THE RELATIONSHIP BETWEEN ACADEMIC PROCRASTINATION AND ACADEMIC PERFORMANCE: THE MODERATING ROLE OF TEACHER SUPPORT

Nik Rozina Nik Jaafar

ABSTRACT

The purpose of this study is to investigate the moderating role of teacher support in the relationship between academic procrastination and academic performance of business students at a Malaysian polytechnic. Eighty-four (84) students enrolled in three (3) diploma programs (Accountancy, Business Studies and Marketing) participated in this study. Data was collected using a self-report questionnaire. Academic performance was examined through grade point average (GPA). The Academic Procrastination Scale-Short Form (Yockey, 2016) and the Teacher Social Support and Teacher Academic Support subscales of the Classroom Life Measure (Johnson et al., 1985) were used to measure Academic Procrastination and Teacher Support respectively. Descriptive and inferential statistics were used to analyse the collected data. The main findings of this study were: i) about 30 % of students reported as high procrastinators, ii) only 28 % of the students perceived high teacher support, iii) teacher support had a high significant positive association with academic performance, and iv) teacher support significantly moderated the effect of academic procrastination on academic performance. The results of this study showed that academic procrastination existed in the sample of polytechnic students. However higher students' academic performance can be achieved by reducing academic procrastination through teacher support. This study allows polytechnic educators to identify strategies for quality teaching and learning and for better teacher-student rapport. Preventive and intervention programs can be put in place to minimise students' academic procrastination and improving their academic performance. This study, however, is subject to several limitations. The primary limitation concerns the sample which did not include students from other study programs. Thus the results do not reflect the general student population and therefore must be interpreted with caution.

Keywords: Teacher support, academic performance, academic procrastination

INTRODUCTION

In general, academic performance is often regarded as a measurement of student success. However not all students in higher education achieved the desired success. According to some researchers, one of the factors associated with poor academic performance or academic failure is academic procrastination (Kim & Seo, 2015; Michinov et al., 2011). Academic procrastination is described by You (2012) as the act of delaying academic work that must be completed. It is also the failure to complete an academic task within the expected time frame. Klingsieck (2013) stated that personal traits like motivation, self-regulation, time management and learning strategies are central in achieving academic success. Ferrari (2004) nevertheless argued that not much is known about classroom environmental influences on academic procrastination. This could probably be due to most studies on academic procrastination and its relationship to academic performance found in literature focused on students' personality traits (e.g. Khosla, 2021; Ocansey et al., 2020; Karatas, 2015; Howell & Watson, 2007).

The classroom environment plays a significant role in students' academic progress. Studies have shown that a caring and supportive interpersonal relationship in school contribute to students' positive academic attitudes and values (Solomon et al., 2000; Marks, 2000). According to Tucker et al. (2002), students' effort and participation in learning are influenced by teachers' care and concern. This is confirmed by numerous research which revealed that teachers have significant impacts on students' academic performance (e.g. Chetty et al., 2014; Jackson, 2012; Yoleri, 2016). Student-teacher relationship has been identified as an important factor that improves student learning and academic outcome (Agyekum, 2019). A number of authors (e.g. Gherasim et al., 2013; Yoleri, 2016) mentioned teacher support and peer support as having the maximum impact on a student's perceived support level at school which in turn lead to positive motivation and better academic attitudes and academic performances. Some authors argued that teacher support is multidimensional and in an academic environment, these dimensions are emotional, informational, instrumental, and appraisal (Anderman et al., 2011; Tennant et al., 2015). Some studies on the impact of academic procrastination and teacher support on academic performance have produced mixed results (e.g. Rice et al., 2012; Yoleri, 2016). Thus this study was primarily undertaken to investigate the extend of academic procrastination amongst polytechnic students and investigated the moderating role of teacher support in the relationship between academic procrastination and academic performance. Findings from this study will help identify strategies for quality teaching and learning and for better teacher-student rapport in improving students' academic performance.

LITERATURE REVIEW

ACADEMIC PROCRASTINATION

Procrastination is basically an act of delaying a task that needs to be accomplished (Noran, 2000). Another description of procrastination is the intentional delay of an intended action despite an awareness of negative outcomes (Steel, 2007). In education research, academic procrastination has been defined as an irrational tendency to delay at the beginning or completion of an academic task (Senécal et al., 2003). A study by Janssen (2015) found that college students exhibited a higher level of procrastination compared to high school and vocational students. Academic procrastination amongst college students has been associated with various negative learning outcomes. A number of authors (e.g. Grunschel et al. 2013; Jones & Blankenship, 2021;

Rice et al., 2012) stated that academic procrastination resulted in adverse academic performance such as low academic grades and low quality academic work. Poor academic performance could also be attributed to certain characteristics of procrastinators such as delay in completing assignments and last-minute preparation for exams (Balkis et al., 2013). As opined by Noran (2000) and Ammermueller and Pischke (2009), the delaying attitude exhibited by these students could have originated from poor time management and peer influence. According to Hussain and Sultan (2010), academic procrastination may be intentional, incidental or habitual. Apart from poor related academic performance, some other negative consequences of academic procrastination found in literature included high stress and anxiety (Kim & Seo, 2015), satisfaction with studies (Grunschel et al. 2013), fear of failure (Abdi Zarrin, 2020), low self-efficacy (Liu et al., 2020), anger and guilt (Rahimi, 2019) and course withdrawal (Wheland et al., 2012).

Some authors (e.g. McCown & Roberts, 1994) mentioned that academic procrastination is quite prevalent among college students. This is supported by Solomon and Rothblum (1984) and Ellis and Knaus (1977) who reported figures of 46% and 95% respectively regarding rates of procrastination among college students. A recent study of dental undergraduate students in Malaysia revealed that 28.5% (n = 361) of these students were high procrastinators. The study however found no significant difference between genders for procrastination and between academic years (Uma et al, 2020). Another local study of 287 university students discovered that a third of these students procrastinated when studying for examinations (Yaakub, 2000). Similarly, a study of 100 students at a Malaysian university revealed that 79 % of these students described themselves as procrastinators (Bakar & Khan, 2016). Academic procrastination and the students' academic performance were however not significantly correlated thus implying that the former was not influenced directly by procrastination behaviour but by other factors. The results of this study is not in line with three meta-analyses study found in literature that investigated the relationship between academic procrastination and academic performance. Studies by Steel (2007), Richardson et al. (2012) and Kim and Seo (2015) all showed a negative association between academic procrastination and academic performance.

On the types of academic procrastination, Jackson (2012) examined the relationship between academic self-efficacy beliefs, academic procrastination, and prior academic skills on course outcomes for students who completed a mandatory developmental college course. Analysis of collected data involving 123 respondents showed the following statistics regarding six areas of academic procrastination: i) studying for exams (44%), ii) weekly reading assignments (35%), iii) completing a writing assignment (32%), iv) school activities (29%), v) attendance tasks (14%) and vi) academic administrative tasks (11%). The study also revealed a statistically significant negative relationship between levels of academic procrastination and academic performance. On the major reasons for academic procrastination, a study by He (2017) of 201 university students revealed the following results: laziness, lack of motivation, stress, too much time internet use and difficulty of task. The study also revealed that 80% of respondents reported anxiety when they procrastinate.

TEACHER SUPPORT

Fullan and Stiegelbauer (1991) defined teacher support as the psychological and practical support of teachers during the teaching process. Teacher social support involves providing emotional support (e.g. approachable, encouragement, and compassion) to students (Johnson & Johnson, 1983; Wentzel, 1998) while teacher academic support is the perceived support (e.g. tutoring and academic advising) from teachers for learning (Griffing, 2006; Johnson & Johnson, 1983). According to Schaefer et al. (1981), there are three types of support: i) emotional support (e.g. caring and empathy), ii) instrumental support (e.g. material aid and skills), and iii) informational support (e.g. advice and guidance). Tardy (1985) further added another category known as appraisal support which refers to the provision of feedback regarding personal qualities or performance that is useful for self-evaluation. In an educational environment, the concept of teacher support, according to Tennant et al. (2015) is multidimensional and encompasses traits like caring and understanding (Caena, 2011), friendliness (Malecki & Demaray, 2003), fairness (Bernard, 1998) and dependability (Split et al., 2012).

Students need to receive adequate support within their academic environment to succeed educationally (Tardy, 1985). The majority of studies found in literature have shown a positive relationship between perceptions of teacher support and academic performance (e.g. Klem & Donnel, 2004; Lee, 2012; Niehaus et al., 2012; Yoleri, 2016). Even though the perceived academic support depends on various factors, teacher support has demonstrated positive impact on students' academic attitudes, motivation, self-efficacy, and study engagement and academic performance (Corkin et al., 2014; Moreno-Murcia & Corbi, 2021; Rautanen et al., 2021; Quinn, 2017). According to Little and Kobak (2003), students are more engaged with learning when there is a supportive relationship (e.g. academic guidance) with the teacher. This is more so when students spend much of their time at school with their teachers and are heavily influenced by them (Eccles & Roeser, 2003). In the same vein, Klem and Donnel (2004) stated that students who perceived teachers as creating a caring learning environment were more engaged academically and were associated with higher academic performance.

There are however studies that have produced mixed results. Wong et al. (2018) for example investigated whether teachers' instrumental support and appraisal support resulted in higher students' performance in mathematics. Data analyses of 13,950 fifteen-year-old Canadian students revealed that only instrumental support positively predicted math performance. The authors opined that different types of teacher support might influence their efficacy in promoting math performance. The differences between genders on the perceived social support and academic performance of 760 Argentinean college students were investigated by Iglesia et al. (2014). Findings indicated that both genders viewed teachers as the less supportive source compared to parents, classmates or friends. Another finding showed that high perception of social support was related to better academic performance but this was only applicable to female students. In another study and using a sample of 270 Hong Kong students, Chen (2005) investigated the mediating effect of academic engagement on the relationship of students' perceived academic support and academic performance. The study revealed that the biggest contributor to students' academic performance (directly and indirectly)

was teacher support followed by parental support and peer support. The same author also investigated whether the influence of teacher support on students' academic performance differed by grade-levels. The findings indicated that perceived teacher support was a strong predictor of academic performance but only for grade 9 students (Chen, 2008).

A number of local studies have looked into the relationship between teacher social support and students' academic performance at various levels of schooling. A study by Veloo et al. (2013) was conducted to examine the relationship between three independent variables; inquiry-based instruction, students' attitudes towards science and teachers' support towards science performance in a sample of 149 primary (year five) school students. The authors reported that all three independent variables significantly influenced science performance of the students. At the secondary school level, Alnawasreh et al. (2019) investigated factors that could affect academic performance of 117 international students in Malaysia. The findings indicated that teacher support along with future goals, peer support and self-efficacy were important factors that influenced academic performance. Local studies on teacher support and students' academic performance also focused on university and college students. Yasin and Dzulkifli (2011) for example found that a significant positive relationship between social support and academic performance existed where higher social support resulted in higher students' academic performance. Their study involved 120 students from a Malaysian university. A similar study by Abdullah et al. (2014) was carried out to examine relationships between perceived social support, university adjustment and academic performance of first semester undergraduates. The results revealed that social support significantly predicted university adjustment and academic performance. The study also discovered that appraisal support which is a component of social support scored the highest level of satisfaction amongst the students followed by belonging support, tangible support and self-esteem support. However not all studies regarding teacher support and students' academic performance showed similar results. For example, a study of 97 business students from a local polytechnic showed that the 'closeness' factor did not impact students' academic performance (Mohamed et al., 2018). The 'closeness' dimension measures the students' perceived affection, warmth, and open communication as displayed by the teachers. The authors opined that a probable cause could be due to limited interaction between students and teachers.

STATEMENT OF PROBLEM

Past studies have reported numerous factors that impacted academic performance among college students. Some of these factors that are often mentioned are: motivation, self-esteem, classroom climate, teacher support and academic procrastination. According to some authors (e.g. Cox & Williams, 2008; Klem & Connell, 2004), perceived teacher support is a crucial factor affecting the behaviour of students which in turn influence their academic performance. Osterman (2000) for example stated that the impact of teacher support on students' academic engagement is above those of peers and family. However, studies on the impact of academic procrastination on academic performance have produced mixed results (e.g. Rice et al., 2012; Steel, 2007). Likewise, there is no concensus on the influence of teacher support on academic performance (e.g. Yoleri, 2016; Iglesia et al. 2014). A number of local studies examined the levels of academic procrastination amongst Malaysian students and how the latter affected students' academic performance. In the context of Malaysian polytechnic students, there is an absence of current knowledge of studies related to teacher support and students' academic performance. Thus given the large number of academics involved in producing quality graduates in the technical, business and services sectors in this country, this study hopes to add to the body of knowledge by providing invaluable insight into the influence of academic procrastination and teacher support on the academic performance of Malaysian polytechnic students.

OBJECTIVES OF THE STUDY

The primary aim of this study is to investigate the moderating role of teacher support in the relationship between academic procrastination and academic performance of a group of Malaysian polytechnic students. The research questions guiding this study are as follows:

1) What is the extent of academic procrastination among the polytechnic students?
2) What is the extent of perceived teacher support among the polytechnic students?
3) Is there a correlation between academic procrastination and academic performance?
4) Does teacher support moderate the relationship between academic procrastination and academic performance?

RESEARCH CONTRIBUTION

There are currently 36 polytechnics in Malaysia providing the nation with skilled workforce in the technical, business and services sectors. Over the last 50 years, Malaysian polytechnics have grown into the largest technical and vocational education and training (TVET) institutions in the country. According to the Ministry of Education (2019), as of October 2018, there were 7,351 lecturers serving in the polytechnics. The 2019 Annual Report published by the Department of Polytechnic and College Community showed that from 1972 until 2019, Malaysian polytechnics have successfully produced 581,594 graduates at certificate, diploma, advanced diploma and bachelor's level. The same report also mentioned that 81 % of students graduated on time in 2019.

Against this backdrop, there are several benefits arising from this study. The research objectives are designed to address the absence of current knowledge in previous studies regarding the impact of academic procrastination and teacher support on Malaysian polytechnic students' academic performance. The research questions guiding this study will allow the management of the polytechnic the opportunity to gather valuable input regarding the extent of students' academic procrastination and perceived teacher support. This study also allows polytechnic educators to identify strategies for quality teaching and learning and for better

teacher-student rapport. By empirically examining the research questions, preventive and intervention programs focusing on minimizing students' academic procrastination and improving their academic performance can be put in place.

MATERIALS AND METHODS

PARTICIPANTS AND PROCEDURES

Convenient sampling approach was adopted for this study because samples were readily accessible to the researcher and data collection was easy. The data for this study were collected in-situ using an anonymous questionnaire comprising of 2 parts: Part A of the questionnaire gathered students' demographic information such as gender, program of study, semester of study and CGPA. Students' self-reported CGPA were classified into 3 categories: i) Low (≤ 2.66), ii) Moderate (2.67 to 3.19), and iii) High (≥ 3.20). Part B of the questionnaire consisted of the 5-item Academic Procrastination Scale-Short Form (APS-Short Form) and the Teacher Social Support (4 items) and the Teacher Academic Support (4-items) subscales of the Classroom Life Measure. Students were reminded that the Teacher Support Scales referred to the teaching staff in general and not to specific teachers.

MEASURES

The following inventories were used to measure students' perceived academic procrastination and students' perceived teacher support.

ACADEMIC PROCRASTINATION

The Academic Procrastination Scale-Short Form (APS-Short Form) was used to measure academic procrastination traits (Yockey, 2016). This 5-item questionnaire measures general procrastination (as opposed to procrastination of specific tasks) and is widely used with college students. Items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicated a high level of academic procrastination. Sample items include 'I put off projects until the last minute' and 'I frequently find myself putting important deadlines off'. The calculated total score of academic procrastination was divided into three categories such as low (≤ 33.3 percentile of total score which is 55), moderate (score between 33.4–66.6 percentile of total score which is 56-61), and high (≥ 67 percentile of total score which is ≥ 62). In the current study, Cronbach's α for the APS-Short Form was 0.79.

TEACHER SUPPORT

Perceived support from teachers was measured by the Teacher Social Support and Teacher Academic Support subscales of the Classroom Life Measure (Johnson et al., 1985). The Classroom Life Measure is a widely-used instrument with established validity and reliability (Johnson & Johnson, 1996). The Teacher Social Support Scale (Cronbach's $\alpha = .81$) has 4 items that focused specifically on the notion of caring. It is defined as the belief that the teacher cares about and likes learners as individuals (Johnson & Johnson, 1996). A sample item of the Teacher Social Support subscale is 'My teacher cared about my feelings'. The Teacher Academic Support subscale (Cronbach's $\alpha = .84$) also consists of 4 items and assesses teacher perceived support for learning. It is defined as the belief that the teacher cares about how much learners learn and wishes to help them learn (Johnson & Johnson, 1996). A sample item is 'My teacher liked to help me learn'. All items on both subscales were rated on a five-point Likert scale ranging from 1 (never) to 5 (always) where higher scores indicate more support. An average score for each subscale was obtained by summing the items and dividing by the number of items. Cronbach's α of the scale in this study was 0.82.

STATISTICAL ANALYSES

The analyses were performed using IBM SPSS (version 20.0) software. Two types of statistical analyses (i.e. descriptive and inferential statistics) were used in this study. Descriptive statistics included calculating the means, standard deviations, frequencies and percentiles of the scores. The hierarchical multiple regression analysis (inferential statistics) was used to investigate the moderating role of teacher support on the relationship between academic procrastination and academic performance.

RESULTS

DESCRIPTION OF THE STUDY PARTICIPANTS

Table 1 displays the descriptive statistics and demographics of the 84 respondents. The majority of the students were females (n = 58; 69%). Three groups of students were surveyed (i.e. Diploma in Accountancy, n = 27 (32%); Diploma in Marketing, n = 28(33%); Diploma in Business Studies, n = 29 (35%)). All students were in their third semester of their six-semester programs.

Table 1: Participant Demographics (N = 84)

		n	%
Gender	Male	26	31
	Female	58	69
Study Program	Diploma in Accountancy	27	32
	Diploma in Marketing	28	33
	Diploma in Business Studies	29	35

A further analysis of the students' CGPA revealed the following statistics as shown in Table 2.

Table 2: Level of Academic Performance (N = 84)

Level of Academic Performance (CGPA scores in parenthesis)	Percentile	Frequencies (%)
Low (≤ 2.66)	≤ 33.3	24 (28.6)
Moderate (2.67 to 3.19)	33.4 to 66.6	32 (38.1)
High (≥ 3.20)	≥ 66.7	28 (33.3)

Note: Mean = 2.88, S.D = .503, Min. = 1.68, Max = 3.88

As can be seen from Table 2, the majority of students (38.1 %) scored CGPAs of between 2.67 and 3.19 (moderate performance) while 33.3% attained CGPAs of 3.20 and above. Further analysis also showed that slightly more than 50% of students (52.4%) obtained CGPAs below the mean value of 2.88.

DESCRIPTIVE STATISTICS

Research Question 1

What is the extent of academic procrastination among the polytechnic students?

To answer the above question, the total score of academic procrastination was divided into three categories such as low, moderate and high. The minimum and maximum scores of each item on the APS-Short Form scale were 5 and 25 respectively. The total score on this scale ranged from 20 to 100. From the statistical analysis, the mean, median and standard deviation of the items were 13.63, 15.58 and 4.643 respectively. Table 3 shows the level of academic procrastination of students who were grouped into the low, moderate and high categories. Higher scores indicated higher level of procrastination by students. As can be observed from Table 3, about 30 % of students reported as high procrastinators and 33.3 % claimed to be moderate procrastinators.

Table 3: Level of Academic Procrastination (N = 84)

Level of Procrastination (Scores in parenthesis)	Percentile	Frequencies (%)
Low (≤ 10)	≤ 33.3	31 (36.9)
Moderate (11 to 17)	33.4 to 66.6	28 (33.3)
High (≥ 18)	≥ 66.7	25 (29.8)

Note: Mean = 13.63, Median = 15.58, S.D = 4.643

Research Question 2

What is the extent of perceived teacher support among students?

A similar statistical analysis that was carried out to answer research question 1 was used to obtain the level of perceived teacher support among the respondents. The total score of perceived Teacher Support Scale was divided into three categories, namely low, moderate and high. The minimum and maximum scores of each item on the Teacher Support Scale were 5 and 25 respectively. The total score on this scale ranged from 8 to 40. The mean, median and standard deviation of the items were 27.69, 27.00 and 5.296 respectively. Table 3 reports the level of teacher support as perceived by the students. Higher scores indicated higher level of perceived teacher support. As can be observed from Table 3, only 27.5% of the respondents had a high perception of teacher support while almost 42% had a low perception of teacher support.

Table 4: Level of Perceived Teacher Support (N = 84)

Level of Perceived Teacher Support (Scores in parenthesis)	Percentile	Frequencies (%)
Low (≤ 25)	≤ 33.3	35 (41.6)
Moderate (26 to 30.6)	33.4 to 66.6	26 (30.9)
High (≥ 30.7)	≥ 66.7	23 (27.5)

Note: Mean = 27.69, Median = 27.00, S.D = 5.296

Research Question 3

Is there a correlation between academic procrastination and academic performance?

Table 5 displays the means, standard deviations, scale reliability estimates and correlations among the study variables.

Table 5: Descriptive Statistics and Correlation Matrix

	Variable	M	SD	1	2	3
1.	CGPA	2.88	.50	-	-	-
2.	Procrastination	13.63	4.64	-.816**	(.87)	-
3.	Teacher Support	27.69	5.29	.869**	-.734**	(0.84)

**. Correlation is significant at the 0.01 level (2-tailed).
note: N = 84. Reliability estimates are displayed in parenthesis along diagonal.

As anticipated, the intercorrelations between the variables showed that academic procrastination had a high significant negative association with academic performance (r = -.816, p <0.01) indicating that students who procrastinated in their academic work did not perform well academically. Teacher support had a high significant positive association with academic performance (r = .869**, p <0.01), indicating the important role teachers play in motivating and supporting students to perform well academically. A significant negative relationship was found between academic procrastination and perceived teacher support (r = -.734, p <0.01). This indicated that students' who perceived little or low support from teachers tended to have high procrastination traits which resulted in not achieving the desired academic outcomes.

INFERENTIAL STATISTICS

Research Question 4

Does teacher support moderate the relationship between academic procrastination and academic performance?

To investigate the moderating effect of teacher support in the relationship between academic procrastination and academic performance, three steps of hierarchical multiple regression analysis were conducted. To overcome the possible problem of multi collinearity, the independent variables (teacher support and academic procrastination) were mean-centered before the interaction term was calculated (Kline, 1998). In the hierarchical regression model, Step 1 involved entering the moderator variable (teacher support) followed successively by the moderator variable (teacher support) and predictor variable (academic procrastination) in Step 2. The final step involved adding the interaction between teacher support and academic procrastination (Step 3). A significant change in R^2 for the interaction term would indicate a significant moderating effect.

Table 6: Summary of Hierarchical Moderated Regression Analysis for Variables Predicting Academic Performance Score

	Variable	B	SEB	ß
Step 1				
	Teacher Support	.083	.005	.869*
Step 2				
	Teacher Support	.056	.007	.587*
	Academic procrastination	-.042	.007	-.385*
Step 3				
	Teacher Support	.053	.006	.561*
	Academic procrastination	-.048	.007	-.438*
	Teacher Support X Academic procrastination	.004	.001	.153*

note: ΔR^2 = .756 for Step 1, ΔR^2 = .068 for Step 2, ΔR^2 = .022 for Step 3, *p ≤ .001

With reference to Step 1 in Table 6, a statistically significant positive effect of teacher support on academic performance was revealed (ß = .869, $p \le .001$). In Step 2, a statistically significant positive effect of teacher support on academic performance was discovered (ß = .587, $p \le .001$). However academic procrastination had an inverse but significant association with academic performance (ß = -.385, $p \le .001$). In Step 3, a significant interaction between teacher support and academic procrastination was revealed (ß = .153, $p \le .001$). Thus the results showed that academic performance was predicted by i) teacher support and academic procrastination and ii) the interaction between academic procrastination and teacher support. The results also showed that teacher support had a moderating effect on the relationship between academic procrastination and academic performance and this was further explored graphically (Figure 1).

Teacher support and academic performance were categorized into three groups: low, medium and high. Figure 1 displays the mean score of academic procrastination on academic performance set to different levels of teacher support.

Figure 1: Graph on the Moderating Effect of Teacher Support on the Relationship between Academic Procrastination and Academic Performance
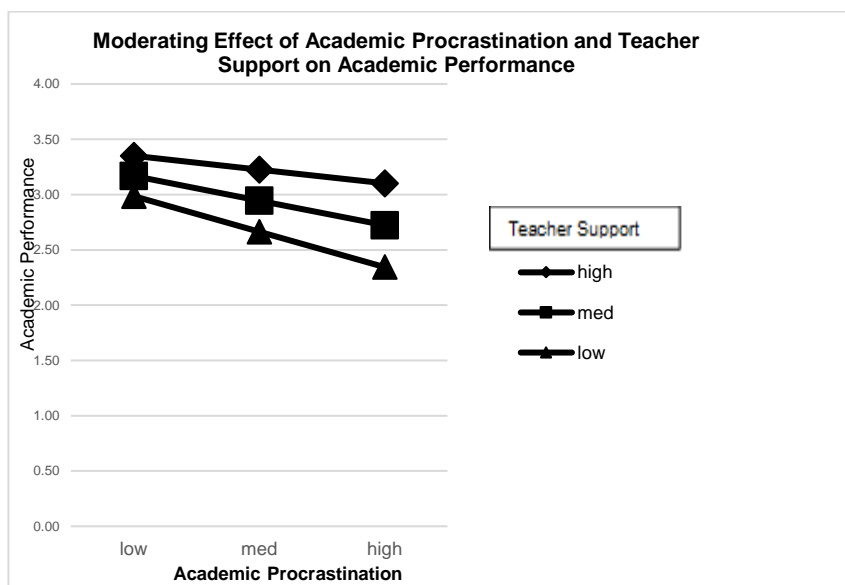
The graph depicts higher academic performance for students that had low academic procrastination and high perceived teacher support. Thus, this implies that teacher support significantly moderated the effect of academic procrastination on academic performance.

DISCUSSION AND CONCLUSIONS

The primary aim of this study was to investigate the moderating effect of teacher support on the relationship between academic procrastination and academic performance of a sample of Malaysian polytechnic business students. Other study objectives were to determine the extent of academic procrastination and perceived teacher support amongst the respondents and to investigate whether there was a correlation between academic procrastination and academic performance.

The findings from this study showed that academic procrastination existed in the sample of polytechnic students. Statistical analysis revealed that almost two-thirds of the respondents were moderate and high academic procrastinators. This lends support to other studies (local and abroad) regarding academic procrastination rates among university and college students (Bakar & Khan, 2016; Ellis & Knaus, 1977; Solomon & Rothblum, 1984; Uma et al, 2020; Yaakub, 2000). The negative association between academic procrastination and academic performance supported previous studies by Steel (2007), Richardson et al. (2012) and Kim and Seo (2015). As anticipated, higher perceived teacher support resulted in higher academic performance. This finding is in agreement with several previous studies such as by Chen (2005), Veloo et al. (2013) and Yasin and Dzulkifli (2011).

The extent of perceived teacher support showed that almost 42% of the respondents viewed low teacher support in relation to their academic studies. Several studies have demonstrated the positive influence of teacher support on academic outcomes (e.g. Kline, 2002; Yu & Singh, 2016; Mushtaq & Khan, 2012). This study however did not explore the probable causes of this negative perception of teacher support. Thus this is one area which could be further examined in future studies since research has shown that effective teacher support could encourage interest and motivation in education which led to better academic performance (Dietrich et al., 2015; Klem & Connel, 2004; Ruzek et al., 2016).

Based on these findings, it is imperative that academic procrastination amongst polytechnic students is viewed seriously since past studies have shown that the latter not only affected academic outcomes but also mental health. (Steel, 2007). Prevention and intervention programs to minimize procrastination behavior should be put in place to help improve academic performance. Future studies on academic procrastination should examine the possible factors that could influence the latter such as personality traits, cultural factors and prior academic experiences.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The limitations of this study include its sample size where data collection was restricted to a small group of participants. The participants did not include students from various engineering departments which constituted more than 60 % of the total student population. Hence it is not possible to generalize the results of the study for all programs offered by the polytechnic. It is therefore recommended that future research could include: i) investigating the mediating role of teacher support in the relationship between academic procrastination and academic performance, ii) gathering data qualitatively to get a better understanding of perceived

teacher support, iii) collecting data from different courses and semesters of study, and iv) examining other variables that are commonly found in literature, for example family and peer support, motivation, perfectionism, fear of failure etc.

REFERENCES

Abdi Zarrin, S., Gracia, E., & Paixão, M. P. (2020). Prediction of Academic Procrastination by Fear of Failure and Self-Regulation. *Educational Sciences: Theory and Practice, 20*(3), 34 - 43.

Abdullah, M.C, Luo, L.K., & Talib, A.R. (2014). Perceived Social Support as Predictor of University Adjustment and Academic Achievement amongst First Year Undergraduates in a Malaysian Public University. *Malaysian Journal of Learning and Instruction, 11*, 59-73.

Agyekum, S. (2019). Teacher-Student Relationships: The Impact on High School Students. *Journal of Education and Practice. 10*(14), 121 – 122.

Alnawasreh, R.I, Mohd Nor, M.Y, & Ashairi Suliman, A. (2019). Promulgating Factors Influencing Students' Academic Achievement: Unveiling the International High Schools Setting. *International Journal of Innovation, Creativity and Change. 7*(7), 109-127.

Ammermueller, A. & Pischke, J. (2009). Peer Effects in European Primary Schools: Evidence from PIRLS. *Journal of Labor Economics, 27*(3), 315- 348.

Anderman, L. H., Andrzejewski, C. E. & Allen, J. (2011). How do Teachers Support Students' Motivation and Learning in their Classrooms? Teachers College Record, 113(5), 969-1003. Available from http://www.tcrecord.org/Content.asp?ContentId=16085

Bakar A.Z, & Khan U.M., (2016). Relationships between Self-Efficacy and the Academic Procrastination Behaviour among University Students in Malaysia: A General Perspective. *Journal of Education and Learning*, 10 (3), 265-274.

Bernard, B. (1997). *Turning it Around for All Youth: From Risk to Resilience*. ERIC/CUE Digest 126, ERIC Clearinghouse on Urban Education, New York, NY, USA.

Caena, F. (2011). Literature Review: Teachers' Core Competences: Requirements and Development. Data from: European Commission. Available from https://ec.europa.eu/dgs/education.../Teacher-Competences_en.pdf.

Chen, J.J. (2005). Relation of Academic Support from Parents, Teachers, and Peers to Hong Kong Adolescents' Academic Achievement: The Mediating Role of Academic Engagement. *Genetic, Social, and General Psychology Monographs, 131*(2), 77–127.

Chetty, R., Friedman, J. N., & Rockoff, J. E. (2014). Measuring the Impacts of Teachers II: Teacher Value-Added and Student Outcomes in Adulthood. *American Economic Review, 104*(9), 2633-2679.

Corkin, D. M., Yu, S. L.,Wolters, C. A., & Wiesner, M. (2014). The Role of the College Classroom Climate on Academic Procrastination. *Learning and Individual Differences, 32*, 294–303.

Cox, A. & Williams, L. (2008). The Roles of Perceived Teacher Support, Motivational Climate, and Psychological Need Satisfaction in Students' Physical Education Motivation. *Journal of Sport & Exercise* Psychology, *30*, 222-239.

Department of Polytechnic and College Community. (2019). *Annual Report 2019*. Available from http://mypolycc.edu.my/index.php/muat-turun/penerbitan/send/2-penerbitan/484-laporan-tahunan-2019

Dietrich, J., Dicke, A. L., Kracke, B., & Noack, P. (2015). Teacher Support and its Influence on Students' Intrinsic Value and Effort: Dimensional Comparison Effects Across Subjects. *Learning and Instruction, 39*,45–54.

Eccles, J.S., & Roeser, R.W. (2003). Schools as Developmental Contexts. In G. Adams & M.D. Berzonsky (Eds.), *Blackwell Handbook of Adolescence* (pp.129-148). Malden, MA: Blackwell Publishing

Ellis, A., & Knaus, W. J. (1977). *Overcoming Procrastination*. New York: Signet Books

Ferrari, J. R. (2004). Trait Procrastination in Academic Settings: An Overview of Students Who Engage in Task Delays. In. H. C. Schowuenburg, C. Lay, T. A. Pychyl, & J. R. Ferrari(Eds.), *Counselling the Procrastinator in Academic Settings* (pp. 19–28). Washington, DC: American Psychological Association

Fullan, M. & Stiegelbauer, S. (1991). *The New Meaning of Educational Change.* New York: Teachers College Press.

Gherasim, L. R., Butnaru, S., & Mairean, C. (2013). Classroom Environment, Achievement Goals and Maths Performance: Gender Differences*. Educational Studies, 39*(1), 1–12.

Griffing, C. (2006). *Student-Teacher Relationships: An Exploration of Student Motivation*. Counselor Education Master's These*s*. Paper 42. Available from http://digitalcommons.brockport.edu/edc_theses/42

Grunschel, C., Patrzek, J., & Fries, S. (2013). Exploring Reasons and Consequences of Academic Procrastination: An Interview Study. *European Journal of Psychology of Education, 28*(3), 841–861.

He, S. (2017). A Multivariate Investigation into Academic Procrastination of University Students*. Open Journal of Social Sciences, 5*, 12-24.

Howell, A. J., & Watson, D. C. (2007). Procrastination: Associations with Achievement Goal Orientation and Learning Strategies. *Personality and Individual Differences, 43*(1), 167- 178.

Hussain, I., & Sultan, S. (2010). Analysis of Procrastination among University Students. *Procedia - Social and Behavioral Sciences. 5*. 1897-1904.

Iglesia, G., Stover, J. B., & Liporace, M. (2014). Perceived Social Support and Academic Achievement in Argentinean College Students. *Europe's Journal of Psychology, 10*(4), 637-649.

Jackson, D. M. H. (2012). *Role of Academic Procrastination, Academic Self-Efficacy Beliefs, and Prior Academic skills on Course Outcomes for College Students in Developmental Education* (Unpublished doctoral thesis). University of Georgia, Athens, Georgia. Available from https://getd.libs.uga.edu/pdfs/jackson_deanna_m_201208_edd.pdf

Johnson, D.W., & Johnson, R., (1996). *Meaningful and Manageable Assessment Through Cooperative Learning*. Interaction Book Co, Edina, MN.

Johnson, D.W., & Johnson, R. (1983). Social Interdependence and Perceived Academic and Personal Support in the Classroom. *Journal of Social Psychology 120*, 77–82.

Johnson, D. W., Johnson, R. T., Buckman, L. A., & Richards, P. S. (1985). The Effect of Prolonged Implementation of Cooperative Learning on Social Support within the Classroom. *Journal of Psychology, 119,* 405-411.

Jones, I., & Blankenship, D. (2021). Year Two: Effect of Procrastination on Academic Performance of Undergraduate Online Students. *Research in Higher Education Journal, 39*,1-11. Available from https://www.aabri.com/manuscripts/203207.pdf

Karatas, H. (2015). Correlation among Academic Procrastination, Personality Traits, and Academic Achievement. *Anthropologist, 20*(1,2), 243-255.

Khosla, H. (2021). Academic Procrastination and Personality Traits in College Students. *The International Journal of Indian Psychology*, *9*(2), 1225-1235.

Kim, K. R., & Seo, E. H. (2015). The Relationship between Procrastination and Academic Performance: A Meta-Analysis. *Personality and Individual Differences, 82*, 26–33.

Klem, A.M., & Connell, J.P. (2004). Relationships Matter: Linking Teacher Support to Student Engagement and Achievement. *Journal of School Health, 74*(7), 262 – 273.

Kline, R. (1998). *Principles and Practice of Structural Equation Modeling*. New York: Guilford.

Kline, R. (2002). A Model for Improving Rural Schools: Escuela Nueva in Colombia and Guatemala. *Current Issues in Comparative Education, 2*(2):170–181.

Klingsieck, K. B. (2013). Procrastination. When Good Things Don't Come to Those Who Wait. *European Psychologist, 18*(1), 24–34.

Lee, J.S (2012). The Effects of the Teacher–Student Relationship and Academic Press on Student Engagement and Academic Performance. *International Journal of Educational Research, 53*, 330-340.

Little, M., & Kobak, R. (2003). Emotional Security with Teachers and Children's Stress Reactivity: A Comparison of Special-Education and Regular-Education Classrooms. *Journal of Clinical Child & Adolescent Psychology, 32*, 127 - 138.

Liu, G., Cheng, G., Hu, J., Pan, Y., & Zhao, S. (2020). Academic Self-Efficacy and Postgraduate Procrastination: A Moderated Mediation Model. *Frontiers in Psychology, 11*. Available from https://www.frontiersin.org/article/10.3389/fpsyg.2020.01752

Malecki, C. K. & Demaray, M. K. (2003). What Type of Support Do They Need? Investigating Student Adjustment as Related to Emotional, Informational, Appraisal, and Instrumental Support. *School Psychology Quarterly,* 18(3), 231-252.

Marks, H.M. (2000). Student Engagement in Instructional Activity: Patterns in the Elementary, Middle, and High School Years. *Am Educ Res J*., *37*(1), 153-184.

McCown, W.G. & Roberts, R. (1994). A Study of Academic and Work-Related Dysfunctioning Relevant to the College Version of an Indirect Measure of Impulsive Behaviour. *Integra Technical Paper 94-98*, Radnor, PA: Integra, Inc.

Michinov, N., Brunot, S., Bohec, O. L., Juhel, J., & Delaval, M. (2011). Procrastination, Participation, and Performance in Online Learning Environments. *Computers & Education, 56*, 243- 252.

Ministry of Education. (2019). *Bilangan Staf Akedemik Politeknik Mengikut Jantina*. Available from http://dspace.unimap.edu.my/xmlui/bitstream/handle/123456789/61015/JADUAL%2018.pdf?sequence=1&isAllowed=y

Mohamed, M., Wok, R., & Mohamed, Z. (2018). Investigating the Influence of Student-Teacher Relationship on Students' Academic Achievement. *IOSR Journal of Humanities and Social Science (IOSR-JHSS), 23*(9), 53-59.

Moreno-Murcia, J.A., & Corbi, M. (2021). Social Support by Teacher and Motivational Profile of Higher Education Students. *Psychology, Society, & Education, 13*(1), 9-25.

Mushtaq, I., & Khan, S. N. (2012). Factors Affecting Students' Academic Performance. *Global Journal of Management and Business Research, 12*(9), 17–22.

Niehaus, K., Rudasill, K. M. & Rakes, C. R. (2012). A Longitudinal Study of School Connectedness and Academic Outcomes across Sixth Grade. *Journal of School Psychology*, 50(4), 443-460.

Noran, F. Y. (2000). Procrastination among Students in Institutes of Higher Learning: Challenges for K-Economy. [Online] Available: http://www.mahdzan.com/paper/procrastinate

Ocansey, G., Addo, C.H., Onyeaka, H.K., Andoh-Arthur, J., & Oppong Asante, K. (2020). The Influence of Personality Types on Academic Procrastination Among Undergraduate Students. *International journal of School & Educational Psychology*, 1-8.

Osterman, K. (2000). Students' need for belonging in the school community. Review of Educational Research, 70(3), 323-367.

Quinn, D. (2017). Longitudinal and Contextual Associations between Teacher-Student Relationships and Student Engagement: A Systemic Review. *Review of Educational Research*, *87*, 345-387.

Rahimi, S. (2019). *Understanding Academic Procrastination: A Longitudinal Analysis of Procrastination and Emotions in Undergraduate and Graduate Students.* (Unpublished doctoral thesis). McGill University Montreal, Quebec, Canada. Available from https://escholarship.mcgill.ca/concern/theses/cj82kc70g

Rautanen, P., Soini, T., Pietarinen, J. & Pyhältö, K. (2021). Primary School Students' Perceived Social Support in Relation to Study Engagement. *European Journal of Psychology of Education, 36*, 653–672. Available from https://link.springer.com/content/pdf/10.1007/s10212-020-00492-3.pdf

Rice, K. G., Richardson, C. M. E., & Clark, D. (2012). Perfectionism, Procrastination, and Psychological Distress. *Journal of Counseling Psychology, 59*(2), 288–302.

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. Available from https://doi.org/10.1037/a0026838

Ruzek, E. A., Hafen, C. A., Allen, J. P., Gregory, A., Mikami, A. Y., & Pianta. R. C. (2016). How Teacher Emotional Support Motivates Students: The Mediating Roles of Perceived Peer Relatedness, Autonomy Support, and Competence. *Learning and Instruction. 42*, 95–103.

Schaefer, C., Coyne, J., & Lazarus, R. (1981). The Health-Related Functions of Social Support. *Journal of Behavioral Medicine, 4*(4), 381-406.

Senécal, C., Julien, E., & Guay, F. (2003). Role Conflict and Academic Procrastination: A Self-Determination Perspective. *European Journal of Social Psychology, 33*(1), 135-145.

Solomon, D., Battistich, V., Watson, M., Schaps, E., & Lewis, C. (2000). A Six District Study of Educational Change: Direct and Mediated Effects of the Child Development Project. *Soc Psychol Educ. 4*, 3-51.

Solomon, L. J. & Rothblum, E.D. (1984). Academic Procrastination: Frequency and Cognitive-Behavioural Correlates. *Journal of Counseling Psychology*, *31*, 504-510.

Split, J.L., Hughes, J.N., Wu, J.Y., & Kwok, O.M. (2012). Dynamics of Teacher-Student Relationships: Stability and Change Across Elementary School and the Influence on Children's Academic Success. *Child Development*, *83*(4), 1180–1195.

Steel, P. (2007). The Nature of Procrastination: A Meta-Analytic and Theoretical Review of Quintessential Self-Regulatory Failure. *Psychological Bulletin*, *133*(1), 65-94.

Steel, P., & Klingsieck, K. B. (2016). Academic Procrastination: Psychological Antecedents Revisited. *Australian Psychologist*, *51*, 36-46.

Tardy, C. H. (1985). Social Support Measurement. *American Journal of Community Psychology, 13*, 187–202.

Tennant, J. E., Demaray, M. K., Malecki, C. K., Terry, M. N., Clary, M. & Elzinga, N. (2015). Students' Ratings of Teacher Support and Academic and Social-Emotional wellbeing. *School Psychology Quarterly*, 30(4), 494-512.

Tucker, C. M., Zayco, R. A., Herman, K. C., Reinke, W. M., Trujillo, M., Carraway, K., Wallack, C., & Ivery, P. D. (2002). Teacher and Child Variables as Predictors of Academic Engagement among Low-Income African American Children. *Psychology in the Schools, 39,* 477-488.

Uma, E., Lee, C.H., Shapiai, S.N., Mat Nor, A.N., Soe, H.H., & Varghese, E. (2020). Academic Procrastination and Self-Eficacy among a Goup of Dental Undergraduate Students in Malaysia. *Journal of Education and Health Promotion*, *9*, 1-6.

Veloo, A., Perumal, S., & Viknesary, R. (2013). Inquiry-Based Instruction, Students' Attitudes and Teachers' Support towards Science Achievement in Rural Primary Schools. *Procedia - Social and Behavioral Sciences, 93*, 65 – 69.

Wentzel, K. R. (1998). Social Relationships and Motivation in Middle School: The Role of Parents, Teachers, and Peers. *Journal of Educational Psychology, 90*(2), 202–209.

Wheland, E.R., Butler, K.A., Qammar, H., Katz, K.B., & Harris, R. (2012). What Are They Thinking? Students' Affective Reasoning and Attitudes about Course Withdrawal. *NACADA Journal, 32*(2), 17-25.

Wong, T. K. Y., Tao, X. & Konishi, C. (2018). Teacher Support in Learning: Instrumental and Appraisal Support in Relation to Math Achievement. *Issues in Educational Research, 28*(1), 202-219. Available from http://www.iier.org.au/iier28/wong.pdf

Yaakub, N.F. (2000) *Procrastination Among Students in Institutes of Higher Learning: Challenges for K-economy: Malaysia*. Available from http://www.postpone/Mahdzan.com.

Yasin, M.S., & Dzulkifli, M. A. (2011). The Relationship between Social Support and Academic Achievement. *International Journal of Humanities and Social Science, 1*(5), 277-281

Yockey, R. (2016). Validation of the Short Form of the Academic Procrastination Scale. *Psychological Reports, 118,* 171-179.

Yoleri, S. (2016). Teacher-Child Relationships in Pre School Period: The Roles of Child Temperament and Language Skills. *International Electronic Journal of Elementary Education*, *9*(1), 210-224.

You, J. W. (2012). The Relationship among Academic Procrastination, Self-Regulated Learning, Fear, Academic Self-Efficacy and Perceived Academic Control in e-Learning. *The Journal of Educational Information and Media*, *18*(3), 249-271

Yu, R., & Singh, K. (2018). Teacher Support, Instructional Practices, Student Motivation, and Mathematics Achievement in High School. *The Journal of Educational Research*, *111*(1), 81-94.

Nik Rozina Nik Jaafar
Department of Commerce
Politeknik Kota Bharu, 16450 Ketereh, Kelantan, Malaysia
Email: nikrozina@pkb.edu.my