Asian Journal of the Scholarship of Teaching and Learning
2025, Vol. 15, No. 1, 1-16

AJSoTL

Article

Context-Specific Personality Traits and Motivation as Predictors of Undergraduate Academic Performance at National University of Singapore, Faculty of Law

Benny TAN
Faculty of Law, National University of Singapore

ABSTRACT

It has been noted that there is a gender gap in terms of undergraduate academic performance at National University of Singapore, Faculty of Law. For the past two decades, male students have been outperforming female students. The present study investigates the following hypotheses: (a) male students, compared to female students, at NUS Law have higher levels of personality traits of openness, conscientiousness and disagreeableness; (b) higher levels of openness, conscientiousness and disagreeableness predict better academic performance in NUS Law undergraduate courses; (c) over the years, assessment in NUS Law undergraduate courses has evolved such that many examiners award top marks to answers produced by students who are more comfortable with legal controversies and debates, who are more industrious in engaging with the content and materials, and who have the courage to exercise independence of thought and critical thinking; and because male students at NUS Law have higher levels of these three personality traits (broadly, openness to experience, conscientiousness and disagreeableness respectively in the law school context), this contributes to them outperforming female students. The findings of this study support the first hypothesis but are mixed and inconclusive in respect of the second (and therefore, third) hypothesis. This study is the first to explore the possibility of a relationship between personality traits of a student and his or her academic performance at NUS Law. It also appears to be the first study to rely on a self-reporting cross-sectional survey to explore possible predictors of academic performance among NUS Law undergraduate students.

Keywords: Big Five personality traits, motivation, academic performance, predictors, determinants

Correspondence: Asst Prof Benny TAN (lawbtzp@nus.edu.sg)

Recommended Citation:

Tan, B. (2025). Context-specific personality traits and motivation as predictors of undergraduate academic performance at National University of Singapore, Faculty of Law. *Asian Journal of the Scholarship of Teaching and Learning*, *15*(1). 1-16.
https://doi.org/10.24112/ajsotl.153219

INTRODUCTION

It has been noted that there is a gender gap in terms of undergraduate academic performance at National University of Singapore, Faculty of Law ("NUS Law"), one of the top-ranked law schools in Asia (Khoo & Neo, 2023). At the undergraduate level, male students have been outperforming female students for the past two decades. During this period, female students generally comprised between 40% and 55% of each undergraduate cohort at the faculty.[1] But in this same period, these female students make up only approximately 20-30% of those who graduated top 10% in terms of overall academic performance of each cohort.[2] Proportion-wise, male students have consistently dominated the list of law undergraduates who obtained first class honours from the faculty.[3]

A similar gender gap in academic performance has also been observed in various law schools in the United States. This includes universities such as Yale (Bashi & Iskander, 2006), Harvard (Neufeld, 2005), Stanford (Taber et al., 1988) and Columbia (Schwab, 2002).

It is natural to then ask – should the teaching and assessment at a law school with such a gender gap be changed in order to narrow or eliminate the gap? But for such a question to be meaningfully answered, it is essential to first identify the reasons that explain the gap so that we can make a more informed decision as to whether the benefits of maintaining the status quo of certain design aspects of teaching and assessment outweigh the disadvantages of allowing such a gender gap to persist. It may be that there are good reasons for teaching and assessing law students through particular approaches, and the gender gap is an inevitable albeit unsatisfactory consequence of that.

Thus far, Khoo & Neo (2023) is the only published empirical research that has investigated this gender gap in respect of NUS Law undergraduate students. The study analysed a pre-existing dataset that includes students' marks for various assessment components, and focussed on whether the gap can be explained by differences in how male and female students perform in class participation assessment. That study found evidence that female students underperform male students in class participation assessment across various courses, and that may be a contributing reason for the gender gap. That said, the difference in class performance is unlikely to be the only or a major causal factor of the gap. This is given that at NUS Law, not all courses have class participation as part of the assessment, and for the courses that do, the weightage is typically only between 10 and 20% of the course's overall mark. Additionally, that finding does not illuminate a more fundamental question – *why* have the female students been underperforming male students in class participation assessment?

Separately, there have been numerous studies that have looked into other possible predictors of academic performance in higher education courses. A group of these studies specifically examined the relationship between a student's Big Five personality traits and academic performance. The Big Five personality traits, a well-studied model of personality, refer to openness to experience, conscientiousness, extraversion, agreeableness and neuroticism (Costa & McCrae, 1992; Digman, 1990; Goldberg, 1993; John & Srivastava, 1999). Some studies, for instance, have uncovered that higher levels of openness, conscientiousness and disagreeableness are each associated with higher academic achievement in students in tertiary education. The broad theory is that students with certain personality traits may be

advantaged (or disadvantaged) depending on the given assessment task in an education setting.

This present study, therefore, explored whether there is such an association similarly in the context of undergraduate students at NUS Law, which may help to explain the gender gap. The first hypothesis is that male students, compared to female students, at NUS Law have higher levels of openness, conscientiousness and disagreeableness. The second hypothesis is that higher levels of openness, conscientiousness and disagreeableness predict better academic performance in NUS Law courses. The overarching hypothesis is this – over the years, assessments in NUS Law courses have evolved such that many examiners award top marks to answers produced by students: i) who are more comfortable with legal controversies and debates, ii) who are more industrious in engaging with the content and materials, and iii) who have the courage to exercise independence of thought and critical thinking;[4] and because male students at NUS Law have higher levels of these three personality traits (broadly, openness to experience, conscientiousness and disagreeableness respectively in the law school context), this contributes to them outperforming female students. For context, examinations and assignments at NUS Law usually consist of one or a combination of the following assessment tasks: hypothetical questions, essay questions, research paper, class participation, and, for courses with student enrolment of 20 or more, the students are strictly graded on a bell-curve.[5]

The present study is novel in two ways. It is the first to explore the possibility of a relationship between the personality traits of a student and his or her academic performance at NUS Law. It also appears to be the first study to rely on a self-reporting cross-sectional survey to explore possible predictors of academic performance among NUS Law undergraduate students.

While the present study is carried out in the context of NUS Law, its findings may be significant in the context of law schools in other parts of Asia and the world, which also have a similar gender gap and marking criteria for assessment. It may also be relevant to the context of other social sciences and humanities courses in universities which have a similar gender gap and apply similar marking criteria for assessment.

LITERATURE REVIEW

There has been quite extensive research that investigates whether students' personality traits, based on the Big Five model, predict their academic performance in higher education. To set the background, the following table summarises this model.

Table 1. Summary of the Big Five personality model.

Trait domain	Can be divided into aspects:	Measured based on a respondent's answer (Likert-scale) to statements such as:
Conscientiousness	Industriousness	"I finish what I start" "I put my mind on the task at hand" "I do not find it difficult to get down to work"
	Orderliness	"I am bothered by disorder" "I like order" "I want every detail taken care of"

Table 1. Summary of the Big Five personality model (*continued*).

Trait domain	Can be divided into aspects:	Measured based on a respondent's answer (Likert-scale) to statements such as:
Openness to experience	Intellect (or "intellectual openness" (Gatzka, 2021))	"I am quick to understand things" "I like to solve complex problems" "I do not avoid difficult reading material"
	Openness (or "senso-aesthetic openness" (Gatzka, 2021))	"I need a creative outlet" "I enjoy the beauty of nature" "I believe in the importance of art"
Agreeableness	Compassion	"I feel others' emotions" "I take an interest in other people's lives" "I sympathise with others' feelings"
	Politeness	"I do not believe that I am better than others" "I respect authority" "I feel others' emotions"
Extraversion	Enthusiasm	"I warm up quickly to others" "I have a lot of fun" "I make friends easily"
	Assertiveness	"I take charge" "I see myself as a good leader" "I am the first to act"
Neuroticism	Volatility	"I change my mood a lot" "I can be stirred up easily" "I am a person whose moods go up and down easily"
	Withdrawal	"I become overwhelmed by events" "I worry about things" "I feel threatened easily"

Notably, Vedel (2014) undertook a systematic review and meta-analysis of the relationship between the Big Five personality traits and academic performance in higher education. She found that conscientiousness, openness and agreeableness correlate significantly with academic performance, with conscientiousness being the strongest predictor. The other two personality traits – extraversion and neuroticism – were not found to be statistically significant in terms of their correlation to academic performance (see also John et al., 2020).[6]

More specifically:

a) There have been many individual studies which found that higher levels of conscientiousness predict better academic performance in higher education (see, for example, Busato et al., 2000; Chamorro-Premuzic & Furnham, 2003; Conrad, 2006; Komarraju et al., 2011; Köseoğlu, 2016; Poropat, 2009).

b) Some individual studies have found that greater openness is associated with better academic performance in higher education (see, for example, Gatzka, 2021; Komarraju et al., 2011; Poropat, 2009). Köseoğlu (2016) found that there was a positive association between the intellect aspect of openness and academic performance.

c) There are individual studies which found that a higher degree of agreeableness predicts better academic performance in higher education (see, for example, Farsides & Woodfield, 2003; Köseoğlu, 2016; Poropat, 2009). Importantly, however, there are

also studies that found that agreeableness is negatively associated with academic performance. In other words, higher levels of disagreeableness predict better academic performance (Komarraju et al., 2011; Rothstein et al., 1994; Tan et al., 2024).

Furthermore, there has been research that studied whether there are differences in Big Five personality traits (either at the domain level or aspect level) between males and females:

a) Some research revealed that at the domain level, there is no difference in the level of conscientiousness between males and females (Costa et al., 2001; Weisberg et al., 2011), while in other research, females were found to be more conscientious than males (Rubinstein, 2005). At the aspect level, in one study, females were found to score higher in orderliness, while males scored higher in industriousness (Weisberg et al., 2011);

b) Research showed that at the aspect level, females scored higher in openness (that is, senso-aesthetic openness) compared to males, but males scored higher in intellect (that is, intellectual openness) compared to females (Costa et al., 2001; Weisberg et al., 2011);

c) Research found that males reported lower levels of agreeableness (whether at the domain or aspect level) compared to females (Costa et al., 2001; Feingold, 1994; Rubinstein, 2005; Weisberg et al., 2011).

Gatza and Hell (2018) and Brandt et al. (2019) stressed that the relationship between personality traits and academic performance may differ depending on the discipline and assessment task(s) involved. This point is undergirded by trait activation theory (Tett et al., 2013), and it makes substantial sense considering that different disciplines in universities may focus on different learning outcomes and hence assess students in a myriad of ways to appropriately reflect that. Some courses may solely test a student's ability to rote learn content or answer multiple-choice questions, while others may emphasise further assessing a student's aptitude in analysis, critical evaluation, grappling with pluralistic perspectives, originality, writing, public speaking and presentation, etc. Indeed, this may well explain the apparently inconsistent findings from the various studies. A higher level of agreeableness in a student may be advantageous for assessment in one discipline, but it may be a higher level of disagreeableness that aids better academic performance in another discipline. Judge and Zapata (2015) made the same point but in the context of an employee's personality traits as a predictor of his or her job performance.

In this regard, it can be seen from Table 1 above that the Big Five model measures a person's personality trait in a broad and general sense. To more helpfully investigate the relationship between an undergraduate student's personality and academic performance at NUS Law, it will be important to consider context-specific personality traits.

Apart from personality traits, other studies have looked into other possible predictors or correlates of academic performance in higher education. In particular, Richardson et al. (2012) performed a systematic review and meta-analysis based on 241 unique datasets and found that a student's motivation to perform well academically is one of the strongest correlates of academic performance and achievement.

METHODOLOGY

A cross-sectional survey was conducted (electronically through LumiNUS, NUS's then online student learning platform) around February 2022. The survey was only open to the undergraduate students at NUS Law (including double-degree students) who were in their second, third or fourth (and above) year of their study in the law programme. Each cohort had about 240 students. First-year students were not eligible because they had not yet completed one year of study and, accordingly, would not be able to report at least one year of their academic performance in the law degree.

The survey instrument had three main parts. The first part comprised a 100-item measure of the Big Five Aspect Scales constructed by DeYoung et al. (2007). Each item is a statement for which a respondent responds based on a five-point Likert scale ("Disagree", "Somewhat disagree", "Neutral", "Somewhat agree" and "Agree"). Examples of statements for each of the 10 aspects are presented in Table 1 above. As recommended by DeYoung and his co-authors, the items were randomly interspersed in the survey, and about half of the statements were reverse-framed so that it could be detected (during data analysis) whether too many respondents answered without properly reading the statements. The summed score for each of the 10 aspects formed a portion of the independent variables in this study.

The second part of the survey sought to measure independent variables specific to the law school context. To reduce survey response fatigue, it focussed only on independent variables which prior research has identified as stronger correlates of academic performance in higher education. Respondents were asked to respond to the following five statements based on the same five-point Likert scale:

a) "In law school, I generally enjoy thinking through complex legal issues and issues with no clear answer." It was theorised that this measures a respondent's openness to experience specifically in the law school context ("Law openness").

b) "For law modules that I took, I would read at least the relevant paragraphs or pages in the source materials (ie. cases, academic articles, textbook and book chapters) listed in my Reading Lists." It was theorised that this measures a respondent's conscientiousness specifically in the law school context ("Law conscientiousness").

c) "In doing assignments and exams in law school, I am very comfortable with expressing my own views and taking a differing view/stance from others, when the opportunity arises." It was theorised that this measures a respondent's disagreeableness specifically in the law school context ("Law disagreeableness").

d) "When I first started law school, I was very motivated to try and make the Dean's List (top 10% of cohort in the year) at some point during my time in law school." It was theorised that this measures a respondent's motivation to excel academically when he or she first matriculated into NUS Law ("Law starting motivation").

e) "Presently, I am still very motivated to make the Dean's List, or make the Dean's List again (as the case may be) at some point." It was theorised that this measures a respondent's motivation to excel academically at the time of completing the survey ("Law current motivation").

The survey also sought to measure another variant of conscientiousness in the law school context by asking on average how many hours per week during a semester term, but excluding

time spent in lecture, seminar and tutorial, a respondent spends studying for all the courses that he or she is taking ("Study hours").

In light of the findings from Khoo & Neo (2023), the next question sought to measure, as another independent variable, how actively a respondent has participated in classes where class performance is an assessment component. The options were: "Never", "Rarely or once in a long while", "About once every two or three classes", "About once every class" and "One or more times every class" ("Class participation").

The dependent variable is the respondent's cumulative academic grade at the point of doing the survey. At NUS Law, students are awarded numerical marks for each course they take, and each letter grade (for example, B-, B, B+, A-, A) corresponds to a range of numerical marks. Students are only told of the letter grade that they receive for each course that they take. Respondents were thus asked to report their cumulative average point (for instance, B- = 3, B = 3.5, B+ = 4, A- = 4.5, A = 5), which would act as a proxy of their cumulative academic performance in the law school so far.

The last part of the survey asked respondents to state their gender and current year of study. The survey responses were collected on an anonymous basis, and respondents were informed of that. Respondents were told generally that the study aimed to examine possible predictors of academic performance among undergraduate students at NUS Law. Each respondent was also offered SGD10 as reimbursement for taking the time to complete the survey.

DATA ANALYSIS AND FINDINGS

286 students completed the survey. 33.9% of the respondents were in their second year of study, 31.1% in their third year, and 35.0% in their fourth (or above) year of study. 53.8% were male students and 46.2% were female students. The following table summarises the cumulative average point (dependent variable) reported by the respondents.

Table 2. Descriptive statistics of the cumulative average point (dependent variable) reported.

	n	Mean	SD	Min	Max
Year of study					
Second year students	97	3.66	0.58	2.23	4.70
Third year students	89	3.67	0.46	2.68	4.75
Fourth (or above) year students	100	3.76	0.44	2.30	4.84
Gender					
Male students	154	3.82	0.47	2.30	4.84
Female students	132	3.56	0.50	2.27	4.74
Overall	286	3.70	0.50	2.23	4.84

It turned out that the respondents of the survey appear to be broadly representative of the undergraduate students at NUS Law. In the recent undergraduate cohort in the faculty, the percentage of male and female students is around 55% and 45% respectively. Respondents who were in their then second, third and fourth (or above) year each formed about one-third of all respondents.

Additionally, the mean cumulative average point reported (3.70 for all respondents, and very close to 3.70 for the three cohorts of respondents) is close to the current mean (around a B grade average) in respect of all law undergraduate students in the faculty.[7]

The descriptive statistics in relation to the various independent variables, and broken down by gender, are as follows.[8]

Table 3. Descriptive statistics of independent variables broken down by gender.

Independent variable	Male		Female	
	Mean	SD	Mean	SD
Agreeableness-compassion	39.36	6.59	41.25	6.10
Agreeableness-politeness	35.08	6.07	37.43	6.25
Conscientiousness-industriousness	32.23	7.00	29.41	7.18
Intellectual openness	35.84	6.76	32.18	6.635
Senso-aesthetic openness	36.15	6.62	39.02	6.25
Law openness ("*In law school, I generally enjoy thinking through complex legal issues and issues with no clear answer*")	3.48	1.29	2.72	1.26
Law conscientiousness ("*For law modules that I took, I would read at least the relevant paragraphs or pages in the source materials (ie. cases, academic articles, textbook and book chapters) listed in my Reading Lists*")	3.59	1.28	3.23	1.25
Law disagreeableness ("*In doing assignments and exams in law school, I am very comfortable with expressing my own views and taking a differing view/stance from others, when the opportunity arises*")	3.68	1.26	2.95	1.30
Law starting motivation ("*When I first started law school, I was very motivated to try and make the Dean's List (top 10% of cohort in the year) at some point during my time in law school*")	3.03	1.64	2.94	1.61
Law current motivation ("*Presently, I am still very motivated to make the Dean's List, or make the Dean's List again (as the case may be) at some point*")	2.60	1.54	2.11	1.30
Class participation ("*In classes where class participation is an assessment component, how often do you voluntarily speak up (to respond to a tutor's question, to pose a question, and/or to respond to a point a classmate made)?*")	3.56	1.24	2.86	1.15
Study hours ("*During semester term, excluding lecture, seminar and tutorial time, on average how many hours per week do you spend studying for all the courses you are taking?*")	31.41	16.94	28.10	13.09

Note. The possible score range for the Big Five Aspects is 10 to 50. The possible score range for the law-specific personality measures and class participation is 1 to 5. For study hours, the possible score range is 5 to 70 (see explanation below).

For study hours, there were outliers reported. 11 respondents stated that they spend less than 5 hours each week studying, and 6 respondents stated that they spend 80 or more hours

studying each week.[9] It was assessed that such numbers are highly unrealistic, and that these respondents likely misunderstood the question or miscalculated. The former group of outlier respondents were thus treated as spending 5 hours each week studying, and the latter group 70 hours each week studying, as these numbers were deemed more realistic and likely accurate.

An independent t-test was performed to assess whether the differences in the various means between male and female students for the independent variables are statistically significant. The results indicated that all of the above differences in mean, except for Law starting motivation, are statistically significant ($p < 0.05$).

Spearman's rho was used to assess the correlation between the independent variables and the cumulative average point (as the dependent variable). The results are as follows.

Table 4. Correlations between independent variables and the cumulative average point.

	Spearman's rho (*r*)
Agreeableness-compassion	- 0.076
Agreeableness-politeness	- 0.028
Conscientiousness-industriousness	0.330***
Intellectual openness	0.305***
Senso-aesthetic openness	- 0.103
Law openness	0.290***
Law conscientiousness	0.344***
Law disagreeableness	0.332***
Law starting motivation	0.130*
Law current motivation	0.480***
Class participation	0.386***
Study hours	0.168**

* $p < .05$. ** $p < .01$. *** $p < .001$.

Finally, regression analysis was performed applying the seven law-specific measures and gender as independent variables and the cumulative average point as the dependent variable. The analysis was run for all 286 respondents, as well as for the respondents in their three individual cohorts, producing four models in total. The usual assumptions for linear regression were checked and met for all four models. The findings are summarised in the following table.

Table 5. Results of regression analysis.

	B	**SE B**	**β**	**95% CI_{lower}**	**95% CI_{upper}**
Constant	2.814	0.100		2.617	3.012
	(2.683)	(0.208)		(2.270)	(3.095)
	[2.860]	[0.184]		[2.495]	[3.226]
	{2.806}	{0.136}		{2.535}	{3.077}
Law openness	0.016	0.021	0.043	-0.026	0.058
	(0.026)	(0.042)	(0.058)	(0.057)	(0.110)
	[0.027]	[0.037]	[0.083]	[-0.047]	[0.102]
	{0.035}	{0.031}	{0.017}	{-0.027}	{0.098}

Table 5. Results of regression analysis (*continued*).

	B	SE B	β	95% CI_{lower}	95% CI_{upper}
Law conscientiousness	0.058**	0.022	0.147	0.015	0.101
	(-0.020)	(0.046)	(-0.043)	(-0.111)	(0.071)
	[0.105]**	[0.040]	[0.287]	[0.025]	[0.184]
	{0.080}**	{0.030}	{0.230}	{0.019}	{0.140}
Law disagreeableness	0.039	0.022	0.102	-0.005	0.082
	(0.104)**	(0.042)	(0.228)	(0.021)	(0.187)
	[-0.032]	[0.038]	[-0.100]	[-0.109]	[0.041]
	{0.034}	{0.036}	{0.104}	{-0.036}	{0.105}
Law starting motivation	-0.036**	0.016	-0.116	-0.067	-0.004
	(-0.080)**	(0.032)	(-0.223)	(-0.143)	(-0.017)
	[-0.012]	[0.030]	[-0.042]	[-0.071]	[0.048]
	{-0.004}	{0.022}	{-0.014}	{-0.048}	{0.040}
Law current motivation	0.123***	0.019	0.359	0.085	0.162
	(0.176)***	(0.038)	(0.428)	(0.100)	(0.252)
	[0.075]*	[0.038]	[0.237]	[0.000]	[0.151]
	{0.117}***	{0.026}	{0.396}	{0.065}	{0.169}
Class participation	0.084***	0.022	0.209	0.040	0.128
	(0.105)**	(0.040)	(0.243)	(0.026)	(0.184)
	[0.077]	[0.042]	[0.183]	[-0.007]	[0.161]
	{0.033}	{0.034}	{0.094}	{-0.034}	{0.100}
Study hours	0.000	0.002	-0.005	-0.004	0.003
	(0.003)	(0.004)	(0.068)	(-0.005)	(0.011)
	[-0.001]	[0.003]	[-0.038]	[-0.007]	[0.005]
	{0.002}	{0.003}	{0.057}	{-0.003}	{0.007}
Gender (Male)	0.094	0.052	0.094	-0.008	0.197
	(-0.014)	(0.104)	(-0.012)	(-0.221)	(0.193)
	[0.227]*	[0.100]	[0.244]	[0.028]	[0.426]
	{0.095}	{0.068}	{0.108}	{-0.040}	{0.230}
R^2 for overall = 0.368;					
R^2 for respondents in second year = 0.422;					
R^2 for respondents in third year = 0.363;					
R^2 for respondents in fourth (or above) year = 0.506.					

Note. B = unstandardised regression weight; SE B = standard error of B; β = standardised regression weight; CI = confidence interval.

Results for all respondents unbracketed; ( ) = results for respondents who were in their second year of study at time of survey; [ ] = results for respondents who were in their third year of study at time of survey; { } = results for respondents who were in their fourth (or above) year of study at time of survey

* $p < .05$. ** $p < .01$. *** $p < .001$.

DISCUSSION

In terms of differences between male and female undergraduate students at NUS Law, the findings suggested that:

a) Female students scored on average higher in Agreeableness-compassion, Agreeableness-politeness, and Senso-aesthetic openness;

b) Male students scored on average higher in Conscientiousness-industriousness, Intellectual openness, and Law openness, Law conscientiousness, Law disagreeableness, and Law current motivation. Male students, on average, also

participated more actively in class and studied more hours per week, compared to female students.

As regards the Big Five personality traits, these findings are generally consistent with those found by Costa et al. (2001), Feingold (1994), Weisberg et al. (2011), and Rubinstein (2005). As regards personality traits specific to a law school context, these findings support the first hypothesis proposed in the Introduction section above. Moreover, that male students participate more actively in class compared to female students corroborates the findings by Khoo & Neo (2023).

As an aside, it appears that male and female undergraduate students at NUS Law do not differ in terms of how motivated they are to excel academically in law school when they first matriculate. It seems that male students become more motivated than female students to excel academically only after some time as they are going through the programme.

In terms of relationship with academic performance, only Conscientiousness-industriousness and Intellectual openness are correlated with academic performance. This is consistent with much of the prior research (Busato et al., 2000; Chamorro-Premuzic & Furnham, 2003; Conrad, 2006; Komarraju et al., 2011; Köseoğlu, 2016; Poropat, 2009). However, in contrast to prior research (Farsides & Woodfield, 2003; Komarraju et al., 2011; Köseoğlu, 2016; Poropat, 2009; Rothstein et al., 1994), for undergraduate studies at NUS Law, Big Five Agreeableness, whether in the Compassion or Politeness aspect, is neither positively nor negatively correlated with academic performance.

All three of the law-specific personality traits, namely a student's motivation to excel academically at the time of matriculation and at the time of survey, how actively a student voluntarily participates in class, and the number of hours a student studies, are correlated with academic performance. Among these variables, a student's current level of motivation to excel academically in law school has the strongest correlation with academic performance (r = 0.480).

In terms of regression, there are three findings that are consistent across all four regression models. After controlling for the other independent variables:

a) Law openness (how much a student generally enjoys thinking through complex legal issues and issues with no clear answer) does not predict academic performance;
b) The number of hours a student spends studying per week during the semester does not predict academic performance;
c) A student's current level of motivation to excel academically in law school predicts academic performance.

The first of the above findings was initially surprising to the author. However, a possible explanation could be that respondents were asked how much they *enjoyed* thinking about complex and controversial legal issues. It is possible that the students who have produced strong answers during assessment at NUS Law *force themselves* to engage with the complex and controversial legal issues, but do not necessarily enjoy doing so.

The second finding is unsurprising and is, in fact, corroborated by other research (Plant et al., 2005).[10] A student may spend many hours studying the materials, but struggle to understand

and retain the content later on for assessment purposes. Conversely, another student may be able to parse and absorb the knowledge much more effectively and end up performing better during the assessment. In NUS Law's context, *it is ultimately the efficiency and efficacy of a student's studying methods that matter more than the absolute number of hours put into studying.* This finding may be especially relevant to students. In the author's experience, there are many undergraduate students at NUS Law who spend almost every one of their waking hours studying, but become extremely disappointed and confused when they end up not achieving top grades.

The third finding is wholly consistent with extant research. It is crucial to add that, as has been highlighted by others, the relationship between a student's level of motivation and his or her academic performance is likely a complex one (Almalki, 2019; Liu et al., 2012; Sogunro, 2015; Tan et al., 2024). At the very least, the relationship is probably dynamic in that, on the one hand, a more motivated student is likely to do more of whatever is necessary to do well in assessment, and that leads to better academic results; on the other hand, a student who does well in assessment becomes more motivated to continue to achieve strong academic results.

The remaining results are mixed. After controlling for the other independent variables:

a) Law conscientiousness (how much a student actually reads prescribed source materials) predicts academic performance overall and for the respondents who were in their third and fourth (or above) year of study, but not for those in their second year of study;
b) Law disagreeableness (how comfortable a student is in expressing his or her own views and a different stance from others) predicts academic performance only for the respondents who were in their second year of study;
c) Law starting motivation predicts academic performance overall and for the respondents who were in their second year of study;
d) Class participation predicts academic performance overall and for the respondents who were in their second year of study.

It is challenging to interpret these mixed results. There are at least three possible (non-mutually exclusive) explanations. The first is that the three cohorts of respondents responded to the survey based on their experience in a varied set of courses. At NUS Law, broadly speaking, undergraduate students take only compulsory courses in the entirety of their first two years of study. They then take elective courses in their third year and above. Accordingly, in this study, respondents in their second year would only have completed three semesters of compulsory courses; respondents in their third year completed four semesters of compulsory courses and a semester of elective courses; respondents in their fourth (and above) year completed four semesters of compulsory courses and three or more semesters of elective courses. It may be that the assessment criteria between the compulsory courses and elective courses, and those amongst the elective courses are too dissimilar. Furthermore, about half of the compulsory courses are taught on a seminar-class basis, and each seminar convenor may apply his or her own idiosyncratic assessment methods and marking criteria. This is in contrast to the compulsory courses, where the entire cohort is taught on a lecture-tutorial basis and where presumably a similar assessment format and marking criteria are applied across the cohort. Thus, a second possible reason is that although all three cohorts of the respondents would have taken the same compulsory courses, they may have been allocated

to seminar groups with different assessment methods and marking criteria. A third possible reason is that Singapore was struck by the COVID-19 pandemic between 2020 and 2022, and hence, the three cohorts of respondents would have been variedly affected by adjustments in teaching and assessment modality.

Overall, the findings from this study are mixed in respect of part of the second hypothesis postulated in the Introduction section above (that conscientiousness and disagreeableness in the law school context predict better academic performance). As a result, it is not possible to draw a meaningful conclusion to the overarching hypothesis suggested in the Introduction section above (that male students have been outperforming female students at NUS Law because male students are more conscientious and more disagreeable in the law school context).

LIMITATIONS AND FUTURE DIRECTIONS

That said, the findings from this study, although mixed, support further research into this topic. At the very least, a similar study should be repeated, as now that the Covid-19 pandemic is behind us, its effect on teaching and assessment modality can no longer confound the results. Future studies may also design items to measure Law openness, Law conscientiousness and Law disagreeableness with increased validity. In this study, only one item was used for each of these variables. Similar to validated instruments to measure Big Five personality, it may be useful to measure the various variables using multiple items. This study also relied on self-reporting by the respondents. Therefore, other research methods that do not wholly or partially rely on self-reporting may be used so that the results may be triangulated. Future studies may also investigate other potential determinants of academic performance in a law school context. It is noted that the R^2 for the four models ranged from 36-50%. This suggests that there might be other variables that account for the remaining variance in academic performance. Finally, if time and funding permit, longitudinal studies may be carried out to explore why male students have been outperforming female students at NUS Law. A longitudinal study design will better be able to test the causal direction of the independent and dependent variables (for instance, the extent to which motivation affects academic performance and vice versa).

ENDNOTES

1. For the ratio of male to female undergraduate students in each graduating cohort at NUS Law in the past twenty years, see https://www.nus.edu.sg/registrar/student-records/student-statistics.
2. For a list of the undergraduate students in each cohort at NUS Law in the past twenty years who graduated top 10% in terms of overall academic performance, see https://law1a.nus.edu.sg/student_matters/medals_prizes.html.
3. For details on the qualifying criteria for law undergraduate degree first class honours at NUS Law (which has evolved over the past two decades), see https://law1a.nus.edu.sg/student_matters/llb_prog/law_grading_coh.html.
4. In one of the courses taught by the present study's author (Evidence Law), the following general examination feedback and marking criteria were shared with the

students: “To the extent that the [legal] issues are controversial, views may reasonably differ and there is no single ‘correct’ answer. To begin with, some basic points need to be stressed. It is important that you analyse the question, identify the specific issues that are raised, and address them clearly and directly. An excellent script would contain a critical and nuanced discussion of the issues raised, cite the relevant [materials], present an argument based on sound reasoning, and, where pertinent, draw on relevant secondary literature. Merely stating or describing the law without any engaging in critical thinking is insufficient. Candidates should show understanding of the controversies surrounding, and problems underpinning, those issues.”

5. For the applicable bell-curve, see https://law1a.nus.edu.sg/student_matters/llb_prog/law_grading_coh.html
6. But contrast Stajkovic et al. (2018) and Trapmann et al. (2007).
7. See https://law1a.nus.edu.sg/student_matters/llb_prog/law_grading_coh.html.
8. For the Big Five aspects, only the results for Agreeableness-Compassion, Agreeableness-Politeness, Conscientiousness-Industriousness, Intellectual Openness and Senso-Aesthetic Openness are reported because prior research has indicated that these are the aspects which more likely correlate with academic performance. Cronbach’s alpha for each of these five measures was above 0.70.
9. One respondent stated that he or she spent 120 hours per week studying.
10. It is also noted that although there is a statistically significant correlation between Study hours and cumulative average point, the correlation is a weak one (see Table 4 above, r = 0.168).

DECLARATION OF INTEREST STATEMENT

The author declares that there are no competing interests, and that the work in this study is original that has not been published previously and is also not supported by any form of funding.

ETHICS APPROVAL

This study has obtained the relevant ethics approval from NUS Institutional Review Board (NUS-IRB-2021-904) dated 12 January 2022.

REFERENCES

Almalki, S. A. (2019). Influence of motivation on academic performance among dental college students. *Open Access Macedonian Journal of Medical Sciences*, *7*(8), 1374-1381.

Bashi, S., & Iskander, M. (2006). Why legal education is failing women. *Yale Journal of Law and Feminism*, *18*(2), 389-449.

Brandt, N. D., Lechner, C. M., Tetzner, J., & Rammstedt, B. (2020). Personality, cognitive ability, and academic performance: Differential associations across school subjects and school tracks. *Journal of Personality*, *88*, 249-265.

Busato, V. V., Prins, F. J., Elshout, J. J., & Hamaker, C. (2000). Intellectual ability, learning style, personality, achievement motivation and academic success of psychology students in higher education. *Personality and Individual Differences*, *29*, 1057-1068.

Chamorro-Premuzic, T., & Furnham, A. (2003). Personality traits and academic examination performance. *European Journal of Personality*, *17*, 237-250.

Conrad, M. A. (2006). Aptitude is not enough: How personality and behavior predict academic performance. *Journal of Research in Personality*, *40*, 339-346.

Costa, P. T. Jr., Terracciano, A., & McCrae, R. R. (2001). Gender differences in personality traits across cultures: Robust and surprising findings. *Journal of Personality and Social Psychology*, *81*(2), 322-331.

Costa, P. T. Jr., & McCrae, R. R. (1992). Four ways five factors are basic. *Personality and Individual Differences*, *13*, 653-665.

DeYoung, C. G., Quilty, L. C., & Peterson, J. B. (2007). Between facets and domains: 10 aspects of the Big Five. *Journal of Personality and Social Psychology*, *93*(5), 880-896.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, *41*, 417-440.

Farsides, T., & Woodfield, R. (2003). Individual differences and undergraduate academic success: The roles of personality, intelligence, and application. *Personality and Individual Differences*, *34*, 1225-1243.

Feingold, A. (1994). Gender differences in personality: A meta-analysis. *Psychological Bulletin*, *116*, 429-434.

Gatzka, T. (2021). Aspects of openness as predictors of academic achievement. *Personality and Individual Differences*, *170*, 110422.

Gatzka, T., & Hell, B. (2018). Openness and postsecondary academic performance: A meta-analysis of facet-, aspect-, and dimension-level correlations. *Journal of Educational Psychology*, *110*(3), 355-377.

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist*, *48*, 26-34.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 102-138). Guilford Press.

John, R., & John, R. (2020). The big five personality traits and academic performance. *Journal of Law & Social Studies*, *2*(1), 10-19.

Judge, T. A., & Zapata, C. P. (2015). The Person-Situation Debate revisited: Effect of situation strength and trait activation on the validity of the Big Five personality traits in predicting job performance. *Academy of Management Journal*, *58*(4), 1149-1179.

Khoo, K., & Neo, J. (2023). Gender gaps in legal education: The impact of class participation assessments. *Journal of Empirical Legal Studies*, *20*(4), 1070-1137.

Komarraju, M., Karau, S., Schmeck, R. R., & Avdic, A. (2011). The Big Five personality traits, learning styles, and academic achievement. *Personality and Individual Differences*, *51*, 472-477.

Köseoğlu, Y. (2016). To what extent can the Big Five and learning styles predict academic achievement. *Journal of Education and Practice*, *7*(30), 43-51.

Liu, O. L., Bridgeman, B., & Adler, R. M. (2012). Measuring learning outcomes in higher education: Motivation matters. *Educational Researcher*, *41*(9), 352-362.

Neufeld, A. (2005). Costs of an outdated pedagogy? Study on gender at Harvard Law School. *American University Journal of Gender, Social Policy & the Law*, *13*(3), 511-569.

Plant, E. A., Ericsson, K. A., Hill, L., & Asberg, K. (2005). Why study time does not predict grade point average across college students: Implications of deliberate practice for academic performance. *Contemporary Educational Psychology*, *30*, 96-116.

Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin*, *135*(2), 322-338.

Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin*, *138*(2), 353-387.

Rothstein, M. G., Paunonen, S. V., Rush, J. C., & King, G. A. (1994). Personality and cognitive ability predictors of performance graduate business school. *Journal of Educational Psychology*, *86*(4), 516-530.

Rubinstein, G. (2005). The Big Five among male and female students of different faculties. *Personality and Individual Differences*, *38*, 1495-1503.

Schwab, C. G. (2002). A shifting gender divide: The impact of gender on education at Columbia Law School in the new millennium. *Columbia Journal of Law & Social Problems*, *36*, 299-337.

Stajkovic, A. D., Bandura, A., Locke, E. A., Lee, D., & Sergent, K. (2018). Test of three conceptual models of influence of the Big Five personality traits and self-efficacy on academic performance: A meta-analytic path analysis. *Personality and Individual Differences*, *120*, 238-245.

Sugunro, O. A. (2015). Motivating factors for adult learners in higher education. *International Journal of Higher Education*, *4*(1), 22-37.

Taber, J., Grant, M. T., Huser, M. T., Norman, R. B., Sutton, J. R., Wong, C. C., Parker, L. E., & Picard, C. (1988). Gender, legal education, and the legal profession: An empirical study of Stanford Law Students and Graduates. *Stanford Law Review*, *40*(5), 1209-1297.

Tan, W. C. J., Cheah, H. M., & Koh, H. C. (2024). Understanding the determinants of academic performance in a higher education institution using an expanded Biggs 3P model. *Asian Journal of the Scholarship of Teaching and Learning*, *14*(1), 55-73.

Tett, R. P., Simonet, D. V., Walser, B., & Brown, C. (2013). Trait activation theory: Applications, developments, and implications for person-workplace fit. In N. Christiansen & R. Tett (Eds.), *Handbook of personality at work* (pp. 71-100). New York, NY: Brunner-Routledge.

Trapmann, S., Hell, B., Hirn, W. J-O., & Schuler, H. (2007). Meta-analysis of the relationship between the Big Five and academic success at university. *Zeitschrift für Psychologie/Journal of Psychology*, *215*(2), 132-151.

Vedel, A. (2014). The Big Five and tertiary academic performance: A systematic review and meta-analysis. *Personality and Individual Differences*, *71*, 66-76.

Weisberg, Y. J., DeYoung, C. G., Hirsh, J. B. (2011). Gender differences in personality across the ten aspects of the Big Five. *Frontiers in Psychology*, *2*, 1-11. ■