

Emotional Intelligence as Predictor of Students' Academic Performance

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ABSTRACT

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Malaysian students have come a long way to achieve their academic results and yet failed to utilise the knowledge gained when they enter the working world. The lack of soft skills and emotional intelligence among these students dampened the situation further. These students are also known to have high memorisation skills instead of a good grasp and understanding of the concepts behind the knowledge. Hence, this study examines whether emotional intelligence can predict students' academic performance as measured by Grade point Average (GPA). Overall emotional intelligence, along with its five elements including self-awareness, self-regulation, self-motivation, social awareness and social skills, is further investigated. Survey questionnaires are employed and distributed among 300 Business and Engineering undergraduate students from two higher education institutions. Through regression analysis, results revealed that four out of five elements could predict students' academic performance as measured by GPA. Interestingly, social awareness was the only element found not able to predict students' academic performance. This study underlined the need for emotional intelligence to be incorporated into the higher education system. It is proposed, therefore, for institutions to introduce emotional intelligence in teaching and learning at the higher level as an essential unit of students' learning. This can be incorporated as part of the curriculum structure as subjects or part of co-curricular activities.

1. INTRODUCTION

The Malaysian education system has evolved since its first education philosophy back in the 1980s. Changes in plans and strategies are inevitable as the education ecosystem needs to evolve to meet the needs of lifelong learners of today and tomorrow. Despite that, undergraduate students in Malaysia are faced with academic challenges that may affect their performances; research has shown that emotional intelligence can improve the academic performance of students (MacCann, Jiang, Double, Bucich & Minbashian, 2020). However, statistics show that Malaysian undergraduates are lacking in soft skills and emotional balance during their studies and even after they have graduated (Shariffah, 2013). Additionally, Lim (2013) reported that approximately sixty percent of Malaysian graduates are having poor attitude, character, personality and communication skills. The situation deteriorated further when these students are not performing well academically.

Responding to the need for diverse learning in the current competitive environment, the lack of emotional congruence with academic performance among learners make it difficult to survive in the challenging learning environment. Although research shows that the academic performance of Malaysian undergraduates is less than favourable and it may be due to different apparent factors, nonetheless, the academic performance among graduates can be further improved by increasing the level of emotional intelligence among learners (MacCann, Jiang, Double, Bucich & Minbashian, 2020).

To date, research on emotional intelligence has been predominantly conducted overseas. Although the topic is gaining attention in Malaysia, it is still in its preliminary stage. Thus, whether emotional intelligence can predict the academic performance among students in Malaysia remain unclear. Earlier studies on emotional intelligence have found inconsistent findings on the relationship between emotional intelligence and academic performance (Ebignagbome & Nizam 2016; Yahaya et al., 2012). Evidently, it is essential to bridge the gap for the lack of conclusive findings between emotional intelligence and academic performance among the learners in the Malaysian setting. Considering the research gap, this research aims to examine the relationship between the dimensions of emotional intelligence and students' academic performance using the Goleman Theory of Emotional Intelligence (Goleman, 1995).

2. REVIEW OF LITERATURE

Emotional intelligence theories have been in existence since the 90s and became sensational since then. There were many philosophers that championed emotional intelligence, including Bar-On (1997) and Goleman (1995). Goleman is one of the philosophers who championed emotional intelligence with its five elements which include self-awareness, self-regulation, self-motivation, social awareness and social skills. This study is based on the Goleman Theory of Emotional Intelligence.

Pool and Qualter (2012) mentioned that students who had high emotional intelligence would outdo the other students academically. They were also more disciplined compared to students who have lower emotional intelligence. One of the reasons argued was that low emotional intelligence students were generally emotionally imbalanced, unfocused which led them to not performing well academically (Khan, 2008; Pinto & Ramalheira, 2017). Furthermore, highly emotionally intelligent students managed their emotions better, which led to a reduction in the feeling of anxiety and depression (Lam & Kirby, 2010). Goleman (1995) conceded that students' emotional intelligence played an important role. Once students acknowledged the emotional intelligence traits, academic performance and relationship with

others could be improved. In short, self-management, socialising and awareness of oneself with others as part of the emotions played a vital role, not only it improves academically but also to create a positive and conducive learning environment for students.

Many scholars have proven that students who performed well academically tend to possess the following traits: high emotional self-awareness, independence, high social awareness, manage stress well, strong social skills, to name a few (Ciesko, 2009; Rasiah, Turner & Ho, 2019; Pinto & Ramakheira, 2017). The studies concurred with the findings that each element of emotional intelligence had its own role and effect on success in academic and career. Additionally, the findings also underlined that emotional intelligence elements were connected with positive traits such as being optimistic, persistent, sound decision-making, awareness of oneself and the others (Van der Linden, Tsaousis & Petrides, 2012). Nevertheless, the same research also found that certain elements of emotional intelligence, such as relying on emotions rather than logic, could have a negative impact on students academically.

Recent research also affirmed the positive relationship between emotional intelligence and students' academic performance. For example, McCann et al. (2020) stressed that academic success not only dependent on cognitive intelligence, but also on the emotional intelligence of students. They further deduced that undergraduate students at different years of studies would be able to absorb and learn the emotional intelligence traits accordingly and thereafter improved their academic performance. Similar view is supported by an earlier study by Ahammed, Abdullah and Hassane (2011) who found significant link between emotional intelligence and students' Grade Point Average (GPA). This meant that highly emotional intelligent students would score high GPA and hence improved their academic performance significantly. In Malaysian settings, Chew et al. (2013) also found a significant relationship between emotional intelligence and academic performance of students whereby highly emotionally intelligent students performed better than others academically. Likewise, Mohamad and Wan Hanafi (2018) conceded the significance of the relationship between emotional intelligence and academic performance in public university's undergraduates. Shah (2020) also confirmed a moderately strong and positive relationship between emotional intelligence and final semester students' academic achievement.

On the flip side of the coin, there were research findings that stipulated no or insignificant relationship between emotional intelligence and students' academic success. Research affirmed there was no significant relationship between emotional intelligence, cognitive ability and students' personalities with academic performance (Newsome et al., 2000; Qaiser et al., 2019). This concurred with previous research, which utilised the EQ-I Total Scores tool to examine the relationship between emotional intelligence and academic success of community college students (Izaguirre, 2008; Zahyah & Farukh, 2016). The difference between these finding and previous findings, which stipulated the relationship between emotional intelligence and students' academic achievement, was the different types of students between university, colleges, and community colleges. This was due to the reason that community college students possessed different qualifications and backgrounds compared to those students who entered colleges and universities. The academic qualification and economic backgrounds of community colleges students set them apart from students in universities and colleges and hence the difference in the findings. Further research with similar findings had been found where there is an insignificant level of emotional intelligence among students and their academic studies (Qaiser et al., 2019).

Further into the millennium, much research also found insignificant relationship between emotional intelligence and students' academic achievement. There was an insufficient amount of evidence to prove that emotional intelligence positively related to students' academic success (Jdtaiwi et al., 2011). Another research concluded that higher score in the emotional intelligence measurement-based tools did not necessarily ensure higher GPAs of students (Portillo, 2011). Similarly, Veitch (2011) and Stratton (2011) also concurred with the findings that there was no absolute evidence to support the relationship between emotional intelligence and students' academic achievement as measured by GPA. Other research had concluded that not all the dimensions of emotional intelligence had a significant impact on students' academically. Emotional intelligence dimensions such as self-awareness and self-regulation were found to be insignificant with students' academic achievement (Ebignagbome & Nizam, 2016). Meanwhile, another research made the affirmation of no significant relationship between emotional intelligence at all with students' academic success (Ngu et al., 2016).

In sum, while there was research that affirmed the significant findings between emotional intelligence and students academically yet, a great number of past studies also presented opposing views highlighting no significant findings between the two variables. With regards to the mixed findings from this research, it is deemed necessary to examine the relationship between emotional intelligence and students' academic achievement in Malaysian settings. Adapting from Goleman's theory of emotional intelligence, five dimensions of emotional intelligence are proposed as predictors of students' academic performance. Figure 1 shows the conceptual framework of the current study.

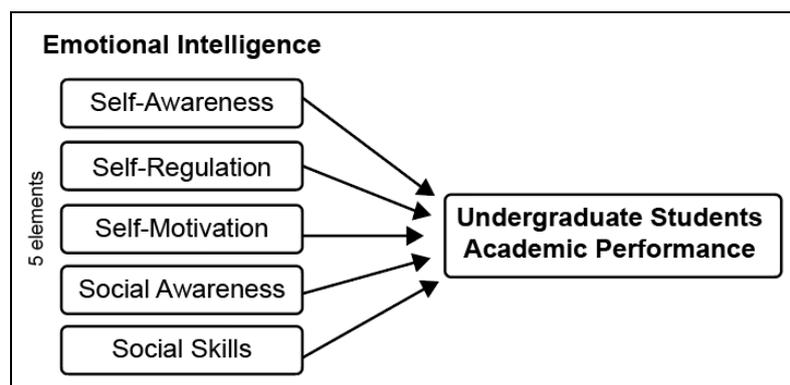


Figure 1. Conceptual Framework

3. METHOD

3.1 Sampling and Data Collection

This study employed a questionnaire survey to achieve the stated research questions. Based on the cross-sectional study approach, the data collection was conducted in a single period from April 2019 to the end of August 2019 at two university colleges, namely RUC1 and RUC2 in Klang Valley, Malaysia. With a total population of 1,350 students studied in Business and Engineering programmes from the institutions, a sample size of 300 is determined based on Krejic and Morgan's (1970) sample size calculation. The sample size calculation was based on $p = 0.05$, where the probability of committing type I error is less than 5 percent or $p < 0.05$.

Business and engineering students from RUC1 and RUC2 were the targeted respondents in this study based on the selection method using purposive sampling. Such sampling was made

on the basis of the similarity in their curriculum structure and learning delivery approach. In addition, the two programmes were regarded as the most popular courses offered by the institutions in the region. Criteria such as age, gender and ethnicity were not part of the selection consideration in this study.

The survey was printed in hard copies and distributed physically at both institutions. With assistance from Programme Heads and lecturers of each institution, questionnaires were distributed to the pre-determined respondents. With periodic reminders, 300 surveys were eventually collected by the researchers. Participation in the survey was voluntary, and the students' consents were obtained prior to the start of the survey. During this process, participants were assured regarding the confidentiality of their responses.

3.2 Instrument Development

For this study, the conceptual framework was based on Goleman's Theory of Emotional Intelligence (Goleman, 1995). The theory was used to address the relationship between emotional intelligence and academic performance in multitude studies (e.g., Mahmood & Iraj, 2011; Ngu, Hanafi, Taslikhan & Raman, 2016; Qaiser et al., 2019). The instrument was designed with a total of 102 items. The questions and sorted accordingly by the researchers together with subject experts in the related field. The questionnaires had undergone words checking and validated by three local university experts who are known for their scholarly works related to Emotional Intelligence and Education.

The survey questionnaire consisted of two sections in total. Section one encompassed basic demographic information such as programme of study, nationality and results based on GPA. Section two consisted of questions related to the five dimensions of emotional intelligence: self-awareness, self-regulation, self-motivation, social awareness, and social skills adapted from various studies as presented in Table 1. Respondents were asked to provide answers using a five-point Likert scale: (1) strongly disagree, (2) disagree, (3) neutral, (4) agree and (5) strongly agree to assess their feelings (emotions) associated with academic achievement.

Table 1. Measurement Scale for Dimensions of Emotional Intelligence

Variables	No. of Items	Scale	Sources
Self-awareness	19	5-point Likert	Phillip, 2001
Self-regulations	13	5-point Likert	Murphy, 2006
Self-motivation	17	5-point Likert	Lu, 2008
Social awareness	18	5-point Likert	Click, 2002
Social skills	35	5-point Likert	Click, 2002

Given that the programmes in both institutions were taught in English as the main language, the questionnaire was thus designed in English to enable respondents to be able to interpret the survey. Initially, the questionnaire was piloted for 30 students to ensure appropriate wording, and areas were checked for improvements. As a result of piloting, few minor changes were made in wording to fit with the objective of this research. Such a process was deemed necessary to allow minimising measurement error. The data were analysed using the Statistical Package for Social Sciences (SPSS) version 25 software. The SPSS was utilised to obtain the descriptive statistics, mean, standard deviation and regression analysis. Data were categorised into demographics profile and regression analyses was used to predict the effect of emotional intelligence dimensions on students' academic performance.

4. DATA ANALYSIS AND RESULTS

4.1 Respondents' Profile

A total of 300 respondents participated in the study, with 57% (n=171) from Business programmes whilst 43% (n=129) from the Engineering programmes. 38% (n=114) are Year 1 students, 32% (n=97) are Year 2 students and 30% (n=89) are Year 3 students. Meanwhile, 88% of the respondents are Malaysians (n=263) leaving approximately 12% International students (n=37). Most of the students from RUC 1 and RUC 2 scored averagely between 2.6-3.0 with 38% and 27%, respectively. Meanwhile, less than 5% of the students from both institutions scored below 2.0. RUC 2 has more students scoring between 3.6 – 4.0 with approximately 15% as compared to RUC 1, with less than 5% of its students scored within the same range. Hence, RUC 2 students performed better academically, with approximately 45% of them scoring from 3.10 – 4.0. Figure 2 shows the respondents' GPA at RUC1 and RUC2.

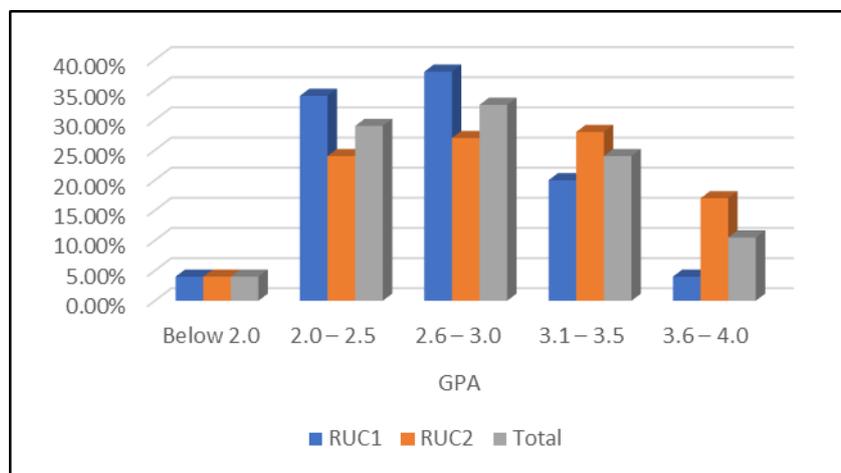


Figure 2. Students' Academic Performance based on GPA

4.2 Descriptive Statistic of Survey Instrument

The descriptive statistic shows that the mean of the variables is within the approximate range of 3.30 – 3.60. Meanwhile, the mean score for students' academic performance based on GPA is 3.03 with a standard deviation of 1.03. This shows a wider spread of GPA scores among the respondents.

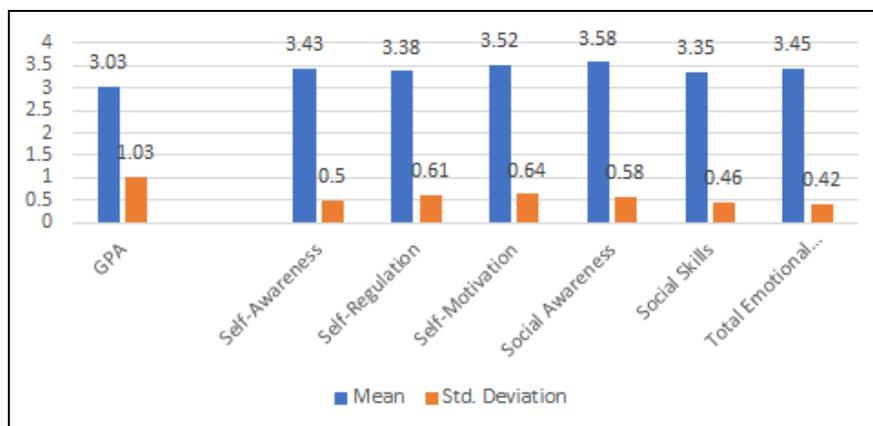


Figure 3. Mean and Standard Deviation of GPA and Emotional Intelligence

As shown in Figure 3, the variable with the highest mean score of 3.58 with a standard deviation of 0.58 is social awareness. Meanwhile, the variable with the lowest mean score of 3.35 with a standard deviation of 0.46 is social skills. In short, respondents seem to have a high tendency towards social awareness, which also means that the students are aware of the emotions of people around them, such as families, friends but scored the lowest when it comes to expressing their own emotions around these people.

4.3 Reliability Test

The results of the reliability test revealed that most of the five dimensions of emotional intelligence scored more than 0.70, except for self-awareness. Social awareness recorded the highest value at 0.9, followed by self-motivation (0.88), self-regulation (0.77), social skills (0.73), and self-awareness (0.68). Although it is commonly perceived that a higher value indicates a strong relationship between items on the test, researchers had determined the scale for quality criteria where 0.60 is an acceptable α value in social science, and it is also accepted and applied by many other researchers (Ghazali, 2008; Mimi et al., 2014).

4.4 Emotional Intelligence and Academic Performance

A regression analysis was performed to examine the relationship between the dimensions of emotional intelligence and student performance. Table 2 shows the coefficient of the elements of emotional intelligence and students' GPA.

Table 2. Coefficients of Emotional Intelligence and GPA

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
Self-Awareness	(Constant)	3.262	0.089		36.635	.000
	GPA	0.056	0.028	0.116	2.012	.045
Self-Regulation	(Constant)	2.984	0.108		27.632	.000
	GPA	0.13	0.034	0.217	3.841	.000
Self-Motivation	(Constant)	3.255	0.113		28.709	.000
	GPA	0.089	0.035	0.143	2.502	.013
Social Awareness	(Constant)	3.502	0.104		33.622	.000
	GPA	0.026	0.033	0.046	0.803	.423
Social Skills	(Constant)	3.19	0.082		38.859	.000
	GPA	0.052	0.026	0.116	2.011	.045

It is seen that self-awareness is significantly associated with GPA ($p < 0.05$, $\beta = 0.116$). Students who are being aware of their own emotions (anger, frustration, sadness and so forth) are more likely to score higher and hence achieve better academic performance. Thus, it is evident that self-awareness can predict students' academic achievement based on GPA.

Meanwhile, the coefficient of self-regulation and students' GPA is significant at $p < 0.05$ with $\beta = 0.217$. It clearly shows that self-regulation can predict students' academic performance as measured by GPA. Inquisitively, students who can regulate and control their own emotions are students who are calm and able to withstand stress and hence higher focus and perform

better academically. Nevertheless, in the Malaysian setting, the finding contradicts the research done by Ebignagbome and Nizam (2016), which stated self-awareness and self-regulation with students' academic performance may be due to the different programmes undertaken by the students and hence no proven variables predictably.

With regards to the coefficients of self-motivation and GPA, it is seen that there is a significant relationship between self-motivation and students' GPA at a significance level of $p < 0.05$ with $\beta = 0.143$. The emotional tendencies to reach certain goals can be associated with the drive needed by students in achieving better grades. From here, it can be gauged that self-motivation can be one of the variables to predict students' performance academically.

Meanwhile, social skills are found to be significantly correlated with students' performance in academics at $p < 0.05$ with $\beta = 0.116$. This indicates that how the students interact among themselves, their adeptness inducing desirable responses with others do play a role in their academic performance. As a result, being one of the elements of emotional intelligence, social skills are a predictor of students' performance academically.

Interestingly, the study fails to support the notion that there is a significant relationship between social awareness and students' performance ($p > 0.05$, $\beta = 0.046$). This can be linked to students' inner abilities, and traits such as self-awareness, self-control and motivation can improve their GPAs rather than following social awareness traits such as taking care of others' needs, feelings, and emotions. Despite respondents project a high tendency towards social awareness as they are more aware of the people's emotions, they might not utilise this trait to be more academically inclined.

Among all variables, self-regulation demonstrates the strongest influence on students' academic performance followed by self-motivation. This is because students who can control themselves with high self-discipline are able to focus and thus achieve higher results in their academic performance. On the contrary, students with a low level of self-regulation and motivation are unable to control or disciplined themselves, feeling demotivated and thus affecting their studies.

5. CONCLUSION

The aim of the study is to examine the relationships between the dimensions of emotional intelligence and students' academic performance using the Goleman Theory of Emotional Intelligence. Based on the statistical analyses, it was found that four out of five dimensions of emotional intelligence have significant positive relationships with students' performance. Specifically, the study demonstrates that students who have a greater level of self-awareness, self-regulation, self-motivation, and social skills are more likely to score higher GPA. Students who can deal with anxiety and stress and have a higher level of self-control and motivation tend to have better grades in their studies. Conversely, students with low emotional intelligence level may have lower self-control and motivation level, which alter them to be less motivated, under tremendous stress and, hence affecting their academic results.

The findings of this research reveal the need for higher education institutions to incorporate emotional intelligence as part of students' learning. This can be done by incorporating emotional intelligence as part of the education framework that governs the institution teaching and learning. Besides, emotional intelligence can be included as part of the curriculum of the subjects being taught in higher education institutions. By combining emotional intelligence in the institution's education framework, incorporating it into the curriculum, conducting

workshops for students will assist the emotional intelligence programmes implementation in a higher education provider and in the hopes of improving not only the students' academic performance but students as holistic individuals.

The emotional intelligence programme is suggested to be embedded into the curriculum structure as part of a more wholesome teaching and learning ecosystem for students. The initiatives to develop students' emotional intelligence level should be explored extensively to enable the education system to evolve and improve the overall education ecosystem. Hence, apart from embedding essentials skills in the curriculum development, emotional intelligence as intervention programmes should be implemented in the co-curricular segments as well. Such programmes could involve well-being workshops, seminars, and training offer to students as part of the co-curricular activities to encourage them to build up their emotional intelligence level to improve not only academically but also the personal well-being.

Although the study has contributed to the emotional intelligence literature, there are several limitations that should be considered for future research endeavours. Firstly, with the current COVID-19 pandemic affecting the lives of many individuals, it is indispensable to investigate the emotional intelligence of students and how it may or may not affect their academic performance, especially post-pandemic. Secondly, as this study is based on a questionnaires survey comparing students from two programmes, to obtain an in-depth understanding of students' emotional intelligence level, future research should include interviews of students from different disciplines, programmes, and institutions.

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