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Investigating the Factors that Influence the Intention of Vietnamese Student's when Selecting an it Program at the University

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Abstract

This study aims to investigate the factors that influence the intention of Vietnamese students when selecting an IT program at the university. Previous research in this area has identified certain gaps, which this study addresses by focusing on the Theory of Reasoned Action (TRA) model. By employing the TRA model, this study introduces a novel approach compared to other existing models and previous research. The data for this study was collected through an online questionnaire administered to a sample of 186 Vietnamese high school students who expressed a desire to pursue IT studies at a university in Vietnam. The sample includes both male and female participants, ensuring a comprehensive representation of the target population. The findings of this study will contribute to a deeper understanding of the factors that influence Vietnamese students' intention to select IT programs at the university level. Moreover, this research sheds light on the applicability and effectiveness of the TRA model in the context of IT program selection among Vietnamese students. The results will have implications for educational institutions, policymakers, and stakeholders involved in shaping the IT education landscape in Vietnam.

Keywords: *Student's intention, attitudes, IT education, Theory of Reasoned Action (TRA), gender disparities.*

1. Introduction

Vietnam has witnessed increased investment in IT infrastructure, including the expansion of broadband networks and the improvement of digital connectivity. This has facilitated the growth of the IT industry and enabled the development of technology-driven startups and businesses (Ratheeswari, 2018). The IT startup ecosystem in Vietnam has been thriving, with the emergence of numerous tech startups and entrepreneurial ventures (Jones et all., 2013). Over the past ten years, the popularity of Information Technology (IT) education in Vietnam has significantly increased. This has led to a substantial rise in the availability of IT programs in both public and private universities nationwide (Cloete, 2017). Many students are showing a deep interest in pursuing studies in IT, following the technology trend (The Vietnam Foundation, 2023).

This study aims to fill the gaps in the literature regarding the factors influencing Vietnamese students' choice of IT programs by utilizing the Theory of Reasoned Action (TRA) model. While there are existing theoretical models and studies on decision-making

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behavior and choice intention, the selection of the TRA model for this research represents a novel approach.

By adopting the TRA model, this study will provide a fresh perspective on the factors that influence Vietnamese students' intention to select an IT program. The TRA model emphasizes the role of attitudes, subjective norms, and perceived behavioral control in shaping an individual's intention to engage in a particular behavior (Ajzen & Fishbein, 2018). Applying this model specifically to the context of Vietnamese students' choice of IT programs will shed light on the unique factors and influences that drive their decision-making process.

Furthermore, this research will contribute to the existing literature by focusing specifically on Vietnamese students. The theory of planned behavior provides an extension of the theory of reasoned action by including perceived behavioral control, which reflects the perceived ease or difficulty of performing the behavior (Ajzen, 2019). The cultural context and educational landscape in Vietnam may differ from other countries, and therefore, the factors influencing students' choice of IT programs could vary as well. By conducting this study in Vietnam, valuable insights will be gained into the specific factors that are relevant and influential to Vietnamese students when selecting an IT program at the university.

Overall, by employing the TRA model and focusing on the Vietnamese context, this study will bridge the gap in the literature by providing a comprehensive understanding of the factors that significantly influence Vietnamese students' intention to choose an IT program. The findings will not only contribute to the existing body of knowledge but also inform educational institutions and policymakers in developing targeted strategies to attract and retain students in the IT field in Vietnam.

Currently, the number of female students studying IT is lower than that of male students, despite the fact that the total university population has more female students than male students (Vietnam Education, 2023). However, it is noteworthy that, statistically, Vietnam's situation is still more favorable compared to Western countries, especially the United States (Sathapornvajana & Watanapa, 2012).

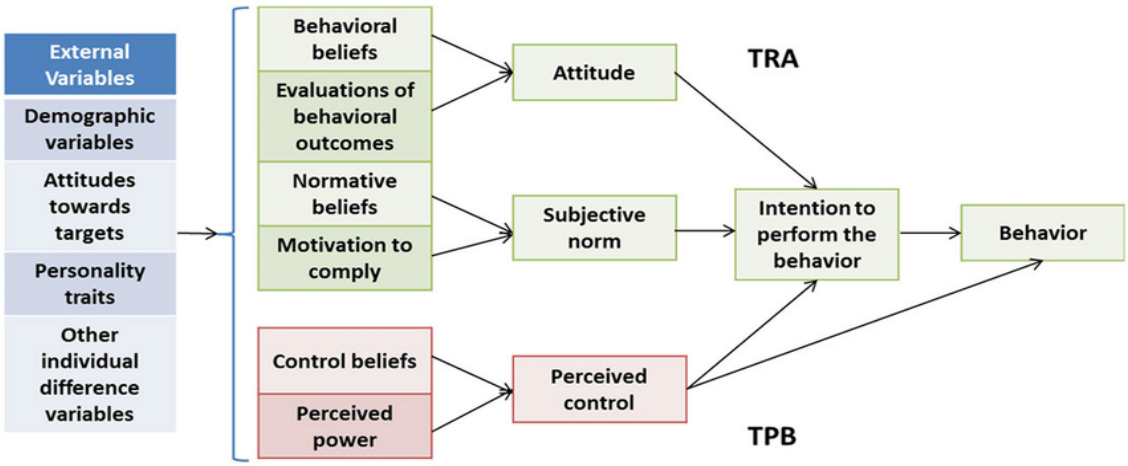

Figure 1. Theory of Reasoned Action (TRA)

Source: (Ajzen & Fishbein, 1980)

In this research, the authors suggest using the Theory of Reasoned Action (TRA) as a framework to understand the factors that affect students' decision-making process when selecting a specific IT program, such as VNUHCM - University of Natural Sciences or University of Information Technology (UIT), among other options. TRA states that an individual's behavior is determined by their behavioral intention, which is influenced by two main factors: attitude and subjective norm. This theory, well-established in social

psychology, emphasizes that an individual's beliefs significantly impact their behavior. The theory of planned behavior further suggests that behavioral intention is influenced by attitude, subjective norms, and perceived behavioral control (Park & Lessig, 2017). The Theory of Reasoned Action is a social psychology theory that provides a framework for understanding and predicting human behavior. It considers an individual's perception of social norms, expectations, and the opinions of significant others. TRA has been widely applied in educational research to understand students' decision-making processes and behaviors related to academic choices, including the selection of specific majors or programs (Malik & Hussain, 2020). Researchers have used TRA to investigate factors such as intentions, motivations, attitudes, and subjective norms that influence students' choices in various educational contexts. The study by Papastergiou (2006) examined the intentions and motivations of Greek high school students in pursuing academic studies in Computer Science (CS). The researcher used TRA as a framework to explore the students' attitudes towards CS, subjective norms related to the field, and their intentions to pursue CS studies. While TRA has been widely used, it does have some limitations. It primarily focuses on individual-level factors and may not fully capture the complex social and contextual influences on behavior (Gati et al., 2011). Additionally, TRA assumes that individuals have complete control over their actions and may overlook external constraints or barriers that can affect decision-making.

By applying TRA in educational research, scholars aim to gain insights into the factors shaping students' choices, intentions, and behaviors. This knowledge can inform educational policies, interventions, and strategies to support students in making informed decisions and pursuing their academic and career goals.

According to Clark. (2017), the potential job opportunities and career prospects associated with the IT program play a significant role in students' decision-making. Students consider the demand for IT professionals in the job market and the potential for growth and advancement in their careers. Moreover Collins. (2016) mention that the reputation and ranking of the university offering the IT program are crucial factors for Vietnamese students. Students often prefer universities with a strong reputation in the field of IT education, as it can enhance their employability and provide better learning resources. Futhermore, the curriculum and course content of the IT program are important considerations. Students look for programs that offer a comprehensive and up-to-date curriculum, covering various aspects of IT such as programming languages, data analytics, cybersecurity, and artificial intelligence (McKimm & Barrow, 2019). The expertise and qualifications of the faculty and teaching staff greatly influence students' intention to select an IT program. Students prefer universities with experienced professors and industry experts who can provide valuable insights and guidance throughout their studies (Hénard & Roseveare, 2012). Facilities and resources: The availability of modern facilities, including computer labs, software, and hardware resources, is another factor that influences students' decision-making. Access to state-of-the-art technology and resources can enhance the learning experience and practical skills development (Desalu et al., 2011). The presence of a strong alumni network and industry connections can provide students with networking opportunities, internships, and job placements. Vietnamese students often consider universities that have established collaborations with IT companies and offer opportunities for industry exposure (Fisher & Price, 2021). The availability of scholarships and financial support can significantly impact students' choices. Scholarships can alleviate the financial burden associated with pursuing an IT program and make the education more accessible to a wider range of students (Callender, 2019). Personal interests and aspirations: Each student has unique personal interests and aspirations, which also influence their intention to select an IT program. Some students may have a specific interest in a particular IT specialization, such as software development or data science, which guides their decision-making process (Sahin & Stuessy, 2015). In another study, Sohail and Shahzad (2010) explored gender differences in attitudes towards scientific subjects, perceptions of science and scientists, as well as

considerations for studying a science major among 100 Pakistani high school students. More recently, Sathapornvajana and Watanapa (2012) conducted a cross-cultural study comparing the decision-making process of male and female students when choosing to pursue an IT major compared to other majors, highlighting the contributing factors to these different decisions in the United States and Vietnam. The main objective of this study is to examine the attitude factors of Vietnamese high school students that influence their intention to pursue a university program in Information Technology (IT). This pilot study has a specific focus and includes a limited number of survey participants, consisting only of Vietnamese high school students expressing an intention to enroll in the IT program at FPT University.

The next section outlines the framework used in this study, including the proposed hypotheses. Subsequently, the data validation method, data analysis, and hypothesis testing are presented. In Section 4, the experimental results are provided along with an exploration of strategic considerations regarding technology and education. Finally, the study concludes with a summary of findings and recommendations for future research.

2. Proposed Framework

This article presents a study conducted on a sample of 12th-grade high school students in Vietnam with two main objectives:

- Identify the factors influencing students' intention to choose an IT university program.
- Understand the differences in attitudes between male and female students when choosing an IT major.

As described in Figure 2, the theoretical framework of this study assumes that the intention to choose an IT program is influenced by two main factors: attitude towards choosing an IT program and subjective norm. Each factor is measured using a set of sub-factors listed in Figure 2. Supporting references for these factors are provided in Table 1. The theoretical framework of the study serves as the conceptual basis for understanding the factors that influence the intention to choose an IT program. It provides a structured representation of the relationships between variables and constructs. In this case, the theoretical framework suggests that the intention to choose an IT program is influenced by two main factors: attitude towards choosing an IT program and subjective norms. By considering the attitude towards choosing an IT program, subjective norms, and the subsidiary factors within each construct, the theoretical framework provides a comprehensive understanding of the factors influencing the intention to choose an IT program. This framework helps guide the research design, data collection, and analysis in order to examine the relationships and effects between these variables.

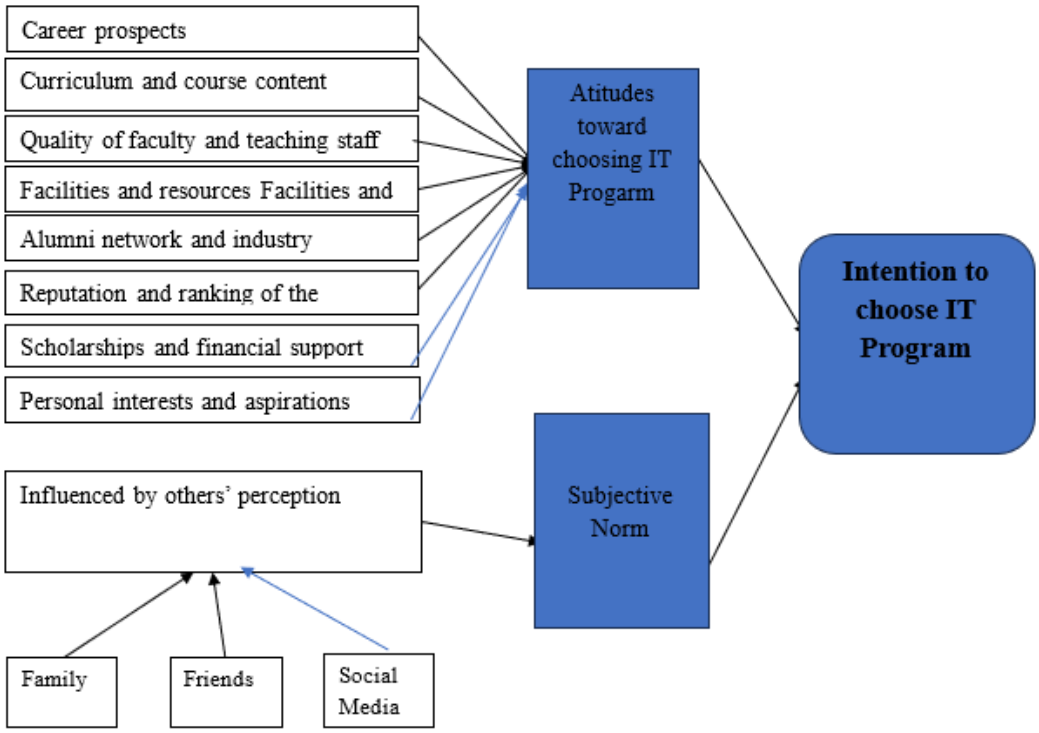

Figure 2. Theoretical model (Constructs of intention to choose an IT program)

Source: Own Research

Additionally, the study also examines the research variables from a gender perspective and proposes the following hypotheses, using males as the control group for comparison:

H1: The level of Career prospects in their own abilities differs between male and female students.

H2: The level of Curriculum and course content differs between male and female students.

H3: The level of Quality of faculty and teaching staff differs between male and female students.

H4: The level of Facilities and resources concern of the IT industry differs between male and female students.

H5: The perception of Alumni network and industry connections differs between male and female students.

H6: The recognition of the Reputation and ranking of the university on differs between male and female students.

H7: The level of concern for cholarships and financial support differs between male and female students.

H8: The perception of Personal interests and aspirations differs between male and female students.

H9: The level of being influenced by others' perception differs between male and female students.

In the hypotheses (H1 to H9), The study presents a series of hypotheses that suggest potential differences between male and female students in various aspects. Each hypothesis addresses a specific factor or dimension and proposes that there may be variations between genders. These hypotheses range from Career prospects and

Curriculum and course content to concerns about the public image of the IT industry, career opportunities, school reputation, facilities, perception of computer innovation and IT, and the influence from others.

To examine the validity of the hypotheses, the study utilized independent sample t-tests. This statistical test compares the means of two independent groups, in this case, male and female students. By conducting t-tests, the researchers can determine whether the observed differences between the groups are statistically significant or simply due to chance. The t-tests allow for a quantitative assessment of the degree of difference between male and female students on the variables of interest. To examine the validity of the hypotheses, the study utilized independent sample t-tests. This statistical test compares the means of two independent groups, in this case, male and female students. By conducting t-tests, the researchers can determine whether the observed differences between the groups are statistically significant or simply due to chance. The t-tests allow for a quantitative assessment of the degree of difference between male and female students on the variables of interest. This research would present the findings and results obtained from the data analysis. The researchers would discuss the implications of the results in relation to the hypotheses and the broader research objectives. Conclusions would be drawn based on the findings, highlighting the significance of any observed differences between male and female students. Additionally, the study might suggest future research directions to further investigate the identified gender differences or explore related aspects that were not covered in the current study.

By employing t-tests, collecting data, conducting statistical analysis, and presenting the results and conclusions, the study aims to contribute to the understanding of gender differences in various dimensions and factors related to IT education.

3. Research Methodology

In this study, the researchers aimed to gather quantitative data to examine the factors influencing customer satisfaction in online shopping, with a particular focus on the role of gender. To ensure the validity and reliability of the data, they utilized an online survey questionnaire (Snyder, 2019).

The questionnaire design was based on the structure and layout proposed by Churchill and Iacobucci, renowned researchers in the field. By following their recommendations, the researchers aimed to enhance the value of the questionnaire and increase the response rate. Techniques such as survey management, pre-notification, and follow-up reminders were employed to encourage participation and improve the quality of the data collected. To address potential non-response bias, a comparison was made between early and late respondents (Tabachnick & Fidell, 1991). This analysis aimed to determine if there were any significant differences between these two groups, which could potentially affect the validity and generalizability of the findings.

In terms of sample size, the researchers aimed to meet the minimum requirements suggested by Hair and Anderson (2013). They determined that a sample size of at least 100 participants was necessary, with a minimum of five observations per variable. However, to ensure more robust results in the multiple regression analysis, which involved multiple independent variables, a desired sample size of 201 was established. By employing randomized sampling, the researchers aimed to select a representative sample from the target population. This approach helped ensure that the findings could be generalized to a broader population beyond the specific sample used in the study (Tabachnick & Fidell, 1991).

Overall, the study aimed to use quantitative methods and rigorous data collection techniques to examine the factors influencing customer satisfaction in online shopping, with a specific focus on the role of gender. By adhering to established guidelines and

employing appropriate statistical analyses, the researchers aimed to provide valuable insights and contribute to the existing body of knowledge in this field. To achieve the desired results, a minimum of 201 participants from Vietnam who engage in online shopping are required to participate in the survey.

The research variables, their measurements, and initial instruments are presented in Table 1. Many attributes related to the proposed factors have been identified in existing literature from various fields, including education, information systems, and social and behavioral sciences (Kothari, 2004). Through expert validation, the measures were categorized into two aspects using the Theory of Reasoned Action (TRA) as a theoretical framework: (1) Attitude towards the choice of IT program, including Career prospects, Curriculum and course content, Quality of faculty and teaching staff, Facilities and resources, Alumni network and industry connections, Reputation and ranking of the university, cholarships and financial support, Personal interests and aspirations and (2) Subjective norms, specifically the influenced by others' perception.

Table 1. Classification of research variables, their corresponding measurements, and the initial tools used in the study.

Categories	Evaluating the variables used for measurement.	Original Source of Instrument
Attitudes toward choosing IT program	Job opportunities and future prospects in the field.	(Jones, 1983).
	The content and structure of the educational program	(Sirgy et al, 1997)
	The competence and expertise of the teaching faculty	(Carver et al, 1979)
	Available facilities and resources for learning	(Park & Lessig, 1977). (Kon et al, 2020)
	Connections with alumni and industry professionals	(Kraimer et al. 2011)
	The reputation and ranking of the educational institution	(Conard, 2000)
	Financial aid options and support	(Price et al, 2003)
	Personal interests and individual goals	(Malgwi et al, 2005)
Subjective norm	Being influenced by the opinions and views of others	(Hui, 1986)

3.1. Data Collection

The survey was conducted at several prestigious high schools in Vietnam, including Gia Dinh School, Nguyen Thi Minh Khai School, and Go Vap High School. The data was collected through an online questionnaire from a sample of 205 12th-grade Vietnamese students who expressed a desire to study IT at either Swinburne University of Technology or FPT University. The sample included both male and female students, and their participation in the study was voluntary.

The survey consisted of two parts. The first part focused on collecting demographic information, such as age, gender, academic program, school type, and school location (Koech et all., 2016). Modifying existing instruments was an important step to adapt them

to the specific context of this study. A total of 186 12th-grade students participated in the research, including 108 male students and 97 female students. The majority of students were enrolled in the science-mathematics program and attended co-educational schools. Table 3 provides an overview of the demographic characteristics of the respondents.

By conducting the survey in these selected high schools and collecting information from the participants, the researchers aimed to gather insights into the attitudes and factors influencing students' interest in pursuing IT studies at the selected universities. The demographic information collected would provide a contextual background for understanding the respondents' characteristics and their potential influence on the study variables (Koech et all., 2016).

Table 2: Stages of data collection and objectives

Stage	Procedure	Objectives
1	To review previous studies on Student's intention selecting an IT program in the University	To find the literature gap and identify theoretical factors affecting Student's intention selecting an IT program in the University
2	Qualitative method: Using focus group with 10 current students and 10 potential students	To check if there are any missing variables/factors
3	Quantitative method: • Pilot study: 10 current students and 10 potential students • Preliminary research: send the survey and apply EFA and CFA to reduce items and validate the questionnaire. • Final validated online questionnaire will be then sent out to obtain the data.	To evaluate if the questionnaire can ensure the accuracy in representing corresponding constructs. To assess the quality of questions and reliability of measure
4	Qualitative method: • Semi-structured interview: 10-20 current students or 10 potential students.	To explore underlying reasons about factors affecting Student's intention selecting an IT program in the University which are found in stage 3 and why it affect.

3.2 Data Analyses

Table 3. Respondent Characteristics

Gender	Age:	Mean (S.D.)	Study	Program		School Type		School			Province
	n=67		Science	Math	Co-Ed.	Male Ed.	Female Ed.	NTMK	GV	GD	Others
Male	108	59.39 (0.56)	35	8	26	7	-	15	23	29	18
Female	97	47.94 (0.55)	36	8	27	-	7	22	18	37	10

The data shows the mean age for male and female students. The mean age for male students is 59.39 (with a standard deviation of 0.56), while the mean age for female students is 47.94 (with a standard deviation of 0.55). This indicates that, on average, male students are older than female students in the sample. The data indicates the number of

students studying different programs. Both male and female students show interest in studying IT programs. Among the male students, 35 are studying Science, 8 are studying Math, and 26 are studying in a Co-Ed program. Among the female students, 36 are studying Science, 8 are studying Math, and 27 are studying in a Co-Ed program.

The key differences between males and females in their choice of studying IT programs are the average age of male students is higher than that of female students. This suggests that there may be variations in life experiences, career aspirations, or motivations that influence their decision to pursue IT programs.

There is no apparent difference in the distribution of study programs between males and females. Both genders have similar proportions of students studying Science, Math, and Co-Ed programs within the IT field. Both male and female students are interested in studying IT programs. The number of male students interested in IT is 108, while the number of female students interested in IT is 97. The data indicates that both male and female students studying IT programs come from various school types. The students studying IT programs are from different provinces.

To evaluate the survey instrument's reliability, Cronbach's alpha coefficient was utilized in a reliability analysis. This analysis measured the level of correlation among the specific items listed in Table 1. In terms of practicality, the values of these variables were verified by three education experts, each with a minimum of 5 years of experience in the field. The content validity of the variables was determined using the Item-Objective Congruence (IOC) index. The reliability analysis, employing Cronbach's alpha, assessed the extent of correlation among the selected items presented in Table 1. Cronbach's alpha is a widely recognized statistical measure used to evaluate the internal consistency or reliability of a questionnaire or survey tool (Tabachnick & Fidell, 1991). It quantifies the degree to which items within a variable are interconnected or correlated. Higher Cronbach's alpha values indicate stronger internal consistency, indicating that the items in the variable are measuring the same underlying construct. By examining the correlations between items, researchers can determine the degree to which the items within a variable are related to one another. To establish the validity of the variables, three education experts were consulted, each possessing at least 5 years of field experience. Their expertise and knowledge were utilized to confirm the relevance and appropriateness of the selected variables for measuring the desired constructs. Expert validation adds credibility and ensures that the variables align with the intended purpose of the study. Content validity refers to the extent to which the items in a questionnaire or survey tool represent the underlying construct being measured. In this case, the content validity of the variables was determined using the Item Objective Congruence (IOC) index. The IOC index assesses the alignment between the items and the intended construct by examining the opinions of experts. It provides a quantitative measure of how well the items capture the content and objectives of the construct.

By conducting reliability analysis using Cronbach's alpha and incorporating expert validation and content validity assessment, the researchers ensure that the survey tool is reliable and valid for measuring the intended constructs in the field of education. This enhances the credibility and accuracy of the data collected through the survey.

Table 4. Composite reliability and group mean.

Categories Variables	Research	The number of items	Cronbach's Alpha	n=67 Male (108): Mean (S.D.)	Female (97): Mean (S.D.)
Career prospects		3	0.462	5.73(0.67)	5.87(0.73)
	Curriculum and course	5	0.751	4.29(1.06)	4.44(0.99)

content					
Quality of faculty and teaching staff		3	0.861	5.99(0.85)	6.10(0.98)
	Facilities and resources	4	0.43		4.99(0.74)
Attitudes toward choosing IT program					
	Personal interests and aspirations	5		0.822	5.66(0.72)
	Reputation and ranking of the university	4		0.853	6.54(0.58)
Innovativeness in computer and IT		4		0.685	6.19(0.64)
		6	0.705	6.04(0.50)	5.88(0.85)
Scholarships and financial support					
		6	0.87	3.96(1.54)	3.52(1.46)
Subjective norm	Being influenced by				
others' perception					

As this is an initial study, we plan to eliminate or modify certain specific questions to improve the alpha value, aiming for a threshold of 0.6 or higher, as recommended by Barbosa Filho et al. (2016). As indicated in Table 4, internal consistency reliability is demonstrated through composite reliability indices (Cronbach's alpha), reported alongside descriptive statistics of standard deviation (S.D.) and mean for each variable. All research variables show alpha values within an acceptable range, except for the Career prospects and Facilities and resources, with alpha values of 0.462 and 0.43, respectively. In order to improve the reliability of the questionnaire, the researchers plan to eliminate or modify certain specific questions. By doing so, they aim to increase the alpha value, which is a measure of internal consistency. The researchers are following the recommendation of Barbosa Filho et al. (2016) to achieve an alpha value of 0.6 or higher. This indicates greater reliability and consistency in the measurement of the variables. The variables related to Career prospects in personal abilities and Facilities and resources have alpha values of 0.462 and 0.43, respectively. These values indicate lower internal consistency for these particular variables. It suggests that the items within these variables may not be strongly correlated with each other. To improve the reliability of the questionnaire, the researchers may consider revising or removing specific questions within the variables that have low alpha values (Goddard & Melville, 2004). This process aims to enhance the measurement of these constructs and increase the overall internal consistency of the questionnaire.

4. Results of Hypotheses Test and Discussion

For hypothesis testing, independent samples t-tests were employed in this study. The t-test, based on the analysis of variance (ANOVA) principle, was used to assess the equality of means between two groups: male and female students in the present research. To ensure accurate reporting of the t-values, Levene's test was utilized to evaluate the equality of variances across the groups. The obtained F ratio, which was found to be statistically significant, indicates differences in characteristics between male and female students. A significance level of $p < 0.05$ was used to determine statistical significance. The direct comparison between the two groups of respondents is presented in Table 5.

Table 5. Hypothesis testing

		Proposed Hypo.	F, sig.	t, sig.	Hypo. Testing
	Career prospects	H1	1.691, 0.198	-0.834, 0.407	***reject***
	Curriculm and course content	H2	0.263, 0.610	-0.613, 0.542	***reject***
	Quality of faculty and teaching staff	H3	0.606, 0.439	-0.497, 0.621	***reject***
	Facilities and resources	H4	0.099, 0.754	-0.590, 0.557	***reject***
toward choosing IT program aspirations	Personal interests and	H5	0.235, 0.630	-0.690, 0.493	***reject***
Reputation and ranking of the university		H6	0.271, 0.643	0.272, 0.786	***reject***
	Scholarshi and financial support	H7	0.027, 0.871	-0.411, 0.682	***reject***
	Alumni network and industry connections	H8	3.330, 0.073	0.917, 0.363	***reject***
Subjective by norm perception	Being influenced others'	H9	0.570, 0.453	1.204, 0.233	***reject***

The research results completely rejected all hypotheses. Both the F-test and t-test showed no significant differences in the studied variables between male and female students. These findings align with a recent survey comparing factors influencing the choice of IT programs in Vietnam and the United States (Sathapornvajana & Watanapa, 2012). Several noteworthy insights were drawn from this study. Firstly, based on the reliability test using Cronbach's alpha and the descriptive statistics, the recognition of the school's reputation appears to be the most influential factor in students' decision to choose a specific IT program. Both male and female students also rated the facilities of the school as the second most important factor. However, the third-ranking factor differed between genders. Male students emphasized the importance of computer innovation and IT in schools, while female students placed greater emphasis on Career prospects and personal requirements, which are often subjective and related to personal emotions. The lowest score in the subjective norm factor (influenced perception by others) indicates that both male and female students demonstrate strong independence. They are not heavily influenced by family or social networks when making decisions.

Furthermore, based on the T-test results, it can be observed that both male and female students today have a clear understanding of their requirements, abilities, and future orientation. They have the capacity to acquire knowledge to make informed decisions and demonstrate independence in pursuing IT studies. The similarity in factors influencing the intention level between genders suggests that IT schools should implement common strategies to shape students' program selection intentions. The most effective strategy includes implementing action plans to enhance the school's reputation and effectively showcasing the excellent facilities of the institution to increase students' awareness. Additionally, the statistical results align with the Theory of Reasoned Action (TRA) model, thereby confirming measurable attributes related to attitudes towards behavior and subjective norms. These attributes contribute to shaping students' behavioral intentions when choosing an IT major.

The research found that the recognition of the school's reputation was the most influential factor in students' decision to choose a specific IT program. This suggests that students

value the prestige and standing of the institution in the field of IT. Moreover, both male and female students rated the quality of facilities provided by the school as the second most important factor. This indicates that well-equipped computer labs, software resources, and modern facilities play a significant role in students' program selection. Male students emphasized the importance of staying updated with the latest trends and innovations in computer and IT fields. This highlights their interest in exploring cutting-edge technologies within the program. About, Self-Awareness and Personal Requirements, female students placed more emphasis on self-awareness and personal requirements. They considered factors such as their own interests, passions, and subjective emotional factors when making their program choices.

The research showed that both male and female students demonstrated a strong sense of independence in their decision-making process. They were not heavily influenced by family or social networks when choosing an IT program. The similarity in factors influencing program choices between genders suggests that IT schools should implement general strategies to shape students' intentions. These strategies could focus on enhancing the school's reputation and effectively showcasing the excellent facilities to increase student awareness and attract prospective students. Therefore, implementing specific action plans to improve the school's reputation and highlight its outstanding facilities can positively impact students' decision-making process. The statistical results were consistent with the TRA model, which suggests that measurable attributes related to attitudes towards behavior and subjective norms contribute to students' behavioral intentions when choosing an IT specialization.

These findings provide valuable insights for IT institutions and educational policymakers in understanding the factors that influence Vietnamese students' decisions when selecting an IT program at the university.

5. Conclusions and recommendation

Through this study, statistical analysis based on the TRA model provides deep insights into students' behavioral intentions when choosing a specific IT program compared to other programs. The statistical measurements indicate that the school's reputation is identified as the most important attribute influencing the behavioral intention to choose an IT school. Additionally, the study examines whether there are differences in the factors influencing the intentions of male and female Vietnamese students using the ANOVA method. The results reveal no significant differences in the factors influencing the intentions of male and female students, indicating that both genders are influenced by similar factors when making decisions to pursue an IT major.

Based on these findings, we propose implementing an inclusive approach to attract both male and female students. Building a solid reputation is identified as the most effective strategy, followed by highlighting the excellent facilities of the institution. It is important to note that this study is a pilot study with a limited number of participants. However, the analysis using Cronbach's alpha coefficient and related measures provide valuable information for designing a comprehensive survey as a follow-up to this study. Furthermore, the discovery of equivalent behavioral intentions between male and female students suggests the need for further research into subtle differences, such as how each gender perceives or recognizes the reputation of an IT school. Another future research direction is to explore the intentions of choosing IT programs among students compared to other existing programs at different universities. Additionally, for educational management purposes, it would be intriguing to investigate the factors influencing the persistence, attrition, and success in studies of male and female students in IT programs. This information can guide the development of appropriate nurturing strategies for male and female students in these programs. In addition to building a solid reputation and

highlighting excellent facilities, there are several other strategies that can be employed to attract both male and female students to IT programs. Here are some suggestions:

Promote diversity and inclusivity emphasize an inclusive and diverse learning environment that welcomes students from all backgrounds. Highlight success stories of both male and female students in IT to showcase the opportunities available to all. Showcase real-world applications, demonstrate the practical applications of IT in various industries and sectors. Highlight how IT skills can be used to solve real-world problems and make a positive impact on society. Offer mentorship and networking opportunities, establish mentoring programs or networking events where current students can connect with alumni or professionals in the IT field. This allows prospective students to gain insights, ask questions, and build valuable connections. Provide scholarships and financial support, offer scholarships or financial aid specifically targeted towards attracting and supporting students, regardless of gender, who are interested in pursuing IT programs. This can help alleviate financial barriers and attract a diverse pool of talented individuals. Collaborate with industry partners, forge partnerships with IT companies and organizations to create internship or co-op programs. This provides students with practical work experience and the opportunity to develop industry connections, making the program more appealing to both male and female students. Engage in outreach and awareness campaigns, conduct outreach activities such as workshops, coding camps, or IT competitions targeted at high schools or community organizations. These initiatives can help raise awareness about the opportunities and benefits of studying IT and spark interest among potential students. Focus on soft skills development, highlight the importance of soft skills in addition to technical skills. Showcase how IT programs can help students develop critical thinking, problem-solving, communication, and teamwork skills, which are valuable in any career path. Provide role models and representation, ensure that promotional materials, guest speakers, and faculty members represent a diverse range of genders, backgrounds, and experiences. This can help prospective students see themselves reflected in the program and feel inspired to pursue IT studies. By implementing a combination of these strategies, educational institutions can create an inclusive and attractive environment that appeals to both male and female students, fostering a diverse and thriving community within their IT programs.

6. Limitation and future study

Limitations of this research:

The study's findings may be limited by the specific sample of male and female students chosen for the research. The results might not be generalizable to a broader population, and caution should be exercised in drawing conclusions. The reliance on self-report measures for assessing variables such as self-confidence, self-perception, and concerns may introduce response biases and social desirability effects. Replication of the study in different cultural settings would provide a more comprehensive understanding of the gender differences in the variables under investigation.

Suggestion for future Studies:

To better understand the dynamics and changes in self-confidence, self-perception, and other variables, future studies could employ a longitudinal design. Future research could investigate the effectiveness of interventions aimed at addressing gender differences in the variables studied. Implementing interventions such as mentoring programs, confidence-building workshops, or educational campaigns could help mitigate any disparities identified and promote greater equality in IT education. By recognizing the limitations and suggesting future directions, researchers can refine their methodologies, expand the knowledge base, and provide valuable insights into the gender differences in self-confidence, self-perception, and other factors influencing students' decision-making processes in the IT field.

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