The Factors influencing the Career Choice of University Students: A Descriptive Analysis of Pure Science and Social Science Students in Universiti Brunei Darussalam

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Abstract

The purpose of this paper is to identify the underlying factors influencing the career choice of university students in Brunei. Specifically, the students that are being sampled are those currently undertaking Bachelor's Degree courses at Universiti Brunei Darussalam. Career choice is proven to be a phenomenon among individuals, notably for students who are about to finish their studies where they have to make arguably one of the most important decisions in their lives on where to work in order to make a living. However, the underlying factors as to what motivates them to pursue their desired career path needs to be assessed. By using the Three-Dimensional Framework, this paper attempts to undertake a descriptive analysis on the factors influencing career choice of university students, by collecting a data sample of 306 students from six faculties in Universiti Brunei Darussalam. Based on a Likert scale of 1 to 5, it has been found that intrinsic factors are the strongest factor influencing career choice, with an average score of 3.71, while interpersonal factors hold the lowest average score of 2.85. It can be concluded that university students are motivated by intrinsic factors when making decisions on their career choice. It is also found that Pure Science students place emphasis on their skills, abilities and work experiences in determining career choice while the answers provided by Social Sciences students are more varied.

Keywords: Intrinsic, Extrinsic, Interpersonal, Career Choice, University Students, Brunei

1   Introduction

In an economic system that is driven by the market forces of demand and supply where private organisations are profit-motivated, and the other half of the economy consists of state-owned organisations, the career choice of an individual is one of the most important dilemmas in everyday lives. It is the point where an individual would have to make a huge decision on where to work for the rest of their life. Different individuals have different motivations that influences the decisions made in their career choice. For instance, some individuals would choose a particular job post due to financial incentives (Frederick, 1911), while others simply work because it is in their interests and passion (Herzberg & Mausner, 1959. B. and Snyderman, 1959). A portion of individuals also work in order to fulfill parental expectations, a prime example being the passing down of an organization from father to son (Agarwala, 2008).

This career choice phenomenon is especially true among university students, where after finishing their education, students have reached a point where they have to decide which career to undertake in order to make a living for themselves and become fully-

independent. However, relatively few people know what motivates university students in Brunei in regards to their career choice. While the motivations behind the decisions made by university students may differ based on culture, by applying Hofstede's cultural dimensions theory, Brunei is stated to be collectivist society (Blunt, 1993), and thus possesses characteristics that is akin to neighbouring countries such as Malaysia (Keshavarz & Baharudin, 2009) and Indonesia (Irawanto, Ramsey & Tweed, 2012). Thus, this paper seeks to identify and analyse the factors that brought about the influences on the career choice, irrespective of the job posts they are opting for. In particular, the Universiti Brunei Darussalam would be used as the basis of study on the career choice of university students.

2   Literature review

There has been an abundance of literature on identifying factors influencing career choice especially in the context of students, although most of their samples are specific in nature. For instance, some have targeted university students that have already found themselves a specific job post (Paolillo & Estes, 1982) such as Anaesthesia trainees (Moore, McDiarmid, Johnston & Cleland, 2017), accountants, attorneys, engineers, and physicians (Paolillo & Estes, 1982), and medical professionals (Hauer et al., 2008), while others have targeted undergraduate students who are currently pursuing certain courses such as Master of Business Administration (Ng, Burke & Fiksenbaum, 2008). However, these researches do not sample an entire university that consists of undergraduate students from all faculties. In terms of definition, career choice is simply referred to as the process by which students undergo through a phase in their lives in which they have to decide which job occupation they choose to work in (Lent, Brown & Hackett, 2000; Pavan, 2011).

Overall, researchers have classified the factors influencing career choice into three main factors, namely intrinsic, extrinsic and interpersonal factors. One of the most ground-breaking research in the field of career choice is the framework made by Carpenter and Foster in 1977, and Beynon, Toohey and Kishor in 1998. This is also called the Three-Dimensional Framework as shown in Figure 1. The framework is based on the idea that each person, upon choosing a career, is being influenced by three main factors. Thus, this paper would then attempt to apply that framework Conceptual Three-Dimensional Framework in the context of Brunei by using the framework to identify the career choice of university students. Recent researches that have made use of the Three-Dimensional Framework is done in order to identify the career choice of the top leading professions in Pakistan (Abbasi and Sarwat, 2014), management students in India (Agarwala, 2008) and Turkey (Aycan and Fikret-Pasa, 2003), students undertaking Master of Business Administration in Romania (Marinas, Igret, Marinas & Prioteasa, 2016), Britain, Israel and Turkey (Özbilgin, Küskü and Erdoğmuş, 2005).
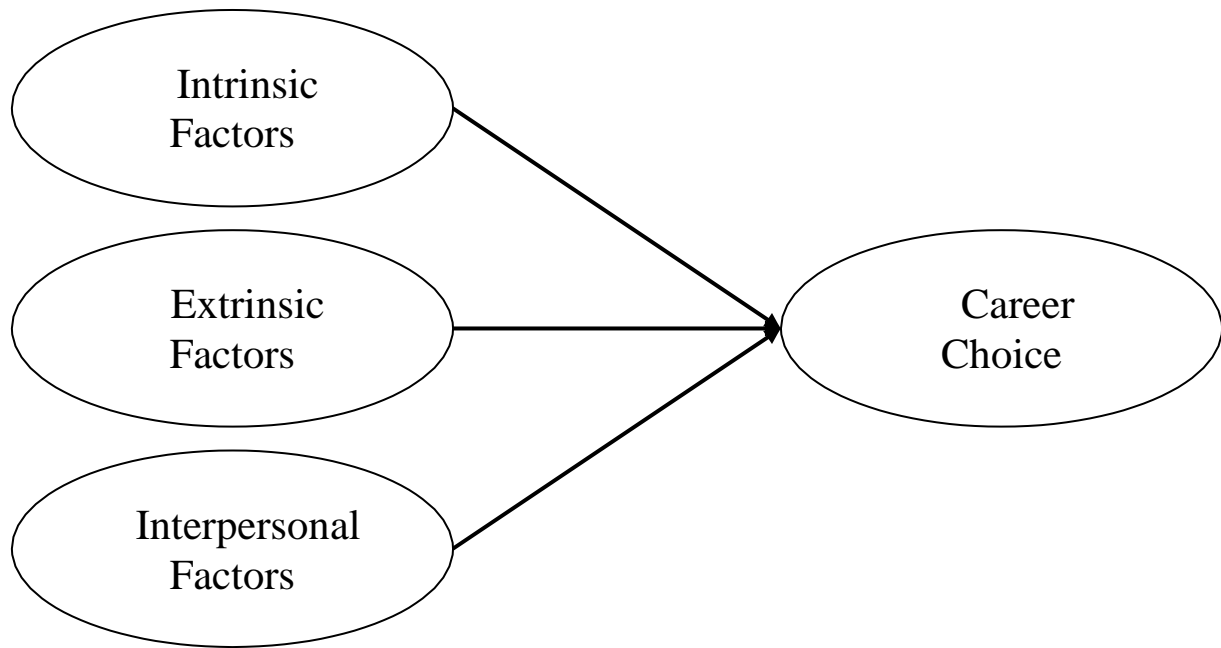
Figure 1
The Conceptual Framework of Carpenter and Foster in 1977 and Beynon et al. 1998, the Three-Dimensional Framework

Intrinsic factors are basically referred to as the personal values within a person. It consists of personal interests and values in their job, which may be determined by their skills and competences from education and training (Carpenter & Foster, 1977; Beynon et al., 1998). Intrinsic factors also include job-related contents such as personally satisfying job due to good working conditions (Aycan & Fikret-Pasa, 2003). When one is motivated by intrinsic factors, it means that the person would be more determined to work for a job that he or she considers interesting or even a job that is related their study courses, as well as a work atmosphere that is considered acceptable to a certain degree, or at least up to standard. A job is considered even more attractive if it provides opportunities for personal development such as career development schemes, promotions and additional training (Gokuladas, 2010). This is supported by Herzberg's two factor theory (Herzberg & Mausner, 1959. B. and Snyderman, 1959), that believes employees are motivated by intrinsic job satisfaction, while demotivation is prevented by having employees work in a good working condition. Another theory, Maslow's Hierarchy of Needs (Einstein, Addams & Roosevelt 2016; Maslow, 1943) also places importance on intrinsic factors as the source of job motivation.

The Three-Dimensional Framework also emphasized that extrinsic factors play a crucial role in influencing a person's decision towards making a career choice. Extrinsic factors takes into account the external environment which include sub-variables such as availability of jobs, well-paying occupations as well as high salary structures (Carpenter & Foster, 1977; Beynon et al., 1998). In other words, extrinsic factors believe that the current labour market conditions may potentially influence a person's career choice. Other sub-variables include a company's brand image and job security (Edvardsson Stiwne, 2005). A person may consider external rewards such as financial incentives as his or her primary motivation to work. This factor is in line with Taylor's Scientific Management in which an employee is believed to be motivated purely for monetary reasons (Frederick, 1911). Some may simply want to avoid being unemployed and not being able to make a living, and so will find jobs that are available, regardless if they are interested. In regards to job hunting, however, it may be difficult to find jobs in markets that are considered to be saturated. This is especially true in

regards to the public sector of Brunei.

The last variable of the Three-Dimensional Framework is the interpersonal factors. Interpersonal factors are simply the social influence of parents, significant others, family, relatives, friends and co-workers. For example, a person may have chosen a career path based on his or her father's expectations, or a friend's recommendation that he or she takes a certain job (Carpenter & Foster, 1977; Beynon et al., 1998). Other sub-variables of interpersonal influence include peer groups and teachers may also have profound influence on a person's career choice. In other words, interpersonal factors also take into account the influences of an early exposure to occupations and professions (Caroline Willis, Shann & Hassell, 2009). a number of studies have made the suggestion that family influences are one of the most important determinants on an individual's career aspirations or choice (Agarwala, 2008; Paloş & Drobot, 2010). In fact, it is stated that any factor pertaining to family influence outweighs any factor that is related to the personal interests of an individual on a career choice (Fouad, Cotter, Fitzpatrick, Kantamneni, Carter, & Bernfeld, 2010).

Apart from attempting to identify the correlation between career choice and the three variables of intrinsic, extrinsic and interpersonal factors, the correlation between career choice and social economic status (SES) is also one of the most studied aspect in research. Elements of SES include Educational background, wealth and income, age, marital status as well as family size. It is generally accepted that upper or higher social class often pertains to desiring high occupational goals as compared to their lower-class counterparts (Raque-Bogdan & Lucas, 2016). Out of all the elements of SES, it is also argued that educational background is even more crucial as a factor of career choice (Shah, Dwyer & Modood, 2010). For example, a person of lower social class with high education background can have higher occupational goals compared to those of higher social class but with inadequate educational background.

Aside from SES, the correlation between gender and career choice is also widely studied upon. A recent research has found that women are more ambitious in their career aspirations as compared to men (Schoon & Polek, 2011), suggesting that female empowerment are on the rise. However, it has been argued that the correlation between gender and career choice is being influenced by miscellaneous factors such as perceived barriers to career development (Cardoso & Marques, 2008) and level of testosterone (Sapienza, Zingales & Maestripieri, 2009).

However, culture has also played a role in influencing career choice. For example, Price (2007) has stated that an individualist society tends to value internal factors such as job satisfaction and career progression, while a collectivist society tends to seek financial and job security. In general, Western culture such as in the United States and United Kingdom are often seen as individualistic where traits such as independence and self-reliance are commonplace,

whereas Asian countries such as India and Japan are seen as collectivistic where they value being in a strong group in order to protect each other's interests (Ng, Burke & Fiksenbaum, 2008; Hofstede 1984) In the case of Brunei, Brunei is stated to be collectivist in nature due to its proximity to other collectivist societies that are present in Malay culture such as in Malaysia and Indonesia (Blunt, 1988; Blunt 1993).

3   Methodology/Materials

The type of sampling that is conducted in this research is known as stratified sampling. This is a method whereby simple subsamples are more or less equal on some characteristics, and are drawn from each stratum of a population (Burger & Silima, 2006). The subsamples in question are the university students and the stratum refer to each faculty.

The questionnaire is derived from Abbasi and Sarwat (2014), Agarwala (2008), Aycan and Fikret-Pasa (2003), Marinas et al. (2016), and Özbilgin et al. (2005), all of whom have adopted

the Three-Dimensional Framework which consists of the three independent variables of intrinsic, extrinsic and interpersonal factors (Beynon et al., 1998; Carpenter & Foster, 1977), in order to assess the factors influencing career choice.

The main content of the questionnaire consists of a Likert scale of 1 (strongly disagree) to 5 (strongly agree), whereby the respondents are asked a series of questions relating to how intrinsically motivated they are in regards to their career choice. The second part of the questionnaire then asked the next series of questions on how much emphasis or value they put into extrinsic factors when deciding their career choice. Finally, the questionnaire would test how much interpersonal influence is involved in determining their career choice.

The questionnaire would then be distributed to six different faculties in Universiti Brunei Darussalam; School of Business and Economics (SBE), Faculty of Arts and Social Sciences (FASS), Faculty of Science (FoS), Institute of Health Sciences (IHS), Faculty of Integrated Technologies (FIT) and Academy of Brunei Studies (ABS). In Universiti Brunei Darussalam, these six major faculties have the highest number of undergraduate students. SBE, FASS and ABS are considered Social Science faculties, while FoS, IHS and FIT are considered Pure Science faculties. Other faculties such as Sultan Omar 'Ali Saifuddien Centre for Islamic Studies (SOASCIS) and Institute of Policy Studies (IPS) either have no Bachelor's Degree courses or have relatively few students as compared to the rest of the faculties, and hence do not take part in this research.

As this is a descriptive analysis, the results would show crucial descriptive data such as the background details of respondents which includes gender, age, education level, faculty and student status. The results culminate in the identification on which of the three main factors of intrinsic, extrinsic and interpersonal factors are the strongest influence on career choice.

Data analysis would be conducted after the process of data cleaning, where any errors and inconsistencies would be removed from the analysis to ensure the quality of data collected (Rahm & Do, 2000). In addition, a Cronbach's Alpha test would be initiated to test the reliability and internal consistency of a set of scale in each variable (Gliem & Gliem, 2003).

4   Results/Findings

4.1   Background Details of Respondents

Below are the summarised background of respondents showing the number of respondents and their percentages. Table 1 includes crucial demographics such as gender, age range and current level of education, as well as career information such as student status.

Table 1
Background of Respondents

Measure	Item	Frequency	Percentage
Gender	Male	127	41.5%
	Female	179	58.5%

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Age Range	Under 18 Years Old	6	2.0%
	18 to 22 Years Old	240	78.4%
	23 to 27 Years old	54	17.6%
	28 to 32 Years Old	2	0.7%
	33 to 37 Years Old	2	0.7%

	Above 38 Years Old	2	0.7%
Current Level of Education	Bachelor's Degree	306	100%
	Master's Degree	0	0%
	PhD	0	0%
Faculty	SBE	60	19.6%
	FASS	52	17.0%
	FoS	52	17.0%
	IHS	60	19.6%
	FIT	52	17.0%
	ABS	30	9.8%
Student Status	Full-Time Student (includes In-Service)	296	96.7%
	Part-Time Student	10	3.3%

4.2 Gender

Based on the gender graph in Figure 2, it can be observed that out of the 306 respondents, the majority of them are females which consists of 58.5% of the sample whereas the rest are males which consists 41.5% of the sample.
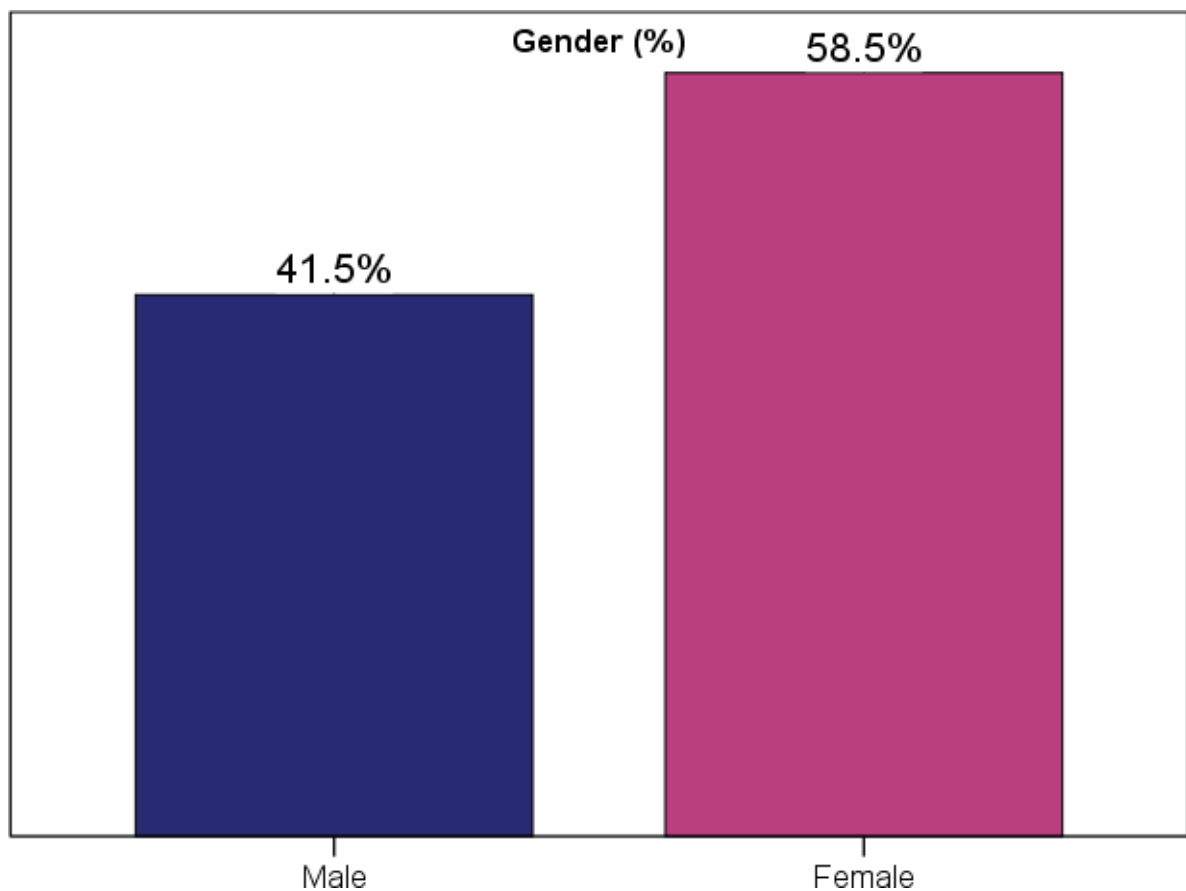
Figure 2

Distribution of Respondents based on Gender

4.3 Age

The next graph illustrates the distribution of respondents by percentage based on their age range. The age range in which this research has managed to gather the most are those ranging from 18 to 22 years, which consists of 78.4% of total sample. On the other hand, age ranges starting from 28 years each represents the least amount of participation, which is 0.7%.
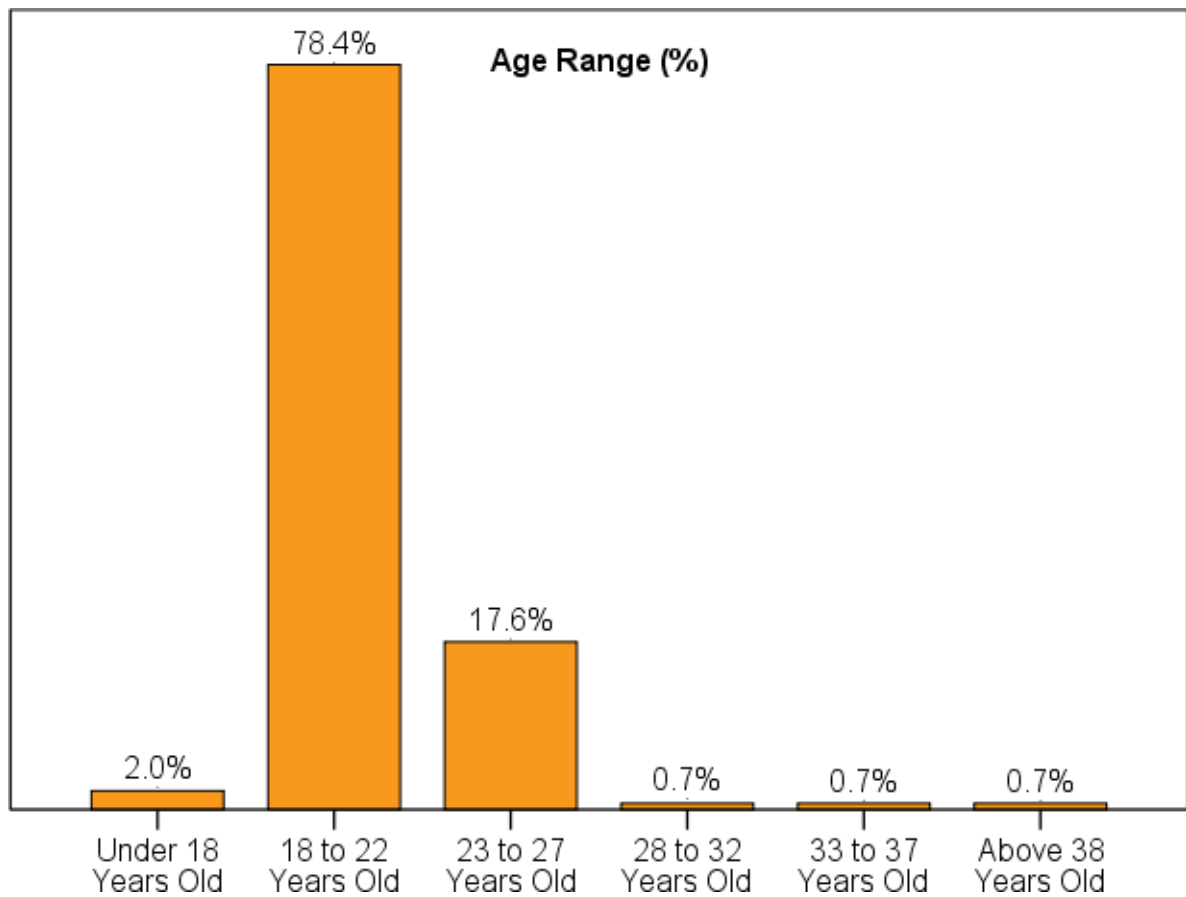
Figure 3

Distribution of Respondents based on Age Range

4.4 Education Level

This section serves to clarify that all 306 respondents are students currently undertaking their Bachelor's Degree courses in Universiti Brunei Darussalam.
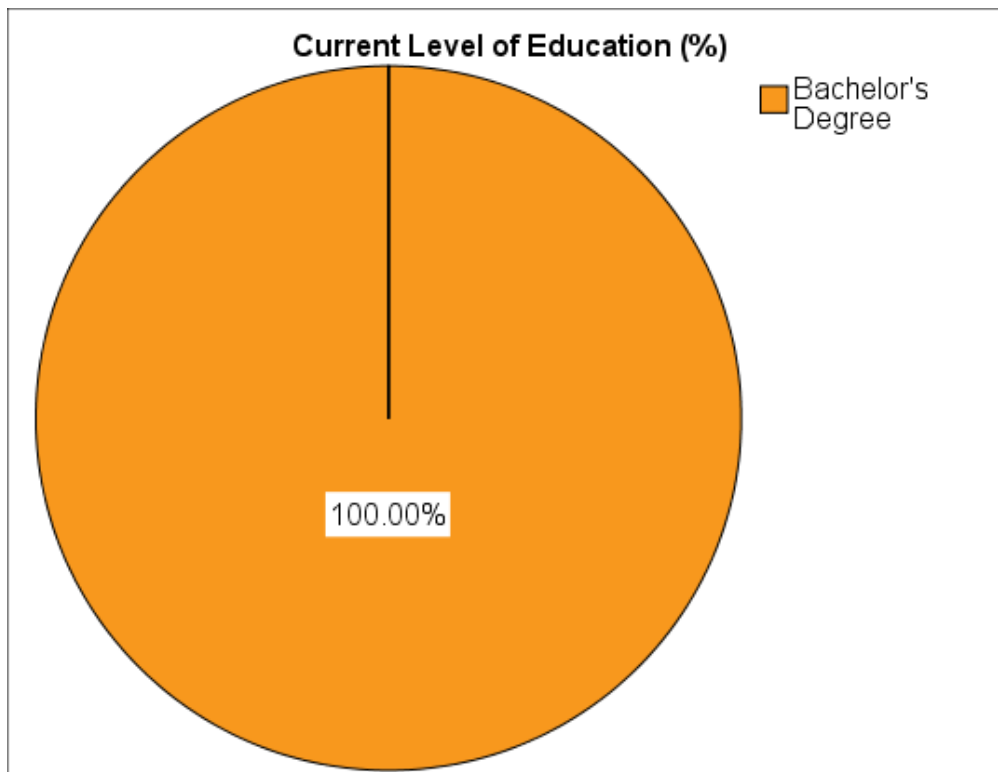
Figure 4

Distribution of Respondents based on Current Level of Education

4.5 Faculty

The physical copies of the questionnaire are distributed by faculty in the following order; School of Business and Economics (SBE), Faculty of Arts and Social Sciences (FASS), Faculty of Science (FoS), Institute of Health Sciences (HIS), Faculty of Integrated Technologies (FIT) and Academy of Brunei Studies (ABS). It should be noted that of the six major faculties, ABS faculty have the least number of Undergraduate students which could explain the lowest percentage of respondents at 9.8%.
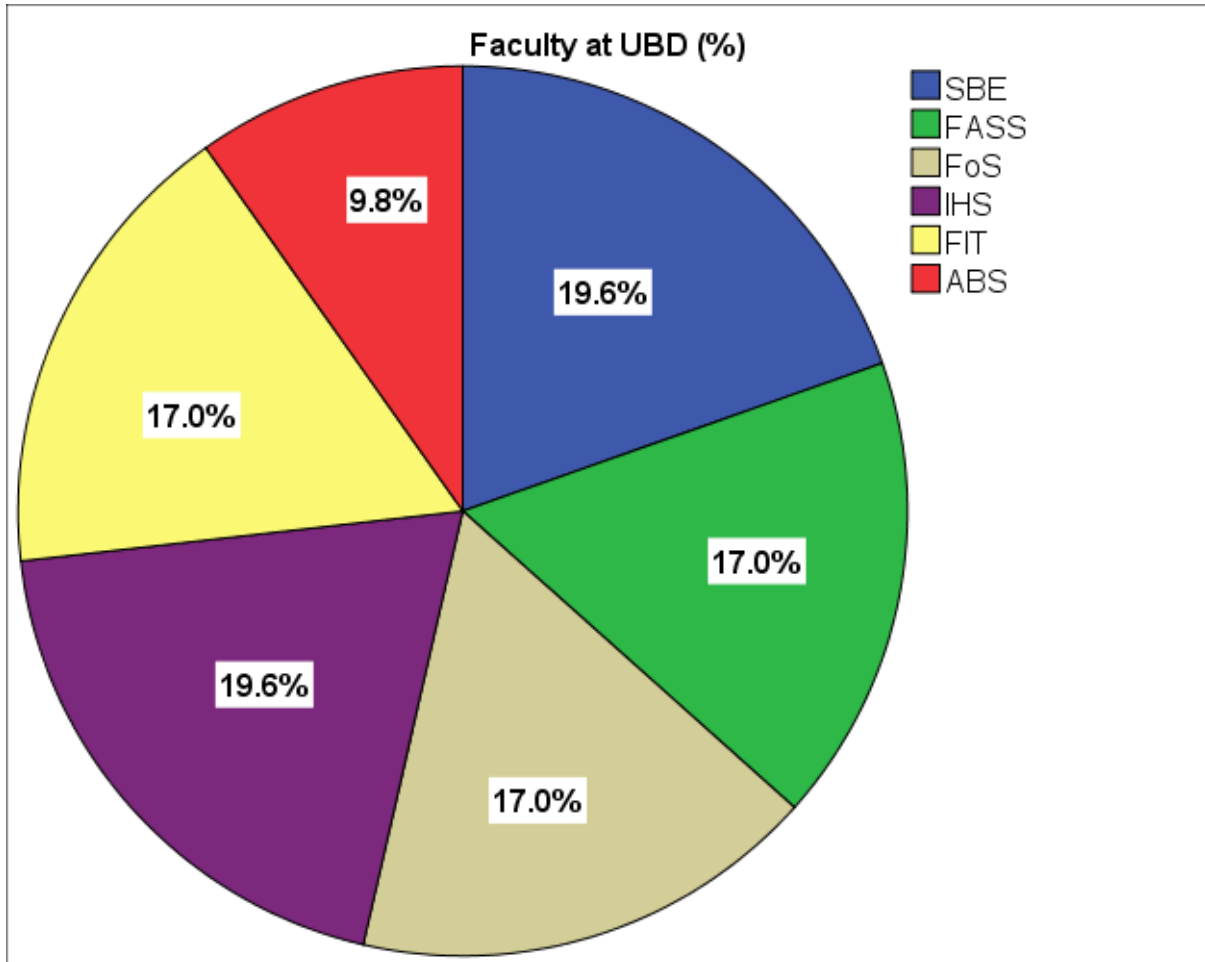
Faculty at UBD (%)

Legend:
- SBE
- FASS
- FoS
- IHS
- FIT
- ABS

9.8%
19.6%
17.0%
17.0%
19.6%
17.0%

Figure 5

Distribution of Respondents based on Faculty

4.6 Student Status

The Student Status section represents respondents' current employment status. Respondents who are employed in full-time jobs are currently doing their part-time Degree courses unless they have been granted in-service status by their employers. In-service refers to leave of absence granted in order to pursue further studies. As shown in figure 6, most of the respondents (96.7%) are currently not employed in full-time jobs and thus, takes full-time Degree courses, whereas only 3.3% are part-time students.
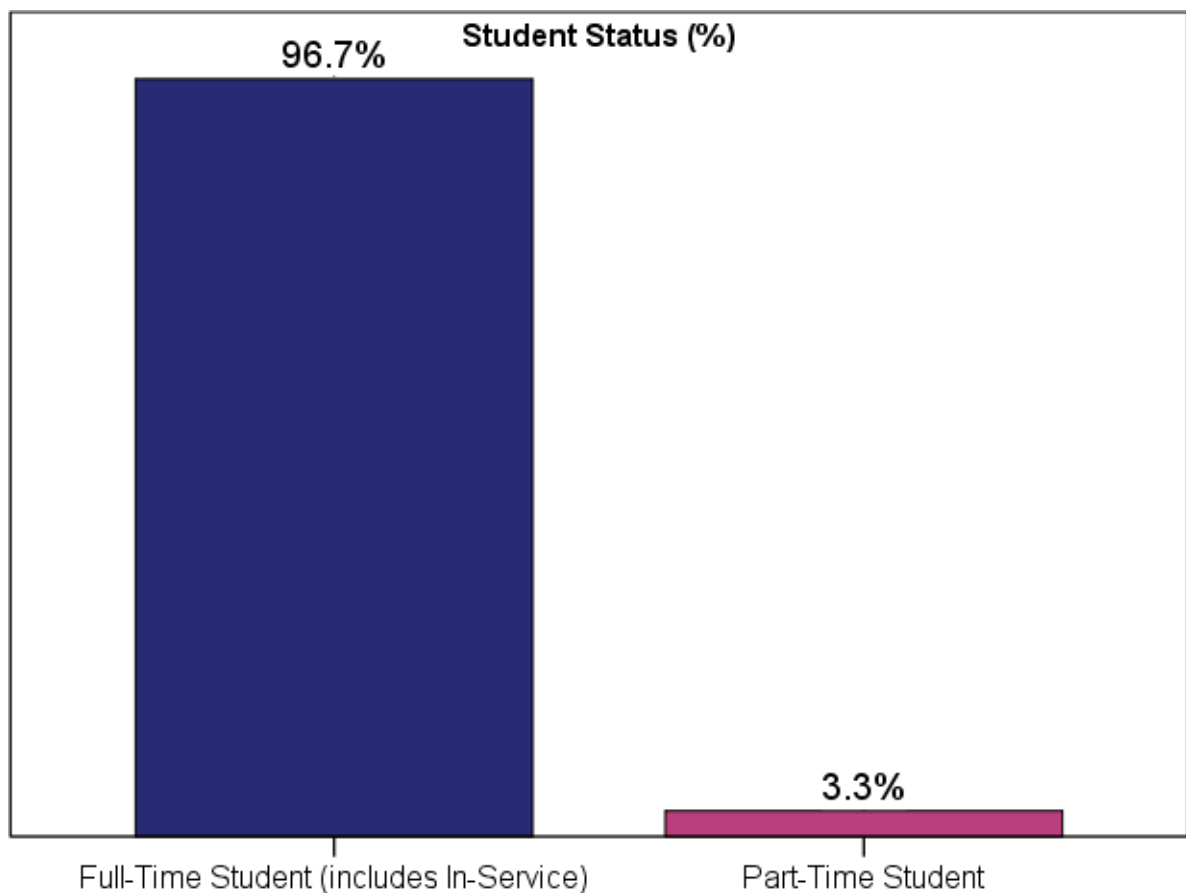
Figure 6

Distribution of Respondents based on Student Status

4.7 Descriptive Statistics

This section explains how each specific item of the three variables of Intrinsic, Extrinsic and Interpersonal factors are ranked based on their average score. The subsequent section explains which of the three variables holds the highest average score, as well as which item holds the highest average score from each faculty.

Table 2
Undergraduate Students' Assessment of the Importance of Factors that they will consider in their career choice.

Ranking of Item	Reason	Variable	Average Score	Standard Deviation
1	My skills, abilities and work experiences determine my career choice.	Intrinsic	4.02	0.80
2	I chose this sector because I believe it will get me personal job satisfaction.	Intrinsic	3.91	0.74
3	I prefer to work in this sector because it is in my interest.	Intrinsic	3.88	0.73
4	This sector offers me a better job condition and atmosphere to work in.	Intrinsic	3.82	0.83
5	My academic qualification and educational level determine my career choice.	Intrinsic	3.74	0.96

6	I prefer this sector because it offers more job security.	Extrinsic	3.67	0.88
7	This sector offers more career advancement and promotion opportunities.	Extrinsic	3.67	0.82
8	I prefer this sector because it offers me superior financial rewards.	Extrinsic	3.65	0.82
9	I chose this sector due to uncertain economic and labour conditions.	Extrinsic	3.53	0.80
10	I believe this sector will elevate my status and prestige in society.	Extrinsic	3.40	0.88
11	I chose this sector regardless of the starting salary.	Intrinsic	3.34	1.01
12	I chose this sector regardless of the availability of jobs.	Intrinsic	3.27	1.02

13	I chose this sector because the majority of the populace are working in this sector as well.	Extrinsic	3.03	1.05
14	My father has influenced me to work in this sector.	Interpersonal	2.91	1.17
15	My relatives have influenced me to work in this sector.	Interpersonal	2.89	1.14
16	My mother has influenced me to work in this sector.	Interpersonal	2.87	1.16
17	I chose this sector because there are no other jobs available.	Extrinsic	2.83	1.00
18	My friends have influenced me to work in this sector.	Interpersonal	2.81	0.98
19	My teachers have influenced me to work in this sector.	Interpersonal	2.75	1.02

*Note: The numerical scoring is based on a 5-Point Likert Scale. 5 denotes that they strongly agree to the item, 4 denotes Agree, 3 denotes Neither Agree nor Disagree, 2 for Disagree, and 1 for Strongly Disagree.

As a general guideline, the lower the standard deviation, the better the results. From table 2, it can be seen that the highest mean score is 'skills, abilities and work experiences. The top five items are components of Intrinsic variable. It is only in sixth rank holds an item from extrinsic variable, which is 'job security' which has an average score of 3.67. An item from interpersonal variable which has the highest average score could only reach rank 14, which is the 'father' item.

Subsequently, by combining and summing the average score of all items in each category, the following mean score can be calculated for each category.

Table 3
Undergraduate Students' Ranking of the Importance of each Categorical Variable that they will consider in their career choice.

Ranking	Variable	Average Score
1	Intrinsic Factors	3.71
2	Extrinsic Factors	3.40
3	Interpersonal Factors	2.85

From the Table 3, the strongest factor that determine the career choice of undergraduate students are intrinsic factors, while interpersonal category holds the lowest average score of 2.85.

Taking into account that Intrinsic factors are the strongest determinant of career choice, the following table shows which item holds the highest value for each faculty.

Table 4:
Item with the highest average score from each faculty.

Faculty	Type	Most Important Item	Average Score

SBE	Social Science	Skills, abilities and work experiences.	3.95
FASS	Social Science	Better job condition.	3.92
FoS	Pure Science	Skills, abilities and work experiences.	4.10
IHS	Pure Science	Skills, abilities and work experiences.	4.23
FIT	Pure Science	Skills, abilities and work experiences.	4.15
ABS	Social Science	Personal job satisfaction.	4.00

It can be seen that all faculties except for FASS and ABS have placed emphasis on 'skills, abilities and work experiences' to determine their career choice. FASS's students' have placed an emphasis on 'better job condition', while ABS placed an emphasis on 'personal job satisfaction'. When looking at Table 4 from the perspectives of Pure Science and Social Sciences students, it can be seen that Pure Science students place emphasis on their skills, abilities and work experiences in determining career choice. On the other hand, the answers provided by Social Sciences students are more varied.

5   Discussion and conclusion

It is interesting to note that majority of the research is done based on the point of view of female participants. This is because out of the 306 respondents, female respondents consist of 58.5% of the sample whereas the rest are males which consists 41.5% of the sample. This is inevitable as it can be observed that there is increasing number of female students in Universiti

Brunei Darussalam. It is also predicted that the number of female populations in Brunei will soon outnumber their male counterpart (Countrymeters, 2018).

It is found that having relevant skills, abilities and work experiences relating to career holds the highest value at an average score of 4.02. This means that Bruneians would prefer to work for a job that is relevant to their skills, experiences and qualification. For instance, a Bruneian with marketing skills and experiences would want a job post that is related to marketing and not any other aspect. From this, it can be concluded that Bruneians generally do not like job mismatch.

Personal job satisfaction comes at a close second at an average score of 3.91. For Bruneians, it is also important that they feel a sense of personal of satisfaction when doing with their jobs. Similarly, in the bronze medal rank, there is interest in the jobs, which simply refers to them having genuine interests in the jobs. In fact, the top five items are components of Intrinsic variable, making intrinsic factors the strongest and the most preferred variable by Bruneians.

The extrinsic item with the highest average score is in sixth rank, which has an average score of 3.67. Even though this item is ranked sixth, it also has a relatively high average score, which means Bruneians value job security when deciding their career, although not as much as the first five intrinsic items. Public sector in particular, often have more job security as compared to the private sector.

As for interpersonal items, the highest in the rank consists of father influence, which has an average score of 2.91. In comparison to the other items in the interpersonal variable, it appears Bruneians have placed emphasis on pleasing the expectation of their father more than any other people in their interpersonal life.

It is important to note that Bruneians are motivated the most by intrinsic factors, which could explain the highest average score of 3.71 when combining all their items. The second highest average score goes to the extrinsic variable with a close average score of 3.40. This means that to some extent, Bruneians also value extrinsic factors when deciding their career choice. On the other hand, interpersonal influence appears minimal at best, as the total average score for interpersonal variable is 2.85.

When looking at the results from the perspective of Pure Science and Social Science students, it can be concluded that Pure Science students put into account their skills, abilities and work experiences when deciding their career choice. This shows that they put emphasis on fully utilising their technical skills in their jobs that requires logic and problem-solving skills, and thus, ensuring good labour productivity at work. As for Social Sciences students, their answers are more varied as their career path is one that is usually related to innovation and creativity at work.

It is noteworthy that this paper refutes certain papers in literature (Price, 2007). In the case of Brunei, despite being a collectivist society, an emphasis is put on intrinsic factors such as personal interests and job satisfaction rather than extrinsic factors such as job security. This is contradictory to the research done by Price (2007) that stated that collectivist society often value extrinsic factors, while individualist society often value intrinsic factors.

In conclusion, due to the relatively large sample size of 20% of undergraduate students, it can be stated that intrinsic factors are what motivates university students in Universiti

Brunei Darussalam. Managers looking to employ fresh graduates can take into consideration that Bruneians largely value skills and abilities when determining their career choice. In other words, financial incentives are least likely to decide their career choice, and it is vital that managers ensure that job employees are intrinsically motivated to ensure productivity at work.

Acknowledgements

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