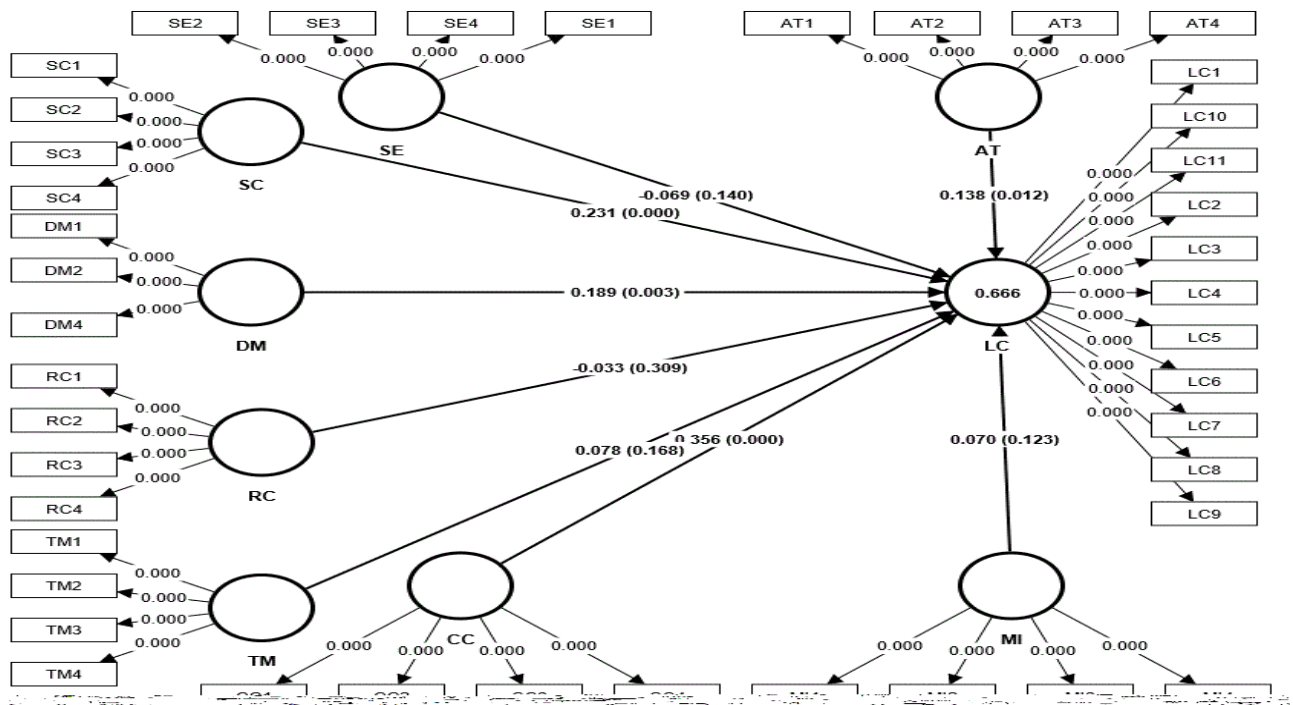


Figure 2: Structural Model

Owing to the limitation of the blindfolding procedure to materialize the predictive power (Ngha et al., 2021), the followed approach proposed by Shmueli et al 2019, who claimed that the PLS-predict has a better predictive power by comparing errors from PLS Root Mean Square Error (RMSE) and Linear Modelling (LM) RMSE. The model can be announced having a strong predictive power when differences between PLS and LM for all items are negative, moderate power when majority of the items having negative results, low power when minority of the items having negative value, and predictive power is not confirmed all items having a positive value. Table 4 illustrates the result of PLS predict, which showing that the model has a strong predictive power.

Table 4: PLS predict

	Q ² predict	PLS-SEM_RMSE	LM_RMSE	PLS-SEM_RMSE - LM_RMSE
LC1	0.468	0.870	0.902	-0.031
LC2	0.411	0.968	1.004	-0.035
LC3	0.451	0.913	0.923	-0.010
LC4	0.384	0.972	1.056	-0.084
LC5	0.397	0.872	0.930	-0.058
LC6	0.369	0.961	0.972	-0.011
LC7	0.298	1.073	1.086	-0.013
LC8	0.390	0.947	0.980	-0.032
LC9	0.388	0.976	1.007	-0.031
LC10	0.357	0.971	1.003	-0.032
LC11	0.282	1.041	1.071	-0.030

Discussion

Self-enhancement practices such as strengthening one's abilities, knowledge, and personal traits, according to research, can have a good impact on leadership capability. Self-enhancement, according to Judge and Bono (2001), is connected with increased levels of self-confidence and self-efficacy, both of which are significant variables in effective leadership. They discovered that self-improvement predicted leadership emergence and effectiveness in their study.

Consistently, self-confidence has been designated as a crucial factor in leadership ability. The meta-analysis conducted by Shamir, House, and Arthur (1993) revealed a positive correlation between self-confidence and leadership effectiveness. They observed that self-assurance enables leaders to take risks, make decisions, and inspire others.

A vital component of leadership aptitude is the ability to make successful judgements and solve complex challenges. This idea was reinforced by a research by Day and Lord (1988), which highlighted the relevance of decision-making skills in leadership. According to their findings, leaders who are more adept at problem solving and decision making are viewed as more capable and competent by their subordinates.

Although responsibility and commitment are commonly regarded as essential leadership qualities, the precise relationship between these factors and leadership ability varies. In a study conducted by Bass and Riggio (2006), it was discovered that while responsibility and commitment are essential for leader development, they do not predict leadership effectiveness explicitly. In the early phases of leadership development, these characteristics may be more influential.

Complex and not always straightforward, the relationship between time management and leadership capability exists. Although effective time management is frequently associated with leadership success, the direct effect can vary depending on other factors. Although there may be few empirical studies explicitly addressing this relationship, Zaccaro, Kemp, and Bader (2004) argue that effective leaders exhibit skills in prioritization, planning, and organization, which are associated with effective time management.

Integration of technology has grown in importance for leaders in the current digital age. According to Avolio, Kahai, and Dodge's (2001) research, leaders who adopt and effectively utilize technology are in a better position to increase their leadership capability. They highlight the significance of technology in communication, information sharing, and decision-making processes, enabling leaders to respond to the demands of their roles more effectively.

Effective communication and collaboration are widely acknowledged as essential leadership abilities. Nonetheless, the primary effect on leadership ability may vary. According to Yukl and Mahsud (2010), the relationship between communication and leadership effectiveness is mediated by a number of variables, including situational demands, follower characteristics, and the leader's communication style. Consequently, the effect of communication and collaboration on leadership competence may be contingent on particular contextual factors.

Inspiring and motivating others is frequently regarded as a crucial aspect of effective leadership. However, the direct relationship between inspiring and motivating behaviours and leadership capacity may not always be supported. Jung, Chow, and Wu (2003) argue in their research that while motivation and inspiration are essential components of transformational leadership, the impact on leadership capability can vary depending on contextual factors and the requirements of followers.

In conclusion, multiple hypotheses were supported, demonstrating that, self-confidence, decision making & problem solving, communication & collaboration, and technology adoption all positively influence leadership capability. The outcomes of this study, on the other hand, did not support the hypotheses related to self-enhancement, responsibility & commitment, time management, and motivating & inspiring others. It is crucial to highlight that these findings may be limited to the sample or setting studied, and that additional research is required to validate and expand on these findings.

Recommendation for Higher Education Institution

This study had released that several hypotheses were supported and some of it are not. Realizing the important of education in producing a good and quality students' leader in future, this study would like to suggest that all the Higher Education provider should conduct a study to investigate the level of their students' personal skills. This approach can be considered as a precaution strategy to identify any positive and negative potential skills or behaviors among students. Once the potentials being identified, a proper training and approach can be provided for proper students' development. For example, this study revealed that the element of self-enhancement, responsibility & commitment, time management, and motivating & inspiring others are insignificant in developing leadership capabilities, which is contradict to the literatures. Therefore several proactive action should be taken to instill these important skills among students.

Conclusion

Finally, the findings of the study had contributed to theoretical understanding of leadership and have practical implications for leadership development. Several non-significant correlations, on the other hand, highlight opportunities for future research. Investigating the nuances of Self-Enhancement, Responsibility & Commitment, Time Management, and Motivating & Inspiring people in various circumstances can provide a more distinction understanding of their impact on leadership capability. Furthermore, investigating the moderating influence of contextual elements like follower qualities and technological advancements might help us better

understand how these factors interact with leadership competence. Further research can look into the precise outcomes associate with these characteristics and their implications for leadership effectiveness. Future research can develop existing theories and provide more thorough insights into good leadership practices by tackling these pathways.

References

- Anderson, J. C., & Gerbing, D. W. (1991). Predicting the Performance of Measures in a Confirmatory Factor Analysis With a Pretest Assessment of Their Substantive Validities. *Journal of Applied Psychology*, 76(5), 732–740. <https://doi.org/10.1037/0021-9010.76.5.732>
- Avolio, B. J., Kahai, S., & Dodge, G. E. (2000). E-leadership: Implications for theory, research, and practice. *The leadership quarterly*, 11(4), 615-668.
- Avolio, B. J., Waldman, D. A., & Einstein, W. O. (1988). Transformational leadership in a management game simulation: Impacting the military commander's work environment and performance. *Group & Organization Management*, 13(4), 373-387.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Psychology Press.
- Bolden, R., Petrov, G., & Gosling, J. (2008). Distributed leadership in higher education: Rhetoric and reality. *Educational Management Administration & Leadership*, 36(3), 289-306.
- Chan, S. H. J., Snape, E., & Redman, T. (2009). Personal and organizational predictors of workplace sexual harassment of women: A multilevel analysis. *Journal of Applied Psychology*, 94(1), 122-138.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd Ed). Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Day, D. V., & Lord, R. G. (1988). Executive leadership and organizational performance: Suggestions for a new theory and methodology. *Journal of management*, 14(3), 453-464.
- Day, D. V., Fleenor, J. W., Atwater, L. E., Sturm, R. E., & McKee, R. A. (2014). Advances in leader and leadership development: A review of 25 years of research and theory. *The Leadership Quarterly*, 25(1), 63-82.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- Duff, A. (2019). Developing effective presentation skills. *Medical Writing*, 28(2), 39-42.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106-121.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial Least Squares Structural Equation Modeling: Rigorous Applications, Better Results and Higher Acceptance. *Long Range Planning*, 46(1–2), 1–12. <https://doi.org/10.1016/j.lrp.2013.01.001>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management and Data Systems*, 117(3), 442–458. <https://doi.org/10.1108/IMDS-04-2016-0130>

- Halimi, F. F., Gabarre, S., Rahi, S., Al-Gasawneh, J. A., & Ngah, A. H. (2021). Modelling Muslims' revisit intention of non-halal certified restaurants in Malaysia. *Journal of Islamic Marketing*. <https://doi.org/10.1108/JIMA-01-2021-0014>
- Hinkin, T. R., & Tracey, J. B. (1999). The cost of turnover: Putting a price on the learning curve. *Cornell Hotel and Restaurant Administration Quarterly*, 40(2), 14-21.
- Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of applied Psychology*, 86(1), 80.
- Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, 87(4), 765-780.
- Judge, T. A., Piccolo, R. F., & Kosalka, T. (2009). The bright and dark sides of leader traits: A review and theoretical extension of the leader trait paradigm. *The Leadership Quarterly*, 20(6), 855-875.
- Jung, D. I., Chow, C., & Wu, A. (2003). The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings. *The leadership quarterly*, 14(4-5), 525-544.
- Kane, G. C., & Piazza, F. (2018). The role of technology in leadership development. In *The Palgrave Handbook of Workplace Spirituality and Fulfillment* (pp. 603-624). Palgrave Macmillan.
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of E-Collaboration*, 11(4), 1–10.
- Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *The Leadership Quarterly*, 7(3), 385-425.
- Nemanich, L. A., & Keller, R. T. (2007). The impact of personal and leadership efficacy on managerial effectiveness: A field study. *Journal of Applied Psychology*, 92(1), 135-146.
- Ngah, A. H., Anuar, M. M., Rozar, N. N., Ariza-Montes, A., Araya-Castillo, L., Kim, J. J., & Han, H. (2021). Online sellers' reuse behaviour for third-party logistics services: An innovative model development and E-Commerce. *Sustainability (Switzerland)*, 13(14), 1–15. <https://doi.org/10.3390/su13147679>
- Northouse, P. G. (2015). *Leadership: Theory and practice* (7th ed.). SAGE Publications.
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. (2012). Sources of Method Bias in Social Science Research and Recommendations on How to Control it. *Annual Review of Psychology*, 63, 539–569. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Shamir, B., House, R. J., & Arthur, M. B. (1993). The motivational effects of charismatic leadership: A self-concept based theory. *Organization science*, 4(4), 577-594.
- Shmueli, G., Sarstedt, M., Hair, J.F., Cheah, J.-H., Ting, H., Vaithilingam, S. and Ringle, C.M. (2019), Predictive model assessment in PLS-SEM: guidelines for using PLSpredict, *European Journal of Marketing*, 53(11), 2322-2347. <https://doi.org/10.1108/EJM-02-2019-0189>
- Tuan Mansor, T. M., Mohamad Ariff, A., Hashim, H. A., & Ngah, A. H. (2021). External whistleblowing intentions of auditors: a perspective based on stimulus–organism–response theory. *Corporate Governance (Bingley)*. <https://doi.org/10.1108/CG-03-2021-0116>
- Yukl, G. A. (2013). *Leadership in organizations* (8th ed.). Pearson Education.
- Yukl, G., & Mahsud, R. (2010). Why flexible and adaptive leadership is essential. *Consulting Psychology Journal: practice and research*, 62(2), 81.
- Zaccaro, S. J., Kemp, C., & Bader, P. (2004). Leader traits and attributes. *The nature of leadership*, 101, 124.