STUDY OF CONSIDERATIONS AND PREFERENCES OF CAREER EXPLORATION'S MENTORING SERVICE FOR THAI HIGH SCHOOL STUDENTS

BY

MR. PEERAPAT TERMPANYA

AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE PROGRAM IN MARKETING
(INTERNATIONAL PROGRAM)
FACULTY OF COMMERCE AND ACCOUNTANCY
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ENTITLED

STUDY OF CONSIDERATIONS AND PREFERENCES OF CAREER EXPLORATION'S MENTORING SERVICE FOR THAI HIGH SCHOOL STUDENTS

was approved as partial fulfillment of the requirements for
the degree of Master of Science Program in Marketing (International Program)

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Member and Advisor

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Independent Study Title	STUDY OF CONSIDERATIONS AND PREFERENCES OF CAREER EXPLORATION'S MENTORING SERVICE FOR THAI HIGH SCHOOL STUDENTS
Author	Mr. Peerapat Termpanya
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ABSTRACT

Nowadays, Thai high school students have problems choosing a major field of study in college due to lack of self and career exploration services provided by the school itself and even by private sectors. They do not know what they "really" like and want to be in the future. This leads to future problems where graduates or jobbers have mismatched capabilities or interests with their current job according to their field of study which may result in low quality of deliverables in the workplace. Though there are several online and offline career counseling service providers, there are still not enough of these service providers and their effectiveness in delivering a product that satisfies students' needs is questionable.

Therefore, this research aims to 1) investigate how students explore and prepare for future careers, 2) identify profiles of potential student customers, and 3) recommend ideal products or services for career counseling based on potential students' preferences. It can deliver vital benefits to develop the right product, service or activities and marketing mix strategy which can be used in career counseling businesses, or in cram schools that plan enter the area of career exploration services.

Two types of methodologies conducted were exploratory and descriptive research. The research results showed that students today are individualistic. Students in Bangkok and upcountry share the same needs. Service offerings must be relevant

and have updated content of how careers work and be offered using an interactive method. Potential target customers (students), called ‘Prepared’, are ones who have a specific set of characteristics of having heavy consumption of relevant contents, high level self-awareness, having a strong plan for career success, and highly considerate. ‘Quality of contents or mentors’ and ‘Online approach’ are basic features needed by potential customers. The effective channel to promote the service is through online websites and selective social media.

Since students are familiar with free-of-charge services, such a service will have a challenge with revenue, as students prefer not to pay. If launching this concept, businesses may need to think of other revenue streams.

Keywords: Career exploration preparation, Interactive methods, Prepared cluster

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Mr. Peerapat Termpanya

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CHAPTER 1
INTRODUCTION

This study is a contemporary topic in applied marketing in societal issue which is education. A large percentage of Thai students (mainly focused on high-school) are indecisive regarding choosing-e a field of study at the college level. This can lead to a severe impact on a person's career if it results in a situation where graduates or jobbers have a mismatch between their training capabilities and their careers. This may result in low work productivity. Therefore, this study aims to provide an understanding of students' underlying insights and attitudes toward effective solutions (mentoring service), potential customer (student) characteristics and marketing mix of the desired mentoring service. Therefore, this study will allow readers who are in education service industry, education business, university and college office of recruitment or new players in this industry to adapt, develop, and offer effective solutions in one of the highest-spending industries in Thailand (Lheam-Thong, 2016).

1.1 Statement of the problem

Nowadays, Thai high school students have problems choosing a major field of study in college, due to the lack of self and career exploration services provided by the school itself and even in the private sector. This results in a less effective workforce when graduates are hired for the jobs that are not matched to their real capabilities. Mentoring or counseling service businesses are one of the effective solutions to this problem. However, the research related to student mentoring business, specifically to Thai high school students, is limited. It is important to research this topic since it may have a big impact on business decisions for both education business players in the industry and education stakeholders.

Therefore, this research aims to 1) investigate how students explore and prepare for future careers, 2) identify profile of potential student customers, and 3) recommend ideal products or services for career counseling based on potential students' preferences. It can deliver vital benefits to develop the right product, service or activities and marketing mix strategy which can be used in career counseling

businesses, cram schools that plan to enter the area of career exploration services, and university and college recruitment offices in a digital age.

1.2 Research objectives

The objectives of this study are:

1. To determine students' values and importance of career exploration preparation.
    1.1. Determine key factors students use to make decisions for university or college fields of study.
    1.2. Determine level of importance and awareness of career exploration preparation among students.
    1.3. Determine satisfaction level of current resources or services students use for career exploration preparation.
2. To identify students (customers) segments and profiles associated to needs and attitudes toward mentoring service as a choice of career exploration solution.
    2.1. Identify student segments defined by necessity and readiness aspects as per demographic and behavioral characteristics profiles.
    2.2. Identify potential students segment according to differing attitudes toward mentoring service.
3. To determine preferred characteristics and attributes of mentoring service defined by potential students (customers) segment.
    3.1. Determine key underlying factors of considerations of desired mentoring product or service.
    3.2. Determine mentoring product or service delivery channel (method) – offline or online.
    3.3. Determine key necessary attributes and features of product or service.
    3.4. Determine key characteristics of marketing mix applied to product or service, defined by potential students (customers).

The next chapter provides a review of the literature related to Thailand's student development, career exploration aspects among Thai students and potential mentoring service solutions. This is followed by chapters of research design, results, and the report ends with a conclusions and recommendations chapter.

CHAPTER 2
REVIEW OF LITERATURE

2.1 Effects of Thailand's education on human capital development

In 2017, Thai government budget on human development and human capability building was 231,894.4 million Thai Baht, making it among the top three budget in the country. On top of that, the ministry of education had a budget of 519,292.5 million Thai Baht (Lheam-Thong, 2016). Those were very high numbers and yet the education and human capital development were not well structured.

Thailand faced a high unemployment rate of fresh graduates in 2015 which was 30.43% (Admission Premium, 2016). This was due to two main reasons. First, high school students often choose fields of study that are "on-trend" during their admission period. But the demand in those areas dropped while they are in university or collage, said by Dr. Supinda Lertrit, professor at Faculty of Education, Rangsit University (Journalism108, 2015). Second, students choose to go into a field or university that was easier to graduate if they were not accepted into the desired field or university. According to Mr. Kiatanan Luankaew, Dean of Faculty of Economics, Dhurakij Pundit University, Thai students had limited information and knowledge of their future career in each field. The government and universities should provide a full disclosure of a rate of employment, a salary range, and job opportunities of each field. This is to help students make an informed decision and it may reduce the number of unemployed graduates. It was also found that there is a number of fresh graduates choose to be hired in underqualified and underpaid jobs (Nummun, 2016).

In addition to an unemployment issue, there was also a "horizontal education mismatch". This term was used when a graduate didn't work in his or her field of study. The horizontal education mismatch was costly to both individual and social. For individual cost, mismatched graduates received 7.2% lower in pay than a matched graduate does. For social cost, it led to a reduced productivity caused by lower capabilities, loss of opportunity, and loss of country's education budget of producing graduates in mismatched fields (Pholphirul, 2016).

2.2 Potential solutions to human capital issues in career exploration aspect

One of the effective solutions to this problem is an "individual career mentorship". A study showed that there was a significant improvement of career selection decisions in a studied group who received an individual self-assessment and mentoring on career exploration (Sukhulthanakorn, 1995). A study of effectiveness of e-mentoring programs to students showed that majority of high school students were unaware and indecisive when it came to their college and career choice because they had little knowledge of what each career was (Single & Muller 1999). The e-mentoring programs included on-web contents, scheduled follow-up emails for assigned tasks, and physical discussion sessions, in which encouraged students to share more of their thoughts (Culpepper, 2008). One of the key factors of success was the relationship building between students (mentees) and mentors. It showed that an effective program needed a course of sessions, not just a one single short session, in order to allow mentees and mentors to build a relationship. Once they had a good relationship, students would be more willing to share their thoughts to their mentors. A good relationship then helped mentors to truly understand mentees and allowed mentors to give an appropriate advice.

2.3 Importance of career exploration solutions

Many countries including Thailand and the U.S. recognized the importance of the implementation of career exploration solutions to students (especially high school students). Same as Thai high-school students, U.S. students did research on college using online reviews, rankings, and tends to help them make a decision of what they want to go into. Those resources are readily available but they made students under-educated of what they truly desire because those resources were not personalized and it based heavily on other people's experiences which came with their own biases. Therefore, they put themselves at risk when they graduate and they may find themselves that they went in a wrong field. This method is far incomparable to understanding from real experiences by person mentoring method. There were many mentoring programs run by schools, colleges, and private organizations and it can be in several formats; by school peer mentoring, college staff mentoring, and college graduates mentoring (Bukowiec, 2016). The key to an effective mentorship was not just a static informative

content but an interactive content transferred by real people. Research by Adecco in Thailand in 2015 showed that the trends of choosing career have been developed from mainstream occupations to many niche professions caused by growth of variety of media contents students exposed to. Entertainment, sports, and comic media programs made students aware of new jobs they've never heard before. Icons like singers, footballers, celebrity chefs, and many more inspired them to pursue their future with the hope of possibility that one day, they will be like their idols (Adecco Thailand, 2015). When the choice of career was presented with entertainment, or anything that students are interested in, or if they have an idol in that field, students are more likely to pursue that career. Therefore, the solution for career exploration presented for students should tie with interesting contents that are related to students, shouldn't be too dry and boring, and should inspire students with iconic approach.

The business of mentoring services and other related services have been in Thailand for years. They were offered by private specialist companies and cram schools that extended their services to fulfill the whole students' journeys. The extracurricular and special skill development courses market has been growing and it reached 12,000 million Thai Baht in 2015 (Kasikorn Research Center, 2015).

Based on the literature review, it is obvious that 1) the issue of horizontal education mismatch was serious. It had a negative impact on country's human capital development and economy; 2) there was a research about the mentoring system for Thai students but it has not been a personalize plan for each individual student; 3) the research on e-mentoring study was done in the U.S. and it gave us only a basic knowledge of the system. However, the context of Thai society is vastly different than that of the U.S. and it has never been studied in Thailand before. Therefore, this proposed study will provide contributions to address those concerns.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Research methodology and procedures

Two types of methodologies conducted were exploratory and descriptive which were applied to all three phases of the research.

3.1.1 Secondary research

First, secondary data research (exploratory) was conducted to provide an overview of the education industry, categories related to university or college entrance (Objective 1.2), key players in mentoring or counseling products or services (Objective 1.3), and customers (students) dynamics including general trends of behaviors and values and attitudes toward career exploration preparation (Objective 1.1, 2.1 and 3.1). Sources of secondary research that are presented in literature review were from industry news, research published by both public and private agencies, academic and opinion articles, and chapters from related books.

3.1.2 Primary research – Exploratory

This study continued by using a focus group and in-depth interviews (exploratory) methodologies to gain insights of customers (students) including key factors for decision making, importance and awareness of career exploration preparation, and satisfaction levels of products or services the respondents used (Objective 1.1, 1.2 and 1.3). The interviews also led to a determination of attitude and necessity levels toward mentoring service (Objective 2.1), and underlying consideration factors when choosing a mentoring service (Objective 3.1). Behavioral aspects then were extracted to determine ideas of preferred product or service characteristics – internet inclusion level (Objective 3.2), media consumptions (Objective 3.3), attitudes to contents (Objective 3.3 and 3.4), perceptions to communications (Objective 3.4), and price perception level (Objective 3.4).

The focus groups had high school students from different grades (grade 10, 11 and 12) to give different views and different levels of needs. The focus groups had two students from each grade making a total of six students per group for the interviews.

There were two groups to be conducted – the first group contained students who had primary final choices of the field they want to study and the second group contained students who had not had their choices and were still indecisive. Each focus group interview session took around 60 to 90 minutes and was conducted by a moderator. In-depth interviews were conducted with eight students – four had final choices and the other four had not. A half-an-hour in-depth interview was conducted with each individual student by the researcher (See sample of focus group and in-depth interview questions in Appendix A). The results from these interviews were analyzed and used as guidelines to develop key quantifiable questions in the descriptive method.

3.1.3 Primary research – Descriptive

The descriptive research method was conducted in a questionnaire format. A list of questionnaires was developed by leveraging deliverables from the exploratory research. There were total of 280 student respondents. The purpose was to quantify key factors of decision making, importance and awareness of career exploration preparation, and satisfaction levels of products or services the respondents used (Objective 1.1, 1.2 and 1.3). The research also aimed to discover the level of readiness and necessity of mentoring service as a choice of career exploration preparation. It also allows the researcher to define customer segments (Objective 2.1 and 2.2). Finally, it identified quantitative preferences for desired products or services (all of Objective 3). The data from questionnaire was collected via an online survey, extracted to a spreadsheet and made ready for analysis. See research questionnaires in Appendix B.

3.2 Data analysis

Data analysis was done in three phases using the results from both types of methodologies to deliver key statistical parameters e.g. means, standard deviations, p-values from methods such as a t-test and ANOVA. These three phases were aligned with three individual objectives specified in research objectives section. Phase 1 analysis was conducted to achieve the result for objective 1. Then the results defined from phase 1 (Objective 1) were used for cluster analysis in phase 2 to define customers (students) segments for Objective 2. Phase 3 was the analysis to identify product or service characteristics preferences studied from specified customer (student) segment

from phase 2. Lastly, all results from the research were summarized with given recommendation for further practical use.

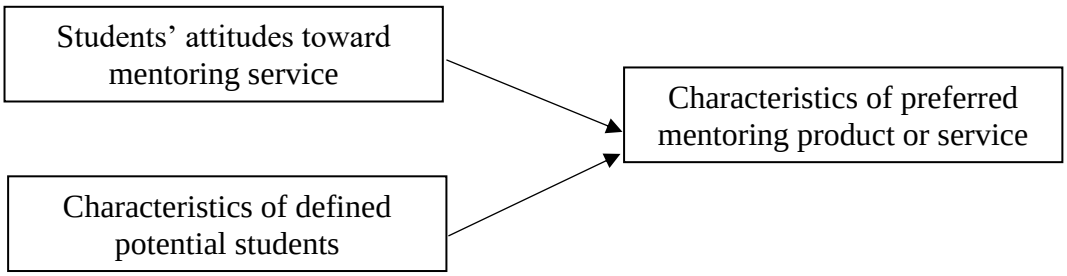
3.3 Key research variables identification

There were two main phases as stated in methodology and procedures section. The first phase of identifying potential students segment for mentoring service were derived from the study of students' characteristics (demographic and behavioral). Those characteristics were used as independent variables that led to dependent variables - attitude aspects toward mentoring service (See Figure 3.1).

Figure 3.1: Association of variables in phase of identifying potential students segment for mentoring service

To deliver results for objective 3, dependent variables were defined as characteristics of preferred mentoring product or service. Product or service characteristics were formats, features, contents, pricing and types of communication media. Key independent variables were the students' attitudes toward mentoring service and the characteristics of defined potential students (customers) (See Figure 3.2).

Figure 3.2: Association of variables in phase of identifying characteristics of preferred service



3.4 Sampling plan and data collection

The research contained two sets of sampling plans, one for an exploratory methodology (focus groups and in-depth interviews) and one for a descriptive methodology (questionnaires). The respondents needed to be current high school students in grade 10, 11 and 12 in Thailand who planned to study in university or college. They also had a household socioeconomic status in A, B or C and had accessibility to the internet. The respondents were recruited using a convenience sampling method.

The plan for the exploratory research was divided to two sub parts: focus groups and in-depth interviews. A total of 22 students were selected from grade 10, 11, 12 and one was from grade 9. Of the 22 students, there were those who already had decided their field of study and those who had not. The researcher conducted two focus groups with seven respondents in each group. One group consisted of Bangkok students and the other was upcountry students. For the in-depth interviews, the researcher conducted nine interviews in the format of an individual interview and a group-of-three interview. Note that the attribute of attending cram school was expected as an indicator for defining potential and probability to use mentoring services. All interviews were voice recorded for a written interpretation in the analysis step.

The plan for descriptive research was that 280 respondents were recruited. Quota sampling was the method used to recruit respondents, segmented based on requirements of geographic locations (Bangkok or Upcountry), grades (10, 11 or 12) and status of attending to cram schools (Yes or No). The number of students in each group of recruited respondents is set to 35 (See Table 3.1).

Table 3.1: Respondent distribution plan for descriptive research

Status of field of study decision	**Geographic area and cram school status**			
	Attending cram school		NOT attending cram school	
	Bangkok	Upcountry	Bangkok	Upcountry
Already have primary choices of field of study	35	35	35	35
Have no choice and indecisive to choose field of study	35	35	35	35

All questionnaires were distributed in an online format. After all responses had been collected, the researcher validated the information of all responses. If an error was found, a new respondent was recruited to replace the one who made the error.

CHAPTER 4
RESULTS AND DISCUSSION

4.1 Secondary exploratory research key findings

Key findings from secondary research start with an explanation of fundamental insights and underlying logic of Thai people when choosing a career. The research continues by illustrating the current basic needs of Thai students and services offerings in the market. In the last part, there is a demonstration of potential offerings that can fill the opportunity gap.

4.1.1 Thai norms limit student paths

Results of the University entrance examination is the first success indicator in students' lives, as treated by Thai norms. Thai people, especially elders, believe that a university degree is key to bring their children good jobs.

Thai society perceives the success of a person from certain indicators. Main success meters are wealth and social prestige. Most successful cases are people in professions such as doctors and engineers who later become businessmen. As a result, high performance students (who have good grade point average) are expected to go into these two occupations no matter if they have a passion for them or not. In addition, top public university graduates can easily earn high respect from employers and their colleagues even in the first year of their career. It is, however, significantly different for those who are from other universities.

By all these mindsets, most Thai students are indecisive when it comes to choosing their fields of study. They have no clear idea what each career is or how they work. However, the fact that Thai students are being indecisive as stated above might not be true anymore because society is changing. Descriptive research results will clarify what they actually think and how to serve them.

4.1.2 Compulsory 'Guidance' classes for Thai school curriculum are outdated

A basic career exploration is provided at schools for Thai students. It is a 'Guidance' class, provided as a compulsory subject in the high school curriculum. The

main scope of this subject is to make students aware of their capabilities, interests, and basic understandings of how careers work.

However, the subject has been taught by teachers who have limited sources of career knowledge. In addition, as the career market evolved, self-assessment tools and career information provided by the school have not been updated (Kamolassawaroj, 2010).

4.1.3 Career self-awareness contents are underserved

It is understood that Thai students focus more on university admission examination preparation contents than career selection. This is proven by the cram school market size of 9,600 million baht in 2015 while the size of career mentoring service market is unknown (Kasikorn Research Center, 2015).

However, according to the Dek-D website (the most popular lifestyle and education content website for high school students) in January 2017, social conversations/engagements about career exploration accounted for 45% of total university admission topics while the examination preparation topics accounted for 55%. This indicates that both areas are almost equal in terms of interest among students (Dek-D, 2017). However, there is no sufficient service offering for career exploration.

4.1.4 Different methods of career exploration solutions are served in the market

There are a variety of career exploration services running currently. The services range from offline to online and from basic format (especially in Thailand) to advanced format (mostly in the U.S.).

The traditional types of offline services are faculty open house events and career camps, usually held by university students. Most cram schools in Thailand have been held as special sessions providing knowledge for career assessment and exploration since 2013.

Online services also play a crucial role to serve needs in the market with a higher level of accessibility and updated information. Most Thai career exploration websites for students contain various information with different formats of contents (news, articles, and videos). Key websites are Dek-D, Eduzones, True Plookpanya, AdmissionPremium, etc. Services in the U.S. focus on assessment tools and platforms

to assist students to ultimately choose their best career decisions. Examples of websites in the U.S. are CareerKey, MentorNet, Mentoring.org, etc.

In summary, Thai students have a high interest in career exploration contents, but school subjects cannot provide full benefits to them. Academic cramming for examinations is well attended while career exploration services are underserved. Moreover, current career exploration offerings are mostly free of charge. Hence, there is a big opportunity for the career exploration service to fulfill the gap by providing a full range of services and to generate revenue and make a profit as a business.

4.2 Primary exploratory research

The qualitative research methods are focus groups and in-depth interviews. The results from this part provided some insights that would give answers to Objectives 1 (career exploration consideration factors) and 3 (preferred service attributes). It also demonstrated primary attributes expected in Objective 2 which were confirmed by the qualitative research results.

The recruiting process for the qualitative research took place at cram schools in the city center of Bangkok. The selection of respondents was based on the aforementioned selection criteria. The total number of respondents was 22 high school students and one grade-nine student. The respondents were mixed between the respondents who already have made a choice of study and those who have not. Focus group interviews were divided into two groups of seven students, one group for students from Bangkok students and the other for upcountry students. Nine in-depth interviews were conducted in the format of individual and groups of three. The reason that the grade-nine student was recruited was to obtain a different opinion toward the topic of study compared to high school students.

Key findings from these interviews were summarized topic by topic and aligned with objectives sequence. Relevant interpretations are presented below with some respondent quotes appropriately

4.2.1 Students are ‘Individualistic’

Only 3 out of 22 respondents (13.6%) stated that they had not made their decisions about university. Ones who had made choices have significantly different interests. There is no trend of ‘following friends’ as a factor in making a choice of fields

of study. There is also no ‘popular’ field of study among the respondents. ‘Hesitation’ was found in some respondents. Of 22 students, 17 were confident with just one single choice, while five others had two or three choices. However, all of the respondents had shared the same interest in “health science fields” such as medicine, dentistry, and pharmacy.

This implied that students are ‘individualistic’ enough to choose their preferred field of study. Other factors may hardly affect their firm decisions -- even parental influence.

4.2.2 ‘Aptitude capability’ is the lead factor for decision

To the question of “What did you consider as key factors for decision making?”, the most answered factor is ‘Aptitude capability’. Students realized which skills they are good at. Some of them said that capability builds passion. In other words, if they study well in particular subjects, they would have passion in them. A good real-life example is “I love football but I am bad at it. However, I am good at math, so I won’t be a football player but I’ll be an engineer”.

The second most answered factor is ‘Inspiration by acquaintances’. Their choices were inspired by their parents’ or siblings’ professions. This is because they could closely see what the work really is, and they could also ask them in detail of what they want to know. ‘Passion’ is the third important factor they considered, while ‘Monetary benefit’ was surprisingly the least important factor. Only two of them said ‘Money’ as the top-of-mind factor. Anyway, most of them agreed that if they could work well, it will eventually make them money.

This evidence showed that students are ‘realistic’ enough to accept what they are. They would make decisions based on their capabilities and get good results in return.

4.2.3 Selecting best choice of study define the future career and study plan

Students valued this decision making as important because it is a ‘key to defining their future career’. They also stated that the decision in choosing the field of study enables them to better prepare and choose the right cramming programs, which will help them to enter the desired faculty.

Students treated the decision of the field of study as the most critical point in their lives. Consequently, they have to think carefully and get well-prepared before making choices.

4.2.4 Decision process of students starts and ends 'Early'

A point of 'when the decision process starts' was identified by analyzing the grade 9 student's answer compared to those of grade 10's. A difference of level of 'Awareness' of decision making in career choice was found. The grade 9 student had no clue about careers while the grade 10 students have started collecting information.

All grade 11 and 12 respondents made their choices within their first semester of grade 11. This implies that students have common period of 'consideration', which is early in the first semester of grade 10 and end of grade 11 years.

4.2.5 Students use free-of-charge 'Multi' sources of information, even it was not perfect

In-school 'Guidance' classes or programs are perceived as 'Useless' for all respondents because the tools are inapplicable to them and the contents are outdated. Students, instead, have access to a full range of information related to career knowledge, mainly through websites. The most popular type of website is a lifestyle community website which provides both own contents and a discussion forum for students to discuss related topics. Dek-D, Eduzones, Pantip are some of the top websites. The main reason that they use these websites is because they can interact with others to ask questions, share ideas, and get to know each other as a community. Moreover, these websites engage users with fun contents, and are not too stressful for students who want to relax while consuming knowledge.

Not only do they use websites, students also acquire information from other physical sources such as talking to school senior alumni or acquaintances. These sources enable the students to cross-check their understanding and to fill in any missing information. Most importantly, they see both websites and information from acquaintances 'Valuable' because they are 'Easy' and 'Free'. They are familiar with free benefits in the online world. So, it is not necessary for them to pay for such knowledge because "Understanding in career knowledge does not have proven evidence."

The advanced occasion for career exploration is an ‘event’ such as open houses and university camps. Most events are held by university students. The advantage for attendees is that they can ‘touch and feel’ the study experience, atmosphere, and real practice (especially in labs). However, ‘inaccessibility’ to the event can be found as the organizers provide limited seats and they are mostly held at top universities in Bangkok, lowering participating opportunity of upcountry students.

Nevertheless, all types of services and solutions have drawbacks. First, most of contents are created by university students who do not have jobs yet. Therefore, their experiences are not as “real” as those who are professionals. This could mislead high school students in making a decision based on the given information. Second, most of the contents are ‘not specifically relevant’ to students, meaning that students may not get answers to the questions they have. Also, these events may not give opportunities to all attendees to ask questions. Lastly, some contents on websites are not up-to-date.

The exploratory research then moved to a concept test by asking students about new solution that combines all pros and eliminates cons that students faced from current career exploration services and solutions.

4.2.6 Concept test: ‘Video call mentoring by professionals’ is good at some aspect, not perfect

When asked about a service concept of ‘online platform for career mentoring sessions by professionals through video call’, all respondents had never heard of it. Ten out of 22 respondents immediately said that they might try it as another source of information and thought that it is superior to other platforms because they can ask any questions (note that 8 out of those 10 respondents are male). A primary consideration for them is ‘mentor quality’. They prefer only high quality mentors and ‘quality’ is determined by professional and educational profiles. Review and rating systems would help them make a decision more comfortably. They also prefer a ‘short but frequent session schedule’ rather than a long session.

Nonetheless, half of the respondents stated that they prefer university students as mentors because they would feel more comfortable talking to university students. They also believe that university students who are in the same generation could understand them well and would give them relevant pieces of advice, especially

examination preparation techniques. The other half, instead, prefer professional mentors who could give them real-life career advice with clearer pictures.

The most concerning point among students, regarding career mentoring through an online video call is that they feel ‘uncomfortable to the video call’. A girl with a confident characteristic said that “Even with close friends, we do not video call”. While three men added that “Typing should be enough for us”. Therefore, this concern needs to be a consideration for trading off between ‘interaction’ and ‘comfort’ if one is to launch this kind of service in the market.

4.2.7 It is ‘hard to pay’ for mentoring service

The ‘hard to pay’ issue is the key challenge for businesses when launching a mentoring service, especially in an online platform. Fifteen respondents refused to pay for the service. Some of them who had experience in applying for university camps (which cost from 400 to 700 Thai Baht) said that it was too expensive and they chose not to attend the event.

Seven respondents considered to pay for this online mentoring service only if the mentor’s quality is high enough. One respondent suggested the business could charge 100 Thai Baht per one mentoring session. That was the price he thought was worth the money.

All of respondents said that they decided themselves about their cramming programs and their parents supported their decisions and paid for them. But for a mentoring service, they thought they needed to convince their parents more if they wanted to try it. It was because the service delivers no tangible evidence or results, unlike examination scores. Therefore, the business needs to deliver high perceived value to students and to find its revenue streams from other sources rather than the students.

4.2.8 High school students are a ‘Mobile generation’

From the respondents’ data, high school students spend their ‘out-of-class’ life on their mobile phones. They regard mobile phones as their entertainment gadgets, while laptops are tools for work. LINE application on smartphones is the most time-consuming application for chatting with friends, followed by Facebook and Instagram for social networking, while YouTube is used as a television. They consume mostly

teen contents and consider same-age celebrities as their idols. However, the key challenge is that students normally do not have an ‘unlimited’ internet mobile phone package. Therefore, online services may not reach them anywhere or anytime, but only when they have a Wi-Fi connection.

4.3 Primary descriptive research

Total of 441 respondents (over planned of 280) completed a questionnaire consisting of 30 questions (with sub rating questions). The questionnaire was designed according to the interview results. The quantitative results from the questionnaires were interpreted to validate certain answers and insights corresponding to all research objectives.

Various statistical parameters and approaches were applied in data analysis using the Statistical Package for the Social Sciences (SPSS): Independent-Samples T-Test, Paired-Samples T-Test, One-Way ANOVA, Bivariate Correlation, Factor Analysis, K-Means Cluster Analysis, Linear Regression, and Custom Tables. The analysis provided validated answers to Objectives 1 and 2 as it defined a potential customer group (cluster). The analysis then continued to Objective 3 by comparing attitudes to mentoring service among clusters and potential service attributes defined by potential customers (cluster).

4.3.1 Respondent profiles

Out of 441 respondents, 87.8% were females. The largest Grade group was Grade 11 (40.1%), followed by Grade 10 (23.1%). In addition, 61.0% were in upcountry of Thailand which was consistent with distribution weight of Thailand’s population. Most students recruited in the survey had good academic performances, with 56.0% having GPAX over 3.25 while only 7.5% lower than 2.50. Even though they were good performers, cram school attendance rate was only 45.8% (See Table 4.1). Also, the frequency distribution for respondents (regarding to choices made, study region and cram school attending) aligned with the target of at least 35 respondents per sub group (see Appendix C).

Table 4.1: Respondent (students) profiles (n=441)

Respondent attributes		Count	Column N %
Gender	Female	387	87.8%
	Male	54	12.2%
Current study grade	Grade 9 or lower	58	13.2%
	Grade 10	102	23.1%
	Grade 11	177	40.1%
	Grade 12	104	23.6%
Current study region	BKK+Metro	172	39.0%
	UPC	269	61.0%
GPAX level	<2.50	33	7.5%
	2.50-3.25	161	36.5%
	>3.25	247	56.0%
Cram school attending	Yes	202	45.8%
	No	239	54.2%

4.3.2 A demographic impact on decision making of chosen career or field of study (Objective 1.1, Hypothesis 1)

Respondent groups were treated as representatives for Thai students who are in the decision making process to pursue university degree. A question was whether they have already had choices of study. The results showed that half of them said yes (n = 224, 50.8%) (see Appendix C). Differences in gender and study region made no significant difference in decision making (Chi-Square = 0.028, p = 0.868). To further elaborate, 51.9% of male students had already made their choices of study while, about the same number, 50.6% of female students had also done so (see Appendix C). The number of students who were decisive were 50.0% for Bangkok students and 51.3% for upcountry students (Chi-Square = 0.071, p = 0.790) (see Appendix C).

The cram school attending factor had no impact on the decision making. 54.0% of students who attend cram schools had already made their choices of study while only 48.1% of students who have not attended cram school did. Even though there was a difference in percentage figures, statistically, there was no significant difference (Chi-Square = 1.496, p = 0.221) (see Appendix C).

Academic performance also had no direct effect on students' decisions. Students who have GPAX lower than 2.50 tended to be indecisive in making choices (only 36.4% had already made decisions). On the other hand, 51.0% of students with GPAX higher than 2.50 had already made a decision. However, this showed no statistical significant difference (Chi-Square = 3.197, p = 0.202) (see Appendix C).

In addition, 80% of students who had made no choice stated that the reason that they could not make their choice is because "They don't know what they actually like". This may be interpreted that it is due to a poor quality of career-related contents consumed by the students (see Appendix C).

4.3.3 Awareness level of study field choice and decision making stages (Objective 1.1, Hypothesis 1)

As stated earlier, the percentage of the result showed that students in the higher grades tended to be more decisive than the lower grade ones. Grade 9 and below students had 50.0% decisive rate while the rate improved corresponding to higher grades and reached 57.7% decisive rate for Grade 12 students. However, the grade had no impact on decision making (Chi-Square = 4.414, p = 0.220) (see Appendix C).

Interestingly, 23.3% of Grade 12 students who had made choices of study did so before they were in Grade 10, which was very early. However, there was a polar characteristic where another 40.0% had just made their choice when they were in Grade 12 (see Appendix C)

The findings contrasted with the results from the interview which stated that most interviewers had already made their choice (please refer to 4.2.1). This may imply that, in larger populations, the choice of study is not easy for students as they lack awareness and do not receive enough information to make a decision in the early years of high school.

4.3.4 Students are 'Individualistic' and 'Realistic' in decision making for career and study (Objective 1.1, Hypothesis 1)

There are three top factors or reasons which are significant for students when making decisions on their careers and studies. The top one is 'Passion' (Mean = 4.41), followed by 'Expected monetary benefit' (Mean = 3.69), and 'Aptitude capability' (Mean = 3.68). Pearson correlation coefficients showed that there was a positive

statistical significant correlation between ‘Passion’ and ‘Aptitude capability’ (r = 0.191, p = 0.000). Although it confirmed the same result as in the interviews, the quantitative results showed that ‘Passion’ led ‘Aptitude capability’. Moreover, it can be interpreted that students who took ‘Passion’ as the primary factor might not be the same people as the ones who took ‘Expected monetary benefit’ as their primary factor. It was shown by a negative correlation between the two factors (r = -0.158, p = 0.001) (see Appendix D).

Moreover, students had a moderate level of “how much they are aware of their passion” at Mean = 3.38. This score also had a strong correlation with ‘Passion’ factor mentioned earlier (r = 0.405, p = 0.000) (see Appendix D).

On the other hand, the results illustrated very low ratings of ‘Dependency’-type factors e.g. impacts of friends (Mean = 1.39), families (Mean = 2.20), and social norms (Mean = 2.38). Results also showed a strong negative correlation of the top factor ‘Passion’ (r = -0.258, -0.359 and -0.150, respectively) (see Appendix D).

The results indicate that students were aware and believed in themselves and were not dependent on others. Social impacts might not affect their decisions as they believed that if they work in the career they are keen at, it would return good benefits to them, no matter what society perceives.

4.3.5 Selecting best choice of study is important to define future career and study plan (Objective 1.2, Hypothesis 2)

The quantitative results (of 5-scale rating questions) confirmed qualitative results. Students valued their decision making as important as a ‘key to define their future career’ (Mean = 4.44), followed by a rationale of ‘better preparation for examination’ (Mean = 3.90). The first rationale was significantly higher than the latter (p = 0.000) when tested by a Paired Samples t Test. Nonetheless, they had positive correlation (r = 0.168, p = 0.000) (see Appendix E).

The mean score of 2.58 was a result of ‘whatever field of study is fine for me’ rationale. It showed that students take the decision seriously and rationally.

In addition, there was a significant difference (F = 7.020, p = 0.008) between Bangkok (lower at Mean = 4.29) and upcountry students (Mean = 4.54) in ‘keys to define their future career’ rationale, tested by an Independent Samples t Test whereas

other respondent's attributes (gender, current grade, GPAX and cram school attending) created no significant difference among these two groups (see Appendix F).

4.3.6 Students chose combination of easy ways, focusing on career contents, for career exploration preparation (Objective 1.3, Hypothesis 3)

From the 5-scale rating questions set, the main resources for career exploration contents are websites (Mean = 4.08). However, students use multiple other methods as well (Mean = 3.99) to cross check. The main content is "career explanation: how professions work" (Mean = 4.07), in which it is slightly more important than "exam preparation techniques" content (Mean = 3.72). Activities provided by schools and university events (open house and camps) are out of their interest and may not be worth it in terms of time consumption (all had mean lower than 2.35) (see Appendix G).

In addition, by investigating some subgroups of students, it turned out that students who expected to pursue studies in medical fields (medicine, dentistry, and pharmacy) still preferred the 'University camp' activity more significantly than non-medical students (Mean = 2.53 vs. 1.86, Independent Samples t Test: $F = 7.295$, $p = 0.007$) (see Appendix G).

In summary, students accept online solutions. They treat them as resources of information without a need to have physical activity or solution. But it matters to those who expect to pursue medical science degrees. Also, the content of how careers work might be the most preferred and relevant information for students.

4.3.7 Students were satisfied with convenience but there are gaps of information relevancy and interactive method to enhance career exploration solution quality (Objective 1.3, Hypothesis 3)

Students were asked to evaluate (5-scale) current career exploration services or solutions they had used. The most preferable factor was "Convenience to access" (Mean = 3.84) and it was very outstanding. It also confirmed that satisfaction with "convenience" was from both websites and online services because it showed a significantly strong correlation ($r = 0.486$, $p = 0.000$).

The next highest two satisfied aspects were "Updated information" (Mean = 3.25) and "Information relevancy" (Mean = 3.21). Nevertheless, these were just at

moderate levels. The findings showed that current solutions might not deliver value which is good enough as per these aspects (see Appendix H).

Moreover, the aspect of "Interaction by talking to other" was rated rather low (Mean = 2.76). This implied that the current quality of this aspect was lower than students' expectation. Even convenient websites only provide static information that could not deliver all relevant information to students. Therefore, it is an opportunity for new business to launch a service to fulfill this gap needed by students, which is "relevant and updated contents of how careers work with interactive method".

4.3.8 Grouping attributes to seven components and define different five clusters (Objective 2.1, Hypothesis 4)

As attributes from the previous part had multicollinearities among each other, the researcher did a Factor Analysis process, using VARIMAX rotation, to categorize them into main characteristic (components) groups. The method suggested Eigenvalues to determine the group of factors as seven main components. Each component was interpreted and defined by the researcher as 'Content-rich', 'Academic', 'Other effects', 'Media', 'Passion', 'Self-plan', and 'Easy/Nearby'.

These components were then applied to K-Means Cluster Analysis method. This resulted in five clusters of students with defined characteristics as 'Emotional', 'Nerd', 'Followers', 'Chill' and 'Prepared' (See Table 4.2).

Table 4.2: Student clusters by K-Means method

Final Cluster Centers

	Cluster				
	Emotional	Nerd	Followers	Chill	Prepared
FAC1_Content	-.24658	-.70629	.08823	-.25926	.98354
FAC2_Academic	-.69302	1.52178	-.23217	-.43135	.59625
FAC3_Others	-.59176	.36703	.87316	.15820	-.76097
FAC4_Media	.57948	.39222	-.35939	-.38508	-.27127
FAC5_Passion	.16852	-.09231	.34820	-.79243	.07269
FAC6_SelfPlan	-.28505	-.49472	.28912	.07368	.30505
FAC7_EasyNear	.25561	-.30893	.61679	-1.09042	.00991
n	116	59	111	74	81

4.3.9 Define potential student (customer) group for new service concept (Objective 2.2, Hypothesis 5)

The new service concept was derived from service attributes and satisfaction characteristics as "relevant and updated contents of how careers work with online interactive method". Students were asked to rate (5-scale) their attitudes to the new career exploration service. Descriptive analysis and One-Way ANOVA were applied to test the results among the clusters.

The student cluster that matched the most to relevant service's attitudes and features is 'Prepared'. 'Prepared' showed the highest scores over other clusters which were "Interaction matters" attitudes (Mean = 4.74, F = 6.234, p = 0.000) and "Real person is better than static information" (Mean = 4.63, F = 2.553, p = 0.039). On the negative attitude questions of "Not need new resource" (Mean = 1.85, F = 6.174, p = 0.000) and "Prefer practice" (Mean = 4.09, F = 1.729, p = 0.023) which were not relevant to the derived concept, 'Prepared' ranked bottom among clusters (which is good) (see Appendix I).

Above all, when tested with a question of "intention to use", 'Prepared' had the highest score of all clusters (Mean = 4.07). By all these results, the 'Prepared' cluster is the most preferable and has highest potential for a new service concept.

4.3.10 Characteristics of potential customer group – 'Prepared' (Objective 2.2, Hypothesis 5)

'Prepared' cluster has characteristics (derived from factor and cluster analysis) as shown in Table 4.2. They showed heavy consumption of relevant contents, high level of self-awareness of what they are good, and had strong plan for the career success in the future and were driven with passion, while they are definitely independent from others' thoughts and media.

Descriptive analysis and One-Way ANOVA showed that 'Prepared' was under-indexed by other clusters in terms of decision making for study choices with only 34.6% had their own choices. Hence, the results confirmed the biggest opportunity from this customer group. 53.1% of them took cram schools, but not the highest frequency (Mean = 3.07, F = 4.563, p = 0.002). They were also the best academic performers, as 66.7%

of them had a GPAX over 3.25. In other words, students who opted for ‘Prepared’ are considerate, high performing, and perfectionists who cannot make a choice easily.

Consideration factors by potential customer group - ‘Prepared’ (Objective 3.1 and 3.2, Hypothesis 5)

Results from the descriptive analysis and One-Way ANOVA indicated that factors that potential customers (‘Prepared’) considered as the top two among clusters were ‘Quality of contents or mentors (if any)’ (Mean = 4.47, F = 6.484, p = 0.000, with Tukey HSD’s significant different to ‘Nerd’ group) and ‘Online approach’ (Mean = 4.12, F = 3.782, p = 0.005) (see Appendix J).

These two factors helped define the concept of the potential services. The first factor is to deliver high quality of contents. Moderate or mass contents would not be acceptable. Second, it must be an online service because ‘convenience’ is most preferred by students, especially for the ‘Prepared’ group.

4.3.11 Service features preferred by potential customer group - ‘Prepared’ (Objective 3.3, Hypothesis 5)

A similar method as used in the previous section was applied to set of ‘Features’ questions. For the ‘Prepared’ group, “Method of talking to university seniors” (Mean = 4.22, F = 5.183, p = 0.000) which was the most desired feature, was significantly statistically different from other features, such as “Talking to professional people” (Mean = 3.57). They preferred university students than professional people because of the smaller generation gap. This was also confirmed by the interview results. The second most desired feature was “Rating and review system is needed for ease of use” (Mean = 4.01, F = 6.466, p = 0.000).

A video call feature that was initially expected to be highly accepted by potential customers had a low mean (Mean = 3.54), even lower than total respondents at Mean = 3.58 (See Appendix K). Students also preferred less time-consuming practice in the service.

From all these results, although an online service (connecting to university senior students) is preferable (rather than professional people), the format cannot be video call but rather anonymous text chatting.

4.3.12 The service would face revenue problem as students prefer not to pay

The result showed a big gap of means between 'Intention to use' and 'Willingness to pay' at 4.07 versus 2.95 out of 5-scale rating by the 'Prepared' potential customers. Even Pearson correlation coefficient showed that it was not significantly different but it can be implied a bad sign of low level of willingness to pay. Business may need to think of other source of revenue streams.

A mean rating score at 3.37 for decision-making power tends to indicate that there is a 'co-decision' between student and parents. The 'Prepared' group was one of the two clusters that had this characteristic. The other was the 'Nerd' group. Also, when it came to payment, parents would cover their child's costs since they have a 'co-decision' characteristic.

4.3.13 Potential student cluster spend life online (Objective 3.4)

As stated in the interview results, students spent most of their time out-of-class 'Online'. Dek-D, one of the career exploration websites, draws the highest traffic from students and is ranked as the number one lifestyle content platform for students. The 'Prepared' cluster rated Dek-D at Mean = 3.99 out of 5-scale which had a significant difference from other career exploration websites e.g. university and education websites. Focusing on Dek-D is enough for business engaging with students (see Appendix L).

Among social media platforms that the 'Prepared' cluster consumed, YouTube ranked number one (Mean = 4.19), followed by Facebook (Mean = 4.07). Interesting correlations occurred when LINE application had high correlation with YouTube ($r = 0.319$, $p = 0.004$) while Instagram had high correlation with Facebook ($r = 0.354$, $p = 0.001$). These figures would help business in terms of marketing budget planning by allocating budget to the highest potential online media channel, in this case, Facebook and YouTube.

CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

5.1 Individualistic students urge career exploration preparation service into potential market

Nowadays, students are aware of their capabilities and do not compromise with social norms and environment effects. They decide mostly on their own which fields of study or careers they will pursue. However, in-school classes or contents for career exploration cannot fulfill students' needs. Current solutions services are free but cannot deliver high quality as expected by students.

The current cram school market size is huge and expanding to self-development segments. Therefore, high value career exploration solution has room to grow and businesses should capture a space in this valuable market where half of prospective students have not yet decided their choice of study.

5.2 Offer service to early-stage students

One of the top two consideration factors about field of study decision is 'Ease them to better prepare for study plan and cramming schedule'. Therefore, potential groups that business should tackle are students from Grade 10 to Grade 11 in semester one who still have enough time to make their choices of study and prepare themselves for the relevant examinations.

However, the contents provided in the service must focus on 'How careers work' as it showed up as the most preferable type of contents. This enables students to get an ultimate understanding of career prospects and eventually let them make the right decision. The second important content must be 'Study and examination preparation tips'. In addition, lifestyle contents should be added on the websites to engage users like most popular websites do.

5.3 Service offer must be in concept of "Relevant and updated contents of how careers work and served with interactive method"

Students have been educated to get information online. Hence, convenience is a very compulsory feature of any new service that is going to be launched. Physical

solutions can only serve the needs of a specific group such as students who want to pursue medical science degrees. Hence, the business player can leave offline practices out of potential scope. The most preferred service delivery method is the interactive method as it could create relevant and most updated contents for students.

Up to this point, the service would look like a community website platform where students can interact (by text chatting) with the ones who take role as mentors for them. In addition, the top reason why students have not made choices is "They do not know what they like". Therefore, the service should also offer 'Capability testing tools' that enable students to know their true capabilities.

5.4 Potential target customers (students) characteristics – 'Prepared'

The 'Prepared' cluster is a target customer group of the business because they have attitudes and consideration factors which correspond most closely to the preferred solution. They have characteristics of heavy consumption of relevant contents, a high level of self-awareness of what they are good at, a strong plan for career success in the future, and driven with passion. They are independent from others' thoughts and media. They are also considerate, high performing, and perfectionists who cannot make choices easily.

To acquire the first group of customers, businesses could target students with this set of characteristics. Online marketing will be the right strategy rather doing mass marketing.

5.5 Basic features of service preferred by potential customers

Certainly, the service should be an online platform delivering relevant contents. Though students prefer "How careers work" content the most, they prefer university senior students rather than professionals as an information source because of the smaller generation gap. They will feel more comfortable talking to the senior students who are almost or in the same generation. Moreover, as up-to-date information is a must for service delivery, older professional people may not be able to give students tips in the same context.

In delivery method, even though 'Interaction' is highly needed by prospective students and a video call is the most efficient way, students are uncomfortable to use it. They prefer a live chat as a means for any interaction.

5.6 Paying customer obstacles

Students are familiar with free-of-charge services, especially for career exploration services. They still think that they can find other free sources of information or talk to some acquaintances to get relevant information instead of paying money for the service. Thus, this service business would face revenue problems as students prefer not to pay.

Businesses need to think of other sources of revenue streams such as renting website spaces/banner, advertising fees, freemium model for premium services, or subscription model for B2B (with schools).

5.7 Play with students but talk to parents

The 'Prepared' students are a student group that tend to 'co-decide' with their parents. Therefore, the strategy for businesses should be to 'Engage with students and communicate call-to-action to parents'. That is, when parents see the same value of the service, they will pay easily.

One more thing that business can offer is 'contents for parents'. If these contents can be delivered to let parents understand the same way as their children, they will feel more confident in the service and will not be reluctant to pay.

5.8 Marketing communication through specific online website and social media

As Dek-D has significantly higher traffic than other channels, it is suggested that channel promotion budget should be allocated mainly to Dek-D. Financial resources can be allocated to other education and university websites only if there is some budget left.

Social media platforms are mandatory. But out of five main platforms, the results suggest to pick only YouTube and Facebook as primary tools. This is not only because they have highest traffic, but because other platforms like LINE and Instagram have high correlations with YouTube and Facebook, meaning that most users are the same people. Thus, allocating a budget to these two platforms should be very effective. In terms of communication message, same-age celebrity idols have strong impact on students in terms of their inspirations in both lifestyle and education. Business could use generation icons or influencers to promote them as leading presenters of the service.

5.9 Limitations of the study

This study is targeted to students that have a plan to pursue study in universities and colleges. However, it is limited to students who only have enough resources to apply the admissions. The majority of respondents are high school students as they have strong awareness of university admission. Nevertheless, the same format of study can be extended to a group of secondary school students and university students, but in slightly different aspects for further beneficial results.

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APPENDICES

APPENDIX A
QUESTIONS FOR FOCUS GROUPS AND IN-DEPTH INTERVIEWS (EXPLORATORY)

1. Are you preparing for university or college admission? If yes, what are you taking for preparation?
2. What do you think about your future field of study? One you have passion with or anything by other reasons?
3. Do you already have your prospect field of study in university or college? If yes, which and why? It not, why?
4. What factors will affect your consideration of choosing field of study?
5. Have you researched for your prospect careers? If not, why and when to start?
6. What do you do to explore your interesting careers?
7. What types of methods or sources do you choose to research on career?
8. How often do you expose to or use those resources or methods?
9. Are you satisfied with your resources? How?
10. Are you now fully confident of information you have, to make decision?
11. What will be your preferred solution that you can think of?
12. Will you willing to pay for mentoring or counseling service? If yes, at what price? If not, why?
13. What will be the important factors you concern when using the service?
14. What do you expect from mentoring session and mentors themselves?
15. Nowadays, what activities consume your time the most, except school?
16. Do you spend time more online or offline? With what?

APPENDIX B

QUESTIONS FOR QUANTITATIVE (DESCRIPTIVE) QUESTIONNAIRE

1. Do you now have choice of occupation or field of study?

1) Yes (Skip to Q3) 2) No

2. Why don't you decide the choices? (answer then skip to Q4)

1) Existing info can't give enough help

2) Lazy

3) Don't know what I like

4) I like what parents don't

5) No clue where to find info

6) Scores can't get field I want

3. Which field do you want to pursue the most?

1) Engineer 2) Science 3) Medicine

4) Dentistry 5) Veterinary 6) Pharmacy

7) Medical Technology 8) Allied Medicine 9) Psychology

10) Economics 11) Commerce 12) Political Science

13) Arts 14) Communication Arts 15) Law

16) Education 17) Other

4. When did you decide your choice of study?

1) Grade 9 or lower 2) Grade 10 Semester 1 3) Grade 10 Semester 2

4) Grade 11 Semester 1 5) Grade 11 Semester 2

6) Grade 12 Semester 1 7) Grade 12 Semester 2

5. How significant is the factor for choosing field of study?

Selection criteria	**Very important**	**Important**	**Moderate**	**Less important**	**Not important at all**
Match with my aptitudes	5	4	3	2	1
Whatever is okay for me	5	4	3	2	1
For exam preparation	5	4	3	2	1

6. How significant is the reason you use for choosing field of study?

Reason	**Very important**	**Important**	**Moderate**	**Less important**	**Not important at all**
Social norm	5	4	3	2	1
Parents	5	4	3	2	1
Aptitudes capability	5	4	3	2	1
Money	5	4	3	2	1
Friends	5	4	3	2	1
Family Idol	5	4	3	2	1
Passion	5	4	3	2	1
Media	5	4	3	2	1
Idol	5	4	3	2	1
GPAX	5	4	3	2	1

7. How much do you aware what you like or passionate about?	**Very aware**	**Aware**	**Moderate**	**Less Aware**	**Not Aware at all**
Rating	5	4	3	2	1

8. How do you prepare for career selection?

Method	**Totally agree**	**Agree**	**Average**	**Not quite agree**	**Not agree at all**
Mentor teachers at school	5	4	3	2	1
Websites	5	4	3	2	1
Focus on exam preparation	5	4	3	2	1
Ask seniors	5	4	3	2	1
Open House	5	4	3	2	1
Focus on how career works	5	4	3	2	1
Camp	5	4	3	2	1

Combine from many sources	5	4	3	2	1

9. Please evaluate effectiveness of methods you used for preparation

Attributes	**Very satisfied**	**Satisfied**	**Moderate**	**Not quite satisfied**	**Not satisfied at all**
Convenience, Accessible	5	4	3	2	1
One-stop	5	4	3	2	1
Relevant	5	4	3	2	1
Interactive	5	4	3	2	1
Practice trial	5	4	3	2	1
Updated	5	4	3	2	1
Meet new friends, seniors	5	4	3	2	1
Meet people in professions	5	4	3	2	1

10. How do you aware which subject are you good at?	**Very aware**	**Aware**	**Moderate**	**Less Aware**	**Not Aware at all**
Rating	5	4	3	2	1

11 Have you ever used career mentoring service?

1) Yes 2) No

12. What do you think about career mentoring service?

Concept	**Totally agree**	**Agree**	**Average**	**Not quite agree**	**Not agree at all**
Real men better than info	5	4	3	2	1
No need, full of resources	5	4	3	2	1
Interactions matter for specific questions	5	4	3	2	1

Talk is not enough, practice better	5	4	3	2	1

13. Which factor do you consider using mentoring service?

Factor to concern	**Very important**	**Important**	**Moderate**	**Less important**	**Not important at all**
Quality mentors	5	4	3	2	1
Meet in person	5	4	3	2	1
Fun, not serious	5	4	3	2	1
Famous mentors	5	4	3	2	1
Variety of mentors	5	4	3	2	1
Serious for credibility	5	4	3	2	1
Online	5	4	3	2	1

14. How frequent do you use social media?	**Most frequent**	**Frequent**	**Moderate**	**Less frequent**	**Not frequent at all**
Rating	5	4	3	2	1

15. What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals?

Feature	**Totally agree**	**Agree**	**Average**	**Not quite agree**	**Not agree at all**
30 mins is too short	5	4	3	2	1
Online video call is convenient	5	4	3	2	1
Talking to univ seniors is better	5	4	3	2	1
Shorter but more frequent	5	4	3	2	1

Good to talk to real working people	5	4	3	2	1
Video call is uncomfortable	5	4	3	2	1
Ratings and reviews needed	5	4	3	2	1
Prefer live talk attending	5	4	3	2	1

16. Will you use this kind of service website?	**Absolutely**	**Maybe yes**	**Not sure**	**Maybe not**	**Never**
Rating	5	4	3	2	1

17. How worth will you pay for the service?	**Absolutely**	**Maybe yes**	**Not sure**	**Maybe not**	**Never**
Rating	5	4	3	2	1

18 Comparing to career camp, what do you think this service is?

Feature	**Totally agree**	**Agree**	**Average**	**Not quite agree**	**Not agree at all**
Convenient, anytime, anywhere	5	4	3	2	1
Meet univ seniors	5	4	3	2	1
Meet real professionals	5	4	3	2	1
Practice trial	5	4	3	2	1
Convenient - No travel	5	4	3	2	1
Get info for exam preparation	5	4	3	2	1
No selection	5	4	3	2	1
Fun, Get new friends	5	4	3	2	1

19. Who decide to attend cram school?	**Students**		**Co-decide**		**Parents**
Rating	5	4	3	2	1

20. How frequent do you research about career on these sources?

Source	**Most frequent**	**Frequent**	**Moderate**	**Less frequent**	**Not frequent at all**
Facebook	5	4	3	2	1
Dek-D	5	4	3	2	1
Pantip	5	4	3	2	1
Univ. websites	5	4	3	2	1
YouTube	5	4	3	2	1
Other education websites	5	4	3	2	1

21. How frequent do you use this social media application?

Social media	**Most frequent**	**Frequent**	**Moderate**	**Less frequent**	**Not frequent at all**
Twitter	5	4	3	2	1
Instagram	5	4	3	2	1
Facebook	5	4	3	2	1
YouTube	5	4	3	2	1
LINE	5	4	3	2	1
Dek-D	5	4	3	2	1

22. Do you have your own personal computers?

1) Yes 2) No

23. Where do you study?

1) Bangkok and metropolitan 2) Upcountry

24. Which grade are you in?

1) Grade 9 or below 2) Grade 10 3) Grade 11 4) Grade 12

25. Do you attend cram school?

1) Yes 2) No

26. Gender?

1) Male 2) Female

27. How frequent do you cram?	**Most frequent**	**Frequent**	**Moderate**	**Less frequent**	**Not frequent at all**
Rating	5	4	3	2	1

28. What is your GPAX?

1) Lower than 2.50 2) 2.50 to 3.25 3) Higher than 3.25

APPENDIX C

SUMMARY OF DESCRIPTIVE ANALYSIS OF TOTAL SURVEY RESPONDENTS

Descriptive table of Q1: Decision

		Count	Column N %
1 Do you now have choice of occupation or field of study?	Yes	224	50.8%
	No	217	49.2%

Cross tabulations of Q1 vs. Q26: Decision vs. Gender

		26 Gender?		
		Female	Male	Total
1 Do you now have choice of occupation or field of study?	Yes	50.6%	51.9%	50.8%
	No	49.4%	48.1%	49.2%
Total		100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)

Pearson Chi-Square	.028[a]	1	.868		
Continuity Correction[b]	.000	1	.983		
Likelihood Ratio	.028	1	.868		
Fisher's Exact Test				.886	.492
Linear-by-Linear Association	.028	1	.868		
N of Valid Cases	441				

Cross tabulations of Q1 vs. Q23: Decision vs. Study region

		23 Where do you study?		
		BKK+Metro	UPC	Total
1 Do you now have choice of occupation or field of study?	Yes	50.0%	51.3%	50.8%
	No	50.0%	48.7%	49.2%
Total		100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.071[a]	1	.790		
Continuity Correction[b]	.029	1	.866		
Likelihood Ratio	.071	1	.790		
Fisher's Exact Test				.845	.433
Linear-by-Linear Association	.071	1	.790		
N of Valid Cases	441				

Custom Tables of Q1 vs. Q23 vs. Q25: Decision vs. Study region vs. Cram school

		23 Where do you study?							
		BKK+Metro				UPC			
		25 Do you attend cram school?				25 Do you attend cram school?			
		Yes		No		Yes		No	
		Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
1 Do you now have choice of occupation or field of study?	Yes	48	53.3%	38	46.3%	61	54.5%	77	49.0%
	No	42	46.7%	44	53.7%	51	45.5%	80	51.0%

Cross tabulations of Q1 vs. Q28: Decision vs. GPAX

		28 What is your GPAX?			
		<2.50	2.50-3.25	>3.25	Total
1 Do you now have choice of occupation or field of study?	Yes	36.4%	53.4%	51.0%	50.8%
	No	63.6%	46.6%	49.0%	49.2%
Total		100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.197[a]	2	.202
Likelihood Ratio	3.228	2	.199
Linear-by-Linear Association	.637	1	.425
N of Valid Cases	441		

Descriptive table of Q2: Reason why not decide

		Count	Column N %
2 Why don't you decide the choices?	Existing info can't give enough help	18	8.3%
	Lazy	0	0.0%
	Don't know what I like	173	79.4%
	I like what parents don't	9	4.1%
	No clue where to find info	5	2.3%
	Scores can't get field I want	13	6.0%

Cross tabulations of Q1 vs. Q24: Decision vs. Grade

		24 Which grade are you in?				
		<G10	G10	G11	G12	Total
1 Do you now have choice of occupation or field of study?	Yes	50.0%	43.1%	51.4%	57.7%	50.8%
	No	50.0%	56.9%	48.6%	42.3%	49.2%
Total		100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.414[a]	3	.220
Likelihood Ratio	4.429	3	.219
Linear-by-Linear Association	2.472	1	.116
N of Valid Cases	441		

Custom Tables of Q24 vs. Q4: Grade vs. Decide period

		4 When did you decide your choice of study?													
		<G10		G10-1		G10-2		G11-1		G11-2		G12-1		G12-2	
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
24 Which grade are you in?	<G10	29	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	G10	23	52.3%	17	38.6%	4	9.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	G11	25	27.2%	12	13.0%	13	14.1%	20	21.7%	22	23.9%	0	0.0%	0	0.0%
	G12	14	23.3%	7	11.7%	3	5.0%	6	10.0%	6	10.0%	15	25.0%	9	15.0%

APPENDIX D

REASONS STUDENTS USE TO MAKE DECISIONS

Descriptive statistics of Q6

Descriptive Statistics

	N	Mean		Std. Deviation	Variance
	Statistic	Statistic	Std. Error	Statistic	Statistic
6 How significant is the reason you use for choosing field of study? : Social norm	441	2.38	.054	1.124	1.264
6 How significant is the reason you use for choosing field of study? : Prents	441	2.20	.055	1.164	1.354
6 How significant is the reason you use for choosing field of study? : Keen	441	3.68	.047	.982	.964
6 How significant is the reason you use for choosing field of study? : Money	441	3.69	.051	1.067	1.138
6 How significant is the reason you use for choosing field of study? : Friends	441	1.39	.036	.749	.561
6 How significant is the reason you use for choosing field of study? : FamilyIdol	441	1.83	.050	1.053	1.108
6 How significant is the reason you use for choosing field of study? : Passion	441	4.41	.037	.775	.601
6 How significant is the reason you use for choosing field of study? : Media	441	3.04	.059	1.243	1.544
6 How significant is the reason you use for choosing field of study? : Idol	441	1.89	.057	1.191	1.418
6 How significant is the reason you use for choosing field of study? : Grade	441	3.13	.059	1.243	1.545
Valid N (listwise)	441				

Correlation among of Q6 variables

Correlations

		6 How significant is the reason you use for choosing field of study? : Social norm	6 How significant is the reason you use for choosing field of study? : Parents	6 How significant is the reason you use for choosing field of study? : Keen	6 How significant is the reason you use for choosing field of study? : Money	6 How significant is the reason you use for choosing field of study? : Friends	6 How significant is the reason you use for choosing field of study? : FamilyIdol	6 How significant is the reason you use for choosing field of study? : Passion	6 How significant is the reason you use for choosing field of study? : Media	6 How significant is the reason you use for choosing field of study? : Idol	6 How significant is the reason you use for choosing field of study? : Grade
6 How significant is the reason you use for choosing field of study? : Social norm	Pearson Correlation	1	.339**	-.047	.319**	.256**	.319**	-.150**	.073	.153**	.178**
	Sig. (2-tailed)		.000	.323	.000	.000	.000	.002	.126	.001	.000
	N	441	441	441	441	441	441	441	441	441	441
6 How significant is the reason you use for choosing field of study? : Parents	Pearson Correlation	.339**	1	.030	.288**	.282**	.392**	-.359**	.097*	.055	.194**
	Sig. (2-tailed)	.000		.532	.000	.000	.000	.000	.041	.253	.000
	N	441	441	441	441	441	441	441	441	441	441
6 How significant is the reason you use for choosing field of study? : Keen	Pearson Correlation	-.047	.030	1	.168**	.003	.069	.191**	-.002	.015	.287**
	Sig. (2-tailed)	.323	.532		.000	.945	.150	.000	.974	.749	.000
	N	441	441	441	441	441	441	441	441	441	441
6 How significant is the reason you use for choosing field of study? : Money	Pearson Correlation	.319**	.288**	.168**	1	.147**	.233**	-.158**	.127**	.102*	.283**
	Sig. (2-tailed)	.000	.000	.000		.002	.000	.001	.008	.031	.000
	N	441	441	441	441	441	441	441	441	441	441
6 How significant is the reason you use for choosing field of study? : Friends	Pearson Correlation	.256**	.282**	.003	.147**	1	.328**	-.258**	.173**	.312**	.134**
	Sig. (2-tailed)	.000	.000	.945	.002		.000	.000	.000	.000	.005
	N	441	441	441	441	441	441	441	441	441	441
6 How significant is the reason you use for choosing field of study? : FamilyIdol	Pearson Correlation	.319**	.392**	.069	.233**	.328**	1	-.294**	.097*	.185**	.203**
	Sig. (2-tailed)	.000	.000	.150	.000	.000		.000	.042	.000	.000
	N	441	441	441	441	441	441	441	441	441	441
6 How significant is the reason you use for choosing field of study? : Passion	Pearson Correlation	-.150**	-.359**	.191**	-.158**	-.258**	-.294**	1	.126**	.008	-.090
	Sig. (2-tailed)	.002	.000	.000	.001	.000	.000		.008	.870	.058
	N	441	441	441	441	441	441	441	441	441	441
6 How significant is the reason you use for choosing field of study? : Media	Pearson Correlation	.073	.097*	-.002	.127**	.173**	.097*	.126**	1	.336**	.196**
	Sig. (2-tailed)	.126	.041	.974	.008	.000	.042	.008		.000	.000
	N	441	441	441	441	441	441	441	441	441	441
6 How significant is the reason you use for choosing field of study? : Idol	Pearson Correlation	.153**	.055	.015	.102*	.312**	.185**	.008	.336**	1	.149**
	Sig. (2-tailed)	.001	.253	.749	.031	.000	.000	.870	.000		.002
	N	441	441	441	441	441	441	441	441	441	441
6 How significant is the reason you use for choosing field of study? : Grade	Pearson Correlation	.178**	.194**	.287**	.283**	.134**	.203**	-.090	.196**	.149**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.005	.000	.058	.000	.002	
	N	441	441	441	441	441	441	441	441	441	441

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Descriptive statistics of Q7: Awareness of passion

Descriptive Statistics

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
7 How much do you aware what you like or passionate about?	441	3.38	.047	.993
Valid N (listwise)	441			

Correlation between Q6 variables and Q7

Correlations

		6 How significant is the reason you use for choosing field of study? : Keen	6 How significant is the reason you use for choosing field of study? : Money	6 How significant is the reason you use for choosing field of study? : Passion	7 How much do you aware what you like or passionate about?
6 How significant is the reason you use for choosing field of study? : Keen	Pearson Correlation	1	.168**	.191**	.139**
	Sig. (2-tailed)		.000	.000	.004
	N	441	441	441	441
6 How significant is the reason you use for choosing field of study? : Money	Pearson Correlation	.168**	1	-.158**	-.095*
	Sig. (2-tailed)	.000		.001	.047
	N	441	441	441	441
6 How significant is the reason you use for choosing field of study? : Passion	Pearson Correlation	.191**	-.158**	1	.405**
	Sig. (2-tailed)	.000	.001		.000
	N	441	441	441	441
7 How much do you aware what you like or passionate about?	Pearson Correlation	.139**	-.095*	.405**	1
	Sig. (2-tailed)	.004	.047	.000	
	N	441	441	441	441

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

APPENDIX E

SIGNIFICANT FACTORS STUDENTS USE TO CONSIDER

Paired Samples Test among Q5 variables

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Lower	95% Confidence Upper			
Pair 1	5 How significant is the factor for choosing field of study? : Fit - 5 How significant is the factor for choosing field of study? : Whatever	1.862	1.580	.075	1.714	2.010	24.742	440	.000
Pair 2	5 How significant is the factor for choosing field of study? : Whatever - 5 How significant is the factor for choosing field of study? : For preparation	-1.320	1.575	.075	-1.467	-1.172	-17.593	440	.000
Pair 3	5 How significant is the factor for choosing field of study? : For preparation - 5 How significant is the factor for choosing field of study? : Fit	-.542	1.261	.060	-.660	-.424	-9.026	440	.000

Correlations among Q5 variables

		5 How significant is the factor for choosing field of study? : Fit	5 How significant is the factor for choosing field of study? : Whatever	5 How significant is the factor for choosing field of study? : For preparation
5 How significant is the factor for choosing field of study? : Fit	Pearson Correlation	1	-.113*	.168**
	Sig. (2-tailed)		.018	.000
	N	441	441	441
5 How significant is the factor for choosing field of study? : Whatever	Pearson Correlation	-.113*	1	.148**
	Sig. (2-tailed)	.018		.002
	N	441	441	441
5 How significant is the factor for choosing field of study? : For preparation	Pearson Correlation	.168**	.148**	1
	Sig. (2-tailed)	.000	.002	
	N	441	441	441

Descriptive statistics for Q5 variables

Descriptive Statistics

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
5 How significant is the factor for choosing field of study? : Fit	441	4.44	.038	.790
5 How significant is the factor for choosing field of study? : Whatever	441	2.58	.061	1.282
5 How significant is the factor for choosing field of study? : For preparation	441	3.90	.054	1.125
Valid N (listwise)	441			

APPENDIX F

INDEPENDENT SAMPLES TEST FACTORS BETWEEN REGIONS

Group Statistics

23 Where do you study?		N	Mean	Std. Deviation	Std. Error Mean
5 How significant is the factor for choosing field of study? : Fit	BKK+Metro	172	4.29	.890	.068
	UPC	269	4.54	.704	.043

Independent Samples Test

		Levene's Test for		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Lower	95% Confidence Upper
5 How significant is the factor for choosing field of study? : Fit	Equal variances assumed	7.020	.008	-3.205	439	.001	-.245	.076	-.395	-.095
	Equal variances not assumed			-3.046	304.200	.003	-.245	.080	-.403	-.087

APPENDIX G

CAREER EXPLORATION PREPARATION METHOD

Descriptive statistics of Q8: Methods

Descriptive Statistics

	N	Mean		Std. Deviation	Variance
	Statistic	Statistic	Std. Error	Statistic	Statistic
8 How do you prepare for carrer selection? : Mentor teachers at school	441	2.12	.048	1.002	1.003
8 How do you prepare for carrer selection? : Websites	441	4.08	.044	.929	.862
8 How do you prepare for carrer selection? : Focus on exam preparation	441	3.72	.044	.923	.853
8 How do you prepare for carrer selection? : Ask seniors	441	3.03	.060	1.264	1.597
8 How do you prepare for carrer selection? : Open House	441	2.35	.060	1.265	1.601
8 How do you prepare for carrer selection? : Focus on how career works	441	4.07	.041	.854	.730
8 How do you prepare for carrer selection? : Camp	441	1.98	.053	1.120	1.254
8 How do you prepare for carrer selection? : Combine from many sources	441	3.99	.045	.951	.904
Valid N (listwise)	441				

Descriptive statistics of Q8: Methods by different prospect fields of study

Q3_MostField_MedOrNot		N	Mean	Std. Deviation	Std. Error Mean
8 How do you prepare for carrer selection? : Mentor teachers at school	1.00	365	2.18	1.007	.053
	2.00	76	1.86	.934	.107
8 How do you prepare for carrer selection? : Websites	1.00	365	4.04	.935	.049
	2.00	76	4.28	.873	.100
8 How do you prepare for carrer selection? : Focus on exam preparation	1.00	365	3.64	.920	.048
	2.00	76	4.09	.851	.098
8 How do you prepare for carrer selection? : Ask seniors	1.00	365	2.97	1.275	.067
	2.00	76	3.30	1.178	.135
8 How do you prepare for carrer selection? : Open House	1.00	365	2.25	1.231	.064
	2.00	76	2.86	1.314	.151
8 How do you prepare for carrer selection? : Focus on how career works	1.00	365	4.04	.839	.044
	2.00	76	4.18	.920	.105
8 How do you prepare for carrer selection? : Camp	1.00	365	1.86	1.050	.055
	2.00	76	2.53	1.280	.147
8 How do you prepare for carrer selection? : Combine from many sources	1.00	365	3.95	.969	.051
	2.00	76	4.20	.833	.096

Independent Samples Test of Q8 between different groups of prospect field of study

Independent Samples Test

		Levene's Test for		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Lower	95% Confidence Upper
8 How do you prepare for carrer selection? : Mentor teachers at school	Equal variances assumed	.282	.596	2.573	439	.010	.323	.125	.076	.569
	Equal variances not assumed			2.704	114.367	.008	.323	.119	.086	.559
8 How do you prepare for carrer selection? : Websites	Equal variances assumed	.282	.596	-2.063	439	.040	-.241	.117	-.470	-.011
	Equal variances not assumed			-2.159	113.782	.033	-.241	.111	-.462	-.020
8 How do you prepare for carrer selection? : Focus on exam preparation	Equal variances assumed	1.136	.287	-3.937	439	.000	-.451	.115	-.676	-.226
	Equal variances not assumed			-4.142	114.501	.000	-.451	.109	-.667	-.235
8 How do you prepare for carrer selection? : Ask seniors	Equal variances assumed	.355	.551	-2.079	439	.038	-.330	.159	-.642	-.018
	Equal variances not assumed			-2.190	114.660	.031	-.330	.151	-.629	-.032
8 How do you prepare for carrer selection? : Open House	Equal variances assumed	.287	.592	-3.875	439	.000	-.609	.157	-.917	-.300
	Equal variances not assumed			-3.714	104.232	.000	-.609	.164	-.934	-.284
8 How do you prepare for carrer selection? : Focus on how career works	Equal variances assumed	2.258	.134	-1.330	439	.184	-.143	.108	-.355	.068
	Equal variances not assumed			-1.252	102.635	.213	-.143	.114	-.370	.084
8 How do you prepare for carrer selection? : Camp	Equal variances assumed	7.295	.007	-4.815	439	.000	-.663	.138	-.934	-.393
	Equal variances not assumed			-4.230	97.075	.000	-.663	.157	-.975	-.352
8 How do you prepare for carrer selection? : Combine from many sources	Equal variances assumed	.844	.359	-2.088	439	.037	-.249	.119	-.484	-.015
	Equal variances not assumed			-2.306	121.270	.023	-.249	.108	-.464	-.035

APPENDIX H

CAREER EXPLORATION METHODS EVALUATION

Descriptive statistics of Q9: Effectiveness evaluation

Descriptive Statistics

	N	Mean		Std. Deviation	Variance
	Statistic	Statistic	Std. Error	Statistic	Statistic
9 Please evaluate effectiveness of methods you used for prep : Convenience, Accessible	441	3.84	.046	.969	.940
9 Please evaluate effectiveness of methods you used for prep : One-stop	441	2.67	.054	1.131	1.279
9 Please evaluate effectiveness of methods you used for prep : Relevant	441	3.21	.050	1.040	1.082
9 Please evaluate effectiveness of methods you used for prep : Interactive	441	2.76	.062	1.302	1.694
9 Please evaluate effectiveness of methods you used for prep : Practice trial	441	2.68	.068	1.436	2.063
9 Please evaluate effectiveness of methods you used for prep : Updated	441	3.25	.058	1.219	1.486
9 Please evaluate effectiveness of methods you used for prep : Meet new friends, seniors	441	2.81	.066	1.384	1.915
9 Please evaluate effectiveness of methods you used for prep : Meet people in professions	441	3.12	.068	1.426	2.034
Valid N (listwise)	441				

APPENDIX I

CAREER EXPLORATION SERVICE FACTOR CONSIDERATION

Descriptive statistics of Q12: Comparison among clusters

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
12 What do you think about career mentoring service? : Real men better than info	Emotional	116	4.51	.716	.066	4.38	4.64
	Nerd	59	4.39	.720	.094	4.20	4.58
	Followers	111	4.59	.707	.067	4.45	4.72
	Chill	74	4.32	.829	.096	4.13	4.52
	Prepared	81	4.63	.580	.064	4.50	4.76
	Total	441	4.50	.717	.034	4.44	4.57
12 What do you think about career mentoring service? : No need, full of resources	Emotional	116	1.93	.788	.073	1.79	2.08
	Nerd	59	2.32	.706	.092	2.14	2.51
	Followers	111	1.98	.874	.083	1.82	2.15
	Chill	74	1.65	.691	.080	1.49	1.81
	Prepared	81	1.85	.853	.095	1.66	2.04
	Total	441	1.93	.816	.039	1.86	2.01
12 What do you think about career mentoring service? : Interactions matter for specific questions	Emotional	116	4.65	.608	.056	4.53	4.76
	Nerd	59	4.22	.744	.097	4.03	4.41
	Followers	111	4.63	.700	.066	4.50	4.76
	Chill	74	4.45	.724	.084	4.28	4.61
	Prepared	81	4.74	.703	.078	4.59	4.90
	Total	441	4.57	.704	.034	4.50	4.64
12 What do you think about career mentoring service? : Talk is not enough, practice better	Emotional	116	4.36	.773	.072	4.22	4.50
	Nerd	59	4.02	.991	.129	3.76	4.28
	Followers	111	4.13	.896	.085	3.96	4.29
	Chill	74	3.95	1.084	.126	3.69	4.20
	Prepared	81	4.09	.925	.103	3.88	4.29
	Total	441	4.14	.927	.044	4.05	4.22
16 Will you use this kind of service website?	Emotional	115	3.93	.856	.080	3.77	4.09
	Nerd	59	3.73	.739	.096	3.54	3.92
	Followers	106	3.97	.762	.074	3.83	4.12
	Chill	72	3.90	.858	.101	3.70	4.10
	Prepared	81	4.07	.685	.076	3.92	4.23
	Total	433	3.94	.791	.038	3.86	4.01

APPENDIX J

CONSIDERATION FACTORS TO USE NEW SERVICE

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
13 Which factor do you consider using mentoring service: Quality mentors	Emotional	116	4.47	.638	.059	4.35	4.58
	Nerd	59	3.97	.718	.094	3.78	4.15
	Followers	111	4.41	.666	.063	4.28	4.53
	Chill	74	4.24	.841	.098	4.05	4.44
	Prepared	81	4.47	.654	.073	4.32	4.61
	Total	441	4.35	.713	.034	4.28	4.41
13 Which factor do you consider using mentoring service: Meet in person	Emotional	116	3.25	1.070	.099	3.05	3.45
	Nerd	59	3.07	1.065	.139	2.79	3.35
	Followers	111	3.44	1.076	.102	3.24	3.64
	Chill	74	3.00	.965	.112	2.78	3.22
	Prepared	81	3.04	1.123	.125	2.79	3.29
	Total	441	3.19	1.073	.051	3.09	3.29
13 Which factor do you consider using mentoring service: Fun, not serious	Emotional	116	4.08	.943	.088	3.90	4.25
	Nerd	59	3.76	1.023	.133	3.50	4.03
	Followers	111	4.12	.960	.091	3.94	4.30
	Chill	74	3.70	1.056	.123	3.46	3.95
	Prepared	81	3.94	.927	.103	3.73	4.14
	Total	441	3.96	.984	.047	3.86	4.05
13 Which factor do you consider using mentoring service: Famous mentors	Emotional	116	1.88	.952	.088	1.70	2.05
	Nerd	59	2.03	.982	.128	1.78	2.29
	Followers	111	2.11	1.012	.096	1.92	2.30
	Chill	74	1.80	1.007	.117	1.56	2.03
	Prepared	81	1.86	.862	.096	1.67	2.05
	Total	441	1.94	.968	.046	1.85	2.03
13 Which factor do you consider using mentoring service: Variety of mentors	Emotional	116	3.97	1.054	.098	3.77	4.16
	Nerd	59	3.71	.911	.119	3.47	3.95
	Followers	111	4.01	.869	.082	3.85	4.17
	Chill	74	3.72	1.000	.116	3.48	3.95
	Prepared	81	3.93	.848	.094	3.74	4.11
	Total	441	3.89	.949	.045	3.80	3.98
13 Which factor do you consider using mentoring service: Serious for credibility	Emotional	116	3.97	.964	.090	3.80	4.15
	Nerd	59	3.68	.880	.115	3.45	3.91
	Followers	111	3.94	.927	.088	3.76	4.11
	Chill	74	3.39	.919	.107	3.18	3.60
	Prepared	81	3.75	.942	.105	3.54	3.96
	Total	441	3.79	.951	.045	3.70	3.88
13 Which factor do you consider using mentoring service: Online	Emotional	116	4.18	.881	.082	4.02	4.34
	Nerd	59	3.78	.948	.123	3.53	4.03
	Followers	111	4.03	.977	.093	3.84	4.21
	Chill	74	3.70	1.095	.127	3.45	3.96
	Prepared	81	4.12	1.029	.114	3.90	4.35
	Total	441	4.00	.992	.047	3.90	4.09

One-Way ANOVA of Q13 among clusters

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
13 Which factor do you consider using mentoring service: Quality mentors	Between Groups	12.573	4	3.143	6.484	.000
	Within Groups	211.345	436	.485		
	Total	223.918	440			
13 Which factor do you consider using mentoring service: Meet in person	Between Groups	12.880	4	3.220	2.843	.024
	Within Groups	493.737	436	1.132		
	Total	506.617	440			
13 Which factor do you consider using mentoring service: Fun, not serious	Between Groups	11.573	4	2.893	3.043	.017
	Within Groups	414.608	436	.951		
	Total	426.181	440			
13 Which factor do you consider using mentoring service: Famous mentors	Between Groups	6.056	4	1.514	1.624	.167
	Within Groups	406.411	436	.932		
	Total	412.467	440			
13 Which factor do you consider using mentoring service: Variety of mentors	Between Groups	6.440	4	1.610	1.802	.127
	Within Groups	389.551	436	.893		
	Total	395.991	440			
13 Which factor do you consider using mentoring service: Serious for credibility	Between Groups	18.905	4	4.726	5.436	.000
	Within Groups	379.059	436	.869		
	Total	397.964	440			
13 Which factor do you consider using mentoring service: Online	Between Groups	14.520	4	3.630	3.782	.005
	Within Groups	418.478	436	.960		
	Total	432.998	440			

Tukey HSD table for Q13 among clusters

			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Emotional	Nerd	.499*	.111	.000	.19	.80
		Followers	.060	.092	.967	-.19	.31
		Chill	.222	.104	.203	-.06	.51
		Prepared	-.004	.101	1.000	-.28	.27
	Nerd	Emotional	-.499*	.111	.000	-.80	-.19
		Followers	-.439*	.112	.001	-.75	-.13
		Chill	-.277	.122	.153	-.61	.06
		Prepared	-.503*	.119	.000	-.83	-.18
	Followers	Emotional	-.060	.092	.967	-.31	.19
		Nerd	.439*	.112	.001	.13	.75
		Chill	.162	.104	.529	-.12	.45
		Prepared	-.064	.102	.971	-.34	.21
	Chill	Emotional	-.222	.104	.203	-.51	.06
		Nerd	.277	.122	.153	-.06	.61
		Followers	-.162	.104	.529	-.45	.12
		Prepared	-.226	.112	.259	-.53	.08
	Prepared	Emotional	.004	.101	1.000	-.27	.28
		Nerd	.503*	.119	.000	.18	.83
		Followers	.064	.102	.971	-.21	.34
		Chill	.226	.112	.259	-.08	.53

APPENDIX K

FEATURES EVALUATION AMONG CLUSTERS

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : 30 mins is too short	Emotional	116	3.63	.974	.090	3.45	3.81
	Nerd	59	3.58	.875	.114	3.35	3.80
	Followers	111	3.79	.865	.082	3.63	3.96
	Chill	74	3.43	1.171	.136	3.16	3.70
	Prepared	81	3.46	.867	.096	3.27	3.65
	Total	441	3.60	.958	.046	3.51	3.69
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Online video call is convenient	Emotional	116	3.59	.995	.092	3.41	3.78
	Nerd	59	3.39	.947	.123	3.14	3.64
	Followers	111	3.72	1.063	.101	3.52	3.92
	Chill	74	3.51	1.101	.128	3.26	3.77
	Prepared	81	3.54	1.049	.117	3.31	3.78
	Total	441	3.58	1.035	.049	3.48	3.67

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Talking to univ seniors is better	Emotional	116	4.15	.760	.071	4.01	4.29
	Nerd	59	3.86	.776	.101	3.66	4.07
	Followers	111	4.22	.719	.068	4.08	4.35
	Chill	74	3.78	1.063	.124	3.54	4.03
	Prepared	81	4.22	.725	.081	4.06	4.38
	Total	441	4.08	.821	.039	4.00	4.16
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Shorter but more frequent	Emotional	116	3.72	1.108	.103	3.52	3.93
	Nerd	59	3.63	.889	.116	3.40	3.86
	Followers	111	3.59	1.004	.095	3.40	3.77
	Chill	74	3.27	1.024	.119	3.03	3.51
	Prepared	81	3.70	.955	.106	3.49	3.91
	Total	441	3.60	1.020	.049	3.50	3.69
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Good to talk to real working people	Emotional	116	3.84	.894	.083	3.67	4.00
	Nerd	59	3.63	.717	.093	3.44	3.81
	Followers	111	3.86	.851	.081	3.70	4.02
	Chill	74	3.46	.909	.106	3.25	3.67
	Prepared	81	3.80	.828	.092	3.62	3.99
	Total	441	3.74	.861	.041	3.66	3.82
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Video call is uncomfortable	Emotional	116	3.42	1.143	.106	3.21	3.63
	Nerd	59	3.59	.985	.128	3.34	3.85
	Followers	111	3.40	.947	.090	3.22	3.57
	Chill	74	3.14	1.197	.139	2.86	3.41
	Prepared	81	3.57	1.161	.129	3.31	3.82
	Total	441	3.42	1.095	.052	3.31	3.52
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Ratings and reviews needed	Emotional	116	3.84	1.012	.094	3.65	4.02
	Nerd	59	3.80	.906	.118	3.56	4.03
	Followers	111	3.70	.930	.088	3.53	3.88
	Chill	74	3.27	1.089	.127	3.02	3.52
	Prepared	81	4.01	.814	.090	3.83	4.19
	Total	441	3.73	.982	.047	3.64	3.83
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Prefer live talk attending	Emotional	116	3.56	1.232	.114	3.33	3.79
	Nerd	59	3.47	1.180	.154	3.17	3.78
	Followers	111	3.19	1.225	.116	2.96	3.42
	Chill	74	2.95	1.292	.150	2.65	3.25
	Prepared	81	3.37	1.249	.139	3.09	3.65
	Total	441	3.32	1.250	.060	3.20	3.43

One-Way ANOVA of Q15 among clusters

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : 30 mins is too short	Between Groups	7.997	4	1.999	2.201	.068
	Within Groups	395.962	436	.908		
	Total	403.959	440			
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Online video call is convenient	Between Groups	4.787	4	1.197	1.117	.348
	Within Groups	466.918	436	1.071		
	Total	471.705	440			
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Talking to univ seniors is better	Between Groups	13.447	4	3.362	5.183	.000
	Within Groups	282.775	436	.649		
	Total	296.222	440			
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Shorter but more frequent	Between Groups	10.765	4	2.691	2.623	.034
	Within Groups	447.389	436	1.026		
	Total	458.154	440			
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Good to talk to real working people	Between Groups	9.449	4	2.362	3.253	.012
	Within Groups	316.596	436	.726		
	Total	326.045	440			
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Video call is uncomfortable	Between Groups	9.606	4	2.402	2.023	.090
	Within Groups	517.623	436	1.187		
	Total	527.229	440			
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Ratings and reviews needed	Between Groups	23.740	4	5.935	6.466	.000
	Within Groups	400.219	436	.918		
	Total	423.959	440			
15 What do you think if there's a website offering service of 30-min mentoring talk session with experienced professionals? : Prefer live talk attending	Between Groups	20.566	4	5.142	3.361	.010
	Within Groups	666.989	436	1.530		
	Total	687.556	440			

APPENDIX L

MEDIA USAGE

Descriptive statistics of Q20: Websites

Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
20 How frequent do you research about career on this sources? : Facebook	81	1	5	3.06	.117	1.053
20 How frequent do you research about career on this sources? : Dek-D	81	1	5	3.99	.109	.981
20 How frequent do you research about career on this sources? : Pantip	81	1	5	3.36	.143	1.288
20 How frequent do you research about career on this sources? : Univ. websites	81	1	5	3.43	.119	1.072
20 How frequent do you research about career on this sources? : YouTube	81	1	5	2.83	.139	1.253
20 How frequent do you research about career on this sources? : Other education websites	81	1	5	3.59	.128	1.149
Valid N (listwise)	81					

Descriptive statistics of Q21: Social media

Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
21 How frequent do you use this social media appication? : Twitter	81	1	5	2.69	.183	1.648
21 How frequent do you use this social media appication? : Instagram	81	1	5	3.73	.137	1.235
21 How frequent do you use this social media appication? : Facebook	81	2	5	4.07	.101	.905
21 How frequent do you use this social media appication? : YouTube	79	2	5	4.19	.118	1.051
21 How frequent do you use this social media appication? : LINE	81	1	5	3.77	.133	1.197
21 How frequent do you use this social media appication? : Dek-D	81	1	5	3.57	.120	1.083
Valid N (listwise)	79					

Correlations among Q21 variables

Correlations

		21 How frequent do you use this social media appication ? : Twitter	21 How frequent do you use this social media appication ? : Instagram	21 How frequent do you use this social media appication ? : Facebook	21 How frequent do you use this social media appication ? : YouTube	21 How frequent do you use this social media appication ? : LINE	21 How frequent do you use this social media appication ? : Dek-D
21 How frequent do you use this social media appication? : Twitter	Pearson Correlation	1	.450**	.217	.252*	.388**	.274*
	Sig. (2-tailed)		.000	.052	.025	.000	.013
	N	81	81	81	79	81	81
21 How frequent do you use this social media appication? : Instagram	Pearson Correlation	.450**	1	.354**	.263*	.261*	.191
	Sig. (2-tailed)	.000		.001	.019	.019	.087
	N	81	81	81	79	81	81
21 How frequent do you use this social media appication? : Facebook	Pearson Correlation	.217	.354**	1	.440**	.420**	.071
	Sig. (2-tailed)	.052	.001		.000	.000	.527
	N	81	81	81	79	81	81
21 How frequent do you use this social media appication? : YouTube	Pearson Correlation	.252*	.263*	.440**	1	.319**	.115
	Sig. (2-tailed)	.025	.019	.000		.004	.315
	N	79	79	79	79	79	79
21 How frequent do you use this social media appication? : LINE	Pearson Correlation	.388**	.261*	.420**	.319**	1	.094
	Sig. (2-tailed)	.000	.019	.000	.004		.402
	N	81	81	81	79	81	81
21 How frequent do you use this social media appication? : Dek-D	Pearson Correlation	.274*	.191	.071	.115	.094	1
	Sig. (2-tailed)	.013	.087	.527	.315	.402	
	N	81	81	81	79	81	81

BIOGRAPHY

Name	Mr. Peerapat Termpanya
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