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STUDENT DECISION-MAKING PROCESSES AS EVALUATED BY STUDENTS, ADMINISTRATORS, AND LECTURERS

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ABSTRACT

Modern society is undergoing numerous rapid changes, which include both opportunities and challenges for individuals of all ages. In this environment, young people, particularly students, are frequently confronted with situations that need them to choose and make decisions. The primary goal of this study was to (i) investigate variations in students' attitudes toward decision-making processes based on gender and school year. (ii) Students, administrators, and lecturers assess the students' own steps in putting decision-making into practice. A sample of 697 students and 120 administrators and lecturers were chosen from six school universities using the random sampling technique. Our research yielded the following results: (1) There is a statistically significant difference in male and female attitudes toward decision-making; and (2) there is a statistically significant difference in freshmen's and seniors' attitudes toward decision-making. Steps in student decision-making include: First, pupils decide to identify the issue. Next, they select the optimal solution. Step three is to make a list of potential possibilities. In the next stage, they collect the necessary information about the problem. Finally, students analyze each plan. This study implies that students, administrators, and lecturers rate students' decision-making processes equally.

Contribution/Originality: This study provides administrators and academics in higher education with a platform for designing particular rules for university training programs that will enhance the decision-making skills of university students. Moreover, the research findings contribute to the theoretical underpinning of the decision-making abilities of Vietnamese university students.

1. INTRODUCTION

Decision-making is a mental process that seeks to pick the best possible options that are available to individuals in light of their current condition, which may be related to work or relationships with others, in order to accomplish the intended goals (Hammond, Keeney, & Raiffa, 2015). Additionally, decision-making is a process in which a preferable option or course of action is selected from a group of possibilities based on predetermined criteria or tactics. It is the process of evaluating alternative courses of action, comparing them, and choosing one (Wang & Ruhe, 2007). Decision-making abilities are critical, with academics focusing on how to make judgments in the face of unanticipated occurrences and conflicting scenarios, as well as the ability to discern the logic of individual decisions (Nagib, 2002).

Decisions of this sort can range from being simple to being complex, depending on the nature and complexity of the circumstance, as well as the amount of problems it presents (Snowden & Boone, 2007). Decision-making is also an important component of an individual's personal and professional life, therefore it should not be susceptible to coincidence or isolated from the reality of its execution (Hammond et al., 2015). When it comes to decision-making, it is the most difficult task that a person will face in his or her lifetime. A process that is described as the apparent option between two or more alternatives (Rimawi & ALMasri, 2021).

Decision-making skills are among the most critical for students to have (Ha, 2012b). Decision-making skill is the ability to select and implement the best solution for oneself from a variety of options for solving a problem (Demirbaş-Nemli, 2018). The decision-making process refines and develops decision-making skills. To begin, in decision-making, one must determine whether a problem or an opportunity exists (Hayee, Raana, Haider, & Sajid, 2021; Kinicki, Williams, Scott-Ladd, & Perry, 2011; Wang & Ruhe, 2007), then decision makers should consider alternatives. Next, he or she should weigh the possibilities and choose one. Alternatives should be examined not just on the basis of cost and quality, but also on the basis of their ethical viability and efficacy (Derto, 1997; Kinicki et al., 2011). Finally, decision makers should implement and assess the solution that has been selected. To ensure implementation's effectiveness, two factors must be considered: meticulous planning and sensitivity to individuals impacted. When analyzing a decision, if the activity does not work, one can give it more time, make minor adjustments, attempt another alternative, or start over again (Sullivan & Decker, 1998).

Education is more than just completing classes; it is also a preparation for building personal skills, such as problem-solving and decision-making, which are all necessary for professional success (Bellack & O'Neil, 2000). Those conducted by Ersoy, Ogurlu, and Aydin (2019) and Fan (2016) have demonstrated that it is critical to teach learners the skill of decision-making and that the process of improving decision-making among learners has a positive impact on improving their academic achievement and development of higher thinking skills. Good decision-making skills will help pupils to achieve high levels of academic achievement and preserve life stability (Ha, 2012a).

Decision-making is becoming increasingly important in today's times, in the era of globalization, in an era of fast changing markets, and ever-increasing competition (Walter, 2010). Students who lack decision-making skills may exhibit incorrect attitudes and behaviors, resulting in negative consequences for themselves, their families, and society (Ha, 2012b). These university students must shoulder the responsibility of choosing decisions that will either help them succeed and cope with university life or make mistakes that will cause them to fail in their academic endeavors (Al-Aajam, 2018; Simić, Kovačević, Svirčević, & Simić, 2017).

Decision-making skills are regarded as one of the essential skills of the twenty-first century (Nguyen, Van Bui, Thi, Thi, & Chi, 2021). However, many current graduates lack a variety of skills, including communications skills, creativity, analytical and critical thinking skills, problem-solving skills, and decision-making skills (Pitan & Adedeji, 2012; Ross & Cornish, 2003). In Vietnam, according to a study by Ong et al. (2014) up to 83 percent of students who have previously graduated are judged to be weak in soft skills; 37% of students are unable to obtain work due to a lack of required skills. According to a Ministry of Labor-Invalids and Social Affairs investigation, more than 13% of students who complete their undergraduate programs each year require re-education or additional skills training; nearly 40% of students require additional workplace support, and 41% require extended time to adjust to new workplaces (Nhan, Thanh, & Linh, 2018). Zaghair and Mohamad (2019) study on a sample consisting of 400 male and female students from Alyarmouk University revealed differences in decision-making skills in favor of females due owing to gender characteristics. As a result, higher education institutions must place a premium on preparing future graduates to be more adaptive to community requirements, as well as on matching graduates' capabilities to skills for their future professions (Neo & Neo, 2001).

To assist students in acquiring a broad variety of skills after graduation, particularly decision-making skills. Students' decision-making skills may be developed by providing them with an understanding of the fundamental phases of the decision-making process. Then, chances for students to use their knowledge in real-world

circumstances such as creating objectives, managing schedules, applying and communicating, and eliminating societal ills. Students' decision-making skills enable them to take charge of their own life, create healthy habits, and support their academic goals, which is especially important in today's educational system.

In Vietnam, research on decision-making skills is scarce, with the majority of studies concentrating on students in primary and secondary schools. Only a few studies have looked at abilities in college students and specific attitudes toward decision-making on the part of the students. Following a review of the literature, we discuss the study's objective. One of the primary objectives of this study was to investigate variations in students' attitudes regarding decision-making according to gender and year of study. In addition, we compared the decision-making processes of students with those of administrators and teachers when it came time to make a decision making.

2. METHODS

2.1. Participants

The survey sample consisted of teachers, administrators, and students from six Vietnamese universities who had consented to participate in the study. We obtained written informed permission from all subjects: Six hundred and ninety-seven undergraduate students participated in this study included 500 females accounting 71.7% (n = 500) and 197 males accounting 28.3% (n = 197). Participants were selected randomly from six different Universities in Vietnam, namely 19.8% (n= 138) from the Hanoi National University of Education, 17.1% (n=119) from the National University of Civil Engineering, 17.2% (n=120) from the Foreign Trade University, 14.5% (n=102) from the Vinh University, 16.4% (n=114) from the Hong Duc University, and 15% (n=104) from the Hue University. The sample consisted of 389 females (81.4%) and 89 males (18.6%). The education level for freshmen is 351 (50.4%) and for seniors is 346 (49.6%). There were also 120 administrators and lecturers, with 20 selected from each school, as shows in Table 1.

Table 1. Socio-demographic characteristics of samples.

Variable		Category	Frequency (%)
Students	Gender	Male Female	197 (28.3) 500 (71.7)
	Education level	Freshman Senior	351 (50.4) 346 (49.6)
	University	Hanoi National University of Education National University of Civil Engineering Foreign Trade University Vinh University Hong Duc University Hue University	138(19.8) 119 (17.1) 120 (17.2) 102 (14.5) 114 (16.4) 104 (15)
Administrators and lecturers	University	Hanoi National University of Education National University of Civil Engineering Foreign Trade University Vinh University Hong Duc University Hue University	120 (100)

2.2. Measurement

The questionnaire used in this study was prepared by the study's authors of the study. The purpose of this study was to ascertain the participants' attitudes and decision-making processes about decision-making skills. This questionnaire was intended for university students, faculty, and administrators. This self-report questionnaire had thirteen items that represented various attitudes and decision-making factors in the decision-making process. The creation of this questionnaire involved the following stages: The first part involved the creation of an open-ended questionnaire on decision-making skills based on a review of the study's literature. Then, to gather data for the

formal questionnaire, a pilot survey was carried out with 20 students. In the second step, a formal questionnaire was created with related topics to assess participants' attitudes and decision-making skills about decision-making processes. The Statistical Package for Social Sciences (SPSS) version 20 was used for data analysis.

The encryption procedure was as follows: The questions tested students' attitudes about decision-making and were graded on a five-point scale: 1 = Seldom, 2 = Occasionally, 3 = Often, 4 = Usually, 5 = Always. To convert discrete data to rankings, the distance value was calculated as (Maximum – Minimum)/n = (5-1)/5 = 0.8 (Malhotra, Hall, Shaw, & Oppenheim, 2006). Questions on how students, administrators, and teachers were evaluated when students made decisions were answered on a 6-point scale: 1 = Regularly, 2 = Quite often, 3 = Sometimes, 4 = Seldom, 5 = Never, 6 = No answer.

2.3. Procedure

In order to take part in the study, volunteers were asked to complete and sign written informed consent forms. This form defined their rights throughout their participation in the research by stating that (i) their responses would be used solely for scientific purposes and that information would be made anonymously public; (ii) they have the right to withdraw from the survey at any time during the research. Participants must first fill out General Information forms, which asked for information such as their gender, school, and grade level, before they may begin. Following that, participants were advised to double-check that they had thoroughly understood the questionnaire Following that, participants were instructed to fill up the questionnaire and understand how it was assessed completely. The pupils were assured that their responses would be kept anonymous, and there were no correct or incorrect responses. All they have to do was to respond with their own views and experiences.

3. RESULTS

As a first step, compare the views of male and female students were compared when it came to decision-making skills. Table 2 shows the discrepancies between male and female undergraduates' perceptions of decision-making ability.

Table 2. Gender differences in the undergraduates' attitudes towards decision making skill.

Options	Gender		p
	Male	Female	
Decisions based on personal experience			0.897
M	4.10	4.09	
SD	0.99	0.95	
Intuitive decision			0.797
M	2.96	2.99	
SD	1.09	1.08	
Decisions based on personal preferences			0.113
M	3.09	3.25	
SD	1.32	1.16	
Decide on the advice of others			<0.005
M	2.81	3.04	
SD	1.19	0.94	
Consider finding the best solution			0.371
M	3.97	4.06	
SD	1.227	1.05	
Analyze the problem, choose the most suitable solution			0.171
M	3.99	4.12	
SD	1.15	1.08	
Choose the option that family members have requested.			0.185
M	2.98	3.10	
SD	1.11	1.03	
Don't consider, deciding based on your personal preferences.			<0.005
M	2.15	1.13	
SD	1.97	0.92	

Table 2 shows that there is a difference in the views of male and female students about decision-making. The decision-making abilities of male and female students differed ($p < 0.005$). Female students were more inclined than male students (M = 2.81; SD = 1.19) to base their *decisions on the advice of others* (M = 3.04; SD = 0.94). Similarly, there is a difference between male and female students when they *don't consider, deciding based on your personal preferences* ($p < 0.005$). Male students (M = 2.15, SD = 1.13) tend to solve the problem, making *decisions based on personal preferences* is higher than female students (M = 1.97, SD = 0.92). Male and female students were evaluated similarly when making *decisions based on personal experience* (Females: M = 4.09, SD = 0.95; Males: M = 4.10, SD = 0.99) as well as *intuitive decisions* (Male: M= 2.96, SD= 1.09; Female: M= 2.99; SD= 1.08).

Females scored higher on positive items. Furthermore, when compared to male students (M = 3.09, SD = 1.32), female students' *decisions based on personal preferences* more (M = 3.25, SD = 1.16). Female students (M= 4.12; 1.08) outperformed male students (M= 3.99; SD= 1.15) to *analyze the problem, choose the most suitable solution.* Furthermore, female students (M= 3.10; SD=1.03) were more likely than male students (M= 2.98, SD= 1.11) to *choose the alternative recommended by family member*s. Female students were more likely to make *decisions based on other people's suggestions*" (M = 3.04; SD = 0.94) than male students (M = 2.81; SD = 1.19).

On the contrary, the options appear to be more negative, with male students scoring higher than female students. The results of this table demonstrate that male students (M = 4.10, SD = 0.99) scored higher than female students (M = 4.09, SD = 0.95) while making *decisions based on personal experience.* Similarly, male students (M = 2.15, SD = 1.13) tend to solve the problem don't consider, *decision based on personal preferences* do more frequently than female students (M = 1.97, SD = 0.92).

Next, differences between freshman's and senior's attitudes towards decision-making skills were measured. Table 3 indicates the difference between freshmen's and seniors' attitudes toward decision-making skills.

Table 3. The difference between freshmen's and seniors' attitudes towards decision-making skills.

Options	School Year		p
	Freshman	Senior	
Decisions based on personal experience			0.175
M	4.04	4.14	
SD	0.96	0.95	
Intuitive decision			0.864
M	2.97	2.99	
SD	1.07	1.09	
Decisions based on personal preferences			< 0.001
M	3.36	3.04	
SD	1.13	1.27	
Decide on the advice of others			0.171
M	3.03	2.92	
SD	1.05	0.99	
Consider finding the best solution			0.277
M	4.08	3.99	
SD	1.05	1.16	
Analyze the problem, choose the most suitable solution			0.670
M	4.07	4.10	
SD	1.13	1.06	
Choose the option that family members have requested.			0.306
M	3.11	3.02	
SD	1.03	1.08	
Don't consider, deciding based on your personal preferences.			0.729
M	2.01	2.03	
SD	0.93	1.05	

There was a relatively little variation in scores expressing their attitudes toward decision-making abilities for the decision-making categories. Both freshmen and seniors occasionally make "Intuitive decisions" (freshman: M =

2.97, SD = 1.07; seniors: M = 2. 99, SD = 1.09); and *don't consider, deciding based on your personal preferences* (freshman: M = 2.01, SD = 0.93; senior: M = 2.03, SD = 1.05).

Additionally, when making decisions, freshman students (M= 3.03; SD= 0.92) selected *decide on the advice of others* more frequently than seniors' students (M= 2.92; SD= 0.99).

Notably, freshmen students (M= 4.14; SD= 0.95) made more *decisions based on personal preferences* than seniors' students (M= 4.04; SD= 0.96). Similar, freshmen students (M= 4.10; SD= 1.06) made more decisions when they analyze *the problem, choose the most suitable solution* than seniors' students (M=4.07; SD= 1.13). However, freshmen students (M= 4.08; SD= 1.05) *consider finding the best solution* than seniors' students (M= 3.99; SD= 1.16).

A statistically significant difference was found in *decisions based on personal preferences* ($p < 0.001$) in the attitudes of freshmen and final-year students. Freshmen students (M= 3.03; SD= 1.05) scored higher than seniors' students (M= 2.92; SD= 0.99).

Table 4. Students, administrators, and lecturers assess students' decision-making processes.

Variable	Level					
	Regularly n (%)	Quite often n (%)	Sometimes n (%)	Seldom n (%)	Never n (%)	No answer n (%)
-Identify the problem						
Administrators and lecturers	33 (27.5)	66 (55)	13 (10.8)	2 (1.67)	1 (0.83)	5 (4.17)
Students	392 (56.2)	213 (30.5)	64 (9.18)	6 (0.86)	1 (0.14)	21 (3.01)
-Collect the necessary information about the problem.						
Administrators and lecturers	18 (15)	37 (30.8)	52 (43.3)	7 (5.83)	1 (0.83)	5 (4.17)
Students	176 (25.2)	294 (42.1)	169 (24.2)	27 (3.87)	2 (0.28)	29 (4.16)
-Make a list of potential possibilities.						
Administrators and lecturers	19 (15.8)	44 (36.7)	43 (35.8)	8 (6.67)	1 (0.83)	5 (4.17)
Students	189 (27.1)	296 (42.5)	162 (23.2)	27 (3.87)	3 (0.43)	20 (2.87)
-Analysis of each plan						
Administrators and lecturers	16 (13.3)	48 (40)	40 (33.3)	5 (4.17)	2 (1.67)	9 (7.5)
Students	190 (27.2)	225 (32.1)	194 (27.8)	37 (5.31)	8 (1.15)	43 (6.17)
-Select the optimal solution						
Administrators and lecturers	29 (24.17)	65 (54.1)	17 (14.1)	6 (5.0)	0 (0)	3 (2.5)
Students	263 (37.3)	300 (43.4)	82 (11.8)	20 (2.87)	1 (0.14)	31 (4.45)

According to the results in Table 4, students go through five processes in order to reach a decision to solve an issue; however, each student's level of utilization of the steps varied. According to administrators and lecturers, the most frequently used step by students was *identify the problem* (82.5% of managers and lecturers choose it regularly and quite often). The second step was *select the optimal solution* (administrators and lecturers rate it " regularly" at 24.2% and "quite often" at 54.2 %). The third step was *make a list of potential possibilities* (administrators and lecturers rate it " regularly" at 15.8% % and "quite often" at 36.7 %).

This conclusion reflects the reality of students today because when students are presented with a situation for which they must make a decision, they must always precisely define the problem and determine the best solution in pursuit of predetermined aims. According to manager and lecturer evaluations, the *step analyzes each plan* is rarely used by students and is scored the lowest (administrators and lecturers rate it "regularly" at 13.3 % and "quite often" at 40% %). The step *collects the necessary information about the problem* is ranked four (administrators and lecturers rate it "regularly" at 15% and "quite often" at 30.8 %). According to administrators and instructors, students seldom use these two procedures to their decision-making, which is a student restriction. Because students lack understanding about the problem and do not examine the merits and drawbacks of each possibility, it is difficult to discover the optimal solution, which quickly leads to difficulties and erroneous decisions. This provided schools with a solid base to consider when designing instructional content for students.

The most frequently used step by students was to *identify the problem* (86.8 % of students choose it regularly and quite often). The second step was to *select the optimal solution* (students rate it " regularly" at 37.3 % and "quite often" at 43.3 %). The third step was to *make a list of potential possibilities* (students rate it " regularly" at 27.1 % and "quite often" at 42.5 %).

The step *collected the necessary information about the problem* and was ranked fourth (students rate it "regularly" at 25.2% and "quite often" at 42.1 %). Finally, 59.3 % of students indicated that they would *analyze each plan* a response that students rarely apply when making decision-making. As a result, the majority of students followed the steps completely while making selections. We discovered that assessment methodologies are comparable when we compared the study findings of students, administrators, and instructors. This research demonstrated once again that the fact that students' decision-making abilities are objective gives a good foundation for educating students' decision-making skills.

4. DISCUSSION

This cross-sectional study examined the variations in participants' attitudes toward decision-making skills by gender and academic year. Students, administrators, and lecturers evaluated decision-making skills in resolving their students' problems.

This survey produced some extraordinary results: (1) There was a statistically significant difference in male and female attitudes toward decision-making, and (2) there was a statistically significant difference in freshmen's and seniors' attitudes toward decision-making. First, in the decision-making process, students chose to identify the problem. The second step was to select the optimal solution. The third step was to make a list of potential possibilities. The next step was to collect the necessary information about the problem. Finally, students indicated that they would analyze each plan. When faced with a decision-making issue, students, administrators, and lecturers all give the students' decision-making process the same rating.

First, while investigating gender differences in students' attitudes toward decision-making skills, our findings show that females in this poll were more inclined than males to make decisions more carefully and consider more regularly. Gender differences are often a contentious subject to address, yet, in this study, in particular, this difference was observed. This can be explained in terms of the distinct personal personality qualities of males and females. Females are often regarded as being more cautious and hesitant than males ((Harden, 2001).This is explained by the fact that females are more sensitive, thoughtful, and responsible than males, who make more intuitive judgments (Hablemitoglu & Yildirim, 2008), although the male rational decision-making levels were shown to be lower than those of the females (Dilmaç & Bozgeyikli, 2009). Another study conducted with university students indicated that male exhibited fewer buck-passing and hypervigilance behaviors (Tatlilioglu, 2014). Another study discovered that female educators were more inclined to make emotional choices (Mostert & Gulseven, 2019). In contrast to these findings, Tekkurşun, Namlı, Hazar, Türkeli, and Cicioğlu (2018) found no statistically significant relationship between decision-making skills and gender.

Second, the current study showed minor differences in the participants' opinions toward decision-making skills in relation to the academic year. In contrast to the freshmen, who were adjusting to a brand-new environment in which they would meet new people, use a new learning platform, apply a new learning method, live independently, and suffer from homesickness, the seniors were preparing to leave their comfort zone and enter an entirely new world, which was a daunting prospect for them (Jones et al., 2020; Rathakrishnan et al., 2021; Ricks & Warren, 2021). Under those circumstances, whatever action they do will have a big impact on their long-term well-being. Perhaps this is the reason why they are both so careful when it comes to making their selections.

Third, students fully apply the decision-making steps. This conclusion reflects the reality of students today because when students are presented with a situation for which they must make a decision, they must always precisely define the problem and determine the best solution in pursuit of predetermined aims. The results of this

study are in line with the study of Ogurlu and Sevim (2017); Regenwetter et al. (2009) which found that decision-making process includes a set of typical steps, which include identifying the problem and goals, generating options, considering the results of options, fact-finding, selecting the best option, implementing, and reviewing. Besides, according to Simon (1977) the process of rational decision-making consists of four stages: intelligence (discovering chances for decision-making), design (creating various courses of action), selection (selecting a particular option), and review (evaluating past choices).

Throughout the decision-making process, students adopt a variety of decision-making strategies, which may be defined as an individual's approach to and methods for resolving a problem. However, most of the time, people do not make rational choices, but rather rely on heuristics (Gigerenzer, 2001).

There were several limitations to this study. First, the participants in the study were not evenly distributed. Next, the female involvement rate was significantly higher than the male participation rate. This skewed distribution had the potential to produce incorrect results. Moreover, since the data collection was done just once, it is possible that self-reported attitudes toward decision-making would alter depending on the present state rather than the steady state. In order to address these shortcomings and develop ways to support decision-making skills of the young people, additional research would be required in future to further study this topic.

5. CONCLUSION

The primary goal of this study was to examine whether there were any changes in students' perceptions of their decision-making skills based on their gender or year of study. Four significant findings arise from this investigation: In terms of decision-making skills (1) Male and female have different views regarding decision-making skills, (2) freshmen and seniors have different attitudes toward decision-making skills, according to the findings of this study (3) the student completes the decision-making process phases and (4) when students perform the decision-making processes, assessments by students, administrators, and lecturers are all the same.

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