Undergraduates Characteristics and public transportation services use in the 21st Century (the case of the Faculty of Management Science, Suan Sunandha Rajabhat University, Bangkok, Thailand)

Pisit Potjanajaruwit

1FMS, Suan Sunandha Rajabhat University, 1 U-Thong Nok rd, 10200, Dusit, Bangkok, Thailand

E-mail: pisit.po@ssru.ac.th

Abstract. The purposes of this research were (1) to survey the level of graduates’ desirable characteristics in the 21st century graduates of business administration students, Faculty of Management Science, Suan Sunandha Rajabhat University and (2) to explore multiple pairwise comparisons between the characteristics of the department and the graduates’ desirable characteristics in the 21st century of the Faculty of Management Science, Suan Sunandha Rajabhat University. This study is a quantitative study for which the specified population, chosen by the researcher, included employers of graduates and related parties of the students of business administration program, Faculty of Management Science, Suan Sunandha Rajabhat University in Bangkok and its vicinity. The data was collected by using questionnaires from 681 samples, which were included in this study using purposive selection technique. The data was then analyzed using descriptive statistics to explain or describe the properties or characteristics of the distribution of variables such as Percentage, Mean and Standard Deviation together with analyzing the differences between the mean values of the two sample groups whether they were actually different or not using one-way ANOVA. The Labour Market Trends / Graduate Desirable Characteristics In the 21st century/ Business Administration Graduate

The results of the research revealed that the desirable characteristics of graduates in the 21st century as required from the employers of the graduates of business administration program in terms of morality and ethics were found with an overall average score at the highest level (= 4.68 and SD = 0.43) with honesty ranked at number 1 in particular. Parts of the sampled population which included governmental departments and state enterprise units were found requiring desirable characteristics of graduates in the 21s century of the Faculty of Management Science, Suan Sunandha Rajabhat University, overall more than private agencies significantly at the level of 0.05

1. Introduction

The 10th National Economic and Social Development Plan (2017 - 2021) was born from brainstorming and the participation of Thai people from all groups, sectors, and regions throughout the country who came together to process every step of this plan extensively. It was found that Thailand would still have to face the context of global change in several important areas which would have a great impact on both opportunities and limitations on national development. Therefore, the next phase
of development must be well-prepared and applied with the use of the nation’s current potential in order to lead to sustainable development. One of the major trending changes is improving the potential of Thai people in education but still focusing on the development of quality of education and lifelong learning [1]. This is consistent with [2] who mentioned a consistent opinion about the employment trend of graduate employers that they were looking for graduates with knowledge in a variety of university-qualified subjects from either private or public sectors. It required a qualified process to produce graduates with desirable characteristics such as moral characteristics, knowledge, intellectual skills, interpersonal and responsibility skills, and analytic skills on numericity, personality, and behavior. This results in the management of higher education in Thailand to face problems and pressures from various changes in both internal and external factors such as the rapid expansion of higher education institutions yet decreasing number of learners [3]. This is due to changes in population structure, revision of institutional roles of higher education that affects the social and economic development of the country, competition from the open education policy, impact of new technology, and also the result of the educational reform in 2011. However, the diversity of higher education institutions also causes gaps that affect the development of higher education in the country, directing educational management to change and become more commercial [1]. The impact results in increased competition in education, allowing the private sector to have more roles and become more involved in higher education until it becomes "Education Business" which is grown by investors and businessmen who are interested in putting in a large amount of investment similarly with other businesses. However, competitions in investments in education business in the global market are quite intense and have effects on the number of students of each university which is also decreasing.

### Table 1

| No. | University                                      | Academic Year | Reduction rate |
|-----|-------------------------------------------------|---------------|----------------|
| 1   | Suan Sunandha Rajabhat University               | 15,910        | 12%            |
| 2   | Bansomdejchaopraya Rajabhat University         | 3,487         | 38%            |
| 3   | Chandrakasem Rajabhat University               | 6,188         | 24%            |
| 4   | Phranakhon Rajabhat University                 | 5,630         | 21%            |
| 5   | Dhonburi Rajabhat University                   | 2,384         | 41%            |

This corresponds to [4], which stated that due to the intense competition and the rapid changing of macro environment, major educational policy reforms were required as soon as possible to produce concrete results of desirable graduates that are in line with the needs of the graduates' employers [2]. With the aforementioned issues, they led to the research on this study "Undergraduates Characteristics in the 21st century of the Faculty of Management Science, Suan Sunandha Rajabhat University" which uses the concept of labor market trends from [5]. This concept consists of trends in the business management of labor market, including marketing, finance, human resources, business operation, service business, and international business which affect the desirable characteristics of graduates in the 21st century. A theory of [5] which consists of characteristics of desirable graduates in the 21st century on morality, knowledge, intellectual skills, interpersonal and responsibility skills, and analytic skills on numericity, personality, and behavior was used in the study.

### 2. Methodology

**Study model**

This study was conducted as a quantitative research study in order to have access to the sample thoroughly and get a good representative sample of the population according to [6]. The data was collected using a questionnaire with the employers of graduates from Business Administration Program, Faculty of Management Science, Suan Sunandha Rajabhat University in the area of Bangkok, Nakhon Pathom, Nonthaburi, Pathum Thani, Samut Prakan, Samut Sakhon Provinces.
However, due to its nature as a quantitative research study, the collected information was broad data that can be applied to all areas. The objective of this study was to explore the level of graduates’ desirable characteristics in the 21st century of business administration students, Faculty of Management Science, Suan Sunandha Rajabhat University.

**Determination of population and sample**
The determined scope of population in this research included graduate employers and related parties of students in business administration program, Faculty of Management Science, Suan Sunandha Rajabhat University from 681 establishments in Bangkok and its vicinity area [7]. The samples were chosen using Purposive Selection which is a technique that selects only samples with specific characteristics that are consistent with the problems and objectives of the research. The population number was planned, determined for its size, and selected only for good sampled population [8].

**Study tools**
The data was collected using questionnaires handed out through the internship of students from business administration program, Faculty of Management Sciences, Suan Sunandha Rajabhat University. The data was collected by the Cooperative Education Department, Faculty of Management Science, Suan Sunandha Rajabhat University from January 2019 - April 2019 and 681 questionnaires were completed and returned. The characteristics of the selected population were based on the research objectives and they were chosen from the prepared list of the population. The reliability of the questionnaire was tested by finding Cronbach’s Alpha Coefficient. The questionnaire that was modified according to expert recommendations was tested with 30 subjects who were not the samples of this study and the questions found with α values of 0.70 and above were considered reliable [9]. The result of reliability tests found that the questions in the questionnaire were reliable and could be used in the study according to the specified criteria with the coefficient of reliability greater than 0.70.

**Analysis and conclusion of data**
Descriptive statistics that were used to describe the properties or characteristics of the variables’ distribution include Percentage, Mean, and Standard Deviation together with the analysis of the test of the differences between the two groups in order to analyze the difference between the mean values of the two sample groups whether they were actually different or not using One-Way ANOVA.

**3. Result**
The data was analyzed for average values of the desirable characteristics of graduates in the 21st century of the employers of students in business administration program using descriptive statistics as follows;

| Table 2 Summary of the Mean and Standard Deviation of desirable characteristics of graduates in the 21st century |
|---------------------------------------------------------------|---------|---------|---------|---------|---------|
| Expected Graduates Attributes | \( \bar{X} \) | S.D. | Results | Ranking |
| Morality and Ethics | 4.68 | 0.43 | Highest | 1 |
| Knowledge | 4.37 | 0.56 | High | 4 |
| Cognitive Skill | 4.37 | 0.57 | High | 4 |
| Interpersonal Relationship Skill and Responsibilities | 4.63 | 0.46 | Highest | 2 |
| Numerical analysis and ICT | 4.22 | 0.49 | High | 5 |
| Personality and behavior | 4.52 | 0.51 | High | 3 |
| Overall average | **4.46** | **0.40** | High | - |

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Overall, the analysis result of the desirable characteristics of graduates in the 21st century according to the employers of graduates from the Business Administration Program was found at a high level (\( \bar{X} = 4.46 \) and SD = 0.40), especially the expected characteristics of graduates in morality and ethics which were ranked as the 1st (with \( \bar{X} = 4.68 \) and SD = 0.43). The 2nd rank was interpersonal skills and responsibilities (with \( \bar{X} = 4.63 \) and SD = 0.46) and the 3rd rank was for personality and behaviour (with \( \bar{X} = 4.52 \) and SD = 0.51). The characteristics in these first 3 places were found with highest Mean values. On the other hand, the 4th rank included both intellectual skills (with \( \bar{X} = 4.37 \) and SD = 0.57) and knowledge (with \( \bar{X} = 4.37 \) and SD = 0.56) which found with an equal value of Mean. Lastly, the 5th rank included skills in numerical analysis, communication, and information technology use (with \( \bar{X} = 4.22 \) and S.D. = 0.49). The 4th and 5th places were found with high Means.

### Table 3

The results of the analysis of organizational data factors affecting the expected characteristics of graduates of the Faculty of Management Science, Suan Sunandha Rajabhat University with One-Way ANOVA (Continued)

| Desired characteristics of graduates in the 21st Century | Types of Institutes | n   | \( \bar{X} \) | S.D. | F      | Sig. |
|-------------------------------------------------------|--------------------|-----|---------------|------|--------|------|
| Overview Desired characteristics of graduates in the 21st Century | Government agencies | 127 | 4.55          | 0.33 |        |      |
|                                                      | state enterprises | 139 | 4.58          | 0.35 |        |      |
|                                                      | Private organization | 380 | 4.39          | 0.43 | 10.280 | 0.000* |
|                                                      | Other              | 35  | 4.50          | 0.45 |        |      |
|                                                      | Total              | 681 | 4.46          | 0.40 |        |      |

The hypothesis testing using F-test found that different factors on organizational data and types of institutes affected the desirable characteristics of graduates in the 21st century of the Faculty of Management Science, Suan Sunandha Rajabhat University differently. The effects found on the overview of the desirable characteristics of graduates in the 21st century (Sig = 0.000), which Sig. value was less than the significant level of 0.05.

Therefore, the desirable characteristics of the graduates in the 21st century of the Faculty of Management Science, Suan Sunandha Rajabhat University were compared in multiple fields separately according to the types of institutes using Fisher's Least Significant Difference (LSD) test as shown in Table 4.

### Table 4

Comparative analysis of desirable characteristics of graduates in the 21st of the Faculty of Management Science, Suan Sunandha Rajabhat University as classified by the types of institutes using LSD

| Types of Institutes | \( \bar{X} \) | 1   | 2   | 3   | 4   |
|---------------------|---------------|-----|-----|-----|-----|
| Overview Desired characteristics of graduates in the 21st Century |               | -0.03 | 0.16* | 0.06 |
| 1. Government agencies | 4.55          | -   |       |     |     |
| 2. state enterprises | 4.58          | -   | 0.18* | 0.08 |
| 3. Private organization | 4.39          | -   | -0.10 |     |
| 4. Other             | 4.50          | -   |       |     |

From the overall analysis of the desirable characteristics of graduates in the 21st century, it was found, overall, the sampled government agencies and state enterprise units required desirable characteristics of graduates in the 21st century from the students of the Faculty of Management Science, Suan Sunandha Rajabhat University more than the private agencies.
4. Discussion
From the results on the desirable characteristics of graduates in the 21st century according to the employers of graduates, it was found that morality and ethics were found with highest overall averages (with $\bar{X} = 4.68$ and SD = 0.43), in particular, honesty was ranked as number one (with $\bar{X} = 4.77$ and SD = 0.49). The 2nd rank was responsibility and punctuality (with $\bar{X} = 4.71$ and S.D. = 0.55). The 3rd was volunteering and generosity (with $\bar{X} = 4.57$ and S.D. = 0.56). All the variables found were also at the highest average values. The findings correspond to a study [2] which explored qualifications of desirable graduates of the businesses. It was found that most owners or executives of businesses required personnel with a bachelor's degree with characteristics including morality, knowledge, intellectual skills, interpersonal skills and responsibility, numerical analysis skills, and personality and behavior. According to another study [3] it was found that as employers did not directly produce graduates, they could not determine the characteristics of graduates from the programs in Financial Marketing, Human Resources Management, and Service business management. Therefore, the duties in graduate production must rely on the teaching and learning process of various higher education institutions in order to instil morality, knowledge, intellectual skills, interpersonal skills and responsibilities, numerical analysis skills, and personality and behaviour into the graduates in order to respond to the organizations and for maximum benefit.

This concept was responded to by a study from [5] that found that the missions of the universities were established mainly to produce graduates in business administration in the branches of marketing, finance, human resource management, business operation, service business management, and international business programs. The universities should encourage graduates to have knowledge together with morality and other skills including intellectual skills and teamwork of good citizenship. This should result with employers getting get good personnel. In addition, skills in IT knowledge should also be cultivated for students in the 21st century.

This corresponds to a work by [10] which explored the expectations and satisfaction with the desirable characteristics according to employers of graduates in hospitality program management in food and beverage service of 4-5 star hotels. It was found that the labor market trends of administration in the fields of service business management, international business, and business operation programs were what most affected the desirable characteristics of graduates in the 21st century which included morality, knowledge, skills, interpersonal relations and responsibility, numerical analysis skills, personality, and behavior. This is also consistent with another study [11] that explored desirable 21st century characteristics according to the employers of the graduates of the Faculty of Economics in international economics program of a university in the United States [12].

It was found that the different needs on graduates of business administration graduated students in marketing, finance, human resource management, business operation, service business management, and international business programs had effects on different desirable characteristics of graduates in the 21st century at a high level. However, the top 3 expectations included the content of the curriculum to be up-to-date with the current world situation, lessons of these programs could be applied to real life, and there were modern learning materials conducive to self-study. The entrepreneurs, both in the public and private sectors, required knowledgeable graduates with an understanding of economic principles and critical thinking who could use information technology and economic tools well [13]. Graduates were also expected to have skills in communication, foreign languages, and also focus on morality and ethics which were also a part of the desirable graduates’ characteristics.

Therefore, according to the results of the study on the desirable graduates’ characteristic in the 21st century of the students of Business Administration, Faculty of Management Science, Suan Sunandha Rajabhat University, the expectation was found most different than the students’ characteristics in morality and ethics at the significant level of 0.05. Therefore, the involved executives or the stakeholders involved should pay more attention to the tendency of demand for such graduates by focusing more in the graduate producing process, curriculums, and lecturers in order to produce...
graduates with desirable characteristics according the employers of graduates. For example, there should be activities to develop morality, a short morality course, and activities for the improving skills in interpersonal and responsibilities, numerical analysis, communication, use of information technology, etc.

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