Factors influencing Thai students' university choices – A systematic literature review

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Abstract

Selection of universities and study programs is one of the most crucial decisions for students in the first stage of pursuing their higher education study. In this decision-making process, students require several considerations before determining the place of study. The purposes of this systematic literature review is twofold: to summarize the factors influencing students' choice, and to formulate managerial implications related to strategies to increase the number of applicants in the context of Thailand. Using Systematic Literature Review (SLR) approach, literature available from 2012 to June 2022 on electronic databases (e.g., Google Search, ThaiJO, Digital Research Information Center, NSTDA online database) with a total number of 25 had been reviewed with thematic analysis. The results showed three emerging themes: internal, external, and interpersonal factors that are considered critical for students' choice decisions. In each theme, details of the subthemes are also identified and explained. This systematic literature review research is a first attempt to present a comprehensive picture of past studies on students' decision-making and explore the factors influencing their choice of the place to study. The study result can be useful for future research using qualitative and quantitative approaches on a higher education selection and provide practical implications for higher education organizations.

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Introduction

Universities and institutions of higher education, as a part of the national education system have a strategic role in educating, conferring degrees and preparing students for future career to ensure a sustainable nation (Dessy et al., 2019). Selection of university for pursuing a degree is thus a complex process which requires students and their parents to consider a number of relevant factors that affect pre-degree students' decision-making for the place of study (Garcia, and Mireles-Rios, 2020; Hussin et al., 2019; Yaacob et al., 2020).

In Thailand, there are 77 public universities (including 38 Rajabhat and 9 Rajamangala Universities) and 42 private universities offering various attractive and quality courses (Ramkhamhaeng University Library, 2015). The high number of public and private universities leads to greater competition in recruiting students each year. More importantly, universities have faced increasingly complex challenges and undergone major transformations in operating environment such as demand changes, global competition, and education funding declination (Simões & Soares, 2010). Furthermore, the COVID-19 pandemic has disrupted traditional educational services in imparting of knowledge and skills at all levels of education and driven the transformation in teaching methodology, students, teachers and parents to adapt to new modalities. (Hoofman & Secord, 2021; Tarkar, 2020). This health crisis has significantly pushed the students in higher education into an uncertain job market and caused anxiety and frustration about their studies and future professional careers (Aristovnik et al., 2020). Consequently, the process of choosing a course and university becomes more complicated for students when facing the considerable choices and future career uncertainty.

With the increasing importance, this paper uses a systematic literature review (SLR) to provide an overview of the research works conducted in the Thailand context on factors influencing students' decision for selecting the universities and/or study programs. Available

literature during Years 2012 - 2022 in Thai and English languages were thematically analysed. To the best of the authors' knowledge, there is no comprehensive study that captured all the factors influencing the decision-making process of pre-degree students in determining the place of study especially in the Thai educational context. Further, the study aims at identifying the existing research gap to derive points for future research. This insightful information can serve as a springboard for stakeholders in an education system to strategically prepare and respond to the drastic changes in the post-crisis recovery.

Theoretical background

Decision-making theory

Decision-making theory seeks to understand how an individual makes a choice between behavioral available alternatives of action and its consequences (Kahneman and Tversky, 1984). Decision is a process of making a choice from a number of alternatives to achieve a desired result (Eisenfuhr, 2011). The decision-making literature emphasizes two basic models of decision making namely the rational model and the bounded rationality model (March, 2010).

In the rational model, a decision maker has a well-organized system of preferences and skills that enable him to calculate, for alternative plans of action, which of these will help him to reach the highest attainable point on his preference scale (Simon, 1955). There are six steps in a rational decision-making process (Lunenburg, 2010):

Step 1: *Identifying the problem-* decision makers are aware of the importance of identifying the problem and understanding the problem situation.

Step 2: *Generating alternatives-* once the problem has been identified, decision-makers generate alternatives to the problem regarding the goals that they hope to achieve through their decision.

Step 3: *Evaluating alternatives-* decision makers evaluate each of the alternatives generated in step 2.

Step 4: *Choosing an alternative*- Once all of the alternatives have been evaluated, decision makers attempt to choose the best alternative to achieve the goal through their decision.

Step 5: *Implementing the Decision*- After choosing the alternatives, decision makers face the challenges for implementing the decision.

Step 6: *Evaluating decision effectiveness* is the final step in the decision-making process. The evaluation is important because it provides decision makers with information that can precipitate a new decision cycle.

Unlike the rational model with an assumption that decision makers are completely rational, the bounded rationality model emphasizes the two principles: *satisficing* in choosing the first alternative that satisfies minimal standards of acceptability, and *heuristics* when decision makers use a set of cues to guide their satisfying decision (Simon, 2009). Cues relate to the attributes of available alternatives, and a decision maker assigns information value to a particular cue based at least on two dimensions: predictive value (PV) and confidence value (CV) of a particular cue (Cox, 1967). The predictive value is "the degree to which consumers associate the given (generic) cue with the presence or absence of a desired attribute while the CV of a cue is the degree to which a consumer has assurance in his or her ability to accurately judge a particular cue" (Fejes & Wilson, 2013). Decision makers utilize various cues to gather information, evaluate available alternative plans of action, and choose the alternative that satisfies their desired decision (Fejes & Wilson, 2013).

Methodology

This study employed a systematic literature review (SLR) methodology to explore factors influencing students' decision-making in the selection of universities and/or study programs in Thailand. A systematic review of the scientific literature is important for identifying research questions, current state of knowledge in a specific area, as well as for justifying future research in the area (Torres-Carrión et al., 2018). The SLR methodology has been well-

recognized and adopted in conducting various areas of education research such as higher education decision-making (Mendes et al., 2019), creative learning environment (Davies et al., 2013), career choices (Akosah-Twumasi et al., 2018), and technology usage in education (Kassab et al., 2020). This study followed the SLR approach guided by Purohit et al. (2021) and Akosah-Twumasi et al. (2018) to conduct this research and used thematic analysis method to identify, screen, and report relevant themes in higher education decision-making.

Literature search

The search was conducted in July 2022 to access the relevant literature available in the following databases: Google Search, ThaiJO, Digital Research Information Center, NSTDA online database, and Scopus. Following the protocol presented by Akosah-Twumasi et al. (2018), the subject and keyword searches in this study depended on three main keywords in Thai and English languages: 1) factors influencing decision and its cognate terms, 2) student and its cognate terms, and 3) university and its cognate terms. The Boolean operators (OR/AND) and search filters were applied to obtain more focused results. Examples of the keyword searches are: 1) "student" AND "factors influencing decision" AND "the selection of Universities"; 2) "pre degree student" AND "factors affecting choice" AND "university selection OR study program selection"; 3) "high school students" AND "factors influencing choices" AND "universities"; 4) "students" AND "factors influencing selection" AND "a university program"; and 5) "students" AND "factors influencing selection" AND "higher education institutions".

An availability of full-text journal articles, dissertations, and research reports within the last ten years (2012 - 2022) were considered for a final review and were crossed-reviewed by two researchers. After the searching process, it was found that there were 35 relevant studies on factors influencing students' choice in the selection of universities and/or study programs included for this systematic literature review.

Assessment of the quality of data

The quality assessment criteria ensure the quality of data because it can minimize study bias and maximizes internal and external validity (Purohit et al., 2021). In this study, the following questions determine the inclusion/exclusion of papers for full reading and subsequent analysis to achieve the research aims:

1. Are all research questions answered adequately?

2. Are factors influencing student's decision-making in the universities/study programs selection investigated in the paper?

3. Does the article outline the methods used to address the research questions?

Table 1 shows quality assessment checklist. Papers were included in the study only if the sum of quality assessment scores regarding the criteria were two points and above.

Table 1 Quality assessment checklist

Level	Description	Score
Yes	Information is explicitly defined/evaluated	1.0
Partially	information is implicit/stated	0.5
No	information is not inferable	0

Sources: Purohit et al. (2021, p. 3295)

The researchers independently assessed data for extraction using coding sheets and then crosschecked in a consensus meeting. Out of 35 papers, there were 25 papers had scored two points and above and thus, fulfilled the required criteria and were selected for data analysis.

Findings and discussion

Table 2 shows 25 studies represented the data in this study. Research variables included author and year of publication, study setting and continent of participant enrolment, study design, participant numbers, participants' levels of education, factors influencing

students' choices. The research findings show that selection of universities/programs for pursuing a degree is a complex process which requires students and their parents to consider a number of relevant factors that affect students' decision-making for the place of study (Garcia, & Mireles-Rios, 2020; Hussin et al., 2019; Yaacob et al., 2020). Regarding theory of decision-making, the findings highlight the importance of an array of cues in making a higher education choice. This SLR research reveals a categorization that students or decision makers utilize internal, external, and interpersonal factors as cues to gather information, evaluate available alternative universities/programs, and choose the option that satisfies their desired decision (Fejes & Wilson, 2013; Lunenburg, 2010; Simon, 2009). The detailed findings are presented as follows.

Theme 1: Internal factors

The internal factors have been divided into three variables, namely, socio-demographics, personal interests and motivation, and other personal factors. Extensive literature has been studied to analyse the impact of each variable on students' choices to pursue their first degree.

Socio-demographic factors including age and gender have been found to influence the university choice of high school students and vocational students (Choojinda et al., 2012) and undergraduate students (Buasri, 2014; Saranphattarathon, 2016). A number of studies also highlighted the impact of family background (e.g., parents' marriage status, education, occupation, family income and number of siblings) on the students' university decision (Buasri, 2014; Chansukri et al., 2018; Choojinda et al., 2012; Kheawmanee et al., 2016; Laomal, 2019; Phurngkuson, 2016; Trakongkit, 2022).

Personal interests and motivation are considered as key factors driving the decision to choose the place to study in many studies (Choojinda et al., 2012; Phurngkuson, 2016; Chunlasewok and Akkapatum, 2016). Specifically, making oneself/family pride (Awae and Herpaiboon, 2019; Apiwatpaisan and Stavethin, 2018; Papadtha, 2017) social acceptance/ society praises (Apiwatpaisan and Stavethin, 2018; Laomal, 2019; Malilate and Abdulraman, 2020;

Papadtha, 2017), and expected outcomes of the study (e.g., career opportunities) (Apiwatpaisan and Stavethin, 2018; Chansukri et al., 2018; Laomal, 2019) significantly drove students' motivation. Tiewtoy et al. (2014) and Apiwatpaisan and Stavethin (2018) also found that family business also contributed to students' choices.

In addition, a large number of research also shows other different personal factors such as academic abilities (i.e., GPAX, O-NET, GAT) (Chansukri et al., 2018; Chuanchaisit, 2016; Phurngkuson, 2014), student's belief and value (Apiwatpaisan and Stavethin, 2018), place of residence (Buasri, 2014), perception on available study programs (Keawtan, 2016), and self-anticipation (Saranphattarathon, 2016) could influence students' decision-making.

Nonetheless, some studies argue that socio-demographic and other personal factors did not show significant impact on students' choice of the place to study. For example, Petchote (2017) found no significant differences in terms of gender, age, majors, family earning, and student earning in the students' decision. Laomal's (2019) research findings showed insignificant relationship of gender, education background, GPAX, and family income to students' university choice. Similarly, Phetcharat's (2020) the research evidence indicated that gender, age, region, area of residence, type of school, GPA, order of choice in university and field of study, and the TCAS system's application process showed no significant relationship with the students' decision.

Theme 2: External factors

External factors refer to students' preferences from educational providers and other determinants relevant to selection of higher education institutions. External factors are divided into five categories, that is, university image and reputation, study programs, facilities and supporting system, marketing stimuli, and other external factors.

University's image and reputation have been well-recognised as critical factors affecting selection of university among the high school students. The literature postulates that well-known university, an outstanding in technology, high standard, professional instructors

(i.e., experts in various fields, teaching methods and techniques that promote effective teaching and learning), and offering a variety of faculties/programs are the most influential factors for the students to make their decision about the university choices (Awae and Herpaiboon, 2019; Suwanwong, 2017; Tengmeesr and Yincharoen, 2018). The findings also show the shift of demand from traditional image and reputation to more industry and innovation focus. The recent study conducted by Intawee (2021) revealed that high school students prefer universities that have the credibility in providing professional skills, morality and ethics, industrial and practical innovation or invention in their learning and teaching management process.

Offering study programs which meet the needs of students (Apiwatpaisan, and Stavethin, 2018; Papadtha, 2017; Petchote, 2017; Phurngkuson, 2014), and the needs of labor market (Awae and Herpaiboon, 2019; Laomal, 2019; Tengmeesr and Yincharoen, 2018; Phetcharat, 2020) is a key determinant affecting the university choices of students. Specifically, program curriculum (Petchote, 2017; Saranphattarathon, 2016), and cumulative average score of graduation (Kheawmanee et al., 2016), appropriate length of study (Awae and Herpaiboon, 2019), reasonable tuition fee and expenses (Awae and Herpaiboon, 2019; Keawtan, 2016; Kheawmanee et al., 2016; Saikham, 2017; Suwanwong, 2017; Tengmeesr, and Yincharoen, 2018) also affected the program selection.

Facilities and environment have been indicated as key determinants of university choices. When choosing the place to study, students place an importance on good university facilities (Papadtha, 2017; Suwanwong, 2017; Tengmeesr and Yincharoen, 2018), and environment (Apiwatpaisan and Stavethin, 2018; Awae and Herpaiboon, 2019; Phurngkuson; 2014; Saikham, 2017). Importantly, financial support (scholarships, student loan, and financial aids) significantly affects program choices (Chansukri et al., 2018; Intawee, 2021; Keawtan, 2016; Thawinwong, 2019; Saikham, 2017). Supporting of educational services (Buasri, 2014; Chuaytukpuan, 2014; Lookkham, 2012), and helping new students with adaptation to new

university life (Awae & Herpaiboon, 2019) is also an important support system to attract students' intention.

Marketing stimuli have been one of important factors that can persuade the students' university selection. Internet marketing, event marketing, educational guidance activities, direct marketing, advertisement influence students' choices of the place to study (Tengmeesr and Yincharoen, 2018; Thawinwong, 2019). The recent study by Trakongkit (2022) also highlights the importance of marketing and media (i.e., variety of information sources, communication channels, educational exhibition and events) as information sources for students' decision-making.

Finally, this systematic review of the literature shows the importance of location in students' decision-making. Location of the university (Apiwatpaisan and Stavethin, 2018; Awae and Herpaiboon, 2019; Keawtan, 2016; Tiewtoy et al., 2014), the place of residence (Buasri, 2014; Saranphattarathon, 2016; Tengmeesr and Yincharoen, 2018), and convenience in traveling to the university (Saranphattarathon, 2016; Tiewtoy et al., 2014) are the influencing factors of students' university selection. The literature also indicates that admission system (e.g., quota or direct admission) (Suwanwong, 2017; Saikham, 2017; Tengmeesr and Yincharoen; 2018), earning opportunities while studying (Papadtha, 2017), types of school graduated (Chuanchaisit, 2016) and graduation plan at high school level (Chunlasewok and Akkapatum, 2016), economy (Malilate and Abdulraman, 2020), and morality and ethics (Intawee, 2021) can influence the university choices.

Theme 3: Interpersonal factors

Interpersonal factors include variables like family members, teachers, friends and acquaintances, and other influencers.

Family members may influence students' decision-making in the university and program selection process. For example, Laomal (2019) suggests that recommendations from parents who are the university alumni are a strongly influencing factor to direct students' choices.

Noticeably, this suggestion aligns with the studies conducted by Awae and Herpaiboon (2019) and Suwanwong (2017). Buasri (2014) and Tiewtoy et al. (2014) also found that students' selection where to continue their study in university level relies upon parents' needs. As aforementioned, relatives are also key influencers to guide students' choices evidently shown in the literature (Apiwatpaisan and Stavethin, 2018; Intawee, 2021; Papadtha, 2017; Trakongkit, 2022).

Teachers provide persuasive suggestions in the higher education selection. The dominant role of teachers in students' choice has been reflected in the past studies (Awae and Herpaiboon, 2019; Chansukri et al., 2018; Tengmeesr and Yincharoen, 2018; Trakongkit, 2022). Furthermore, the influence of friends and acquaintances is also found significant in students' decision-making. The role of friends and acquaintances, Suwanwong (2017) and Saikham (2017) found that the role of friends and acquaintances affected students' university choices. That is to say, the students were convinced by recommendations from their seniors or acquaintances who study at the higher educational institutions and they also follow the friends' university choices. Apiwatpaisan and Stavethin (2018), Tengmeesr and Yincharoen (2018), Awae and Herpaiboon (2019), Intawee (2021) and Trakongkit (2022) also confirmed that graduates' job choice had been influenced by friends and acquaintances.

Finally, marketing influencers refer to a strategic selection in which an organization chooses influencers to engage their followers in an attempt to leverage these influencers' unique resources to promote their offerings (Leung et al., 2022). The literature also revealed that marketing influencers (e.g., actors and actresses, idols, and role models) have been employed to promote the university and to influence the students' university choices to pursue their first degree (Intawee, 2021; Suwanwong, 2017; Thawinwong, 2019).

Table 2 A list of articles

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
1	Choojinda et al. (2012)	Research report	Nonthaburi province	Questionnaire (5-Likert scale)	400	High school students and vocational students (Year 3)	Descriptive statistics, ANOVA	**Internal-** sex, motivation educational background, GPA, parents' job and salary **External-** **Interpersonal-**
2	Lookkham (2012)	Research report	Bangkok and the central provinces of Thailand	Questionnaire (5-Likert scale)	334	High school students	Descriptive statistics	**Internal-** **External-** curriculum and instruction, instructor, teaching and learning instrument, classroom and university environment, academic service (i. e. , library, librarian, and advisor), and general service (i.e., financial aid and students' news). **Interpersonal-**
3	Buasri (2014)	Journal article	Mahachulalong kornrajavidyala ya University, Ubonratchatha ni campus	Questionnaire (5-Likert scale)	385	Undergraduate students	Descriptive Statistics, t-test, f-test, ANOVA, paired-samples t-test, LSD	**Internal-** gender, age, education attainment, marriage status, occupation, place of residence, income, **External-** university's reputation, teaching and learning management, tuition fees, educational services, atmosphere and physical environment, parents' needs, expectation for education. **Interpersonal-**

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
4	Chuaytukpuan (2014)	Research report	Dhurakij Pundit University, Bangkok	Questionnaire (5-Likert scale) and open-ended question	954	Undergraduate students	Descriptive Statistics	**Internal-** gender **External-** curriculum, instructors, and welfare and services, affiliated faculty, **Interpersonal-**
5	Phurngkuson (2014)	Conference paper	Faculty of Education, Phetchabun Rajabhat University	Questionnaire (5-Likert scale)	249	First-year undergraduate students	Descriptive statistics, t-test, f-test, LSD, ANOVA	**Internal-** motivation**,** academic expertise, gender, GPAX form high school, parents' jobs, parents' marital status, parents ' educational background, number of siblings in family, family salary **External-** physical environment, study major. **Interpersonal-**
6	Tiewtoy et al. (2014)	Research report	Bangkok and the central provinces of Thailand	Questionnaire (5-Likert scale)	249	High school students (Grade 12) and vocational certificate students (Year 3)	Descriptive statistics	**Internal-** **External-** available provided courses, quality of teachers, the need for continuation of family' s business, and convenience in traveling to the university**,** university' s reputation, variety of available faculties, location, and cost **Interpersonal-** guidance teacher' s suggestions, parents' needs

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
7	Chuanchaisit (2016)	Research report	Thammasat University, Bangkok	Questionnaire (5-Likert scale)	204	First-year undergraduate students	Descriptive and inferential statistics	**Internal-** gender, GPAX submitted for study program's application, monthly family salary , **External-** demographic information, types of school graduated, number of siblings who are doing their studies. **Interpersonal-**
8	Chunlasewok and Akkapatum (2016)	Research report	Faculty of Education, Rambhai Barni Rajabhat University, Bangkok	Questionnaire (5-Likert scale)	217	First-year undergraduate students	Descriptive statistics, ANOVA	**Internal-** gender, personal motivation **External-** graduation plan in high school level **Interpersonal-**
9	Keawtan (2016)	Conference paper	High schools in Songkhla province	Questionnaire (5-Likert scale)	359	High school students (Grades 10-12)	Descriptive statistics and Chi-square	**Internal-** perception of available programs of study **External-** image of institution, teaching and instructor, location of university, parents' financial support (i.e., tuition fees), **Interpersonal-**
10	Kheawmanee et al. (2016)	Research report	Rajamangala University of	Questionnaire (5-Likert scale)	480	First-year undergraduate students	Descriptive statistics, t-	**Internal-** gender **External-** family income per month, family's marital status, cumulative average score of graduation,

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
			Technology (5 campuses)				test, and F-test	faculty, source of expenditure for education, main occupations of parents, parents' educational levels **Interpersonal-**
11	Saranphattarathon (2016)	Master's degree thesis	Universities located in Bangkok	Questionnaire (5-Likert scale)	371	First-year students in accounting major	Descriptive statistics, t-test, ANOVA, LSD	**Internal-** self-anticipation, gender, age, **External-** reputation of university, curriculum, instructor, buildings, convenience in commuting, concerned parties, career necessity, budgets, domicile, parents' jobs and salary **Interpersonal-**
12	Papadtha (2017)	Conference paper	Bangkok and surrounding areas	Questionnaire (5-Likert scale)	600	High School, Professional certificate, and diploma students	Descriptive statistics	**Internal-** Make oneself and family prided, enhance self-position/social status, acceptance from others, earning opportunities while studying, **External –** University (i.e., instructors, good standard, career opportunities, good facilities, well-known U and environment), study programs (i.e., scholarships), **Interpersonal-** Parents encourage further education, recommendations from relatives, school media, and teachers/teacher counsellors' recommendation and friends' persuasion in respective order.

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
13	Petchote (2017)	Journal article	Department of Home Economics, Ramkhamhaeng University	Questionnaire (5-Likert scale)	255	The 1st year undergraduate students	- Descriptive analyses - t-test -One-way Analysis of Varience, - Scheffe's Hoc Comparison	**Internal –** There is no significantly different in term of gender, age, majors, family earning, and student earning in the students' choice decision, **External –** University image, Instructors, Curriculum, Implementation, Facility, and Instructional Media in respective orders.
14	Saikham (2017)	Research report	the Lower Northern Region of Thailand	questionnaire (5-Likert scale)	2,347	High School Students	Descriptive statistics	**Internal** - Personal background and abilities. **External –** Media, image and quality of higher education institutions, environment, education fee, sources of scholarship, expenses, and entrance examination system. **Interpersonal –** parents, teacher counsellors, Seniors or acquaintances who study at that institution, role models who are university alumni, friends, and relatives in respective orders.
15	Suwanwong (2017).	Research report	Thailand	questionnaire	300	High School, Professional	Descriptive statistics	**Internal-**

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
				(5-Likert scale) and open-ended questions		certificate, and diploma students		**Extrinsic –** University image (i.e., well-known U, variety of programs, instructors, good facilities & environment), study programs (i.e., reasonable fee and expenses, scholarships, quality of program, programs meet the needs of labor market, and quota or direct admission system), **Interpersonal**- Seniors or acquaintances who study at that institution, teacher counsellors/ parents' recommendation, parents are the university alumni, friends chose this university and role models who are university alumni in respective order.
16	Apiwatpaisan and Stavethin (2018)	Research report	Accounting program, Silpakorn University	Questionnaires (5-Likert scale) Semi-structured interviews	400 (200 students and 200 parents)	-undergraduate students - parents	- descriptive analysis - content analysis	**Internal** – Believes (e.g., Accounting profession is an honorable profession, high income), values (e.g., Accounting is highly regarded in society, Society praises accountants as smart people), personality, motivations (e.g., expanding the family business, making family prided, social acceptance, dream career)

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
								External – study program, instructors, university, teaching management system, good environment, location, and scholarships. **Interpersonal** - decision- making influencers (teachers, seniors/friends, parents and relatives).
17	Chansukri et al. (2018)	Research report	Thailand	Questionnaire (5-Likert scale)	8,000	The 1st year undergraduate students	Multinomial Regression Analysis	**Internal-** Socio- demographics (gender and family background), Academic Abilities(GPAX, O-NET, GAT), expectation of results (income, social acceptance, self-worth) **External –** financial factors (e. g. , financial constraints and scholarships), **Interpersonal-** recommendations from influencers (teachers, parents, and friends)
18	Tengmeesr and Yincharoen (2018)	Research report	Faculty of Science and Technology, Rajamangala University of Technology Sriwichai	Checklist and Questionnaire (5-Likert scale)	239	The 1st year undergraduate students	Descriptive analyses	**Internal-** **External –** University image (i.e., well-known U, variety of programs, outstanding in technology, and outstanding in teaching), **study programs** (i.e., well-known, good quality, focusing on the professional field, quota or direct admission system, and reasonable fee and expenses, courses offered to

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
								meet the needs of the labor market, and a program received praise from society), **instructors** (i.e., graduated from reputable universities, experts in fields, famous in the area, teaching methods and techniques that are easy to understand), good facilities & environment, direct media/advertisement, near hometown. **Interpersonal**- recommendations from parents, relatives, teachers, Seniors and friends, and close friends chose this university.
19	Awae and Herpaiboon (2019)	Research report	Prince of Songkla University, Pattani Campus	Questionnaire (5-Likert scale)	339	The 1st year undergraduate students	- Descriptive analyses - t-test - ANOVA	**Internal**- making oneself prided, saving expenses for the family, There is no significantly different in term of gender, course plans (Science-Mathematics-Art-Linguistics), GPAX, schools, and homeland. **External – university image** (i.e., well-known U, variety of programs, instructors, quality standard, outstanding in technology, outstanding in teaching, promote internships, courses offered to meet the needs of the labor market, location near hometown,

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
								and environment), appropriate length of study, reasonable fee and expenses, scholarships, and a basic adjustment system for new students, **Interpersonal-** recommendations from influencers (teachers, parents, seniors and friends), relatives are the university alumni,
20	Laomal (2019)	Research report	Thailand	Questionnaire (5-Likert scale)	755	High school students	- Descriptive Statistics - t-test	**Internal-** family background (income, financial liquidity and constraints), social acceptance, honor/ reputation, Society honors knowledge and abilities, career opportunities, There is no significantly different in term of gender, education background (high schoolers vs professional certificate students), GPAX and family income. **External** – University (i.e., well-known U, modern, programs meet the need of labor market, location, facilities, and environment), Finance (education fee, cost of books and equipment, living expense and foods), study programs (i. e., popular, job market, variety of

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
								programs, focusing on the professional field, meet the needs of students), education guidance about Khon Kaen University. **Interpersonal**- recommendations from parents, parents are the university alumni.
21	Thawinwong (2019)	Master's degree thesis	Ram Phaipani Rajabhat University	Mixed Method (questionnaire and interview)	400	- The 1st year undergraduate students - 9 participants at university management level	-Descriptive analysis	**External** – Internet marketing, event marketing, scholarships and giving university products in the educational guidance activities, direct marketing, advertisement, University image (research and community service integration, producing teachers, and university located in a royal palace in the East region, green university) **Interpersonal**- influencer marketing
22	Phetcharat (2020)	Journal article	Thaksin University, Phatthalung Campus	Questionnaire (5-Likert scale)	370	The 1st year undergraduate students	- Descriptive analysis - Simple logistic regression	**Internal-** Qualifications Score according to the Qualifications Framework gender, age, region, area of residence, type of school, average GPA, order of choice in university Order of choice in the field of study and the application cycle according to the TCAS system has no relationship to the decision

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
								External - Curriculum and Instruction, instructors, Promotion and development of students, Graduation and employment
23	Malilate and Abdulraman (2020)	Journal article	Three Southern Border Provinces	Questionnaire (rating scale and 5-Likert scale)	300	High school students	Descriptive analysis	**Internal**- interests and personal reasons **External**- study programs, economy and social values, and university image **Interpersonal**- decision-making influencers
24	Intawee (2021)	Journal article	Sampran, Nakhon Pathom	Questionnaire (5-Likert scale)	400	High school students	Descriptive analysis	**External**- Productivity and quality (i.e., professional skills, morality and ethics, further study or career opportunities, programs meet the needs of educational institutions and enterprises, practical innovation or invention) learning and teaching management process, the credibility of the university, Expenses throughout the course (i.e., student loan and scholarship), and good environment and facilities **Interpersonal**- influence from other people (recommendations from friends, seniors, parents, teachers, and actor/actress/ relatives studying at the university)

No	Author and Year	Types of articles/reports	Study Setting	Research Method	Sample Size	Participants' Level of Education	Data Analyses	Key Findings - Factors and Study outcomes identified
25	Trakongkit (2022)	Master's degree thesis	Chandrakasem Rajabhat University	Questionnaire (5-Likert scale)	400	The 1st year undergraduate students	descriptive analysis	**Internal**- own and social expectations (i.e., easy to find work after graduation, social acceptance, have knowledge and abilities that are recognized in the profession), family economic status, GPAX **External**- instructors, information and media (i.e., variety of information sources, communication channels, educational exhibition and events) , study programs meet the needs of students, **Interpersonal**- recommendations from relatives and teachers, friends choosing to study at the university, seniors currently studying at the university

Conclusion

The present study highlighted three key determinants that have influenced the Thai students' choice decision in selecting their universities including internal, external, and interpersonal determinants. The results from the systematic review can infer that there is a multiplicity of factors that affect their students' and their different stakeholders' decision-making. This phenomenon has happened in higher education for some reasons.

First, pursuing a first degree for the Thai students in higher educational system is not free of charge. The students rely on their parents' financial supports so that they have to follow their parents' suggestions of which universities they should choose to study at university level. That is to say, somehow the Thai students' choice of university has been manipulated either directly or indirectly.

Second, culture and belief dominate the Thai students' decision. They prioritise the universities' reputation and image as salient factors because they care about societal acceptance. Also, an offer to study in prestigious universities contributes to an increase of better job opportunities both in local and international working sectors. In addition, graduates in reputational university's image have a sense of pride to support acceptable social status.

Lastly, it is important to emphasise that the Thai education support system is ineffective to instruct the students what they have to consider when they have to choose their universities. Students especially those who study in upper level are mainly influenced by their parents, relatives, friends, seniors and external influencers (e.g., actors/actresses, and idols) in the university/program selection to pursue their first degree. There is still lack of guidance from their teachers. Basically, a student deserves to study in the field of study in which they are interested. Hence, appropriate supports from basic education in high schools are solid foundation to serve the Thai students' suitable decision to choose the university choice for their higher education.

Finally, this research provides practical implications for higher education institutions' policy makers, instructors, and administrators by identifying a multiplicity of factors that affect

their students' and their different stakeholders' decision-making. The findings imply the universities to pay close attention to student needs as well as maintain high standards for the programs of study in order to attract good students. It is noteworthy to note that interpersonal influences are highlighted in the findings, and thus universities should maximize the use of social media, website announcements, and alumni newsletters to proactively promote activities or events held on-and-off-campus to keep current students, parents, alumni and the public informed regarding university's offerings.

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