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FACTORS INFLUENCING STUDENT LEADERSHIP SKILLS AMONG GENERATION Z: A STUDY IN NORTHERN REGION MALAYSIAN UNIVERSITIES

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ABSTRACT

Student leadership plays a significant role in promoting organizational effectiveness and leadership ability in higher education institutions. This study will be based on the Social Learning Theory and Trait Theory of Leadership and will explore how student engagement, leadership development programs and personality traits impact student leadership skills in Generation Z students. Based on quantitative design, 129 university students were sampled in northern Malaysia and their data analyzed using the Statistical Package of the Social Sciences (SPSS) version 30.0. The findings reveal that the three variables are significant and have a positive relationship with student leadership skills. These results highlight the need to encourage active participation of students, organized leadership programs and personality-based growth in developing competent and futuristic student leaders.

Keywords: student leadership skills, student engagement, leadership development program, personality traits, Gen Z students

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INTRODUCTION

Most of the time, leadership qualities are considered as indispensable qualities of students in the twenty-first century in education (Jackson and Lee, 2021). Leadership development can be quite an important part of the end-of-the-course educational experience, especially in Malaysian universities, where the development of future-ready graduates is a national agenda (Mahmood and Ismail, 2022). The generation of the late 1990s and the first half of the 2010s, Generation Z (Gen z) represents the bulk of the population in universities and has distinctive features in the influence of the digital era and the accelerating changes in the global environment (Nguyen and Martin, 2020). In that regard, the conceptualization of the critical aspects that govern the development of leadership capabilities in this generation is very important to crafting educational methods that can unlock their leadership capabilities (Ali and Hussein, 2023).

The students of the Gen Z generation are very different in terms of values, behaviors, and preferences in the field of learning as compared to other generations (Anderson and Rainie, 2020). Generally, they are characterized as digital natives, socially aware, and practical, and their leadership opportunities and tasks are met with a distinct worldview (Goryunova and Jenkins, 2023; Seemiller and Grace, 2016). Such generational characteristics can only influence their interactions with the leadership development process (Park and Lee, 2022). In turn, the role of personal character traits, flexibility, the impact of technology and social media, and the structures that are offered by the university settings play essential parts in the development of Gen Z students leadership abilities (Twenge, 2017; Smith and Johnson, 2023).

Although this role has increasingly been appreciated, a number of problems relating to student leadership persist in the development of student leadership amongst the Gen Z students in Malaysian higher education institutions. Among the issues is the deterioration in the involvement of the students especially in co-curricular and leadership activities. Gen Z students are rather passive participants in campus life as they are often more likely to focus on their academic achievement and online communication than on being involved in student organizations or holding leadership positions (Zainol et al., 2024). Such a detachment exposes them to less authentic problem solving, collaborative, and communication experiences, which are the fundamental components of building leadership capacity (Azhar et al., 2020).

The inconsistency and inaccessibility of leadership development programs in institutions of higher learning is also another issue of concern. Despite the high rate of implementation of leadership workshops, seminars, and training modules in many universities, such programs are not always systematically embedded in the academic curriculum and do not often have continuity and well-structured follow-up (Hashim et al., 2019). Moreover, attendance is usually optional, which leads to poor attendance and minimal involvement, especially in students who may experience the greatest benefits, such as organized leadership developmental tracks (Parai and Alias, 2025). In other cases, such programs also do not correspond to the learning preferences of Generation Z students, who prefer interactive, technology-based, and experiential methods of learning to the traditional lecture-based ones (Ahmed et al., 2021).

Moreover, Generation Z personality traits, which include high self-awareness, preference of autonomy and aversion to hierarchies are more conceptualized in terms of dual tendencies that are circumstantial than as fixed or conflicting traits. Based on the Social Learning Theory and Trait Activation Theory, these traits can enable or limit the development of leadership under certain environmental conditions and contexts of learning (Al Naqbi, 2021). As an illustration, leadership

effectiveness in supportive and flexible settings can be boosted by adaptability, technological confidence and readiness to be innovative. On the other hand, long-term leadership development can be impeded by tendencies to risk aversion, fear of failure, and immediate results in more rigorous or high-pressure settings (Mukhtar and Abd Razak, 2024). Unless these dynamics are dealt with properly in the process of training leadership, vital skills like resilience, accountability, and strategic thinking may not be developed.

Besides, Generation Z learners can be characterized by a decreased interest in official leadership positions and usually think of leadership as a challenging task that is not in their comfort zone (Seemiller and Grace, 2016; Kim and Lee, 2022). The perceived demands of leadership like long-term dedication, hard work, and exposure to risk may diminish its attractiveness, especially in persons who value efficiency and the need to minimize risks (Smith and Jones, 2020). Also, Gen Z gives much importance to work-life balance and mental health and this can be another deterrent to engaging in leadership as it can be associated with stress, time, and mental health (Seemiller and Grace, 2016; Chan and Ng, 2021).

It is against this background that this current study will focus on investigating the aspects of leadership development in Generation Z students in universities within the northern part of Malaysia (Ahmad and Rahman, 2021). In particular, it explores the role of student engagement, leadership development programs, and personality traits in the development of student leadership skills. This is especially crucial considering the new issues that are cropping up in the higher education environment in Malaysia. According to reports provided by the Ministry of Higher Education Malaysia and national graduate employability surveys, graduate employability has increased in the past few years, but employers still claim lack of soft skills, especially leadership, communication and critical thinking skills.

Moreover, student involvement in co-curricular and leadership based programs, including student unions and campus organizations continues to be medium and unequal in various institutions, implying that a large percentage of students is not pursuing leadership development opportunities. This gap highlights the importance of more comprehensively studying the relationship between institutional initiatives and individual characteristics to impact leadership outcomes.

This paper fills critical gaps of how universities can develop future student leaders by focusing and concentrating on student engagement, leadership programs, and their personality traits. With these factors in place and been introduced, educators and policymakers should implement evidence-based and student-centered practices to comply the leadership efforts with the values, expectations, and learning preferences of Generation Z to help produce competent, motivated, and resilient graduates (Dugan and Komives, 2007; Kumar and Lee, 2023).

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LITERATURE REVIEW

A student leadership is an critical issue and important aspect of education that is often considered by the possibility to inspire, motivate, and guide others towards a common goal (Kocabas et al., 2020). Effective student leaders not only possess communication and organizational skills, but are also emphatic and dedicated to creating and maintaining positive and inclusive learning environments in the universities. They also take an active part in co-curricular activities, organizing student initiatives, and community service thereby contributing to personal development as well as peer development. The key contribute and factor of effective leadership among students include responsibility, teamwork, initiative, and role-modelling behaviors (Cox, 2014; Northouse, 2018).

Apart from that, generally, student leadership may be perceived within the context of several theoretical frameworks of leadership by many scholars. To illustrate on the statement before, the Transformational Leadership Theory can help us understand how student leaders motivate and inspire others by developing a common vision and generating intrinsic motivation. The role played by the student leaders in the peer support and community-oriented activities echoes the role of leaders in the Servant Leadership Theory to prioritize the needs and development of others. Moreover, the Social Learning Theory postulates that leadership behaviors are acquired through observation, interaction and experience learning especially in a collaborative academic setting.

All these theoretical assessments and standpoint of view, emphasize that student leadership is not primarily a conglomeration of personal traits, but rather a developmental and socially constructed process mediated by the interactions, experiences, and contexts of student leadership. Student leadership, as supported in the literature, is important in improving the academic performance and interest of students because they can develop their skills and responsibility in organized environments (Cox, 2014; Northouse, 2018).

THE RELATIONSHIP BETWEEN STUDENT ENGAGEMENT AND STUDENT LEADERSHIP SKILLS

Student engagement encompasses involvement in both classroom and extracurricular activities that are intended to enhance learning, and it also emphasizes the importance of measuring the outcomes of these activities. Student engagement was defined as "student involvement in educationally purposed activities" (Hu and Kuh, 2001). This operational definition (Kuh et al., 2011) stated that student engagement had two main characteristics. The first is the amount of time and effort students put into their academic work and other education-related activities. The second aspect relates to how schools use their resources, design their curricula, maximize learning opportunities, and provide support services to encourage students to engage in activities that foster determination, progress, and graduation. Additionally, engagement is seen as multidimensional, involving students' emotions, behaviors and cognition (Fredricks, et al., 2004).

The student engagement has been noted to be a key element in the attainment of leadership skills in higher education setting. Participation extends further than classroom participation and is inclusive of the participation of students in extracurricular activities, student organizations, and community service, all of which provide chances of leadership development (Kiersch and Peters, 2017). The Theory of Student Involvement states that the more time and effort students spend in rewarding campus experiences, the higher their personal and leadership growth (Astin, 2014).

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Gen Z students have been observed to have limited participation in campus activities in the context of Malaysian universities, and this is frequently explained by the academic pressure and the need to communicate via digital means and not face-to face (Jamaluddin et al., 2024). This poor participation limits the acquisition of leadership skills that are critical like decision-making, working in teams, and communication (Saidi and Abd Aziz, 2025). Furthermore, the lack of active participation will not allow students to acquire the hands-on experience in order to overcome the real-life challenges as leaders.

It has been proposed that student leadership development is closely predictable by student engagement under the circumstances when the opportunities are purposeful, participatory, and experiential (Dugan and Komives, 2007). Therefore, promoting the establishment of an environment in which productive interaction can take place is crucial to making Gen Z students future leaders.

THE RELATIONSHIP BETWEEN LEADERSHIP DEVELOPMENT PROGRAM AND STUDENT LEADERSHIP SKILLS

The leadership development programs (LDPs) of higher education are organized programs that help in developing leadership competencies of the students by means of workshops, training, mentoring, and experience-sharing. These programs are usually institutionally oriented in order to generate holistic graduates who are not only equipped with some academic skills but also soft skills (Eich, 2008).

In Malaysia, LDPs have been claimed to lack consistency, be too theoretical, and not customized to suit Gen Z students (Thien et al., 2022). Most programs are not continuity based and are not evaluated which means that not much effect is created in terms of long term leadership development. Moreover, the voluntary aspect of participation usually leads to poor participation of shyer or unaware students about their potentials as leaders.

Well planned LDPs have been observed to have a strong positive impact on self-awareness, emotional intelligence, problem solving, and team management skills which are all vital qualities of a good leader (Owen, 2012). The incorporation of practical learning, teamwork, and self-reflection into the leadership development programs can help make them more meaningful and effective among Gen Z learners (Yeganeh et al., 2025).

THE RELATIONSHIP BETWEEN PERSONALITY TRAITS AND STUDENT LEADERSHIP SKILLS

The personality traits play a central role in determining how people view, interpret and act in leadership positions. Openness, conscientiousness, extraversion, agreeableness and neuroticism are the Five-Factor Model (FFM) that has been extensively applied to understand the impact of personality on leadership (Judge et al., 2002). Empirical data indicate that extraversion and conscientiousness are positively related to leadership emergence and effectiveness as they

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promote proactive behaviour, goal orientation, and social interaction. As for Gen z students, all the traits such as adaptability, digital confidence, and creativity may react as advantages in contemporary leadership scenarios (DeCarvalho, 2025). However, some of the traits like being afraid of failure, not wanting to take risks, and wanting to be independent can make it harder to become a leader in the organization (Hubbart, 2024). These traits might make people hesitant to take on responsibilities or lead others in roles that require a long-term commitment.

In the Malaysian scenario, the weight and important of these personality traits in the process of leadership formation should be interpreted through the prism of existing cultural norms and values, which are traditionally collectivist, respectful towards hierarchy, and socially harmonious. Such aspects for example agreeableness might be more noticeable in such environments especially in organization, since leaders are supposed to keep the group united, interpersonally sensitive, and collectively oriented instead of focusing on personal achievements. Equally, as extraversion facilitates leadership visibility and communicative, its expression can be checked by the cultural demands of modesty and respect to authority.

Additionally, conscientiousness fits in with the Malaysian organizational and educational demands which focus on discipline, responsibility, and reliability. On the other hand, neuroticism can be a barrier to leadership especially in a setting where emotional containment and flexibility are a prerequisite. Thus, the dependency between the personality and leadership in Malaysia is not entirely trait-based but contextual as it is the interplay between personal disposition and socio-cultural demands.

For Gen z students, traits such as adaptability, digital confidence, and creativity may function as advantages in contemporary leadership scenarios (DeCarvalho, 2025). However, traits like being afraid of failure, not wanting to take risks, and wanting to be independent can make it harder to become a leader (Hubbart, 2024). These traits might make people hesitant to take on responsibilities or lead others in roles that require a long-term commitment.

Commonly in Malaysian universities, acknowledging and integrating student personality development into leadership training can enhanced students' readiness to lead. Programs that promote self-evaluation, resilience enhancement, and interpersonal development have been shown to markedly enhance leadership potential (Mahmood and Ismail, 2022). As a result, matching leadership programs with each person's personality can help them grow as leaders in a more personalized and effective way.

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Hence, the conceptual framework presented below is developed based on the literature review. As illustrated in Figure 1, the model visually represents the relationships between the independent and dependent variables:

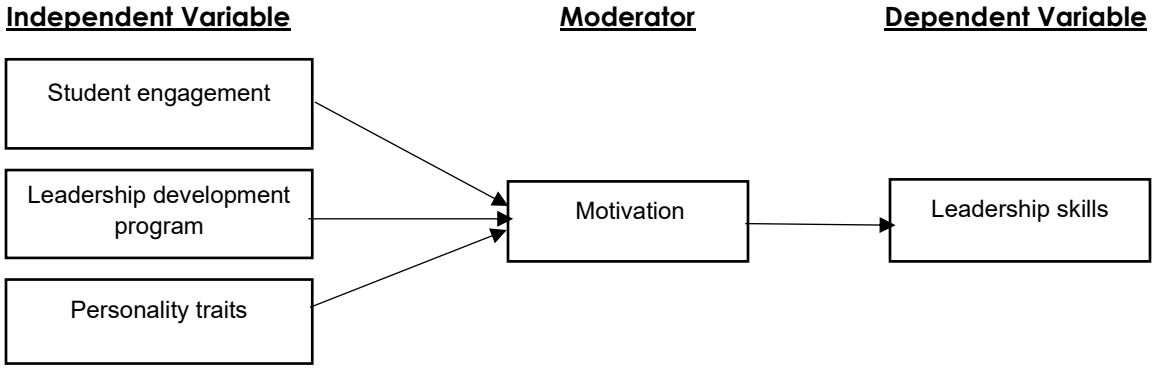


Figure 1. Conceptual Framework

METHODOLOGY

This research study is using a comprehensive quantitative approach, correlational research design to investigate the factors affecting student leadership skills among university students in the northern region of Malaysia. This study emphasized on student leaders occupying diverse organizational positions within the universities, with a sample size of 129 participants obtained via stratified random sampling. The sample size is sufficient to guarantee the validity of the research findings. Apart from that, this study also using the G*Power statistical analysis program to determine and figure out the appropriate sample size. The minimum sample size for this study was determined using G*Power. According to Hair et al. (2017), the minimum sample size was 119 because the effect size was 0.15, the alpha was 0.05, and the power was 0.80.

The data analysis were gathered about the independent variables, i.e., student engagement, leadership development programs, and personality traits using a structured survey questionnaire and the dependent variable, i.e., student leadership skills. The measurement of all items was based on a 5-point Likert scale with a strong level of disagreement as 1 (Strongly Disagree) and a strong level of agreement as 5 (Strongly Agree). The questionnaire was based on the previously existing scales and underwent content validation by experts to provide clarity, relevancy, and suitability to the study context.

To ensure the data was accurate, a pilot study was also occur before the actual collection of the data in order to further assure the reliability and understanding of the instrument by the generation Z respondents. The pilot test feedback was utilized to make changes to ambiguous items and ensure that the respondents had a clear understanding of the Likert scale and survey instructions. Then, the last survey was published online, which made it more accessible and efficient to respond, and guaranteed complete data collection.

In the context of the research process and methodology, the integrity of this study was a primary concern and to ensure this process was valid and appropriate, the participants were made aware of the research, and their consent was sought before the research was conducted. Moreover, the

anonymity of the participants was ensured, which was a significant ethical consideration for research involving human subjects.

RESULTS

Regarding the demographic profile, 58.7% of the respondents were female while the rest were male students and the majority of the respondents' age was in the range of 20-24 years old (35.6%), reflecting the typical age range of Generation Z university students in Malaysia. In terms of leadership position, respondents consisted of members of the Student Representative Council as well as position holders in academic clubs within their respective universities.

The majority of respondents (63.5%) had served in their respective organizations for approximately one year, while 20.2% had served for 2–3 years, and the remaining respondents had served for more than three years.

DESCRIPTIVE ANALYSIS AND CORRELATION

Table 1 presents the results of descriptive statistics, Cronbach's alpha reliability coefficients, and correlations among the variables. The mean scores for all variables were positive, with values ranging from 3.24 to 3.68, indicating that respondents generally agreed with the measured constructs.

The reliability analysis demonstrated strong internal consistency for all variables, with Cronbach's alpha values ranging from 0.81 to 0.92, exceeding the acceptable threshold of 0.70 as recommended by Hair et al. (2011). In particular, the Leadership Development Program construct recorded the highest reliability value (a = 0.92), indicating excellent internal consistency.

The correlation coefficients among the constructs ranged from 0.527 to 0.697, indicating moderate to strong positive relationships, which are within acceptable limits and meet the assumptions for further analysis.

Table 1. Means, reliability and correlations

Variables	Mean	Cronbach's Alpha	1	2	3	4
Student engagement	3.37	.83	1			
Leadership development program	3.68	.92	.741**	1		
Personality traits	3.24	.81	.527**	.666**	1	
Student leadership skills	3.38	.90	.687**	.697**	.549**	1

** Correlation is significant at the level 0.01 (2-tailed); 1=student engagement; 2=leadership development program; 3=personality traits; 4=student leadership skills

HYPOTHESES TESTING

The multiple regression analysis determined which variables (independent variables) explain variability in the outcome, how much variability in the dependent variable is explained by the independent variables and which variables are significant.

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Table 2. Summary of Multiple Regression Analysis

Independent variables	Dependent variable	R2	F	Std. Error of the Estimate	Beta	t-value	Sig.
Student engagement	Student leadership skills	0.52	12.34	0.54	0.42	3.92	<0.01
Leadership development program					0.31	3.56	<0.01
Personality traits					0.16	2.92	<0.05

Table 2 shows that student engagement, leadership development programs and personality traits have a significant impact on student leadership skills at $p<0.05$ ($\beta=0.42$, $t=3.92$; $\beta=0.31$, $t=3.56$; $\beta=0.16$, $t=2.92$). The results also indicate that all the variables explain 52% ($F=12.34$) of the variance in student leadership skills.

DISCUSSION

The findings suggest that student engagement is one of the key contributors to student leadership skills, alongside leadership development programs and personality traits, all of which demonstrate significant positive effects, with many students reporting that active participation in academic and extracurricular activities directly boosts their leadership abilities in the classroom (Hassan and Ismail, 2022). This aligns with existing research, which emphasizes the crucial role of engagement in developing leadership qualities such as initiative and responsibility (Khan and Ahmad, 2021). The study suggests that by assessing and fostering student engagement, educators can design more effective lessons and activities that not only promote active learning but also contribute to the long-term development of leadership skills (Rahim and Zain, 2023). This highlights the importance for higher education institutions in the northern region of Malaysia to implement strategies that enhance student involvement, thereby preparing students for leadership roles both within university settings and in their future careers (Lee and Wong, 2021).

The research discussion reveals that Leadership Development Programs have a significant positive impact on student leadership skills, with students reporting noticeable improvements in their leadership abilities and the quality of their work environment after completing such programs (Ali and Karim, 2020). This is consistent with Posner and Brodsky's (1994) assertion that leadership training should be designed to enhance students' understanding and skills in areas such as challenging the process, inspiring a shared vision, enabling others to act, modeling the way, and encouraging the heart. These skills are essential for the effectiveness of student leaders and are likely to be beneficial in their future work environments (Kouzes and Posner, 1997; Lim and Hassan, 2023).

In this study, personality traits were found not to have a significant overall impact on student leadership skills, with the influence of these traits varying greatly depending on the individual, particularly among members of Generation Z (Tan and Ibrahim, 2022). While personal traits may differ from generation to generation, the current trends suggest that these traits do not substantially impact leadership skills (Liew and Cheong, 2023). This study has shown that personality traits did not prove to be the best predictor of leadership skills in Generation Z students in northern

Malaysia. This can be attributed to the fact that Gen Z students tend to value harmony and psychological comfort during group interactions, especially in collectivist educational experiences. In case of conflict in team productivity, students might resort to avoidance behavior or would rather work in isolation to reduce tension among people.

This behavioural inclination is similar to what was found by Ramli and Chong (2021), who discovered that Malaysian Gen Z students tend to avoid conflict in collaborative settings. But instead of seeing this as a failure of the program to orient the team towards teamwork, it could be that the program is designed in such a way that leadership development in this generation is more of a situational response rather than a situational reaction.

Under the Social Learning Theory hypothesis, leadership behaviours are determined by interaction with the environment as well as observed social experiences instead of a combination of personality dispositions. Accordingly, the comparably less strong influence of the personality traits in this study, may indicate that situational factors, team dynamics and institutional context have a more significant role in shaping leadership development among Malaysian Gen Z students.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, several strategic recommendations are proposed in order to enhance leadership development among Generation Z students in universities, especially in the northern region of Malaysia. The recommendations are aimed at addressing factors such as student engagement, leadership development, personality traits, and characteristics of Gen Z students.

To begin with, universities ought to adopt specific solutions that would not only improve academic but also non-academic engagement of students. The previous studies have clearly indicated that active engagement in co-curricular activities, student organizations, and community service has a significant impact on leadership development because these activities provide learners with chances of experiential learning and role-taking (Astin, 1999; Dugan and Komives, 2007). In the Malaysian context, the involvement of the students in campus based activities has been associated with the emergence of soft skills like communication, team work and leadership preparedness. In the context of the Social Learning Theory, these environments help students to acquire leadership behaviours by observing, interacting with, and practicing leadership behaviours. Thus, a campus culture that enhances active participation is a necessity in equipping students with leadership positions in the future.

Second, it is important to invest in the extensive and systematic approaches to leadership development. Studies have indicated that effective leadership programs must incorporate both theoretical and experiential learning, in terms of simulations, workshops, and project-based learning, to both develop and improve leadership competencies (Day, 2000; Komives et al., 2005). Nonetheless, since Generation Z students tend to have limited time and focus on the work-life balance, the flexibility of the program becomes crucial. Research has shown that flexible and modular program designs enhance student engagement and participation, especially amongst digitally oriented students (Seemiller and Grace, 2016). Therefore, leadership programs in universities should be structured and at the same time flexible to the schedules and learning styles of students.

Moreover, since the situational and contextual factors are often relevant to leadership development, the training programs should be focused on the adaptability, decision-making, and conflict resolution. This is in line with the Trait Activation Theory, which assumes that individual traits are manifested differently when considering the situational cues. Experience has demonstrated that experiential learning in various and demanding situations increases the capacity of the students to apply leadership skills effectively across situations (Kolb, 1984). Thus, the exposure to real life and dynamic leadership situations would help to build the confidence and competence of the students in leading diverse teams.

Moreover, universities ought to create powerful support networks to student leaders to make sure that leadership roles do not adversely affect their academic achievements or well being. Studies show that role strain and stress that student leaders experience can impact performance as well as mental health unless they are dealt with effectively (Kuh, 2009). Mentoring, counselling services and peer support networks can be used to assist the students to balance between leadership roles, academic and personal requirements.

With the phigital nature of Generation Z, which is a mix of digital and physical experiences, universities must also use digital technologies in the development of leaders. Research has shown that the online learning platforms, virtual simulations, and online collaboration tools can be used to improve the engagement and to provide flexible learning environments that are in line with the preferences of Gen Z (Prensky, 2001; Seemiller and Grace, 2016). These tools do not only help in developing digital competencies, but also assist in developing leadership skills based on interactive and self-paced learning.

Lastly, universities should have in place mechanisms of ongoing assessment and enhancement of leadership development programs. Continuous evaluation, student response, and a program refinement through data is essential to maintain relevance and effectiveness (Kirkpatrick, 1994). Ongoing assessment enables the institutions to keep pace with the changing student needs and varying learning conditions, thus maintaining the long-term effectiveness of leadership development programs.

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CONFLICT OF INTEREST

We certify that the article is the original work of the Authors and the Co-Authors. The article is not under consideration for publication elsewhere, nor has it been published before. This research/manuscript has not been submitted for publication, nor has it been published, either in whole or in part, anywhere else.

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