

The Relationship between Locus of Control and Decision-Making among Undergraduate Students

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ABSTRACT

The present study investigates the relationship between the locus of control and decision-making among undergraduate students. The research sample comprises 200 Cognitive Science students from the Universiti Malaysia Sarawak; it consists of an equal number of male and female students and first-year and final-year students. Two instruments were used to assess the participants: the Levenson Locus of Control Scale and the “How Good Is Your Decision-Making?” Scale. The findings reveal higher scores for male students in decision-making and internal locus of control, while females demonstrated higher external locus of control scores. A positive correlation was also observed between the internal locus of control and the effectiveness of decision-making processes. However, no significant difference was found in locus of control and decision-making abilities between first-year and final-year students. This indicates that these traits remain relatively stable across academic progression. The present study highlights the importance of nurturing an internal locus of control, especially in an academic setting, to enhance students’ decision-making abilities and overall psychological well-being. These findings offer insights into strategies that could be practical for reinforcing students’ internal locus of control while also enhancing their decision-making abilities.

Contribution/Originality: This study is among the few to examine the relationship between locus of control and decision-making among undergraduate students, with a focus on gender differences and academic year. The findings provide valuable insights into how different dimensions of locus of control shape decision-making processes within the higher education context.

1. Introduction

Locus of control is a fundamental concept in Julian Rotter’s social learning theory (Rotter, 1966), significantly influencing human behaviour and cognitive processes. It provides a

framework for understanding how individuals perceive the impact of their actions on their lives. Understanding how locus of control affects decision-making is vital, as it has been linked to various concepts that underscore its significance in human behaviour. Decision-making, defined as the process of recognising and selecting the most appropriate option from a range of alternatives to achieve a specific goal (Ahmed & Omotunde, 2012) is particularly influenced by locus of control. Its relevance extends across multiple domains, impacting financial choices, risk-taking, and mental health. Individuals possessing a strong internal locus of control may demonstrate more effective decision-making skills, the need to investigate the effect of locus of control.

Research shows risk behaviours and locus of control are significantly correlated. According to Kesavayuth et al. (2018), older women with higher score of their perceived locus of control scores are more willing to take financial risks. This suggests that there is a positive relationship between locus of control and the risk attitudes of older people, who are very different from younger people. Akter and Rahman (2018) propose that students with lower internal locus of control possibly making them more prone to bullying due to the greater influence of external opinions. Understanding these dynamics is particularly crucial in academic contexts, where a student's sense of control affects their performance, well-being, and decision-making abilities.

Extending these findings, it is unsurprising that locus of control has been recognised as a significant indicator of various life events, including mental health, personal relationships, and career outcomes. For example, Kesavayuth et al. (2020) found that dominant internal locus of control individuals often maintain better mental health and greater self-regulation. Likewise, Buddelmeyer and Powdthavee (2016) highlighted a correlation between overall happiness and internal locus of control. Conversely, those whose locus of control is external often struggle with trust and coping strategies. Similarly, Scott et al. (2010) noted that dominant external locus of control individuals are more prone to avoid confronting challenging situations, echoing earlier research by Lonergan and Maher (2000) on leadership performance.

Furthermore, research indicates that gender differences in the locus of control can influence labour market outcomes. For instance, Semykina and Linz (2007) discovered that locus of control and wages are positively correlated, suggesting that personality traits strongly influence women's earnings, while their impact on men's earnings is relatively minor and not always significant. Studies reveal nuanced patterns in health-related decision-making. For example, Fogel and Israel (2009) noted that males exhibit an internal locus of control when seeking health information. In contrast, females are more likely to attribute decisions to external influences. However, findings are mixed, as Rastegar et al. (2013) reported no major gender differences in internal locus of control, external locus of control, and task abilities, indicating that the relationship between locus of control and gender may not consistently translate into labour market differences.

Despite extensive research on decision-making and locus of control, a significant gap remains, particularly in understanding their specific relationship among undergraduate students. Although many studies have focused on particular decision-making approaches or styles (Akyürek & Guney, 2018; Sagone & Indiana, 2021), limited attention has been given to how locus of control influences overall decision-making abilities, especially in categorising decisions as good, medium, or bad. Understanding how locus of control affects the quality of students' decisions is crucial for developing effective strategies to enhance their academic success and personal outcomes. Evidence supports the benefits

from both internal and external locus of control. Nevertheless, the direct interplay between locus of control and decision-making in undergraduate education remains largely unexplored. While studies by [Mohamed et al. \(2018\)](#) have provided significant understanding of the implications of locus of control on their decision-making in nursing education, it would be interesting to further examine the relationship between these variables in undergraduate students from other academic disciplines.

Moreover, empirical evidence from [Anderson et al. \(2018\)](#) shows that the locus of control is not static; it evolves throughout an individual's life in response to various experiences. Generally, a greater internal locus of control tends to emerge in adults as they mature, peaking in middle age before potentially shifting again later in life ([Cain, 1994](#)). Factors such as career progression and personal challenges significantly influence this evolution. Furthermore, research indicates that educational exposure affects the locus of control. [Bedel \(2015\)](#) notes that first-year students may exhibit a higher external locus of control than final-year students, which aligns with the assertion that younger individuals often report a higher external locus of control ([Rotter, 1966](#)).

[Rotter \(1966\)](#) categorised locus of control into two types: internal and external. He proposed that individuals with an internal locus of control think they have the power to influence future outcomes through their actions, fostering independence and resilience. Conversely, those with a dominant external locus of control have a tendency to attribute their experiences to external factors, which may lead to feelings of weakness and dependence on significant others. Expanding on the model from [Rotter \(1966\)](#), [Levenson \(1973\)](#) introduced a three-dimensional locus of control model, distinguishing internal, powerful others, and chance dimensions. Those with a dominant internal locus of control perceive that their actions directly influence life outcomes, while those influenced by powerful others perceive external forces as primarily determining their fate. The chance dimension reflects a belief that luck and uncontrollable events significantly shape life experiences. This framework offers crucial insights into how differing perceptions of control can affect motivation and psychological well-being depending on the context. Given the substantial impact of these dimensions on behaviour, understanding how locus of control influences decision-making is essential.

1.1. Research objectives

The main goal of this study is to explore the relationship between locus of control and decision-making. The specific objectives are: 1) to examine the relationship between locus of control and decision-making; 2) to investigate gender differences in decision-making; 3) to assess gender differences in locus of control; 4) to determine whether students with a high internal locus of control exhibit significantly better decision-making abilities, and 5) to analyse the relationship between locus of control and decision-making based on students' year of study (first-year vs. final-year). This research investigates the connections between the dimensions of locus of control (internal, powerful others, chance) and decision-making (the ability to choose the most appropriate option). As much remains to be understood about this relationship, the research questions include: 1) How does locus of control influence decision-making? 2) Are there significant gender differences in decision-making? 3) Are there significant gender differences in locus of control? 4) Do students with a high internal locus of control exhibit better decision-making abilities? 5) And does the relationship between locus of control and decision-making vary among students based on their year of study?

2. Research Methods

2.1. Design

The study used a quantitative research approach, specifically a correlational design, to examine the relationship between the locus of control and decision-making among undergraduate students.

2.2. Participants

The study used stratified random sampling to select participants, ensuring that key subgroups within the population were adequately represented. A total of 200 undergraduate students from the Cognitive Sciences programme were included in the sample. The sample was evenly divided by gender (100 females and 100 males) and academic year (100 first-year and 100 final-year students). The decision to include 200 participants was based on achieving a sufficient sample size for statistical analysis, ensuring reliable results while maintaining manageable data collection (Field, 2024). This design ensures an unbiased comparison between gender and year of study, while allowing the findings to reflect these variables in relation to locus of control and decision-making. Participants' ages ranged from 19 to 25, with 23-year-olds making up the largest proportion of the sample (n=50, 25%).

Second-year students were excluded from the study to better isolate and explore the decision-making experiences of first-year students, who are engaging in their initial independent decision-making experiences, and final-year students, who have had multiple opportunities to make decisions throughout their academic journey. Second-year students were also excluded to avoid including a group still transitioning between early and advanced decision-making stages, which could potentially dilute the distinct differences in decision-making experiences that the study aimed to explore.

2.3. Materials

The instruments utilised in this study include the Levenson Locus of Control Scale (Levenson, 1973) and the How Good Is Your Decision-Making? (MindTools, 2020). Developed by psychologist Hanna Levenson, the locus of control scale assesses individuals' sense of control across three dimensions: Internal, Powerful Others, and Chance (Levenson, 1973). The questionnaire, used in its original form from the study by Reknes et al. (2019), consist of 24 items equally distributed among these three dimensions. Participants provide their response to the items on a Likert scale.

The Internal dimension score is determined by totalling the responses to items 1, 4, 5, 9, 18, 19, 21, and 23, then adding 24 to the overall sum. For the Powerful Others dimension, responses to items 3, 8, 11, 13, 15, 17, 20, and 22 are summed, adding 24 to the total. Lastly, for the Chance dimension, scores are derived from items 2, 6, 7, 10, 12, 14, 16, and 24, with 24 added to this total. Scores range from 0 to 48, when the internal scores are high, it indicates a strong internal locus of control, which can be advantageous for effective behaviour change. Conversely, higher scores on the Powerful Others or Chance scales reflect a stronger external locus of control. A high score on the Powerful Others scale reflects the belief that influential people control one's destiny. In contrast, a high score on the Chance scale signifies the belief that fate is dictated by luck or random occurrences (see Table 1).

Table 1: Levenson Locus of Control Scale Questionnaire

| Number | Questions | Locus of control |
|--------|---|------------------|
| 1 | Whether or not I get to be a leader depends mostly on my ability. | Internal |
| 2 | To a great extent, my life is controlled by accidental happenings. | Chance |
| 3 | I feel like what happens in my life is mostly determined by powerful people. | Powerful others |
| 4 | Whether or not I get into a car accident depends mostly on how good a driver I am. | Internal |
| 5 | When I make plans, I am almost certain to make them work. | Internal |
| 6 | Often, there is no chance of protecting my personal interests from bad luck | Chance |
| 7 | When I get what I want, it's usually because I'm lucky. | Chance |
| 8 | Although I might have good abilities, I will not be given leadership responsibility without appealing to those in positions of power. | Powerful others |
| 9 | How many friends I have depends on how nice a person I am. | Internal |
| 10 | I have often found that what is going to happen will happen. | Chance |
| 11 | My life is chiefly controlled by powerful others. | Powerful others |
| 12 | Whether or not I get into a car accident is mostly a matter of luck. | Chance |
| 13 | People like me have very little chance of protecting our personal interests when they conflict with those of strong-pressure groups. | Powerful others |
| 14 | It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune. | Chance |
| 15 | Getting what I want requires pleasing those people above me. | Powerful others |
| 16 | Whether or not I get to be a leader depends on whether I'm lucky enough to be in the right place at the right time. | Chance |
| 17 | If important people were to decide they didn't like me, I probably wouldn't make many friends. | Powerful others |
| 18 | I can pretty much determine what will happen in my life. | Internal |

| | | |
|----|---|-----------------|
| 19 | I am usually able to protect my personal interests. | Internal |
| 20 | Whether or not I get into a car accident depends mostly on the other driver. | Powerful others |
| 21 | When I get what I want, it's usually because I worked hard for it. | Internal |
| 22 | In order to have my plans work, I make sure that they fit in with the desires of people who have power over me. | Powerful others |
| 23 | My life is determined by my own actions | Internal |
| 24 | It's chiefly a matter of fate whether or not I have a few friends or many friends. | Chance |

Source: [Levenson \(1973\)](#)

The second tool, the How Good Is Your Decision-Making Scale, was created by [MindTools \(2020\)](#) from Emerald Works Limited to assess individuals' decision-making abilities, which are crucial in both personal and professional settings. This particular scale was chosen because it categorises participants' scores into distinct types of decision-making abilities, providing clear interpretations of their strengths and areas for improvement. It consists of 18 questions, each targeting specific stages of decision-making, and participants respond using a Likert scale that ranges from "Not at All" to "Very Often". The questions address six key stages of the decision-making process: Establishing a Positive Decision-Making Environment, Generating Potential Solutions, Evaluating Alternatives, Deciding, Checking the Decision, and Communicating and Implementing.

Scores on this scale range from 18 to 90, with each score falling into a specific category that interprets the individual's decision-making abilities. A score of 18 to 42 indicates underdeveloped decision-making skills, where decisions often rely heavily on luck or instinct. A score of 43 to 66 reflects a competent decision-making process with potential for initiative-taking improvement. Finally, a score of 67 to 90 signifies a solid and well-rounded approach to decision-making (refer to [Table 2](#)).

Table 2: How Good Is Your Decision-Making Scale Questionnaire

| Number | Questions | Type of decision-making |
|--------|---|---|
| 1 | I evaluate the risks associated with each alternative before making a decision. | Evaluating Alternatives |
| 2 | After I make a decision, it's final - because I know my process is strong. | Checking the Decision |
| 3 | I try to determine the real issue before starting a decision-making process. | Establishing a Positive Decision-Making Environment |
| 4 | I rely on my own experience to find potential solutions to a problem. | Generating Potential Solutions |

| | | |
|----|---|---|
| 5 | I tend to have a strong “gut instinct” about problems, and I rely on it in decision-making. | Deciding |
| 6 | I am sometimes surprised by the actual consequences of my decisions. | Evaluating Alternatives |
| 7 | I use a well-defined process to structure my decisions. | Establishing a Positive Decision-Making Environment |
| 8 | I think that involving many stakeholders to generate solutions can make the process more complicated than it needs to be. | Generating Potential Solutions |
| 9 | If I have doubts about my decision, I go back and recheck my assumptions and my process. | Checking the Decision |
| 10 | I take the time needed to choose the best decision-making tool for each specific decision. | Deciding |
| 11 | I consider a variety of potential solutions before I make my decision. | Generating Potential Solutions |
| 12 | Before I communicate my decision, I create an implementation plan. | Communicating and implementing |
| 13 | In a group decision-making process, I tend to support my friends’ proposals and try to find ways to make them work. | Establishing a Positive Decision-Making Environment |
| 14 | When communicating my decision, I include my rationale and justification. | Communicating and implementing |
| 15 | Some of the options I’ve chosen have been much more difficult to implement than I had expected. | Evaluating Alternatives |
| 16 | I prefer to make decisions on my own and then let other people know what I’ve decided. | Establishing a Positive Decision-Making Environment |
| 17 | I determine the factors most important to the decision and use those factors to evaluate my choices. | Deciding |
| 18 | I emphasise how confident I am in my decision as a way to gain support for my plans. | Communicating and implementing |

Source: [MindTools \(2020\)](#)

Both instruments employed in this study were validated by a field expert and subjected to a pilot test. Each of the two questionnaires achieved a Cronbach’s Alpha value of 0.900, indicating excellent internal consistency.

2.4. Procedure

Data were collected using a Google Form and distributed via social media platforms such as WhatsApp and Instagram. This method was chosen for its convenience, allowing participants to complete the questionnaires at their own pace and from any location. To ensure inclusivity, the questionnaire was written in English to facilitate comprehension among students from diverse backgrounds. Participants were informed that the survey would take approximately 10 to 15 minutes.

Participation was voluntary, and ethical approval was obtained for this study. All participants provided consent by submitting their completed Google Forms. As the research was conducted online, participants were informed that they could withdraw at any time, before, during and after the participations, without any consequences.

To protect participants' identities, the Google Form was configured not to collect Gmail addresses, ensuring anonymity; respondents were identified only as undergraduate students of a local higher institution. They were also encouraged to share the survey link within their social networks to maximise outreach.

Participants were provided with the researcher's contact information and invited to seek clarification or address any concerns related to the study before and after the data collection period. The questionnaire underwent pilot testing and was refined based on feedback to ensure clarity and effectiveness. Additionally, demographic information was collected to facilitate analysis across different student profiles. All data were stored securely and managed strictly to uphold participant privacy.

Data collected were analysed using the Statistical Package for the Social Sciences (SPSS) software. Descriptive statistics were employed to summarise the demographic data. To address the research questions, Pearson correlation analysis was conducted to explore the relationship between locus of control and decision making. Independent t-test were used to compare gender differences in locus of control and decision making. The results were interpreted to determine the statistical relationship.

3. Results

The findings of this study reveal significant patterns concerning gender differences and the relationships between locus of control and decision-making abilities. Each research question is discussed below, accompanied by relevant statistical analyses.

Research question 1 studies the relationship between locus of control and decision-making. The Pearson correlation analysis demonstrated significant relationships among internal locus of control, powerful others, chance, and decision-making abilities. The correlation between internal locus of control and decision-making was moderate and positive ($r = 0.507$, $p < 0.001$), with the mean score for internal locus of control at 40.86 (SD = 4.801) and the mean decision-making score at 55.89 (SD = 5.210). Additionally, the internal locus of control exhibited moderate positive correlations with powerful others ($r = 0.402$, $p < 0.001$) and chance ($r = 0.365$, $p < 0.001$). These results indicate that individuals who possess a stronger internal locus of control tend to perform better in decision-making tasks and attribute outcomes to powerful others and chance.

Research question 2 focuses on gender differences in decision-making abilities. The independent samples *t*-test indicated a significant difference in decision-making scores ($t(198) = 1.663, p = 0.049$), with male students ($N = 100, M = 56.50, SD = 5.913$) scoring higher than female students ($N = 100, M = 55.28, SD = 4.342$). Levene's test for equality of variances was significant ($F = 9.058, p = 0.003$), supporting the assumption of equal variances. These results indicate that males may exhibit higher decision-making abilities than females.

Research question 3 investigates gender differences in the locus of control. Independent samples *t*-tests were conducted for each dimension. For the Internal Locus of Control dimension, the *t*-test indicated a significant difference ($t(198) = 3.839, p < 0.001$), with male students ($N = 100, M = 42.19, SD = 4.679$) scoring higher than female students ($N = 100, M = 39.52, SD = 4.565$). In the Powerful Others dimension, the *t*-test also showed a significant difference ($t(198) = 2.181, p = 0.030$), with males ($N = 100, M = 22.51, SD = 11.536$) scoring higher than females ($N = 100, M = 20.38, SD = 8.955$). However, for the Chance dimension, the *t*-test revealed no significant difference ($t(198) = -0.271, p = 0.787$), as male ($N = 100, M = 22.74, SD = 10.848$) and female students ($N = 100, M = 22.88, SD = 9.355$) scored similarly. These results suggest gender differences vary across different locus of control dimensions.

Research question 4 investigates whether students with a high internal locus of control exhibit significantly better decision-making abilities. A Pearson correlation analysis revealed a significant positive relationship between internal locus of control and decision-making abilities ($r = 0.507, p < 0.001$). Descriptive statistics indicate that the mean score for internal locus of control was 40.86 ($SD = 4.801$) among 200 participants, while the mean decision-making score was 55.89 ($SD = 5.210$). These results suggest that students with higher internal locus of control scores tend to demonstrate significantly better decision-making abilities, indicating an association between a high internal locus of control and improved decision-making performance.

Research question 5 examines the relationship between locus of control and decision-making by year of study. The independent samples *t*-test showed no significant differences in decision-making abilities and locus of control by year of study. For decision-making scores, the *t*-test results showed no significant difference ($t(198) = -1.415, p = 0.159$), with first-year students ($N = 100, M = 55.37, SD = 5.161$) and final-year students ($N = 100, M = 56.41, SD = 5.232$) having similar scores. For the internal locus of control, the *t*-test results indicated no significant difference ($t(198) = -0.456, p = 0.649$), with first-year students scoring 40.70 ($SD = 5.329$) compared to final-year students who scored 41.01 ($SD = 4.230$). Additionally, the *t*-test results for the Powerful Others dimension showed no significant difference ($t(198) = -0.880, p = 0.380$), and for the Chance dimension, the results were also non-significant ($t(198) = -1.346, p = 0.180$). These findings suggest that locus of control and decision-making abilities do not significantly differ between first-year and final-year students.

4. Discussion

Several studies emphasise the significant role of locus of control in shaping students' decision-making abilities. For instance, [Bodill and Roberts \(2017\)](#) showed that students with a strong internal locus of control exhibit greater self-efficacy, leading to more effective academic decisions. Similarly, [Peixoto et al. \(2021\)](#) found that an internal locus of control enhances motivation and decision-making, improving educational outcomes.

Leung et al. (2015) also observed that Chinese students with an internal locus of control are better equipped to manage academic stress, demonstrating superior decision-making skills.

While these studies affirm the positive influence of an internal locus of control, it is essential to consider the broader context. Millar and Shevlin (2007) highlighted that individuals with an external locus of control often link their outcomes to external forces, such as fate or luck, in contrast to those with an internal locus of control, who have confidence in their efforts and abilities (Santokhie & Lipps, 2020). Furthermore, Saxena (2016) and Hallo et al. (2020) underscore the importance of considering cultural and social contexts when examining how locus of control shapes decision-making styles and behaviours.

The study reveals significant gender differences in decision-making, with males consistently achieving higher scores than females. Societal expectations often encourage males to assert their independence and leadership, fostering greater decision-making autonomy. In contrast, societal norms typically lead females to seek external advice and pursue consensus, significantly influencing their decision-making processes. Gujjar and Aijaz (2014) support this view, noting that many male students demonstrate confidence in making independent decisions, while females often seek validation from trusted individuals due to a perceived lack of self-confidence.

Dawson (2023) further highlights that women are frequently perceived as having less influence than men in organisational contexts despite comparable work experiences. Such perceptions may stem from entrenched stereotypes that depict women as less competent decision-makers (Tabassum & Nayak, 2021). Consequently, men are often granted greater authority and are invited to contribute more frequently than their female counterparts (Ridgeway & Bourg, 2004). This pattern may also reflect personality traits, as some prefer seeking advice before making decisions, while others favour autonomy. Additionally, societal roles and expectations shape these tendencies, with men often stereotyped as logical and independent and women as intuitive and focused on interpersonal relationships (Gray, 1992).

The study identifies a significant gender divide in locus of control, with males scoring higher on internal control measures. At the same time, females tend to rely more on external factors, particularly in the 'Powerful Others' and 'Chance' dimensions. Zaidi and Mohsin (2013) similarly found that men exhibit a stronger internal locus of control than women, enhancing their confidence in making independent decisions. In contrast, societal expectations often lead females to seek external validation and collaboration, potentially limiting their decision-making autonomy. Gujjar and Aijaz (2014) highlight the considerable influence of gender on internal and external locus of control, emphasising the need for strategies that empower female students to strengthen their internal locus of control, which could improve their decision-making abilities.

Additionally, research suggests that men typically engage in riskier and more impulsive behaviours than women (Cross et al., 2011), resulting in greater autonomy in decision-making. Dawson (2023) found that females are statistically less inclined to take risks than their male counterparts. This reliance on others for decision-making support is often linked to gender norms, which, as Siddiquah (2019) explains, shape individuals' orientations towards external factors. Understanding these dynamics highlights the locus of control's educational and psychological implications, suggesting that fostering a strong

internal locus of control could enhance decision-making skills and academic outcomes. Educators should, therefore, consider strategies to help students cultivate a more robust internal locus of control throughout their educational journey.

The findings reveal a significant correlation indicating that individuals with a dominant internal locus of control demonstrate higher decision-making scores. Research shows that those with an internal locus of control typically trust in their capacity to influence and manage their surroundings (Verma & Shah, 2017). Klein and Warnet (2000) emphasise the integral role of locus of control in shaping life experiences. Moreover, consistent studies indicate that individuals with a strong internal locus of control often exhibit traits associated with well-being and positive mental health outcomes (Ng et al., 2006). Kesavayuth et al. (2020) further support this by finding that individuals with a dominant internal locus of control experience better mental health, correlating positively with their ability to make sound decisions.

This aligns with the research of Kirdök and Harman (2018), which indicates that students with a predominant external locus of control face more significant challenges in decision-making due to inconsistent or insufficient information. Consequently, those who possess a strong internal locus of control are known for their initiative-taking decision-making skills, demonstrating self-assurance and independence. The consistent results across numerous studies and cultural contexts suggest that an internal locus of control enhances personal and academic efficacy and significantly improves decision-making outcomes (Verma & Shah, 2017).

Interestingly, the results indicated no significant differences in locus of control and decision-making between first-year and final-year students. This lack of difference may stem from several factors. Firstly, the developmental qualities of decision-making and locus of control skills may have been established before university and remained stable throughout the undergraduate years. Students' educational backgrounds, such as attending boarding schools or completing diplomas, may have already cultivated better locus of control and decision-making skills. Additionally, the relatively narrow age range of 19 to 25 years among undergraduates reduces the likelihood of observing significant changes in these traits over time.

Furthermore, the academic environment provides similar experiences and challenges for both first-year and final-year students, leading to a consistent development of locus of control and decision-making skills. The pre-existing traits of students who choose to attend university may include a higher internal locus of control and practical decision-making skills, thereby reducing variability. Moreover, students' extracurricular activities and life experiences contribute to developing locus of control and decision-making abilities, further blurring distinctions between these groups.

In summary, this study concludes that locus of control significantly influences decision-making. Internal locus of control individuals demonstrate more vital decision-making abilities due to their proactive, responsible, and informed approach to decisions and problem-solving. Conversely, people who have an external locus of control often struggle to make decisions, often adopting a reactive and passive mindset driven by beliefs in external factors. To optimise student outcomes, universities should consider reducing the emphasis on group assignments while increasing individual tasks. Although group assignments foster communication skills, they can also lead to free riding, which diminishes individual responsibility and independence. By increasing individual tasks,

students can develop their decision-making skills autonomously. Partner assignments may offer a balanced approach, allowing for collaboration while ensuring active participation from each student. By strengthening the internal locus of control, educators can empower students to make more effective decisions and navigate challenges with optimism and resilience. Students typically exhibit better decision-making abilities, well-developed critical thinking skills, excellent knowledge, and relevant experience. Therefore, educational interventions should enhance students' internal locus of control to optimise their decision-making capabilities and foster a sense of hope for achieving positive outcomes.

However, it is crucial to recognise certain limitations of this study. The use on self-reported measures may introduce bias, and the sample was limited to a specific demographic, which may not represent all student populations. Future research should address these limitations by incorporating diverse samples and employing mixed methods approaches to gain deeper insights. Additionally, it is recommended to consider personality as an independent factor in future studies, as different personality traits can significantly influence decision-making processes and outcomes. Understanding how personality interacts with locus of control may provide a more nuanced perspective on decision-making abilities. Further research could explore interdisciplinary approaches, integrating insights from psychology and sociology to enhance our understanding of these dynamics. By expanding the scope of investigation to include these aspects, researchers can develop more effective educational strategies tailored to diverse student needs, ultimately promoting better academic and personal decision-making outcomes.

Ethics Approval and Consent to Participate

This research adhered to the ethical guidelines outlined by the American Psychological Association (APA). Approval for conducting the study was obtained from the Ministry of Education and the Sarawak State Education Department. Additionally, permission to collect data was granted by the school. Informed consent was obtained from all participants, and participation was voluntary. Consent was considered given upon submission of the study form. Participants were informed of their right to withdraw from the study at any time without consequence.

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Conflict of Interest

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