

# INFLUENCE OF HOLLAND'S PERSONALITY-ENVIRONMENT CONGRUENCE ON ACADEMIC PERFORMANCE, OVERALL SATISFACTION, AND SELF-ESTEEM AMONG BACHELOR DEGREE STUDENTS AT ASSUMPTION UNIVERSITY

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**Abstract:** This study was conducted to investigate the influence of Holland's personality-environment congruence on academic performance, overall satisfaction, and self-esteem among bachelor degree students at Assumption University. Two hundred and ninety six junior and senior students completed a self-administered questionnaire which measured the study's primary variables (degree of congruence, academic performance, overall satisfaction, and self-esteem). The findings indicated that the respondents reported no significant level of congruence influence on academic performance. However, the results showed a significant positive correlation on overall satisfaction and minor significant negative correlation on self-esteem. These findings demonstrate that even though personality-environment congruence does not have any significant effect on academic performance or has only minor negative significant effect on self-esteem, many other scientific researchers also support the idea that personality-environment congruence influences overall satisfaction and this overall satisfaction affects academic performance and then academic performance affects self-esteem. It is suggested that future research should investigate these pattern of relationships in both Thai educational settings as well as work settings. There is still much room for further research in this area within the Thai context.

**Keywords:** Holland, Personality-Environment Congruence, Academic Performance, Overall Satisfaction, Self-Esteem, Bachelor Degree Students, Assumption University

## Introduction

Choosing a major is one of the most important decisions incoming college or university students have to make because the major that is eventually chosen determines the faculty unit or department they will join and the teachers and students they will interact with. One of the most common factors that affect students' choice is their interest in the core subjects offered by particular faculty units; students believe that they would feel comfortable attending those subjects because their personality characteristics seem to match

the course requirements and related environmental conditions. For example, one might consider studying science because he or she enjoys doing experiments, is curious about the world, and likes learning about logical facts and scientific discoveries. Students believe that the chosen major and corresponding faculty unit matches their personality. On the other hand, others may decide to enter a particular area of study because of parental pressure, while other students may think that a program is fairly easy and that they will graduate with little or no difficulty. As a result of the selection, some students remain satisfied with the chosen field of study, claiming that it suits them while others face various difficulties such as poor academic performance and low self-esteem (Burtchaell, 1987). Research shows that the culture and climate of the chosen major and faculty unit affect students' learning, grades earned, satisfaction, and graduation (Porter & Umbach, 2006).

John Holland's theory proposes that people are attracted to work environments that conform to their personality orientation. Holland referred to the alignment between personality and work environment as 'congruence' (Donohue, 2006). According to Holland's theoretical proposition, people showing certain personality patterns generally do well in similar or congruent environments (Brown, 2005). In contrast, individuals whose personalities are poorly matched to their work environments are more likely to change careers than their congruent counterparts. Following Holland's perspective, it can be said that people search for environments where they can use their skills and abilities and express their values and attitudes; that people who choose to study and work in an environment similar to their personality type are more likely to be successful and satisfied; and that how people act and feel depend, to a large extent, on their school or work environment. Past research had shown how congruence between personality and the chosen college major and faculty unit (department) enhances students' performance, life satisfaction, and self-esteem (Jones, 2012). It had also been suggested that the college major and corresponding faculty unit create an academic environment which reinforces and rewards student competencies that match the environment pattern of the faculty unit in a manner that is consistent with Holland's theory (Smart, Feldman, & Ethington, 2007).

Astin (1993) argued that, actually, this is what most students already do, even though they may not be aware of it. Those who are artistically oriented, for example, are more likely to major in fine arts, music, theater, journalism, or English. Holland's personality

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types (realistic, investigative, artistic, social, enterprising, and conventional) predict the major students choose and that a good personality-major match is related to college success; generally, the better the match, the better students do. While there are other factors to consider in choosing a college major, personality-major match is still one of the most important (Jones, 2012).

Considering the aforementioned theoretical perspectives and empirical findings, the current study attempted to explore how the personality-college major match affects college success. While Holland's theory has attracted considerable research attention, the majority of these studies have tended to focus on the influence of congruence on job satisfaction or performance. Rarely has Holland's perspective on personality-environment congruence been applied to postsecondary education and, even rarer, are related studies conducted within the Thai setting. With a view to bridging the knowledge gap, the current study involved Thai college students in one of Thailand's top universities.

### Objectives

This study aimed to investigate how congruence between students' personality and their academic environment, which was suggested by Holland's theory of Typology, might impact on college performance in terms of grade point average (GPA), overall life satisfaction in terms of whether the student feels happy and comfortable in the chosen college major or faculty unit, and on self-esteem which translates into the overall evaluation of one's worth as a person.

### Literature Review

Most scientists interested in academic success have been drawn to *Holland's Theory of Careers* (or *Vocational Choice*) and use it as a starting point. The basic idea underlying this theory is, "Behavior is determined by an interaction between personality and environment." According to the theory, environments tend to be dominated by people with certain personalities who surround themselves with people like themselves and seek out problems that match their interests, talents, and world outlook (Donohue, 2006). Holland also asserted that when people select an environment that is not congruent with their personality, their productivity and satisfaction falls. And when people select an environment that is congruent with their personality, their productivity and satisfaction rises (Holland, 1959, as cited in Arnold, 2004). Therefore, it follows that people search for surroundings that allow them to express their personality orientation. For example, individuals with a strong interest in social welfare gravitate towards environments that provide them the opportunity to

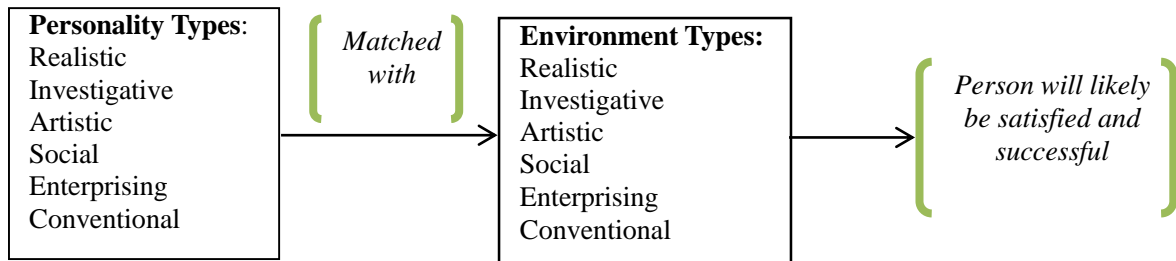
interact with others, such as advising or volunteering. According to Holland (1997), in order to gain a sense of satisfaction, individuals must first fix the 'incongruence' between their personality predispositions and their environment by seeking a new and congruent environment.

Holland (1997) theorized that personality can be categorized into six types, namely: realistic, investigative, artistic, social, enterprising, and conventional (RIASEC). People with similar personality configuration who are grouped together in the same job or task can create an environment that suits their style and are likely to respond to many situations and problems in similar ways (Richards, 2005). For example, when people with artistic personality gather together to perform a task, they build up a work environment that rewards creative behavior and thinking; such an environment is referred to as 'artistic environment'. By the same token, in the academic setting, by providing the right environment of teaching goals and learning interventions, enthusiastic learners are likely to improve in character development, intellectual development, and vocational development (Smart, 1982).

As earlier suggested, environment can also be divided into six types which run parallel to the six types of personality: realistic, investigative, artistic, social, enterprising, and conventional (RIASEC) environments; thus, the theory has gained yet another name – *Typology theory*. According to Holland (1997), people tend to search for suitable environments in which they can put their abilities and skills to good use and are able to express their attitudes and values. For example, realistic type of individuals will be attracted to realistic work environments (e.g., outdoor activities, hands-on operations, etc.). In the same vein, social type of individuals will search for corresponding work environments (e.g., helping people, coaching, etc.). The rewarding outcome is that, by choosing to engage in an environment that matches one's personality, individuals are more likely to be satisfied and successful (Pronk & Harrison, 1998). Figure 1 model below depicts Holland's typology theory.

(See Figure 1 on the next page)

Jones (2012) opined that how one feels and acts at work can be predicted by his or her school or workplace environment. Hogan and Blake (1999) further expounded with some situational examples. If a person opts to work in a particular environment, the person is bound to meet people with similar personality traits; thus, the person is bound to feel good about being able to do many things that others can do. Furthermore, the person would feel comfortable spending time with others of similar orientation and are



**Figure 1: Holland's Typology Theory**

Source: Jones, 2012

likely to respond to situations in similar ways. On the other hand, one is bound to feel uncomfortable when made to work with non-compatible personalities. Not surprisingly, this individual may soon consider moving to a more compatible environment where everyone can comfortably express their social inclinations. The following section presents the six types of personality and corresponding environment in more detail, following Holland's typology (RIASEC) theory.

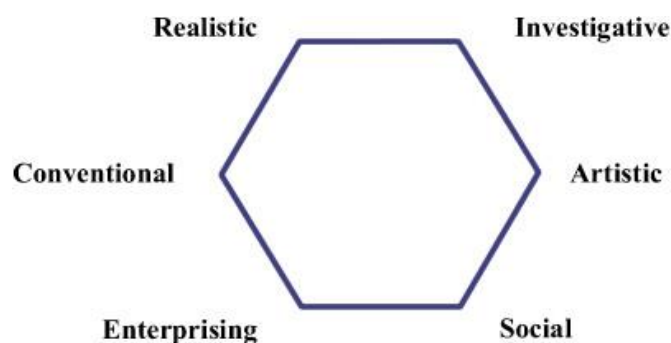
Zunker (2003) argues that these six types are 'pure' types by Holland's standards. To identify a particular type, one should look closely at how the person shows or expresses his or her educational or vocational interests, type of employer, or test results obtained from instruments such as *Self-directed Search*, *Strong Interest Inventory*, or *Vocational Preference Inventory*. But the fact is that there are actually very few people who possess only one pure type; normally, people do have subtypes. These subtypes are derived from the top three scores from suitable tests (1997, as cited in Brown, 2005).

**Consistency** Certain personality and environment types share common elements. For example, artistic and investigative types have more in common than social and realistic types. The closer the types displayed on the hexagon model, the more consistent are the characteristics displayed by adjacent types. Individuals with high consistency have codes that stand next to each other (e.g., SEA, ESC, etc.). Those with low consistency have codes such as CAI or SCI (Holland, 1997, as cited in Brown, 2005).

**Differentiation** A person who comes close to the pure personality type (i.e., their primary type score is much higher than their other scores) is said to have high differentiation; that is, the traits and characteristics of a particular type share little similarity with other types. On the other hand, a person whose personality type fits many types is described as having low differentiation. This latter type has a poorly defined personality style and is described as undifferentiated (Brown, 2005).

**Identity** Identity can be seen in people who have a stable and a clear picture of their interests, talents, and goals. If applied to environment types, identity refers to the degree to which the environment has stability, integration, and clarity of tasks, goals, and rewards. In light of this, people who reveal many occupational goals show their low identity (Zunker, 1994, 2003).

**Congruence** Congruence describes how well a personality type matches or "fits" a particular environment. It reflects the ideal situation where personality matches the environment. For example, the social personality type will function best within environments that have high concern for social problems, social interaction, and educational activities (Zunker, 2003). It can thus be inferred that, if applied to the school setting, congruence translates into how well the student's personality matches his or her school environment. Past research supports the theoretical perspective that congruence is highly related to academic performance and persistence, satisfaction, and stability of choice (Spokane, Luchetta, & Richwine,



**Figure 2: Holland's Hexagon Model**

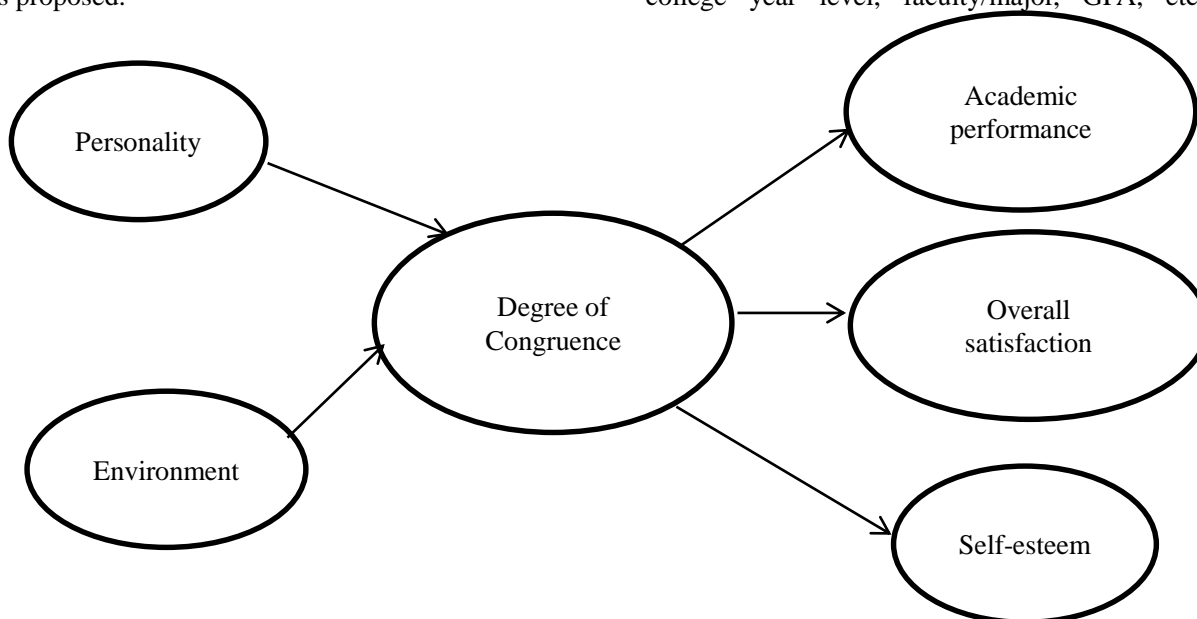
Source: [http://www.careerkey.org/asp/your\\_personality/hollands-theory-of-career-choice.html](http://www.careerkey.org/asp/your_personality/hollands-theory-of-career-choice.html)

2002; Dumenci, 1995, as cited in Zunker, 2003).

**Calculus** Calculus is what Holland's model provides. Holland proposed that the theory of relationship between types of career environment is supported by empirical research technique (i.e., technique obtained through experience, experimentation, and observation). Conducting further related research will provide clients and counselors with a clearer understanding of Holland's theory (Zunker, 2003).

### Conceptual Framework

Based on the review of literature on Holland's typology theory and the findings and implications of the cited related research, the following conceptual framework is proposed.



**Figure 3: Conceptual Framework of The Study**

### Method/Procedure

#### Participants

The participants of this study consisted of Thai bachelor degree students at Assumption University in Bangkok, Thailand, an international university where English is the medium of instruction. Through convenience sampling and according to the proper total sample size of quantitative study in order to find the effect of variables in each group of studies, the targeted total sample size was 300 ( $n=300$ ) students, obtained from 10 faculty units. Participants were further divided into 30 students per faculty. The inclusion criteria required that participating students must be (a) Thai students of Assumption University; (b) third year/junior students or higher who have taken more than half of their total credits to ensure that they have taken major/required subjects; and (c) willing to

participate in the study.

#### Research Instrumentation

The research instrument employed to meet the objectives of the study was a self-administered four-part survey questionnaire in English. Detailed description of each part of the questionnaire is presented in the following section.

##### Section 1: Demographic Background.

The demographic background section of the questionnaire comprises a researcher-constructed set of questions that aim to obtain personal information about the respondents that were deemed pertinent to the study. This section consisted of items concerning selected demographic characteristics such as gender, age, college year level, faculty/major, GPA, etc. To

maintain confidentiality, personal information that are not related to the study and which would directly identify the respondents were not included in the questionnaire.

##### Section 2: Career Key.

Section 2 of the questionnaire consisted of the *Career Key* (Parts 1 and 2), a test developed by Lawrence K. Jones (2012), Professor Emeritus in the College of Education at the North Carolina State University. The Career Key is a self-rating scale in two parts. The first part asks respondents to rate six categories based on Holland's RIASEC typology, using the following scale: 2 = *if the statement is very true to you*; 1 = *if the statement is mostly true to you*; and 0 = *if the statement does not describe you*. The second part is about appealing occupations, using the following scale: 2 = *if the occupation definitely interests or attracts you in some way*; 1 = *if the occupation might*

interest you; and 0 = if the occupation is something you are undecided about, does not sound interesting, or something you would dislike.

#### Section 3: Overall Satisfaction.

The third section consisted of the *Subjective Happiness Scale* (SHS), a test developed by Sonja Lyubomirsky, Ph.D (1999). This is a 4-item scale of global subjective happiness that is used in the Authentic Happiness website in order to indicate people's overall happiness at a point in time. The measure contains two items that ask respondents to characterize themselves using both absolute ratings and ratings relative to peers. While the other two items provide brief descriptions of unhappy and happy individuals and ask the respondents about the extent to which each characterization describes them.

#### Section 4: Self-Esteem.

The fourth and final section consisted of the *Rosenberg Self-Esteem Scale* (SES) (1989)—the most widely-used self-esteem measure in social science research. The measure was developed by sociologist Dr. Morris Rosenberg who worked as a professor of sociology at the University of Maryland from 1975 until his death in 1992. SES is commonly scored as a Likert scale in which 10 items are answered on a four-point scale, ranging from strongly agree to strongly disagree. To score the items, a value is assigned to each of the 10 items, as follows: For items 1, 2, 4, 6, 7: 3 = *Strongly Agree*, 2 = *Agree*, 1 = *Disagree*, and 0 = *Strongly Disagree*. For items 3, 5, 8, 9, 10: 0 = *Strongly Agree*, 1 = *Agree*, 2 = *Disagree*, and 3 = *Strongly Disagree*. The scale's scores range from 0 to 30, with 30 indicating the highest score possible.

### Data Collection Procedure

The current researcher planned to distribute the survey questionnaire to targeted participants (bachelor degree students) in Assumption University, at the Suvarnabhumi Campus and Hua Mak Campus, where the choice location would be areas around faculty offices or faculty unit buildings, using convenience sampling. The actual data collection procedure consisted of the following steps:

Step 1: - The current researcher, with the help of four trained research assistants, recruited potential participants randomly by inviting students in and around the campus to participate voluntarily, regardless of gender, age, ethnicity, religion, physical condition, and mental ability. Students were asked what year they are currently in; if they were in year 3 and above, they were then asked if they wish to participate in the study. Additionally, the questionnaire was handed to participants only upon the assurance that they understand the objective of the survey (informed consent), that they can respond in English, and that they are willing to participate without any coercion.

Step 2: Upon receipt of the questionnaire, every participant was given a brief orientation on how to fill in the sections of the questionnaire and assured of confidentiality and anonymity in the exercise. Participants were also encouraged to answer the questions honestly. It was anticipated that since most of the students were at least in their third year and would have passed the Basic English subject, they would not have any comprehension problem with the English test that was deemed to use simple words and grammar.

Step 3: Upon collection of the completed questionnaire, the current researcher inspected every questionnaire to look for errors or omissions; only valid questionnaires were subjected to data analysis.

### Findings/Results

#### *Demographic Profile of Respondents*

The sample consisted of 296 participants of whom 126 (42.6%) were males and 170 (57.4%) were females. Their ages ranged from 18 years or younger to 23 years or older with a mean age within the interval 21 years to 22 years. In terms of their college year level, 90 students (30.3%) reported that they were Junior/third year students, and 207 (69.7%) reported that they were Senior/fourth year or higher students. In terms of the faculty/major they were enrolled in, the participants were more or less evenly distributed between the 10 faculties: Engineering (10.4%), Science and Technology (9.8%), Bio Technology (9.1%), Arts (10.1%), Music (10.1%), Communication Arts (10.1%), Architecture (10.1%), Nursing Sciences (10.1%), Law (10.1%), Finance and Banking (8.4%), and Accounting (1.7%). Of the 296 participants, 28 (9.5%) reported that they had changed faculty before, while 268 (90.5%) said they had not.

#### *Reliability Analysis of Scales Employed*

Reliability was conducted on the two scales of overall satisfaction and self-esteem. The purpose of the reliability analysis was to maximize the internal consistency of the two measures by identifying those items that are internally consistent (i.e., reliable), and to discard those items that are not. The criteria employed for retaining items are (1) any item with 'Corrected Item-Total Correlation' (I-T)  $\geq .33$  will be retained (.33<sup>2</sup> represents approximately 10% of the variance of the total scale accounted for), and (2) deletion of an item will not lower the scale's Cronbach's alpha. Prior to the reliability analysis, all negative worded items were reverse-scored to ensure consistency of the item scores. Table 1 presents the items for the two scales together with their I-T coefficients and Cronbach's alphas.

**Table 1: Scale Items Together with Their Corrected Item-Total Correlations and Cronbach's Alphas**

<u>Life satisfaction</u>		<u>Corrected I-T Correlations</u>
• In general, I consider myself a very happy person.	.63	
• Compared to most of my peers, I consider myself happier.	.62	
• Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?	.60	
Cronbach's Alpha = 0.68		
<u>Self-esteem</u>		<u>Corrected I-T Correlations</u>
• I feel that I'm a person of worth, and my worthiness is equal or higher than others.	.21	
• I feel that I have a number of good qualities.	.32	
• All in all, I am inclined to feel that I am a failure.	.27	
• I am able to do things as well as most other people.	.33	
• I feel I do not have much to be proud of.	.23	
• I take a positive attitude towards myself.	.38	
• On the whole, I am satisfied with myself.	.31	
• I certainly feel useless at times.	.50	
• At times I think I am no good at all.	.51	
Cronbach's Alpha = 0.65		

As can be seen from the above Table 1 and based on the criteria for retaining items that are internally consistent, the factor of overall satisfaction is represented by 3 items, and the factor of self-esteem is represented by 9 items. The computed Cronbach's alpha coefficients for the two scales were adequate and ranged from .65 to .68. Each of the two factors of overall satisfaction and self-esteem was then computed by summing across the items that make up that factor and their means calculated.

The computation of the P-E congruence variable followed the instructions provided by *The Career Key* and the *Match Up! Your Personality to College Majors 2013*. Specifically, the degree of congruence is indicated on a 4-point scale ranging from:

- 0 = No congruence between personality and environment at all (personality and environment are opposite to each other on the hexagonal model; i.e., personality = R and environment = S)
- 1 = Weak congruence between personality and environment (personality and environment are

further away from each other on the hexagonal model; i.e., personality = R and environment = E or A)

- 2 = Strong congruence between personality and environment (personality and environment are next to each other on the hexagonal model; i.e., personality = R and environment = I or C)
- 3 = Perfect congruence between personality and environment (personality and environment are the same on the hexagonal model)

#### *GLM Multivariate Analysis of Variance*

GLM multivariate analysis of variance (MANOVA) was employed to test for gender, age, and college year level differences for the four variables of GPA, overall satisfaction, self-esteem, and P-E congruence. The following Table 2 presents the means and standard deviations for the four variables of GPA, overall satisfaction, self-esteem, and P-E congruence as a function of the participants' gender, age, and college year level.

**Table 2: Means and Standard Deviations for the Variables of GPA, Overall Satisfaction, Self-Esteem, and P-E Congruence as a Function of Gender, Age, and College Year Level**

		<u>Age</u>								<u>College Year Level</u>			
<u>Male</u>	<u>Female</u>				<u>≤21 yrs</u>		<u>&gt;22 yrs</u>		<u>3<sup>rd</sup> yr</u>		<u>4<sup>th</sup> yr</u>		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
GPA	2.70	.42	2.81	.46	2.84	.47	2.66	.40	2.81	.46	2.74	.44	
OS	5.09	.97	5.26	.96	5.22	1.03	5.14	.87	5.32	1.02	5.13	.93	
S-E	2.26	.38	2.14	.40	2.16	.41	2.23	.37	2.19	.38	2.19	.39	
P-E C	2.00	.99	2.32	.93	2.21	.97	2.17	.96	2.29	.96	2.15	.97	

In order to investigate whether there are gender, age, and college year level differences for the four variables of GPA, overall satisfaction, self-esteem, and P-E congruence, GLM multivariate analysis of variance (MANOVA) was conducted. The results of MANOVA are as follows:

#### Gender.

The results showed that there was an overall gender effect for the four variables combined,  $F(4,273)=3.83$ ,  $p<.01$ . Follow-up tests of between-subjects effects showed that gender has a significant effect for the dependent variables of GPA, self-esteem, and P-E congruence,  $F(1,276)=4.16$ ,  $p<.05$ ,  $F(1,276)=6.70$ ,  $p<.01$ , and  $F(1,276)=7.65$ ,  $p<.01$ , respectively. Examination of the marginal means showed that female participants reported higher level of GPA ( $M=2.81$ ) and P-E congruence ( $M=2.32$ ) than their male counterparts ( $M=2.70$  and  $M=2.00$  respectively); and male participants reported higher level of self-esteem ( $M=2.26$ ) than the female participants ( $M=2.14$ ). Male and female participants did not differ on their reported level of overall satisfaction ( $p>.05$ ).

#### Age.

The results showed that there was an overall age effect for the four variables combined,  $F(4,274)=2.83$ ,  $p<.05$ . Follow-up tests of between-subjects effects showed that age has a significant effect for the dependent variable of GPA,  $F(1,277)=10.47$ ,  $p<.001$ . Examination of the marginal means showed that the younger participants (aged 21 years or younger) reported a higher level of GPA ( $M=2.84$ ) than their

older counterparts (aged 22 years or older) ( $M=2.66$ ). Younger and older participants did not differ on their reported levels of overall satisfaction, self-esteem, and P-E congruence ( $p>.05$ ).

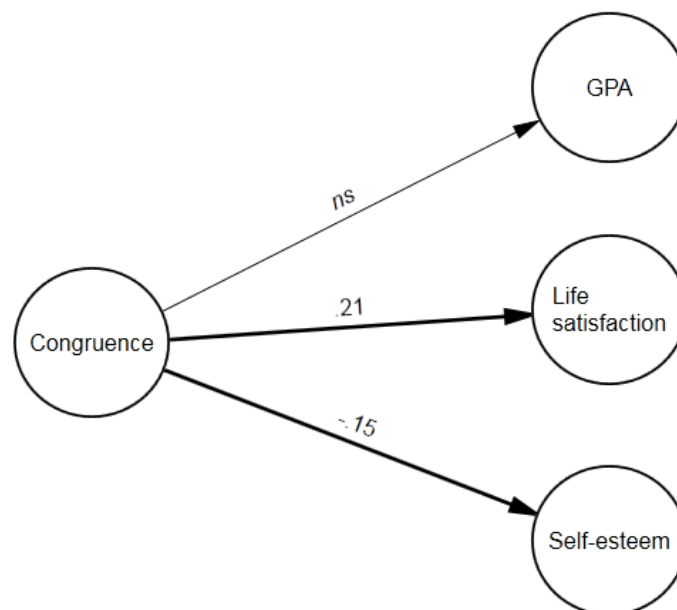
#### College Year Level.

The results showed that there was no overall 'college year level' effect for the four variables combined,  $F(4,274)=1.24$ ,  $p<.05$ . Follow-up tests of between-subjects effects also showed that 'college year level' has no significant effect for any of the four dependent variables of GPA, overall satisfaction, self-esteem, and P-E congruence ( $p>.05$ ).

#### Multiple Regression Analysis

As mentioned earlier, multiple regression analysis was employed to test the research hypothesis thus stated: *"Students who chose a college faculty/major that has a higher degree of congruence to their personality demonstrate higher level of academic performance, higher level of overall satisfaction, and higher level of self-esteem."*

In order to test the impact of the congruence between the participants' personality and their environment on their academic performance (GPA), levels of overall satisfaction and self-esteem (represented by the regression model depicted in Figure 3), multiple regression analysis was conducted. The analysis involved regressing GPA, levels of overall satisfaction and self-esteem on the predictor variable of P-E congruence. The results of the analysis are presented in the following Figure 4.



**Figure 4: Regression Model of The Participants' GPA, Levels of Overall Satisfaction and Self-Esteem As A Function Of Their P-E Congruence**

The results showed that the congruence between the participants' personality and their environment is (1) significantly and positively associated with their overall satisfaction ( $Beta=.21$ ), and (2) significantly and negatively associated with their level of self-esteem ( $Beta=-.15$ ). Thus, the more congruent the participants' personality and their environment, the more satisfied they are overall. However, the more congruent their personality is with their environment, the lower is their reported self-esteem. It can also be gleaned from the figure that P-E congruence is not significantly associated with academic performance.

## Discussion

### P-E congruence and academic performance

P-E congruence is not significantly associated with academic performance. This suggests that no matter how well-matched students' personality orientation is to their degree program, this does not guarantee that they would excel in their studies. The insignificant association may not necessarily reflect on other factors that may contribute to academic achievement such as intelligence and ability to perform certain tasks, family pressure, peer influence, study habits, etc. Patrick (2012) stated that intelligence and ability to perform certain tasks contribute to high performance. School performance might be mediocre, depending on student attendance, emotional experiences, and general attitude towards school. For the participants of this study, poor English skills may contribute to difficulties in one's studies in an international school such as Assumption University. All of these cited factors can impact academic performance, regardless of how well-matched students are to their degree program. Personality alone is not enough to measure academic achievement; it requires additional practice, self-discipline, positive emotion, proactive study habits, etc. in order to achieve high academic performance.

### P-E congruence and overall satisfaction

The results suggests that, in spite of other factors such as current political climate, personal circumstances, social interactions, socioeconomic factors, etc., being in a degree program that suits their personality characteristics appears to contribute significantly to students' global sense of happiness. This findings are matched up to what Holland (1997) has stated in his theory that when individual chooses environment that matched to their personality, their satisfaction or in this case their overall satisfaction will rise.

### P-E congruence and self-esteem

The results showed that the better the match between the students' personality and their faculty unit or major, the lower their self-esteem. There is a negative

significant association between P-E congruence and self-esteem; however, the correlation value was weak to almost no correlation at all. So, it cannot be proven outright that a strong congruence between people's personality and environment will lower their self-esteem. There may be factors (e.g., poor grades, unsupportive professors, etc.) that intervene in which even when students are in an environment that matches their personality traits, the overall evaluation of their personal worth or value is relatively low. Rosenberg (1989) suggested that academic performance affects self-esteem in such a way that if there is high academic performance, self-esteem would also be high and vice versa. There are other factors that affect self-esteem including juvenile delinquency and depression; for example, juvenile delinquents who habitually break the law do not have a high estimate of themselves; similarly, individuals experiencing depression do not have a high self-worth. Bailey (2011) stated that parents and social factors have an impact on people's self-esteem as well. Individuals whose parents have high expectations but ignore their personality and interests are likely to have low self-esteem. Parents who are unsupportive of their children (e.g., use abusive language, negative comparison, or violence) will negatively affect their children's self-esteem. Moreover, according to Charoenthaweesub & Hale (2011), Thailand possesses vertical family system in which parents have a lot of influence toward their children. Their acceptance and their opinion very much affect their children and thus they can affect their self-esteem as well.

### Demographic differences

*Gender:* Results reflect that female students are more careful to match their personal characteristics with the objectives and study plan of the degree program being considered compared to male students. Nguyen (2012) suggested that, in Asian families, males are more valued than females primarily because they carry the family name and are, by tradition, expected to be the leader of the family in the next generation. In effect, males have less opportunity of selecting the faculty/major of study that they really like because they are expected to choose their studies according to their family's expectations. Females, on the other hand, are free to choose the program that matches their personality. In terms of academic performance, it was suggested that female students take their studies more seriously, complete their course requirements on time, study hard for examinations, etc. The results also indicated that there is no significant difference between male and female participants in terms of their overall satisfaction. With regard to the variable self-esteem, it is quite possible that the male students' overall evaluation of their worth or value may have been



enhanced because of lesser friction with classmates, lesser pressure on grade expectations from their parents, or taking greater pride in their chosen college major, compared to female students.

**Age.** The findings showed that younger students reported better academic performance than their older counterparts. It is possible that students in younger age range are those who make better progress in meeting the demands of their course program due to greater enthusiasm and commitment to their studies than those in older age range who are simply waiting to graduate and who may have lost some of their enthusiasm along the way.

**College year level.** The results demonstrated that college year level has no significant impact on any of the four dependent variables of P-E congruence, academic performance, overall-satisfaction, and self-esteem. This means that being in the junior or senior year level of study does not affect students' level of person-environment fit, overall happiness, and global self-worth. This researcher suggests that there should be further investigation about the role played by year of study on the variables of P-E congruence, academic performance, overall-satisfaction, and self-esteem.

### **Relationships among academic performance, overall happiness, and self-esteem**

A review of related studies showed certain relationships among the key variables of this study. Baumeister (2003) reported that high academic performance contributes to high self-esteem. Malhi (2010) also reported that higher academic performance reinforces self-esteem and thus the frequency of the better performances supports individual's self-esteem to be higher as well. Ryff (1989) demonstrated that there is a positive relationship between life satisfaction and self-esteem. He also reported that life satisfaction, self-esteem, locus of control, morale, and affect balance are correlated with each other positively. Past research also pointed out that there is a strong relationship between happiness and academic performance. According to Spice (2011), a high level of happiness reflects greater job performance and productivity (as cited in Lyubomirsky, King, & Diener, 2005). It was also found that the happiness level does contribute towards higher school achievement for advance students. Ballenato (2009) also supports the finding that happiness contributes towards academic performance. He stated that happiness comes from positive beliefs toward oneself and, by the same token, happiness and positive beliefs about oneself tend to reflect directly on academic performance among university students.

It can be inferred from the above-cited studies that the said variables are associated with each other. It can be assumed that choosing degree programs or faculty

units that are deemed congruent with one's personality will likely increase overall happiness, then, overall happiness will likely increase academic performance, and consequently academic performance will likely increase self-esteem.

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