

## **Big Five Differences in Personality Traits Based on High School Backgrounds**

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### **Abstract**

Using the five-factor model, this research compares how personality traits differs between students graduating from a Thai high school, those finishing from an international school within the country, and those that graduate from outside of the country. Participants were 937 first-term undergraduate majoring in 17 different programs. When comparing traits to an American sample of 21-year-olds, Thai undergraduates scored significantly lower on openness, conscientiousness, agreeability, and neuroticism (all  $p = .000$ ). Extraversion scores between them were not significantly different. When comparing high school backgrounds, female students coming from a Thai school had significantly higher scores in conscientiousness ( $p = .008$ ) than those who came from an international school. They also had significantly lower neuroticism scores than the international school graduates ( $p = .000$ ). Males who study abroad had significantly higher agreeableness ( $p = .013$ ) and openness scores ( $p = .004$ ) than those who studied at a Thai high school. In conclusion, Thai students coming from different secondary educational systems showed distinct character traits differing according to students' gender. Prior research has associated these factor differences to future academic and career success.

**Keywords:** *Big five personality traits, five-factor model, undergraduates, Thailand, international school*

### **Introduction**

Does studying at an international school or in another country affect students' personalities? During those critical adolescent years that shape an individual for life, what is the impact on their character? Prior research has concluded that the influence of instructors and school peer groups is important. Erikson's development theory (1968) identified teachers' prominent role in helping students find their identity. Instructors do this through confirmation of students' abilities and by providing a safe environment where students can try on different identities (Hammon & Hendricks, 2005). When researching about selection of Thai vocational colleges, Pimpa and Suwannapirom (2008) found the influence of teachers had the same correlation as did family influence on personal attitude and institutional attractiveness of students. School friends and peers also influence students' decisions and actions (Felmlee, Eder & Tsui, 1985; Hallinan & Williams, 1990).

In Asia, international schools have become an educational phenomenon. Of the 8,900 international schools in the world, Asia claims 56% (Machin, 2017), and 80% of these are local students. In Thailand, studying at an international school is a way to step up, to get ahead and prepare for top universities. With the developing middle class, the number of international schools has also increased, leading to a competitive educational environment. The growth of international schools is also driven by the continuing deterioration in Thailand's PISA (Program for International Student Assessment) scores in math, science, and reading (Mala, 2016). They also provide alternative education opportunities because of tight government educational budgets (Pinyakong, Virasilp, & Somboon, 2007). Another solution has been to send children outside of the country to study, despite parental fear of terrorism threats and natural disasters. In 2017, 4,655 Thai students studied at the primary and secondary level in Australia (Australian Department of Education, 2017). Of the 7,100 Thai students who went to the US in 2015, 500 were secondary school students (US International Trade Administration, 2017).

In terms of personality research, business industries have extensively used the big five survey to match applicants to an organization's environment. There is also plenty of focus on successful personality traits of employees in a wide variety of industries and job positions. Nonetheless, the

authors have found no educational equivalent of the five-factor model examining differences in traits based on students' secondary school background. This current research project conducted at an international college in Thailand addresses this gap by providing a comparison of educational backgrounds. For two years, incoming Thai undergraduates studying in 19 different majors at an international college in Thailand took the original English version of the big five personality inventory. These participants graduated from Thai high schools, international high schools within the country, or schools from outside Thailand.

## **Literature Review**

### ***Big Five***

Research on what traits make a person unique goes back to the early Greeks when Hippocrates related personality to four humors (Nutton, 2013). At the beginning of the 1900s, Jung's writings on extroversion and introversion inspired the development of the famous Myer-Briggs Type Indicator (Emre, 2018). This started the character-trait research boom of the 1930s (Barenbaum & Winter, 2008). The early use of factor analysis led to the development of the first proto-personality taxonomies. There was no one originator. The factors emerged as a consensus agreement on the crucial attributes (John, Naumann, & Soto, 2008). The original Cattell articles listed 171 traits grouped into 35 factors (1945). Thurstone (1934) recognized five personality disorder types, and Goldberg labeled them the big five after realizing that these same traits appeared in many research projects (1990). The competing five-factor NEO Inventory (McCrae & Costa, 1985) held out for years as a separate model but eventually merged into the big five (Goldberg, 1993).

Constancy of these dimensions and the clearness and simplicity of their factors have made the big five index an often-used business tool. It is the one personality test most likely to be given during the hiring process (Caldwell & Burger, 1998). In their landmark paper, Barrick and Mount's (1991) meta-analysis connected personality to job performance. This was based on 231 studies and included 24,000 participants. One key factor that cut across all occupations was conscientiousness. They also found that extraversion was important for managers and salespeople. Hertz and Donovan's research (2000) confirmed Barrick and Mount's findings that conscientiousness had the highest correlation across all positions. For customer service, agreeableness and openness were also positively correlated. A European version of the study also singled out conscientiousness as correlating with many occupations (Salgado, 1997). Other projects look at traits of an entrepreneur (Leutner, Ahmetoglu, Akhtar, & Chamorro-Premuzic, 2014) and characteristics that help employees adapt in a changing environment (Huang, Ryan, Zabel, & Palmer, 2014).

Research connecting personality to academic performance is just as prominent. Vedel's meta-analysis (2014) showed that conscientiousness was the best predictor of grade levels and confirmed in other studies (see Paunonen & Ashton, 2013; Poropat, 2009; Richardson, Abraham, & Bond, 2012). Vedel's data also showed some positive correlation with agreeableness and openness.

### ***Education and Personality***

The current project builds on the assumption that differences in personality factor scores are partly because of secondary educational background. There is a rich body of education literature that relate moral and character development to school, going all the way back to Aristotle's maxim of first learn what is good before doing good (Arthur, 2008). Thorndike, originator of educational psychology and developer of the Alpha-Beta Assessment during World War I, recommended using science to measure the effect that classroom learning had on character (1910), the first modern mile marker mapping students' personality traits.

As to a model explaining changes to personality, McCrae and Costa (2008) proposed the Five-Factor Theory that character traits are shaped by basic tendencies, character adaptations, and self-awareness. Biology and the environment shape these three factors. Originally, the researchers said traits were stable after adulthood but then revised this to "relatively stable," recognizing that there were changes in age, between nationalities, in cultural movements, and in major life experiences like

divorce. Roberts, Wood, and Smith (2005) argue that the Five-Factor Theory doesn't take into account the character progression from childhood to early adult, that there is something more than just genetics. They proposed the Social Investment Theory, that a person makes a commitment to a social institution. The expectation of that institution will control behavior and over time change traits such as agreeableness and conscientiousness.

Studies have shown that personality characteristics are the least fixed for younger participants. As participants grew older, their traits became more constant, leveling out for those 50 years and older (Roberts & DelVecchio, 2000). De Hann, De Pauw, Van den Akker, Dekovic, and Prinzie (2017) found proof of personality malleability from early childhood to late teens. They also observed that gender differences in character were most pronounced in older teens.

Roberts, Wood, and Smith (2005) thought social investment best explained the personality changes from teens to early adult, using the example of university students who have a better GPA scoring higher on conscientiousness, or those who enjoy student activities scoring higher on agreeableness. They said that all children and young adults show transformation because they are all going through a similar socialization process at the same time. They cited Robins, Fraley, Roberts, and Trzesniewski (2001), as evidence. In this research, 270 students at the University of California at Berkeley completed the big five survey in their first week of school. In their fourth year, they found that the mean score for neuroticism had decreased by 23%, while agreeableness, conscientiousness and openness all significantly increased.

As to the five-factor model, the authors have found no research that compares the effect of different secondary school backgrounds on character traits. Research of nearly 6,000 Germans showed that the big five were sensitive to educational level (Rammstedt, Goldber, & Borg, 2010). Participants were grouped according to educational levels: none to early secondary, intermediate secondary, and upper secondary. Using exploratory factor analysis, the researchers could reproduce the 5 factors in the intermediate and upper secondary, but not for the lower secondary sample. A large United States study looking at the personal difference between high school dropouts observed that low extraversion and high neuroticism scores best predicted who would quit school (Migali & Zucchelli, 2017).

The closest study to the current one was conducted on university students going on exchange. Of the 1,134 that participated, 527 went abroad for a minimum of one term and up to one school year (Zimmermann & Neyer, 2013). The project measured a significant decrease in neuroticism score and a significant increase in openness and agreeableness scores.

Does the secondary education environment shape students, or do students of a particular characteristic cluster at a particular school? The literature suggests that both dynamics have an impact. After many years and many studies, McCrae and Costa (2008) theorized that individuals have certain innate characteristics, and that external events also have an effect. In conclusion, the Social Investment Theory gives a basis for expecting the secondary education experience to have an influence on traits.

### ***Thai Upper Secondary Schools***

The main inquiry in this project was the students in the academic track of upper-level secondary education, from 10th to 12th grade. Most of the ASEAN countries make this education level optional, including Singapore. The two exceptions are the Philippines and the Brunei Darussalam (The ASEAN Secretariat, 2014). China, Taiwan, and South Korea also make these last three years optional (Hodgen, Pepper, Sturman, & Ruddock, 2010; OECD, 2016a, 2016b).

One issue was that the nation-wide scores on the Ordinary National Education Test (O-NET) have continued to drop. High school seniors scored 49 percent on the Thai language portion, but only 35 percent in social science, 29 percent in science, and a dismal 25 percent in math ("O-Net Scores," 2018). The PISA scores reflected weaknesses in the same areas (Mala, 2016). Students at the private schools score only slightly better (Goodman, 2017).

In Thailand, public schools are in concept free. Of the 1.9 million upper secondary students studying in 2016, only 18% studied at a private school (Thai Ministry of Education, 2017). Most parents who are financially able will send their children to a fee-based school. The upper-market international schools can cost as much as US\$30,000 per year, not including an extra entry payment of US\$10,000. Newer, more economical schools can cost around US\$10,000 per year, with a onetime entrance fee of \$1,000. In contrast, the top-tier Thai high schools start at the cost of an economical international school, but some charge as little as \$1,000 a year. Private Thai schools can receive government subsidies, but then the government can set limits on tuition charged (Pinyakong, Virasilp, & Somboon, 2007). The international schools are self-supporting and have no such restrictions.

### **Research Method**

The current research is quantitative, using the five-factor survey. It includes five dimensions: extraversion, conscientiousness, neuroticism, agreeableness, and openness. Each relates to a continuum. For example, a low score on extraversion means that the participant is introverted. The tipping point is at the plus or minus 50%, where a personality is neutral, not an extrovert or an introvert. The opposite of agreeable is antagonistic. For conscientious, antonyms would include inattentive, imprecise, not careful. The opposite of neuroticism would be stable or calm. The inverse to openness would be closed to experiences (John & Srivastava, 1999).

The null hypothesis was that there would be no significant difference of the score of each factor for students coming from three different high schools. A  $p$ -value of .05 with a two-tail test was used for evaluating significance.

The authors used the classic 44-item version for this research. The 5-point scale ranged from strongly disagree to strongly agree. Some questions are negatively scored, so they needed to be adjusted when the final score was calculated.

Participants in this study were incoming freshmen for a two-year period at a large international college in Thailand. The big five was given during an orientation session. Of those entering during this time, a good portion had studied at an international high school or abroad. Because these students had just graduated high school and started their college studies, this sample provides an opportunity to measure differences between those who have studied in the Thai education system, at an international school, or at a high school abroad. The college has over 3,000 undergraduates studying in 17 different majors.

The study received Institutional Review Board approval from the Faculty of Social Sciences and Humanities, Mahidol University, ID 2015/374 (B2), in compliance with human research ethics required by the university.

### **Problem Definition**

There are two main research questions:

1. Is there a significant difference in the five factors regarding high school background?
2. Using the big five factors, what is the personality profile of first-term Thai undergraduates?

The main research problem is when looking at the five personality factors of first-term undergraduate students, is there a significant difference between those who graduated from a Thai high school, those who finished at an international high school in Thailand, and those who graduated from abroad outside of Thailand? Because many projects identified a definite gender difference in personality (Hill & Edmonds, 2017; Jackson, Thoemmes, Jongmann, Ludtke, & Trautwein, 2012; McCrae et al., 2002; Soto, 2016), this project separated data analysis by gender.

## Results

### *Participant Characteristics*

The total sample size was 1,056 participants representing 60% of the first-year students entering the college during the period of study. Fifty-seven percent were female. The mean age was 18.4 ( $SD = 1.68$ ), with the youngest at 15, and the oldest 35. Students had registered for 17 different majors. The top three majors were international business with 28%, travel industry management at 13.9%, and marketing at 11.7%. Over half of the participants were from the business division, and the second largest group was from the science division (17%).

Of the 1,056 who completed the big five survey, the authors did not include 119 because they did not provide enough details to identify schools or they completed a GED or equivalent certificate. This left 937 for the school comparison. Thirty percent graduated from a Thai high school, 41% from an international school in Thailand, and 18% graduated abroad.

As to the reliability of survey for Thai participants, the results were comparable to what Schmitt, Allik, McCrae and Benet-Martinez (2007) measured in other Southeast Asian countries, but lower than their 56-country average (2007). In the current study, the Cronbach's Alpha score for extraversion was .72, the highest of the factors. Neuroticism came in second at .67, and conscientiousness was .65. Agreeableness and openness were tied at .63. When given in the United States, the reliability score was .70 or higher (Arterberry, Martens, Cadigan, & David Rohrer, 2015; McCann, 2015; Schmeck & Ribich, 1978). Schmitt et al.'s (2007) 56-nation results bracketed North America between .77 and .84, and Western Europe between .68 and .84. Their range for South and Southeast Asia was between .57 and .77, similar to the current research results.

### *Big Five Results*

Analysis shows that the Thai undergraduates scored over the middle 3.0s for all factors. The highest was 3.4 for openness, and the second highest at 3.35 was agreeability. This is in line with Thai citizens' reputation for being friendly and open. The lowest scoring was 3.07 for neuroticism, again matching the residents' character of being more relaxed and less stressed.

Srivastava, John, Gosling and Potter (2003) provide detailed results of their big five survey based on ages that ranged from 21 to 60. Although 21 is a little older than the average age of 18.4 in this survey, it provides the most reasonable benchmark for comparison of Americans to the Thai students surveyed. Because of the unequal sample size and variance, Welch's t-test was used (Derrick, Toher, & White, 2016).

The one factor that was not significantly different was extraversion. This was interesting because most Thai people consider themselves shyer than Westerners.

For all else, the scores were significantly lower for the Thai students than for the US participants. Openness scored the lowest ( $M\ diff. = 0.52, t(1,745) = 31.2, p = .000$ ), highlighting the Thai school system's emphasis on respect for teachers, parents, and following the rules. Conscientiousness ( $M\ diff. = 0.31, t(1,756) = 17.1, p = .000$ ), and agreeableness ( $M\ diff. = 0.29, t(1,968) = 17.5, p = .000$ ) with similar t-scores were next. As to conscientiousness, 18-year-old Thai pupils are less mature than an American at the same age; they mostly have never worked and have been supported by their parents. Most Thai students still live with their parents while studying. By comparison, it was headline news when 15% of the American students still live at home (Fry, 2017). About 40% of full-time US undergraduates work (Institute for Education Sciences, 2017). Higher responsibility comes from working, attending class, paying housing bills, and managing schedules.

As to higher neuroticism for 21-year-old Americans ( $M\ diff. = 0.25, t(1,696) = 11.9, p = .000$ ), having to take on the responsibilities of making a living likely brings with it the stress of doing all these things, compounded by studying at the same time. In contrast, attending university in Thailand is idealized as the best time in most peoples' lives.

### Comparing Results of Students from Different High Schools

Is there a difference between those who graduated from a Thai school, those who graduated from an international school in Thailand, and those who graduated from outside Thailand? Many prior projects concentrated on character development for adolescents and young adults using the big five while focusing on gender differences (Hill & Edmonds, 2017; Jackson, Thoemmes, Jongmann, Ludtke, & Trautwein, 2012; McCrae et al., 2002; Soto, 2016). Because of this, the authors first analyzed the differences between females and males.

An independent samples t-test of the Thai students' big five scores showed that several factors were different. Neuroticism was significantly higher ( $t(970) = 4.61, p = .000$ ) for females ( $M = 3.14, SD = .565$ ) than males ( $M = 2.97, SD = .574$ ).

Women ( $M = 3.4, SD = .442$ ) also scored significantly higher than men ( $M = 3.28, SD = 4.14$ ) on agreeability ( $t(966) = 4.54, p = .000$ ). Yet they did ( $M = 3.37, SD = .430$ ) score significantly lower on openness ( $t(976) = 2.13, p = .033$ ) than did the males ( $M = 3.43, SD = .480$ ).

The conclusion reached from this was that there is a gender difference in personality for Thai pupils.

Secondary education background also had a meaningful impact on the results. One-way ANOVA analysis of each gender provided a clearer picture. When looking at ANOVA omnibus results for the male participants, two significant personality factors were openness ( $F(2, 370) = 5.37, p = .005$ ) and agreeability ( $F(2, 368) = 4.37, p = .013$ ). This is in line with the authors' expectations and prior research results.

**Table 1.** Post-Hoc Tukey's HSD Multiple Comparisons of High Schools for Thai Males in Big Five Factors

Item	Factor	Factor Compared	M Diff.	Sig.*
Agreeableness	International	Thai	0.12	.059
		Abroad	-0.05	.574
	Thai	International	-0.12	.059
		Abroad	-0.17	<b>.013</b>
	Abroad	International	0.05	.574
		Thai	0.17	<b>.013</b>
Openness	International	Thai	0.13	.061
		Abroad	-0.09	.302
	Thai	International	-0.13	.061
		Abroad	-0.22	<b>.004</b>
	Abroad	International	0.09	.302
		Thai	0.22	<b>.004</b>

\***Bold:** Significantly different using two-tail  $p$ -value  $< .05$

Both factors passed the test of homogeneity of variance, so Tukey's honestly significant difference (HSD) test was used for post-hoc comparisons. Openness for those Thai males graduating high school abroad ( $M = 3.54, SD = .464$ ) was significantly higher ( $p = .004$ ) than for those who graduated from a Thai high school ( $M = 3.31, SD = .410$ ). This is in line with what the authors measured when comparing the current Thai participants to American 21-year-olds. The Americans scored significantly higher than Thais for that factor. With a mean difference of 0.09, Thai males studying at an international high school in Thailand also scored higher on openness than those who studied at a Thai high school, but not significantly higher.

For agreeableness, schoolboys who studied abroad ( $M = 3.36, SD = .469$ ) also scored significantly higher than the participants who finished secondary school in Thailand ( $M = 3.18, SD =$

.385). The mean difference between those from an international school and those from a Thai high school was 0.12, more than double the mean difference between international and abroad, but still not significant. This coincides with the prior analysis that 21-year-old Americans scored higher for this factor.

One-way ANOVA was again used to analyze Thai females only. When doing so, conscientiousness appears again as statistically significant ( $F(2, 481) = 4.50, p = .012$ ), as does neuroticism ( $F(2, 496) = 13.28, p = .000$ ).

Conscientiousness and neuroticism both pass the test for homogeneity of variance, so the authors again used Tukey’s HSD test for post-hoc comparison. This is where results seen earlier in the combined survey came back up with a stronger t-test score. The females coming from a Thai high school ( $M = 3.23, SD = .441$ ) had a significantly higher score ( $p = .008$ ) in conscientiousness than do the females coming from a high school abroad ( $M = 3.17, SD = .496$ ). In contrast, conscientiousness for males studying at different school was not significantly different ( $F(2, 372) = 1.88, p = .155$ ).

For the neuroticism factor, schoolgirls coming from Thai schools ( $M = 2.98, SD = .550$ ) scored significantly lower ( $p = .000$ ) than those coming from an international high school ( $M = 3.25, SD = .540$ ). They also scored significantly lower ( $p = .003$ ) than women studying abroad ( $M = 3.20, SD = .565$ ).

**Table 2.** Post-Hoc Tukey’s HSD Multiple Comparisons of High Schools for Thai Females in Big Five Factors

Item	Factor	Factor Compared	M Diff.	Sig.*
Conscientiousness	Thai	International	0.15	<b>.008</b>
		Abroad	0.07	.538
	Thai	International	0.15	<b>.008</b>
		Abroad	0.07	.538
	Abroad	International	0.08	.389
		Thai	-0.07	.538
Neuroticism	International	Thai	0.27	<b>.000</b>
		Abroad	0.04	.822
	Thai	International	-0.27	<b>.000</b>
		Abroad	-0.23	<b>.003</b>
	Abroad	International	-0.04	.822
		Thai	0.23	<b>.003</b>

\***Bold:** significantly different using two-tail  $p$ -value < .05

## Discussion

Does the type of high school attended affect students’ personalities? This is an interesting question and difficult to answer. The school’s mix of intense peer pressure, unique school culture, and the adolescent search for identity should have some synthesizing effect. Although some earlier research using the big five survey showed minimal change in adolescents as they mature from 12 to 18 (McCrae et al., 2002), newer research revealed that younger individuals are more malleable than older adults (De Haan et al., 2016; Roberts & DelVecchio, 2000; Soto, 2016).

The unique educational backgrounds of the students studying at this international college allowed for distinctive evidence supporting the authors’ answer. There are definite differences in personality between students who graduated from a Thai high school, those who came up through the international schools within the country, and those Thai students who graduated from high schools abroad.

Females from a Thai high school scored significantly higher on conscientiousness than did those from an international school. This agrees with the authors’ perceptions of these students when

they take first-level undergraduate general education classes. Schoolgirls from a Thai school are more punctual. Although shy about asking questions during class, these pupils are more likely to come up during breaks and ask questions. These are the students who listen closely to instructions. These females are also more likely to attend makeup classes and take better notes (Deveney, 2005).

The females from international schools are more like their male counterparts regarding conscientiousness. In fact, the mean score for females ( $M = 3.085$ ,  $SD = 0.530$ ,  $N = 204$ ) and males ( $M = 3.085$ ,  $SD = 0.435$ ,  $N = 190$ ) from international schools was the same. They may be too confident in their language skills, so they do not carefully listen. Some of the brightest ones will ask questions, but more often than not, they have an “I know, I know” attitude. They are more focused on socialization than learning. Because of the high expense of international schools, these pupils come from families in the upper income bracket. Graduating university is one of the expected status accomplishments, and just passing is good enough for the family’s expectations. These students have less motivation to do their best compared to the lower to middle class, who need to do well to earn their own keep after graduating.

Schoolgirls from an international school have a significantly higher neuroticism score than females from a Thai high school. Using an independent sample t-test, females coming from an international school ( $M = 3.25$ ,  $SD = .540$ ,  $N = 214$ ) also score significantly higher on neuroticism ( $F(393) = 4.84$ ,  $p = .000$ ) than did their male counterparts ( $M = 2.98$ ,  $SD = .560$ ,  $N = 181$ ). This also fits with what the authors said about these female pupils from international schools focusing on socializing. Navigating hybrid Thai/western systems is much more complex than following the set Thai female culture rules. They are to put education and family before everything else. They are not to smoke or drink in public. Sexual activities are only permissible after marriage. The Thai female role is presented as rules to be followed from primary to secondary school and reinforced regularly through Thai state media. Contrast this with an international high school, where the emphasis is on individualism, and the Western social norms are opposite of Thai conventions. What is being seen is the regional version of cross-culture kids (Pollock, Van Reken, & Pollock, 2017). The most simplified version of this is a Thai student with traditional Thai parents studying at an international school. At school, the pupils are being taught to question everything, but when returning to their home at night, they are told not to challenge their elders by asking rude questions. During school, they are communicating in one language and at night, another.

Why are the neuroticism scores of those studying at international schools higher for females than males? There are higher expectations and more social rules for Thai females compared to males. They can go out only if supervised or with a group of friends trusted by the family. Added on top are the insecurities from physical appearances not faced by most men (Frost & McKelvie, 2004). Women are also more attuned to their social environment. For example, research has shown that female secondary students are more likely than males to try smoking due to peer influences (Flay, Hu, & Richardson, 1998). Both academic performance and attitude relate to higher conscientiousness and lower neuroticism (Poropat, 2009; Vedel, 2014). They also come up as important factors for work performance (Barrick & Mount, 1991; Rothmann & Coetzer, 2004; Ziegler et al., 2014). In term of personality, this means that women coming from Thai high schools may have the edge over those graduating from an international high school. What is unclear is if Thai high schools are shaping their conscientiousness or if social and economic pressures are pushing the more conscientious toward Thai schools. Like in most cases, it is likely a bit of both. As to the Thai schooling system developing a less neurotic female, this is likely because of school influence.

As to males, those studying abroad had a significantly higher score on openness and agreeableness than did those at a Thai high school system. Although not quite reaching the  $p < 0.05$  significance level, those that studied in an international school also had higher openness and agreeableness scores. Openness is another factor that relates to careers (Barrick & Mount, 1991). This also has been related to GPA (Komarraju, Karau, Schmeck, & Avdic, 2011). The analysis showed that those males that study abroad become more open to new experiences and to new concepts. This would be expected of someone that is submersed into a different culture, using a different language.

An often-given reason for studying abroad for Thai pupils is developing confidence. The significant increase in extraversion scores over those that stay at a Thai high school confirmed that this was the case. This is a big step in developing self-identity, but it does not directly connect to career or academic ability, as does openness. In conclusion, openness and extroversion for male students appear to be influenced by their secondary school background.

Does the type of high school students attend affect their traits? For male high schoolers, going to study abroad appears to make them more extroverted and open to new experiences. Studying at an international school had some effect but not as pronounced.

The remarkable result for females was that when considering character factors, the women coming from a Thai high school may have the advantage over those graduating from an international school. This is because they appear to be more conscientious and less neurotic. Both factors connect to academic ability and career potential.

## **Summary**

Sixty percent of the incoming freshmen at an international college took the big five inventory. Of the 1,056 participants, 937 Thai undergraduates (89%) were included in this research.

What was the personality profile of these first-term Thai undergraduates? They scored highest on openness. Yet when the results are compared to data collected from 21-year-old Americans in a separate research project (Srivastava et al., 2003), their USA counterparts scored 15% higher. Their second highest score was for agreeableness, but again, the Americans scored 9% higher on this factor. Thai students scored the lowest on conscientiousness, with the 21-year-old Americans scoring significantly higher. On the positive side, Thai students are less neurotic than the American sample. This falls in line with the stereotype of Thai being less stressed than their Western counterparts. The one factor similar for both Thai students and US participants was extroversion, varying only by 0.3%, well within random sampling error. There can be issues with the comparing samples from different years and different countries, but it gives the best general benchmark for comparing personalities at an appropriate age between the two countries.

This leads to the second research question, is there a significant difference in the five factors regarding high school background? The three that are being measured are graduation from a Thai high school, an international school in Thailand, or a high school outside of Thailand. The authors found some noteworthy differences between genders.

Females who came from a Thai high school scored significantly higher on conscientiousness than did those from a Thai international school. Yet the females from a Thai school scored significantly lower on neuroticism than did those from an international school. Higher conscientiousness and lower neuroticism are the two traits that have been linked to academic and career success (Barrick & Mount, 1991; Poropat, 2009; Rothmann & Coetzer, 2004; Ziegler et al., 2014). Women graduating from a Thai high school may have the educational and occupational edge over those finishing at a pricey international high school.

Did the school atmosphere affect these females' personalities? This is most likely with neuroticism. The benchmark comparison showed that Thai participants had a significantly lower neuroticism score than the Americans. The outcome of the Thai females was similar, with those studying in a Western-style system having significantly higher levels of stress and worries compared with those from a Thai system. As to conscientiousness, it is not as clear if the Thai high education system has formed more conscientious students, or if economic and social status forced more diligent females toward studying at a Thai high school.

Thai males who finished their secondary education abroad scored higher on agreeableness and openness than those who graduated from a Thai high school. Both can have a positive effect on academic grades (Komarraju, Karau, Schmeck, & Avdic, 2011; Vedel, 2014). Being more open can also help their future careers (Barrick & Mount, 1991; Huang, Ryan, Zabel, & Palmer, 2014; Hurtz & Donovan, 2000). The baseline measurement of Thai participants to Americans also showed that they scored lower on openness. This helps confirm that the experience of studying abroad makes males more open, making them better students and more employable.

ASEAN neighbors have similar educational dynamics and cultural parallels to Thailand. Parents can choose local schools, international schools or bear the cost of studying abroad. This study provides some first evidence on how school background shapes individuals for their future studies and careers. Gender is an important factor when looking at differences in personality traits based on high school background.

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