

Psychological Attributes and Growth Mind Set of Psychology University Students as Factors of Competitiveness

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Abstract

One of the main challenges faced by most higher learning institutions is to produce graduates who are competent, wholistic and competitive. Particularly for countries like Malaysia, that is striving to become a fully industrialized country. It needs competent and effective human resources. Consequently, universities have a huge responsibility to cultivate graduates who will mostly become the required competent and competitive human resources. Therefore, the current study sought to find the main factors that are associated with competitiveness among university students. Specifically, the current study measured the differences between students from public and private universities in terms of their personality traits, self-esteem, growth mind set and competitiveness. The study also aimed to examine the relationships between the variables with competitiveness among these students. 294 psychology students from both public and private universities participated in the survey study. The questionnaires used were the Big Five Inventory (BFI) (John & Srivastava 1999), *Rosenberg Self-Esteem Scale* (RSES) (Rosenberg 1965), *Implicit Theories of Intelligence Scales* (ITIS; Dweck 2000) and Revised Competitiveness Index (RCI) (Houston et al. 2002). The results showed few significant differences between public and private university students. Particularly, there were significant differences in personality traits (extraversion and neuroticism) between students from the different types of universities. Furthermore, there was also a significant difference in students' self-esteem. The findings implied significant factors in solving the issue of producing competitive graduates who will enter the work force. Relevant parties including university top management, can benefit from the results to be incorporated into their strategic planning.

Keywords: Psychological Attributes, Mind Set, Competitiveness, University Students

Introduction

Graduate employability (GE) has been one of a nation's economic issue for some time. Particularly, for Malaysia as it is striving to become a fully industrialized country. The drive

factor number 1 in the Malaysia Education Development Plan 2015-2025 (Higher Education, Ministry of Higher Education Malaysia) clearly requires higher education institutions to produce graduates who are wholistic, entrepreneurial and balanced. This push factor will promote continuous excellence in the higher education system. Among the objectives of the drive factor number 1 is to produce graduates who hold knowledge, morals, mind set, and manners to become a virtuous individual (PPPM, KPM). In the world that is evolving towards the 4th industrialized revolution (4IR), it needs effective and competent graduates to secure the competitiveness abilities that will achieve a high employability chance.

The issue of graduate employability is more alarming when unemployment statistics reveals an unemployability percentage of 3.3% which is equivalent to 517 000 unemployed individuals in Malaysia (Kementerian Hal Ehwal Ekonomi 2020). The discussion on the issue is not new as it began to receive attention from many parties and various disciplines since last few years. The issue is an important issue since it can impact the economic growth of the nation. Consequently, many studies have focused on factors that influence the marketability and employability of university graduates especially graduates from public universities.

In reference to the Graduate Confirmation Study Report 2018 that has been issued by Ministry of Higher Education Malaysia (2019), there are 341 311 graduates who have successfully completed their studies in 2018. This total is taken from 702 higher education institutions. Table 1,1 shows the Jadual di bawah menunjukkan fractions of graduates based on their institutions.

Table 1

Total graduates based on types of institutions

Type of Institutions	Number of graduates who completed their studies
Public Universities	132 518
Private Universities	128 104
Polytechnics	28 685
Vocational Colleges	14 185
ILKA KPLB	11 907
Community Colleges	10 432
ILKA KSM	9 605
ILKA KBS	4 343
ILKA MOA	1 274
Others	258

Source: Ministry of Higher Education Malaysia (2019)

The graduate numbers in 2018 clearly reflect the tough competition that graduates are facing in finding jobs. On top of that, these figures do not include the total number of graduates from previous years who are still unemployed.

In such a tough job market, university graduates have to ensure that they have various skills that are regarded as highly competent to the employers. Employers' perception is among the important factors in securing graduate employability.

Burrus et al. (2013) state skills that are required for the graduates to reflect their competitiveness at a global level. These skills are problem solving, mechanical, service

orientation, social literacy, entrepreneurial literacy, scientific literacy, civic literacy, information processing, sports ability, visual accuracy, fluid intelligence, communication skills, team work, innovation/achievement, an attention to details. Problem solving skills and fluid intelligence are at the top of the skill list and second place in the competitiveness list. In the recent World Economic Forum (October 2020), it has been stated that critical thinking and problem solving are the top skills that employers believe that will be very important in the next five years (World Economic Forum's Future of Jobs Report, 2020). In another study, Yeager & Dweck (2012) have stated that problem solving skills and fluid intelligence are strongly associated with mind set. In addition, Rozainee et al. (2020) found differences in mind sets in students from public universities and private universities.

There has been evidence from a study by Arawati Agus et al. (2011) which investigated job skills that are important to employers across various sectors and types of jobs in Malaysia. The findings are indeed consistent with Burrus et al. (2013) report. Arawati Agus et al. (2011) found that employers from various sectors were still not satisfied with the job skill qualities of university graduates. According to their gap analysis, they found that graduates need to improve on their skills especially on their decision making and problem solving skills. This includes their thinking skills.

Based on this premise, the current study focuses on the university graduates's mind set to determine its influence as a mediator in the relationship between psychological attributes and university students' levels of competitiveness. The reason to investigate mind set is because it reflects an individual's problem solving, decision making and ability to think analytically that require high and complex intelligence. There have been various studies on mind set that have proven positive effects that include increase in intelligence that was achieved through growth mind set (Dweck 2000, 2007; Dweck et al. 1995; Yeager & Dweck 2012).

Research Questions

1. Are there any differences in personality, self-esteem, mind set and competitiveness between students in public and private universities?
2. What are the relationships between personality, self-esteem, mind set and competitiveness among university students?

Research Objectives

1. To measure differences in personality, self-esteem, mind set and competitiveness between public university students and private university students
2. To examine the relationships between personality, self-esteem, mind set and competitiveness among university students

Methodology

Participants

The participants in the current study include 294 students from Psychology programs of 12 different universities in Malaysia. The participants were from various degree levels from bachelor to doctor of philosophy. Universities were chosen based on the Malaysian Qualification Agency (MQA) list of universities that offer psychology programs. The 12 universities were both public and private universities.

Research Instruments

The instruments used were survey questionnaires that comprise of five parts: Part A is the demographic information, Part B is for personality items, Part C is the self-esteem items, Part D is the mind set items, and Part E is the competitiveness items.

There were four psychological questionnaires used in the study which are the Big Five Inventory (BFI) (John & Srivastava 1999), *Rosenberg Self-Esteem Scale* (RSES) (Rosenberg 1965), *Implicit Theories of Intelligence Scales* (ITIS; Dweck 2000) and Revised Competitiveness Index (RCI) (Houston et al. 2002). The questionnaires were back translated (Brislin, 1970).

Questionnaire Reliability

A pilot study was conducted to test the reliability of questionnaires. It was carried out on 30 students from psychology program at Universiti Kebangsaan Malaysia. Data were analyzed using the Alpha Cronbach test to determine questionnaires' reliability. The results are shown in Table 2.

The analysis showed that all questionnaires have very good reliability values except for agreeableness subscale with a value of only $\alpha = .28$. According to Kaplan dan Saccuzzo (1993), reliability values between .70 hingga .80 can be accepted as good for research purposes.

Table 2

Alpha Cronbach Values For Questionnaires Used In The Study

Questionnaire	Alpha Cronbach (α)
Big Five Inventory	
Extraversion	.65
Agreeableness	.28
Conscientiousness	.77
Neuroticism	.89
Openness	.62
Rosenberg Self-Esteem Scale	.87
Implicit Theory of Intelligence Scale	
Growth mind set	.82
Fixed mind set	.85
Revised Competitiveness Index	
Enjoyment of Competition	.80
Contentiousness	.80

Findings

Differences in personality, self-esteem, mind set and competitiveness between public university students and private university students

T-test analysis revealed that there was a significant difference between public university students and private university students [$t(292) = 3.578$, $p < .05$] on mean scores of their extraversion personality. Public university students showed a higher mean score ($M = 27.27$, $SD = 5.14$) of extraversion personality than private university students ($M = 24.86$, $SD = 5.29$).

There was also a significant difference in neuroticism between public and private university students where students from private universities showed a higher score ($M = 24.42$, $SD = 5.91$) than those from public universities ($M = 22.64$, $SD = 5.93$).

However, there were no significant difference for agreeableness, conscientiousness and openness personality traits.

As for the self-esteem attribute, public university students ($M = 29.84$, $SD = 5.41$) showed a higher mean scores than those of private university students ($M = 27.39$, $SD = 5.09$). T-test was significant for this factor [$t(292) = 3.970$, $p < .05$].

However, there was no significant difference in growth mind set between students from public and private universities [$t(292) = -0.230$, $p > .05$]. Similarly, students from public and private universities did not differ on their competitiveness scores [$t(292) = 1.738$, $p > .05$].

Table 3 shows the results of the differences.

Table 3 Summary of t-test results between public and private university students base on their personality, self-esteem, mind set and competitiveness

Variables	Groups	N	Mean (M)	Standard Deviation (SD)	t (t) Value	Degree of Freedom (df)	Significant value (p)
Extraversion	Public University	122	27.07	5.14	3.578	292	.000**
	Private University	172	24.86	5.29			
Agreeableness	Public University	122	33.67	4.65	1.011	292	.313
	Private University	172	33.10	4.89			
Conscientiousness	Public University	122	29.61	4.78	1.442	292	.150
	Private University	172	28.78	4.90			
Neuroticism	Public University	122	22.64	5.93	-2.548	292	.011*
	Private University	172	24.42	5.91			

	Private University	172	24.42	5.91			
Openness	Public University	122	35.14	5.06	0.833	292	.406
	Private University	172	34.63	5.18			
Self-esteem	Public University	122	29.84	5.41	3.970	292	.000**
	Private University	172	27.39	5.09			
Growth mind set	Public University	122	4.14	0.77	-0.230	292	.818
	Private University	172	4.16	0.91			
Competitiveness	Public University	122	41.61	9.17	1.738	292	.083
	Private University	172	39.70	9.43			

*p<0.01; *p<0.05

Relationships between personality, self-esteem, mind set and competitiveness among university students

Table 4 shows the results of relationships of all variables (personality, self-esteem, mind set) with competitiveness.

Table 4

Results of Pearson Correlation Tests For Each Variable With Competitiveness

		Pearson Correlation (r)	Significant Value (p)
Extraversion	Competitiveness	.449**	.000**
Agreeableness		-.033	.578
Conscientiousness		.288**	.000**
Neuroticism		-.258**	.000**
Openness		.217**	.000**
Self-esteem		.400**	.000**
Growth Mind set		.214**	.000**

** p < .001

The Pearson Correlation test showed that extraversion has a moderate positive significant relationship with competitiveness ($r = .449^{**}$, $p < .001$). This means that the more students are extrovert, the more they are competitive.

However, there was no significant relationship between agreeableness and competitiveness among students ($r = -.033$, $p = .578$). Conscientiousness, however, has a weak positive significant relationship with competitiveness ($r = .288^{**}$, $p < .001$). Even though the relationship is weak, it can be suggested that the more students are conscientious, the more competitive they are. Similarly, agreeableness has a weak positive correlation with competitiveness ($r = .217^{**}$, $p < .001$). This also indicates that the more agreeable the students are, the more competitive they can be. There was also a weak correlation between neuroticism and competitiveness ($r = -.258^{**}$, $p < .001$). The relationship is a negative one which indicates that the less neurotic the students are, the more competitive they can be.

Pearson Correlation test also showed a significant positive relationship between self-esteem and competitiveness ($r = .400^{**}$, $p < .001$). The higher the students are with their self-esteem, the more they are competitive.

The results of Pearson Correlation test on growth mind set revealed a weak positive relationship with competitiveness ($r = .214^{**}$, $p < .001$). This suggests that the more growth mind set the students are, the more they are competitive.

Discussion

The results of the study have shown some differences between students from public universities and private universities. In particular, they are different in terms of their extraversion and neuroticism personality traits. Students from public and private universities are also different in their self-esteem. The differences may be due to the different cultures that the two types of universities are cultivating. Public universities are mostly orienting more towards research, whereas private universities are oriented more on teachings. However, this has to be taken with lots of caution as there is yet evidence to prove the point. Alshagga et al. (2015) has however, shown that public and private university students have different orientation in their stress perception. Public university students perceived their stress as more correlated to academic matters whereas private university students perceived their stress more with life matters. This could be related to the difference in neuroticism where private university students showed higher neuroticism than public university students.

Results on relationships between psychological attributes (personality and self-esteem) and growth mind set and competitiveness have shown few significant relationships. Four personality traits, namely, extraversion, conscientiousness, neuroticism and openness have significant relationships with competitiveness. All except neuroticism have positive relationships. The results indicate that for students to be more competitive, they also need to be more extrovert, conscientious, open but less neurotic. However, the results are based on relationship analyses, not causal analyses. Therefore, they could only suggest associative factors but not as causal ones.

Results also showed that self-esteem has a significant positive correlation with competitiveness. There is a close association between self-esteem and confidence (Rutkofsky et al., 2021). Rutkofsky et al. (2021) acknowledged that confidence, self-image and self-esteem are related to each other to shape one's self value. Based on this fact, it can be

claimed that self-esteem can be associated with competitiveness. Students with more self-esteem will have more confidence to compete better in many aspects of life.

Lastly, growth mind set also had a positive significant relationship with competitiveness. This is consistent with Rozainee et al.'s (2020) study that found a significant relationship between mind set and employability. They stated that this confirmed growth mind set to be a determiner for achievement and employability which require students to be competitive.

Conclusion

A comparison was done between students in Psychology programs at public universities and private universities. The comparisons revealed differences in some personality traits (extraversion and neuroticism). It was discovered that public university students are more extrovert than their counterpart from private universities. With regard to neuroticism, it was shown that students from private universities have higher scores on their neuroticism trait than students from public universities. Furthermore, public university students seemed to be higher on their self-esteem scale than students from private universities. These differences may be due to the different environment, in particular the culture that surrounds these students.

The current study also found that there were few relationships between the variables. Firstly, personality traits, namely extraversion, conscientiousness, neuroticism and openness were found to be correlated with competitiveness.

Secondly, self-esteem were found to be positively correlated with competitiveness.

Lastly, growth mind set was proven to be positively correlated with competitiveness.

The current findings have shown some insights into essential attributes especially personality traits, self-esteem and mind set and their relationships with university students' competitiveness. These finding will surely be beneficial to relevant authorities such as university top management to achieve their goal in producing competitive graduates. Nevertheless, the current study only involved students from Psychology programs. As a result, findings have limitations to be generalized to all university students.

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