UNIVERSITI PUTRA MALAYSIA

RELATIONSHIP BETWEEN INTELLIGENCE, CREATIVITY, SELFESTEEM AND ACADEMIC ACHIEVEMENT AMONG IRANIAN UNDERGRADUATE STUDENTS IN MALAYSIAN UNIVERSITIES

HABIBOLLAH NADERI

FEM 2009 7

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By

HABIBOLLAH NADERI

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

May 2009

This thesis is dedicated to:
My wife,
Daughters (Haniyeh & Mohaddeseh), son (Hossein),
And,
Teachers who always affected my mind and memory;
May God blesses them

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

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Chairman: Associate Professor Rohani Abdulla, PhD

Faculty: Human Ecology

The purpose of this study is to investigate the relationship between intelligence, creativity, self-esteem and academic achievement among Iranian undergraduate students in Malaysian universities. A quantitative research methodology (cross-sectional) was designed for this research. One hundred and fifty three Iranian undergraduates' students were randomly selected out of six universities. Both descriptive and inferential statistics were used to analyze the data in the study using SPSS. The statistical techniques used were Descriptive Statistics, Independent-Sample t-test, Multiple Liner Regression, Chi-square , Multinomial Logistic Regression and Pearson Correlation.

The findings in this research study did not support the difference between male and female on creativity. However there was a significant gender difference on the creativity subscales of environmental sensitivity, initiative and what kind of person are you (WKOPAY). Males obtained significantly higher scores on initiative and the WKOPAY

subscale than females, but female achieved significantly higher scores on environmental sensitivity than males. The research findings showed that there was no significant difference between female and male students on intelligence.

The results of the multiple regression analysis showed that intelligence, gender were not significant predictors of academic achievement. The R^2= 0.02 implies that the two predictors variables explain about 0.2 % of the variance in academic achievement. On the other hand, the multiple regression analysis also revealed that creativity, age and gender explained a low proportion (R^2= 0.143) of the variation in academic achievement. The findings revealed that the variations in academic achievement explained by the independent variables, intelligence, creativity and gender, was also low. Consequently, a dissimilar aspect of creativity and academic achievement was significant relationship for males and females when looking at the relationships between creativity and academic achievement. The research findings showed that there were significant differences between male and female students on self-esteem. Additionally, the findings of the multinomial logistic regression analysis showed that self-esteem was strong significantly correlated with academic achievement, when gender was controlled. Generally, intelligence, creativity, gender and age were not significant factors in explaining the variance of academic achievement, but self esteem and dissimilar aspect of creativity were the most significant relationship on academic achievement. Implications of the findings are discussed, as well as recommendations for future research. Specially, for students that show characteristics of attribution theory and its causes to which they attribute their success or failure.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

HUBUNGAN ANTARA KEBIJAKSANAAN,KREATIVITI, JATI DIRI DAN PENCAPAIAN AKADEMIK MAHASISWA DAN MAHASISWI DARI NEGARA IRAN DI INSTITUSI PENGAJIAN TINGGI DI MALAYSIA

Oleh

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Tujuan kajian adalah untuk memantau hubungan antara kebijaksanaan, kreativiti, jati diri dan pencapaian akademik antara mahasiswa-mahasiswi Iran di institusi-institusi pengajian tinggi di Malaysia. Kaedah penyelidikan yang berbentuk kuantitatif telah digunakan dalam kajian ini. Seratus lima puluh penuntut Iran telah dipilih secara rawak dari enam buah universiti tempatan. Kaedah statistik penerangan yang terperinci dan data digunakan dalam menganalisa data melalui kaedah SPSS. Teknik-teknik statistik yang digunakan adalah statistik penerangan, uji kaji sampel bebas, t-test, Multiple Liner Regression, Chi-square, Multinomial Logistic Regression dan Pearson Correlation.

Hasil kajian tidak menyokong kewujudan perbezaan antara jantina terhadap kreativiti. Tetapi terdapat perbezaan yang ketara antara jantina di bawah pecahan kreativiti terhadap sensitiviti persekitaran, inisiatif dan jenis keperibadian seseorang (WKOPAY). Pencapaian kaum lelaki adalah lebih tinggi terhadap inisiatif dan WKOPAY berbanding kaum perempuan tetapi pencapaian kaum perempuan lebih tinggi terhadap

sensitiviti persekitaran berbanding kaum lelaki. Kajian juga menunjukkan tiada perbezaan yang nyata diantara jantina terhadap kebijaksanaan. Keputusan analisis 'multiple regression' menunjukkan kebijaksanaan, jantina tidak mempengaruhi pencapaian akademik. R^2= 0.02 dua faktor penjangka yang mewakili 0.19% dalam variasi pencapaian akademik. Analisis ini juga mendedahkan bahawa kreativiti, umur dan jantina mewakili variasi yang rendah (R^2= 0.143) dalam pencapaian akademik. Kajian menunjukkan bahawa variasi dalam pencapaian akademik diwakili oleh faktor-faktor bebas, kebijaksanaan, kreativiti dan jantina adalah rendah. Perbezaan dalam aspek kreativiti dan pencapaian akademik adalah nyata apabila melihat perhubungan antara kreativiti dan pencapaian akademik di antara kaum lelaki dan perempuan.

Kajian menunjukkan variasi dalam pencapaian akademik yang diwakili oleh faktor bebas, kebijaksanaan, kreativiti dan jantina adalah rendah. Kesinambungannya, aspek yang berlainan dalam kreativiti dan pencapaian akademik adalah hubungan yang sangat penting untuk penuntut lelaki dan perempuan apabila melihat hubungan antara kreativiti dan pencapaian akademik. Hasil kajian menunjukkan terdapat perbezaan jantina yang ketara dalam jati diri. Tambahan pula, kajian daripada analisis ' multinomial logistic regression' menunjukkan jati diri yang kuat dalam pencapaian akademik apabila jantina menjadi kawalan. Secara amnya, kebijaksanaan, kreativiti, jantina, dan umur bukan faktor –faktor penting yang mewakili variasi dalam pencapaian akademik, tetapi jati diri dan aspek kreativiti mempunyai hubungan yang sangat penting dalam pencapaian akademik. Implikasi dari hasil kajian dan cadangan untuk kajian masa hadapan turut dibincangkan, terutamanya bagi pelajar yang menunjukan ciri-ciri teori attribuasi serta kesannya terhadap kejayaan atau kegagalan mereka.

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I am greatly indebted to my thesis supervisory committee members. I would like to acknowledge their patience, guidance, and willingness to share their knowledge, skills, and time and experience particularly, my supervisor, associate professor Dr. Ronani Abdullah and the committee members.

To associate professor Dr. Ronani for her efforts as the source of my success, strength, and inspiration for this work. She is a sincere and extremely caring educator who has always encouraged me to be creative in my research work. She has always to bring out the best in me to be a good researcher. She also patiently perused and validated the contents of the research instrument, from time to time. Her constant constructive ideas and criticisms as well as invaluable advice throughout this study provided me with the right direction and motivation to successfully complete this study.

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Finally, I would like to acknowledge all types of support rendered to me technically, financially, and morally from other parties not mentioned here that helped to make this research a success.

I certify that an Examination Committee has met on 28th of May 2009 to conduct the final examination of Habibollah Naderi on his Doctor of Philosophy thesis entitled “the relationship between intelligence, creativity, self-esteem and academic achievement among Iranian undergraduate students in Malaysian universities " in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the candidate be awarded the relevant degree of Doctor of Philosophy.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirements for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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Date: 14 January 2009

DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for other degree at Universiti Putra Malaysia or at any other institution.

HABIBOLLAH NADERI

Date:

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LIST OF ABBREVIATIONS

IESC	Iran's Educational Statistical Center
CGPA	Cumulative Grade Point Average
ANOVA	Analysis Of Variance
GF	Fluid Intelligence
CCFIT	Catell Culture Free Intelligence Test
WKOPAY	What Kind Of Person Are You?
CTBS	Comprehensive Tests of Basic Skills
CAPP	Collegiate Assessment of Academic Proficiency
GRE	Graduate Record Exam
WASI	Wechsler Abbreviated Scale of Intelligence
WRAT3	Wide Range Achievement Test Third Edition
SAI	Self Assessed Intelligence
AP	Academic Performance
SAM	Something About Myself
I.Q	Intelligence Quotient
RSES	Rosenberg Self – Esteem Scale
KTCPI	Khatena-Torrance Creative Perception Inventory
TTCT	Torrance Test of Creative Thinking
CPI	Creative Perception Inventory
ASCT	Abedi-Schumacher Creativity Test
SAI	School Achievement Index
CFIT-3a	Scale 3 of the Catell Culture Fair Intelligence Test
FS	Female Students
MS	Male Students
TAT	Thematic Apperception Test
VACT	Villa and Auzmendi Creativity Test
APA	American Psychological Association
GS	Crystallized Intelligence
WISC-III	Wechsler Intelligence Scale for Children
SAT	Scholastic Aptitude Test
SPSS	Statistical Package for the Social Sciences
STAT	Science Teachers Association of Texas

CHAPTER 1

INTRODUCTION

1.1 Chapter Structure

Chapter one introduces the study which includes introduction, statement of the problem, the significance of the study, research objectives, research questions, research hypothesis, operational definition of the terms. The conceptual framework, limitation and over of the study

1.2 Introduction

Over the past 20 years, higher education in Iran has seen a shift from elite to mass education. This national educational reform provides more equity and access to higher education and academic achievement to the general population. Accompanying the development in higher education, there is an increasing diversity amongst the student populations. Students from different social and cultural backgrounds, with varied life experiences, and diverse levels of education bring with them varied needs and academic potentials as noted by (Naeimi, 2005).

The government has spent a lot of money to ensure the efficiency and effectiveness of the country's education system. This is evident from the annual report by the government's budget, it is quite evident that the education sector often got the highest priority (Dirgaunarsa, 1986). In the 2001 budget reports that, more than 1/3 of the Iranian

government's budget was allocated to the education sector (Iran's Budget Report, 2001) .

Even though the government has spent money on the development of educational infrastructures, it was reported that the achievements of the Iranian students have deteriorated in comparison to the previous years (Fathei, 2006). The Iran's Educational Statistical Center (IESC) reported that the level of the students' achievement in higher education was 91.4% in 1999, 90.6% in 2000 and 89.9% in 2001. This clearly portrays the steady decline in the students' academic achievements within three year period (Educational Statistics Center of Iran, 2002)

Many researchers believe that success in higher education is not only essential to furthering one's own education but also ensures a more educated and productive society. Therefore, there has been a continuing interest in the identification of effective predictors of academic achievement in higher education (Mahmodiasl, 2002). Concomitantly, Fathei (2006) stated that each individual student is unique and has his or her own educational related needs. The fulfillment of these needs is vital for an individual's endeavor and pursuit to achieve the academic excellence. Understanding these important needs can help educators handle students' psychological problems better and assist the individual to enhance their abilities and potential talents (Mirzabigi, 2001).

Academic achievement has been studied for more than 100 years (Amini, 2004; Mahmodi, 1998 ; Mirzabigi, 2001). Several indicators of academic achievement including cumulative grade point average have been studied. Most of the early research in academic achievement focused on the use of ability measures and high school performance measures to predict college grades (Mahmodiasl, 2002; Naeimi, 2005).

Numerous investigators examined the influence of undergraduate cumulative grade point average on academic success and found significant positive correlation (Can et al., 2008; Cohn et al., 2004; Gelardi & Emby, 2005; Hirsh & Peterson, 2008; Hong, 2002).

The intelligence-achievement relationship has been established in the literature and intelligence is the strongest predictor of academic performance/achievement (Furnham & Monsen, 2009; Gelade, 2008; Xin & Zhang, 2009) . Nevertheless, there are some studies which imply this relationship is weak or has moderating effect or is not significant (Chamorro et al., 2008; Coyle & Pillow, 2008; Ziegler, Knogler, & Bühner, 2009).

Inconsistent relationship between academic achievement and creativity has been reported in the literature. (Ai, 1999; Karimi, 2000; Palaniappan, 2007) in their studies they found barely positive relationships between creativity-academic achievement correlation have been reported in quite a number of studies. (Educational Statistics Center of Iran, 2002; Palaniappan, 2005; 2007, Ananda Kumar Palaniappan), on the other hand, did not find negative relationship between creativity and academic achievement. In addition, a review of studies relating creativity and academic achievement shows a substantial number of investigations did not find any significant relationship between these two variables (Behroozi, 1997; Nori, 2002; A. K Palaniappan, 1994).

The conception of intelligence is frequently associated with creativity. However, Furnham & Bachtiar (2008) cited early investigations which supported modest

relationship between creativity and intelligence. Intelligence and creativity both have an impact on academic achievement, but the direct effect of intelligence on academic achievement is much higher while creativity has a moderate effect on academic achievement (Rindermann & Neubauer, 2004).

Academic achievement and self esteem has also been studied. Pullmann & Allik (2008) reported that general self-esteem is positively related to academic achievement among secondary school students but not as strong as academic self-esteem. Further Marsh & Mara (2008) suggested that prior self-esteem has small positive effect on subsequent educational attainment. Pullmann & Allik (2008) cautioned that low general self-esteem does not necessarily signal a poor academic achievement. Children learn to detach their self-esteem from academic outcomes, thus, protecting them from the feeling of failure. The relationships between intelligence, creativity, self esteem and academic achievement is still debatable as the results seem to be inconsistent. Further research is needed to understand this phenomenon.

1.3 Statement of the Problem

Academic achievement has always been the interest of researchers and educators for a long time. Academic achievement is the outcome of both teaching and learning experiences. The relationships between creativity, intelligence, self-esteem, and academic achievement have been studied but, the relationships among these variables have not yielded consistent results (Ai, 1999; Amini, 2004; Furnham & Monsen, 2009; Grzegorek et al., 2004; Hirsh & Peterson, 2008; MehrAfza, 2004; Pullmann & Allik,

2008; Rohde & Thompson, 2007). For example Furnham & Monsen (2009), Rohde & Thompson (2007) and Tajvand (1998) studied relationship between academic achievement and intelligence, Amini (2004), Grzegorek et al., (2004) and Pullmann & Allik (2008) examined between self-esteem and academic achievement and (Ai, 1999; Hirsh & Peterson, 2008; MehrAfza, 2004) investigated between creativity and academic achievement. However, the above studies did not include all the variables in a single research. Hence, the interrelationships between these variables need further investigation.

The internationalization, liberalization and democratization of education adopted by the government of Malaysia have prompted the influx of international students enrolled in local institutions of higher learning (Ghazali & Kassim, 2004). Foreign students enrolments in Malaysia have increased rapidly from 32 students in 1990 to 12,605 in 1999 (Ghazali & Kassim, 2004). Foreign students represent less than two percent of higher education enrolments in Malaysia, but this proportion is likely to grow over the next decade as the Malaysian government aims to recruit 100,000 foreign students to study in universities of higher education by 2010 (Higher Education Minister Mustapa Mohamed, 2006) .

According to Higher Education Minister Mustapa Mohamed (2006), Malaysia has the potential to become the choice country for foreign students to pursue tertiary education abroad. The social stability and reasonable cost of living were among those factors which helped draw foreign students to come to this country. The government will intensify promotion efforts to attract more students from neighboring Southeast Asian

nations, China and west Asia (such as Iran). Although, there are 40,000 foreign students in Malaysia, adding that the number is rather small compared with the facilities available (Higher Education Minister Mustapa Mohamed, 2006).

The number of Iranians students in Malaysia has increased from less than 60 students in 1999 to more than 4000 in 2009 (Iranian Counseling in Malaysia Noor, 2008). Iranian students' composition was only 0.5% in 1999 and has increased to 10% of the total of foreign students in Malaysia. The influx of Iranian students to Malaysia may be due the practice of Islam in Malaysia and a relatively low cost of living. These prompted the some Iranian students to pursue their tertiary educations in Malaysia which is a non traditional education hub for Iranian students (Mustapa Mohamed, 2006 & Noor, 2008). Traditional educational hubs for Iranian students are countries like the United States of America, Canada and European. Nonetheless, how are these students coping with their studies in Malaysia? Are they performing academically? What factors influence their academic achievement? Academic achievement is one measure to reflect their adjustment in their study programmes.

The relationship between intelligence, creativity, self-esteem and academic achievement has been established among Iranian secondary school students in Iran (Amini, 2004; MehrAfza, 2004; Naeimi, 2005; Tajvand, 1998; Zeinvand, 2006) , but the relationship between the intelligence, creativity, self-esteem and academic achievement among Iranian undergraduate students has not been established (Amini, 2004; Behroozi, 2006; Tajvand, 1998; Zeinvand, 2006). Iranian researchers Amini (2004), Behroozi (2006) and Tajvand (1998) postulate that differences in academic achievement are due to