

Effects of Self-regulated Learning, Parental Involvement and Homework on Academic Achievement of School Students

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Abstract

Purpose: The focus of this research is around education specifically academic achievement of year 10 students in Secondary Schools Brunei. The purpose of this research is to explore the effects of self-regulated learning, parental involvement, and homework on the academic achievement of the Year 10 students. **Methods:** The collection of data is hoped to provide invaluable insight for teachers, unit of Guidance and Counseling, parents, students, and individual on the topic concerning the academic achievement of the students and particularly their children. Therefore, measures can be taken to address any issues to improve their academic achievement. Before-hand, a pilot study was carried out to determine the consistency of the questionnaire. The research instrument adopted in this research, for instance, is the questionnaire and it involves 300 students of year 10 in randomly selected government schools in Brunei. All the accumulated data were processed using Statistical Package for the Social Science (SPSS). Multiple regression and MANOVA were used to test the research questions. **Results:** The findings provide evidence that self-regulated learning, parental involvement and homework have significant impact on academic achievement [$R^2 = .047$, adjusted $R^2 = .046$; $F = (3, 220 = 3.742$ $p = 0.05$). The model explained 4.7% of the variance in the students' academic achievement. The findings also showed that self-regulated learning ($F = (1, 222 = 21.40$, $p = 0.000$) and homework ($F = (1, 222 = 5.62$, $p = 0.01$) has significant effect on gender, except for parental involvement on students' academic achievement. **Conclusions:** Students' academic achievement was associated with self-regulated learning, parental involvement, and homework. In addition, gender also plays a role in academic achievement with girls outperformed boys. Given this, these predictors should be considered in developing and designing strategies in assisting to increase students' achievement. However, more research should be conducted in relation to students' academic achievement since lack of study regarding the issue, particularly in Brunei Darussalam.

Keywords: Self-regulated, Learning, Parental Involvement and Homework

Introduction

The topic of self-regulated learning or parental involvement and homework has gained attention from several researchers because of its effect on the student's academic achievement. Studies have found that the most essential factors in academic achievement in the 1930s were intelligence and drive or the degree to motivation. However, nothing has changed really; these factors still play a role in the academic success (Best and Khan, 1989; Hatter, 2014; Teijlingen, Hundley 2001; Eysenck 1970).

The research on learning showed that students gain academic achievement when they become cognitively engaged in teachers' pedagogical strategies of teaching (Akey, 2006). The students may enjoy learning more and more, and more likely to participate in the school tasks. The grouping of students, collaboration among peers to help one another learn also has been associated with increased engagement and learning, as they are more receptive to challenging assignments. In other words, students enjoy learning more and learn better when what they are studying is of personal interest, which at the end contributes to their academic achievement.

Apart from that, Qi Li (2006) studied the factors contributing to the academic achievement that is intelligence, motivation, and the environment stated that intelligence is a necessary condition for achievement, which comprised of mental abilities. The ability is about the quality of being able to do something, which serves as the foundation of achievement thus with the ability he or she is capable to do something such as difficult tasks. The motivation is about the interest degree of doing something and the positive motivation can stimulate the potential ability through keeping attention on the task, whereas the negative motivation will break the exertion of ability by weakening one's interest which influences the academic achievement. Whilst, environment for instance is a complex concept, which composed of social value, economic status, race, gender, ethics, and health. In addition, others claimed that factors such as the attitude of the students, school resources and leadership style, classroom environment, parental role, and student's social circle (Kapor, 2018). Given this, various factors were said to affect students' academic achievement.

However, when talking about mental abilities, Eysenck (1970) stressed the importance of psychological and mental health in education. Mental health can directly affect a student's academic work and social life either positively or negatively. Hence, those students with psychological and mental health problems tend not to perform well in achievement tests and most are eliminated, which occurred in Brunei due to its examination-oriented system of education which at the end may contribute to the wastage rate in Brunei higher education sector (The Brunei Times, 2009). Besides, there are many issues concerning the students' academic performance in Brunei, for instance, Metussin (2017) suggested that poor quality of teaching, inadequate learning resources and lack of interest and motivation on the part of students may hinder their mental abilities on education.

Also, class size is one of the factors that impact upon academic performance (Mlambo, 2011). Apart from that were student motivation, socioeconomic status and attendance. This was supported by Fantuzzo, Davis, & Ginsburg, (1995) that found the socioeconomic status of the students and their family shows moderate to a strong relationship with academic performance. Further, research also has found that there was a positive relationship between self-motivation and academic achievement (Burke, 1991). Thus, according to Kudari (2016),

such aspects like classroom size and environment should be disciplined and well-ordered that include instructional strategies and efficiency in the management of the classroom can lead to better performance of the students.

Talking about attendance, for example, major reasons for students' absenteeism may include assessment pressures, poor delivery of lectures, the timing of lectures, and work commitments (Erdogan, Bayram, Deniz, 2008). For instance, research by Woodfield and Earl Novell (2006) found the relationship of academic achievement on gender that female students outperformed male students, and this may due to female students being more conscientious and thus less likely to miss lectures. While others namely have found that men perform better than women in certain settings and women outperform men in other settings as well (Haist, Wilson, Elam, Blue and Fosson, 2000). However, others stressed that factors such as differences in career preferences might also lead students to develop different levels of interest and motivation for studying (Mundia, 1998).

Furthermore, the time spends on task also determine how students achieve (Nickerson, 2006). Time spent on tasks may include reading a book, participating in extra-curricular activities such as playing a sport or watching television. Those students who spend more time on the unimportant extra-curricular activities may come to school with less ability to concentrate and put forth less effort on schoolwork, which could account for their making less academic progress during the year. This concept which refers to the among of time students spend attending to whether to school-related or non-school related tasks might have contributed to the academic performance of students. Nevertheless, this 'engage time (Prater, 1992) suggested that increasing the amount of time available for learning/instruction might not enough to achieve learning gains. For this purpose, both 'engage time' whether for school- or non-school related tasks should be tailored for the students so that they can manage their time which in turn may influence their performance at school.

A study by Henderson and Berla (2004) argued that the most accurate predictor of the student's achievement in school is Positive-Home School relations; the family can create a home environment that encourages learning, express high (but not unrealistic) expectations for their children achievement and future careers and become involved in their children's education at school and in the community. It was also stated that when parents involved in their children's education at home they do better in school. Studied by Steinberg (2006) reveal that parents are most effective in improving academic achievement through attending school programs and conferences. Irvine (2012) for instance finds that parental involvement is a more significant factor in a child's academic performance than the qualities of the school itself which contributes to academic achievement. Parents certainly play a vital role particularly concerning their children's success at school. Previous studies have reported that parents, their children, and other family members encourage one another for having a good and conducive learning atmosphere within the home. Strategies that parents can employ are providing assistance and help to their children via providing private tuition, provision of technology, and other learning materials to enhance their children's academic performance. Many studies have acknowledged the importance of role play by parent involvement in relation to their children's academic achievement. This is to say that role that parent play whether in parent-child and parent-school involvement influences their children's attitudes and behaviors that in turn affecting student achievement.

Statement of Problem

There have been numerous studies conducted on students' achievement (Cheng et al., 2019; Qi Li, 2006). The findings are varied from the students' effort, previous schooling, parents' educational background, family income, self-motivation of students, age of the student, learning preferences to the entry qualification of the students. For instance, academic achievement is generally associated with the students' IQ. Students who obtained great academic achievement tend to be thoughtful as their gifted intelligence. However, according to Francis and Skelton (2005), some smart students are not high achievers, and her study found that the grittiest students- not the smartest ones had the highest GPAs. This shows that cognitive (intelligence or mental ability) does not relatively contribute to academic achievement. This is to shows that other factors might play a role in student achievement particularly in academics.

Factors such as student motivation and attitude, classroom size and environment, the leadership style, the skill and abilities of the teachers, student's social circle, and role of parents interact with each other and contribute to a student's academic achievement. Based on the evidence, many factors contribute to the students' academic performance at school be it motivation and interest in the part of students and teachers, or factors that focused on areas such as infrastructure and leadership of the head teachers at school. Nevertheless, it was said that theses factors interact with one another that focused on academic excellence in students. Given this, more studies should be conducted regarding the examination of the factors contributing to a student's academic performance. As mentioned earlier, one of the key ingredients is self-regulated learning. However, studies on various issues on education including student's self-regulated learning in Brunei is quite limited (Mundia and Salleh, 2017). In addition, lack of studies on the various issue also leads to the absence on the degree to which these factors contribute to a student's academic performance that needs to investigate further especially in relation to the role plays by a family in enhancing self-motivation and learning in their children toward academic excellence. Based on that, it is imperative to examine the aspect of self-regulated learning and parental involvement that have been reported to contribute to student's greater achievement in academic performance (Fan & Chen, 2001; Xiao, Yao & Wang, 2019), particularly in Brunei.

It is not clear regarding all the factors with regard to student achievement at school that has been investigated in Brunei. Although previous studies have been reported a significant impact of self-regulated learning, and parental involvement in student performance, nobody knows about this aspect with regards to various mentioned factors such as limited resources and motivation to do well (Mundia & Salleh, 2017). Based on that, the present study will try to address the following questions:

- i. What is the level of self-regulated learning, parental involvement, homework, and academic achievement of the year 10 Secondary School Students in Brunei Muara District?
- ii. Are there significant impacts of self-regulated learning, parental involvement, and homework towards the academic achievement of the year 10 Secondary School Students in Brunei Muara District?
- iii. Are there significant differences between self-regulated learning, parental involvement, homework, and academic achievement of the year 10 Secondary School Students in Brunei Muara District on gender?

From the research questions, two hypotheses were formulated:

- i. There are no significant impacts of self-regulated learning, parental involvement and homework with academic achievement of the year 10 students.
- ii. There are no significant differences between self-regulated learning, parental involvement, homework and academic achievement according to gender.

Scope of the Study

This study is conducted with 300 students from three randomly selected secondary schools in Brunei Muara District, specifically of year 10 students. The year 10 students are particularly those with General Education Programme and Applied Education Program backgrounds, not include the Special Needs Students. This study is narrowed into academic achievement in relation to their self-regulated learning, parental involvement and homework as well as socioeconomic status of the parents. The academic achievement of the students for instance focuses on their latest result of the examination.

Methods

Population and Sample

The sample respondents were selected using simple random sampling. In this research, students of Year 10 with 'O' level programs are randomly selected, and of randomly selected secondary schools in Brunei Darussalam, specifically three secondary schools in Brunei Muara District. A total of 300 participants were involved: 100 students from each school and they are at the age ranging from 16 to 18 years old. The students were not chosen in terms of classes (science or art class) if students with 'O' level programs, not students with Special Needs Program. The researcher decided to choose randomly selected secondary schools in Brunei to enrich the data gathered, whereby when analyzed may lead to a comparison of different perspectives.

In regards, determination of sample size is based on a method applied by the Krejcie and Morgan chart (1970). The formula for determining sample size is stated as below:

$$S = \frac{x^2 NP(1-P)}{d^2(N-1) + x^2} \text{ whereby}$$

S = sample size

x^2 = value of chi-square at 1 degree of freedom based on the level of confidence required 0.05 (3.841)

N = population size

P = population ratio (estimated as 0.50 to indicate a maximum sample size)

D = degree of accuracy as stated as a ratio of 0.05

$$\begin{aligned} & \frac{3.841 \times 300 \times 0.5 (1-0.50)}{0.05^2 \times (300-1) + 3.841 \times 0.5 (1-0.5)} \\ &= \underline{288} \\ &1.708 \\ &= 168.6 @ 169 \text{ samples} \end{aligned}$$

Therefore, the researcher needs to have not less than 169 questionnaires from them, to make sure the validity of the results of the researcher.

Research Design

The research design used in this study was a quantitative approach. The researchers used quantitative research design to analyze data using numbers and constructing graphs to explain the collected data (or findings). In addition, the researchers made use of 300 students in the study and quantitative research design is useful and suitable for studying large numbers of people.

Measures

The questionnaire included questions relating to demographic, self-regulated learning, parental involvement, homework, and academic achievement.

Demographic Characteristics

Information that was collected was on students and parents' backgrounds include age gender, religion, parents' level of education, and monthly salary.

Self-Regulated Learning

Self-regulated learning was examined using 81-items from Motivated Strategies for Learning Questionnaire (MSLQ) (McKeachie, Pintrich, and Lin, 1985) that was measured on a 7-point scale (1= not at all true of me to 7= very true of me). Cronbach's alpha for this self-regulated learning measure was 0.93.

Parental Involvement

The parental involvement was measured with a 28-items scale using three response sets which were 'Yes', 'Not Sure', and 'No Answer' (The Learning Coalition, Hawaii Department of Education, 2009). The reliability of parental involvement was 0.78.

Homework

Twenty items from The Homework Problem Checklist (Teta, 2009) were used to assess students' homework completion using a 4-point scale (1= never, 2= at times, 3= often and 4= very often). Cronbach alpha score of .86.

Academic Achievement

Academic achievement was measured with questions that required the students to choose subjects taken at this level (year 10) and identified their grades obtained for each of the subjects.

Data Analysis

In this research, data gained from the questionnaire were analyzed based on the research objective and the research hypothesis. The data were analyzed on a computer using SPSS version 20 (IBM Corp Released 2010, Armonk, NY) and descriptive and inferential statistics (multiple regression and MANOVA) were employed. For all analyses, beta values with a 95% significance interval, standardized β , and p values for all variables were calculated, the level of significance was set up at $p < 0.05$.

Results

Demographic

participants in this study comprised of 226 male and 182 female students. Table 1 shows the mean and standard deviation of predictors associated with academic achievement.

Table 1

Distribution of Mean and Standard Deviation for overall Self-regulated Learning

Self-regulated Learning	Mean	Standard Deviation
Metacognitive Self-regulation	4.36	.78
Time and Study Environment	4.31	.68
Effort Regulation	4.37	.90
Peer Learning	4.61	1.21
Help-Seeking	4.80	.87
Overall	4.49	.89

Table 1 above shows that Help-Seeking generates the highest mean with 4.80 (SD= .87), followed by Peer Learning with mean 4.61 (SD= 1.21), Effort Regulation with mean 4.37 (SD= .90), and Metacognitive Self-regulation with mean 4.36 (SD= .78). Time and Study Environment generates the lowest mean, 4.31 (SD= .68). This indicates that Help-Seeking is the most dominant factor in Self-regulation Learning.

The distribution of mean and standard deviation for the overall Parental Involvement aspect (See Table 2). The result shows that School Information/ Communicating has the highest mean than others, mean 14.1, and a standard deviation of 3.12. This is followed by Parenting with mean 12.06 (SD= 2.68), Community Involvement with mean 7.70 (SD= 1.92), Volunteering with mean 6.25 (SD=1.60), and Learning at home with mean 5.29 (SD= 1.65). Decision Making has the lowest mean compared to others, with a mean of 3.98 (SD= 1.59). This indicates that School Information/ Communicating is the dominant factor in Parental Involvement.

Table 2

Distribution of Mean and Standard Deviation for overall Parental Involvement

Parental Involvement	Mean	Frequency
Parenting	12.06	2.68
Learning at Home	5.29	1.65
Volunteering	6.25	1.60
Decision Making	3.98	1.59
Community Involvement	7.70	1.92
School Information/ Communicating	14.19	3.12
Overall	8.24	2.09

Table 3

Distribution of Mean and Standard Deviation of overall Academic Achievement

Variable	Mean	Standard Deviation
Academic Achievement	1.39	.369

Table 3 shows the distribution of mean and standard deviation of overall subjects on Academic Achievement. It shows that academic achievement has mean 1.39 and a standard deviation of .369

The outcome of Table 4 intended to answer the research question on "Are there significant impacts of self-regulated learning, parental involvement, and homework towards academic achievement?" Data analysis results show that for the population ($n=224$), all the three variables self-regulated learning, parental involvement and homework had no significant impact on academic achievement.

Table 4

Results of Linear Regression Analysis for the Impact of Self-regulated learning, Parental Involvement and Homework towards Academic Achievement

Model	R	R Square	Standard Error	R Square Change	F	Sig.
1	.217 ^a	.047	.36569	.047	3.608	0.12

a. Predictors: (constant), Homework, Parental, Self-regulated Learning

b. Dependent Variable: Academic

Model 1: $F = (3, 220) = 3.742$ $a < 0.05$

Table 5

Results of Predictor Beta for the impact of Self-regulated Learning, Parental Involvement and Homework on academic achievement

Variables	B	t	sig
Self-regulated learning	-.122	-1.641	.10
Parental involvement	.129	1.934	.05
Homework	.058	.795	.42

Dependent variable: Academic achievement

As seen from Table 5, it shows that Parental Involvement has the highest value of Beta which is 0.129, followed by Homework (0.058) and Self-regulated Learning (-0.122). Significantly, predictors Self-regulated learning, Parental Involvement, and Homework [$(3, 220) = 3.742$ $p < .05$] contribute 4.7 percentage variance ($R^2 = .047$) to effects. In other words, when it increases by one unit, the effect score will increase by 4.7 percent. No independent variables above are the main factor in effect.

The correlation between the criterion variable and regressor variable self-regulated learning is $-.172$, the correlation between the criterion variable and regressor variable parental involvement is $.157$, and the correlation between the criterion variable and regressor variable homework is $.124$. The ANOVA results show that there is no significant relationship between the criterion variable and regressor variables self-regulated learning, parental involvement and homework at the significant level of $p < .05$.

Table 6 result is intended to answer the research question on “Are there significant differences between Self-regulated Learning, Parental Involvement, and Homework on gender?” Data analysis shows for the population ($n=224$), a significant effect of self-regulated learning, parental involvement, and homework on gender.

Table 6

Results of Multivariate Pillai's Trace for the differences between Self-regulated Learning, Parental Involvement, and Homework on Gender

Multivariate Tests					
	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	.089	7.204 ^a	3.000	220.000	.000
Wilks' lambda	.911	7.204 ^a	3.000	220.000	.000
Hotelling's trace	.098	7.204 ^a	3.000	220.000	.000
Roy's largest root	.098	7.204 ^a	3.000	220.000	.000

Multivariate Pillai's trace showed an overall significant effect on independent variables Self-regulated Learning, Parental Involvement, and Homework from the influences of gender with $[F(3,220) = 7.20, p < 0.05]$. Table 7 shows the results of differences between self-regulated learning, parental involvement and homework on gender.

Table 7

Results Of Univariate Test For The Differences Between Self-Regulated Learning, Parental Involvement And Homework Based On Gender

Dependent Variable		Sum of Squares	Df	Mean Square	F	Sig.
Self-regulated learning	Contrast	6.779	1	6.779	21.403	.000
	Error	70.310	222	.317		
Parental	Contrast	.019	1	.019	.174	.677
	Error	23.688	222	.107		
Homework	Contrast	1.223	1	1.223	5.629	.019
	Error	48.228	222	.217		

The result above showed a significant effect on each of the variables based on gender: i.e. Self-regulated learning, $[F(1, 222) = 21.403, P < .05]$, Parental Involvement, $[F(1, 222) = .174, P < 0.5]$ and Homework $[F(1, 222) = 5.629, P < 0.5]$. Therefore, self-regulated learning and homework have significant effect on gender, with significant $.000 < p < .05$ and $.019 < p < .05$. No significant effect of variable parental involvement on gender, with significant $.677 < p < .05$.

Table 8 showed the mean value of males and females corresponding to the variables. The results showed a dependent variable i.e. self-regulated learning has the mean value of females exceeded the mean value of males. The mean value for females was $M = 4.614$, and the male was $M = 4.266$. The other variables, parental involvement, and homework have the mean values of males exceeding the mean value of females. The mean values for males were $M = 1.830$ for parental involvement and $M = 2.329$ for homework. This relatively presented that by the population the female students outweigh the male students in self-regulated learning. While the male students were outweighing the female students on variables parental involvement and homework. The analysis also showed that the independent variables for gender led to R square values of 8.8 percent self-regulated learning, 0.1 percent parental involvement, and 2.5 percent homework respectively.

Table 8

Results of MANOVA analysis on the differences between Self-regulated Learning, Parental Involvement, and Homework on Gender

Dependent Variable	Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Self-regulated learning	Male	4.266	.053	4.161	4.371
	Female	4.614	.053	4.509	4.719
Parental	Male	1.830	.031	1.770	1.891
	Female	1.812	.031	1.751	1.873
Homework	Male	2.329	.044	2.243	2.416
	Female	2.182	.044	2.095	2.268

Discussion

According to Desforges and Abouchaar (2003), a basic level of teacher-parent interaction is necessary to afford the transfer of information and to effect mutual support and shared values. The information varies from programs to courses, expectations, and assessment processes. Therefore, the school needs to design effective forms of communications about school programs and children's progress (MICHIGAN, 2002) such as conferences with parents at least once a year, and a regular schedule of useful notices, memos, phone calls, newsletters, and other communications.

Elaine (2013) found that parental involvement has much less influence on the achievement of adolescent pupils. When investigated the relationship between parental involvement and social class, there was a strong relationship between them. In other words, the higher the social class, the more parental involvement was evident (Desforges and Abouchaar, 2003). Adding to that, their research found that parental education was positively related to parent-teacher contact. The more educated the parent, the greater was their involvement in their child's education, as they are skilled with the conception of 'parents as co-educator.'

Besides that, the National Assessment of Education Progress through tests given in the 1970s through the 1990s found that children of the rich scored considerably higher on all national tests than the children of the poor. The international comparison of reading achievement in

fifteen centuries also found that higher reading achievement was positively associated with higher socioeconomic status.

In addition, Elaine (2013) found that the children from highly educated parents and economically more stable did better in school than those of lesser-endowed parents. It produced a stronger influence on student achievement than the funds expended by the schools the students attended. Therefore, the socioeconomic status of parents can be considered as the main contributor to academic achievement. The above statements show a high probability that there are significant impacts of socioeconomic status towards academic achievement.

According to Baron (1996), girls and women are successful in school, as measured by grades. While the men are more successful if the criteria include prominence in prestigious careers and high salaries. On top of that, academic achievement determines the extent to which women and men are high or low achievers.

John and James (1989) investigated the imagery associated with achievement and success. She found out that women tend to imagine negative consequences for the successful female students, but men usually described the successful male in positive terms. Therefore, psychologically, women equate success with the loss of femininity and feel anxious about success, especially when it involves competing with men. This also showed that women do better when working alone or when in competition with other women than must compete against a man. On the other hand, a man performs better when they compete for work alone.

Limitations of the Study

The limitations are several limitations in conducting this study. The study is finding the effects of self-regulated learning, parental involvement and homework on academic achievement. Therefore, the findings are limited to those factors, by which there are more factors of academic achievement that could find out.

The study surveyed a relatively small number of students from three randomly Secondary Schools in Brunei Muara District and focusing on year 10 students only. For instance, findings of this study are highly dependent on the sincerity of respondents to provide answers on the questionnaire given. Their sincerity is needed so the analysis results will not be based on false information. Having said so, it is subject to the respondents' sense of accountability to collaborate sincerely, and the researcher has no rights to judge or force the respondents to provide likely answers.

Responses to the survey may have been lowered than expected due to students' reluctance to participate. Also, submitting very incomplete answers on the questionnaire are excluded from the data analysis, which contributes to the result of the response.

Conclusions and Recommendations

This study which was conducted among Year 10 students from three Secondary Schools in one of the Brunei districts has some interesting findings. First of all, there were impacts of factors such as self-regulated learning, parental involvement and homework towards student's academic achievement. This finding is quite similar to reported previous studies in

the literature. In addition, the important factors which are self-regulated learning and parental involvement contributed to student's academic achievement in relation to gender. This is an interesting finding as little research has been undertaken in Brunei Darussalam.

These findings suggested strategies to improve students' academic achievement must be developed that take into consideration the aspect of self-regulated learning, parental involvement and homework. Role play by parents is an important role not only for their children but also for the sake of school be it, teachers, and school administrators. For instance, in term of parent-child involvement; strategies such as parent-child discussion and parental monitoring has been reported to have a significant impact on children. The discussion between parents and children in a way that affects the behavior of their children has been attributed to the parent-child discussion (Hoover- Dempsey & Sandler, 1995; McNeal, 2014). Furthermore, parents that actively involved in their children's life is also has a significant degree that can instill not only good behavior but also influence their academic performance. Hoover- Dempsey & Sandler's (1995) strategy of parental monitoring has been associated with both student behavior and performance. Another important strategy also asked for parental involvement with the school which has been regarded as one of the strategies that can affect academic performance (McNeal, 2014). Such a strategy in which parents can make contributions and intervention in the schooling process is more likely to affect the student's achievement. Both strategies have been reported to have a significant impact on the behavior and performance of students.

Likewise, other important findings in the present study were the impact of self-regulated learning on the academic performance of Year 10 students in a secondary school in Muara District, Brunei. Since self-regulated learning is referred to as the student who is actively engaged in their learning based on their own pace might teach them how to learn it efficiently. Thus, teachers should encourage and assist their students via various techniques and strategies for the students to be able to master their learning process. Such strategies like rehearsal, elaboration, time management that involves many of the higher-order cognition processes (Bandura, 1986) us the key to success for students (e.g. OECD, 2013).

Previous studies have reported that for students to be excel in learning, they need to be equipped with self-regulation abilities (Greene et al., 2018; Kizilcec et al., 2017). Many studies have concluded that various self-regulated learning strategies (e.g. elaboration, rehearsal, etc.) contributed to the positive outcome for students. This is to shows that self-regulation ability is a significant predictor of academic and non-academic outcomes (Haron et al., 2015). Thus, it is imperative that teachers in the school at Muara District in Brunei to be equipped themselves with these strategies that can assist their students in achieving better academic performance as self-regulated learning is the way forward for students to master their learning process on their own.

Another implication from this study is that homework can be a tool to assist students in academic achievement. For students, parents, and teachers, the meaning of homework is different from one to another. Bryan & Burstein (2004) argued that the lack of homework completion is due to a lack of parental involvement. This is true if the parents lack the knowledge and training on how to involve and assist with their children's homework (Cooper & Nye, 1994). Thus, parents need to set up a routine procedure and guidelines for them and also for their children and monitor their children's progress to assist their children's

homework completion (Xu & Corno, 2003). Another strategy that has been put forward is the usage of student planners in helping them to organize their homework. Parents can also blend in to monitor their children's progress by referring to the children's homework planners as the planners were being signed daily. This will create more awareness and involvement on the part of parents and further concentration among students on their part of homework completion (Reiley, 2008). In addition, for teachers; it is their responsibility to design homework that is high in quality, developmentally appropriate to students (Bryan & Burstein, 2004). For example, giving them real-life assignments can help students in homework completion (Bryan & Burstein, 2004). This is because the selection of homework assignments is positively associated with student motivation and academic behavior (Dettmers et al., 2010).

This study finding requires further studies particularly with regard to self-regulation learning and homework in Brunei and their impact on students' academic performance. By establishing further evidence on the contributor factors of academic achievement might improve individuals in obtaining good academic achievement. Nevertheless, in this present study, self-regulated learning and parental involvement have shown a relationship with academic achievement. Given this, by applying independent self-learning among their children with constant monitoring on the part of parents regarding their children's learning might assist their academic achievement and performance.

References

- Akey, A. (2006). Student Context, Student Attitudes and Behavior, and Academic Achievement. Retrieved from <http://www.mdrc.org/publication/student-context-student-attitudes-and-behavior-and-academic-achievement>.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs: Prentice-Hall.
- Baron, T. (1996). Gender: Psychological Perspectives. Allyn and Bacon.
- Bryan, T., & Burstein, K. (2004). Improving homework completion and academic performance: Lessons from special education. *Theory Into Practice*, 43(3), 213-219.
- Brunei Darussalam. (n.d). What is SPN21? Retrieved from http://planipolis.iiep.unesco.org/upload/Brunei%20Darussalam/Brunei%20Darussalam_SPN21English.pdf.
- Burke, P. J. (1991). Identity Processes And Social Stress. *American Sociological Review*. 56, 836-849.
- Burns. (1997). *Introduction to Research Methods*. London: Longman.
- Busato, P., Elshout, H. (1999). Intellectual ability, learning style, personality, achievement motivation and academic success of psychology students in higher education. Retrieved from <http://ac.els-cdn.com>.
- Catherine, S. (n.d). Self-regulated learning strategies and achievement in an introduction to information system course. Retrieved from www.proquest.com.
- Cheng, L., Ritzhaupt, A. D., & Antonenko, P. (2019). Effects of the flipped classroom instructional strategy on students' learning outcomes: A meta-analysis. *Educational Technology Research and Development*, 67, 793-824.
- Cooper, C., & Nye, B. (1994). Homework for students with learning disabilities: The implications of research for policy and practice. *Journal of Learning Disabilities*, 27(8), 470-479.
- Desforges, A., Abouchaar, S. (2003). The Impact of Parental Involvement, Parental Support and Family Education on Pupil Achievement and Adjustment: A literature review. Retrieved from http://bgfl.org/bgfl/custom/files_uploaded/uploaded_resources/18617/desforges.pdf.
- Dettmers, S., Trautwein, U., Ludtke, O., Kunter, M., & Baumert, J. (2010). Homework works if homework quality is high: Using multilevel modeling to predict the development of achievement in mathematics. *Journal of Educational Psychology*, 102(2), 467-482.
- Donald, A., Jacobs, L. C., Chris, S. (2010). *Introduction to Research in Education*. Belmont, CA: Wadsworth Cengage Learning.
- Elaine, W. (2013). *School-based Research, A guide for education students*. New York: SAGE Publications Ltd.
- Eysenck, H. J.(1970). *Dimensions of Personality*. London: Routledge and Kegan Paul.Francis (2000). *Boys, Girls and Achievement*. London: Routledge.
- Fantuzzo, J., Davis, W., Gwendolyn, Y., Ginsburg, M.D..(1995). Effects of Parental Involvement in Isolation or with Combination with peer Tutoring on Student Self Concept and Mathematical Achievement. *Journal of Educational Psychology*, 87(2), 272-281.
- Greene, J. A., Copeland, D. Z., Deekens, V. M., & Yu, S. B. (2018). Beyond knowledge: Examining digital literacy's role in the acquisition of understanding in science. *Computers and Education*, 117, 141–159.
- Haron, H. N., Harun, H., Ali, R., Salim, K. R., & Hussain, N. H. (2015). Self-regulated learning strategies between the performing and non-performing students in statics. *Proceedings*

- of 2014 international conference on interactive collaborative learning, ICL 2014, (December), 802–805.
- Hoover-Dempsey, K. V., Sandler, H. M. (1995). Parental involvement in children's education: Why does it make a difference? *Teachers College Record*, 97(2), 310-331.
- James, A., Micheal, W., Robert, C., Larry, H. (2012). *Research Methods and Methodologies in Education*. SAGE Publications Ltd.
- John, W. B., James, K. (1989). *Research in Education*. Allyn and Bacon.
- Kidwell, V. (2004). *Homework*. London: Continuum.
- Kizilcec, R. F., Pérez-Sanagustín, M., & Maldonado, J. J. (2017). Self-regulated learning strategies predict learner behavior and goal attainment in massive open online courses. *Computers & Education*, 104, 18–33.
- Kudari, J. M. (2016). Survey on the Factors Influencing the Student's Academic Performance. *International Journal of Emerging Research in Management and Technology*, 5(6), 30-36.
- Fah, L. Y., Hoon, K. W. (2009). *Introduction to Computer Data Analysis with SPSS 16.0 for Windows*. Venton Publications.
- Hatter, J. (2014). Epstein's six types of parental involvement. Retrieved from <http://www.livestrong.com/article/78816-epsteins-six-types-parent-involvement/> NRC G/T (n.d). General aspect of academic learning. Retrieved from <http://www.gifted.uconn.edu/siegle/selfregulation>.
- McKeachie, W. J., Pintrich. P. R., & Lin, Y. G. (1985b). Teaching-learning strategies. *Educational Psychologist*, 20(3), 153-160.
- McNeal, R. B. (2014). Parent involvement, academic achievement and the role of student attitudes and behaviors as mediators. *Universal Journal of Educational Research*, 2(8); 564-576.
- Metussin, H. (2017). Gender gap in academic achievement in Brunei Tertiary Education: Qualitative perspective. *European Journal of Social Sciences Education and Research*, 4(2), 28-42
- Mundia, L. (1998). The status of technical subjects in Papua New Guinea provincial high schools: a survey of attitudes. *Science, Technology and Development*, 16(2), 104-111.
- Mundia, L., Salleh, S. (2017). Coping styles of failing Brunei vocational students. *Education and Training*, 59(4); 389-405.
- OECD. (2013a). PISA 2012. Results in focus. What 15-year-olds know and what they can do with what they know. Paris: OECD.
- Pentrich, D. E. (1990). Motivated Strategies for Learning Questionnaire. Retrieved from www.indiana.edu/~p540alex/MSLQ.pdf.
- Prater, M. A. (1992). Increasing time-on-task in the classroom: Suggestions for improving the amount of time learners spend in on-task-behaviors. *Intervention in School and Clinic*, 28(1), 22-27.
- Pugh, G. (1989). Qi's site: Parental Involvement Developing Networks between School, Home and Community. London: Cassell Educational Limited.
- Qi Li. (2006). Relationship between intelligence and achievement. Retrieved from <http://qili.myweb.uga.edu/FirstYearReview/PAPER/IntelligenceandAchievement02.htm>.
- Tanner, E. D. (2001). *Assessing Academic Achievement*. Allyn and Bacon Publisher.
- Teijlingen, H. (2001). Social Research Update: The importance of pilot studies. Retrieved from <http://sru.soc.surrey.ac.uk/SRU35.html>.

- Teta. (2008). Increasing Homework Completion in Children with ADHD using the Mystery Motivator Intervention. Retrieved from <http://gradworks.umi.com>.
- The Brunei Times. (2014). More students ace A-level exams. Retrieved from www.bt.com.bn/news-national/2014/02/07/more-students-ace-level-exam.
- The Brunei Times. (2009). Briefing on Student Progress Assessment. Retrieved from http://www.bt.com.bn/home_news/2009/01/17/briefing_on_student_progress_assessment
- The Learning Coalition. (2012). Parental Involvement Questionnaire. Retrieved from <http://www.thelearningcoalition.org/wp-content/uploads/2012/10/Parent%20Involvement%20Questionnaire.pdf>.
- The Learning Coalition. Official website of The Learning Coalition. Retrieved from <http://www.thelearningcoalition.org>.
- Toby, P. (2012). Study: Parenting is more important than schools to academic achievement. Retrieved from <http://news.ncsu.edu/releases/wms-parcel-parents/>.
- Vatterott, C. (2009). Rethinking Homework. USA: ASCD.
- Victor, M. (2011). An Analysis of some factors affecting student academic performance in an introductory biochemistry course at the University of the West Indies. Caribbean Teaching Scholar, vol 1, no 2, p. 79-92. Retrieved from <http://libraries.sta.uwi.edu/journals/ojs/index.php/cts/article/viewFile/10/7>.
- Weiner, B. (1992). Human Motivation: Metaphors, Theories and Research. SAGE Publications.
- Xiao, S., Yao, K., Wang, T. (2019). The relationships of self-regulated learning and academic achievement in university students. PHECSS 2018, SHS Web of Conferences, 60, 001003.
- Xu, J., & Corno, L. (2003). Family help and homework management reported by middle school students. *The Elementary School Journal*, 103(5), 503-519.
- Yanuz, E., Servet, B., Levent, D. (2008). Factors That Influence Academic Achievement And Attitudes In Web-Based Education. *International Journal of Instruction*, vol 1, no 1. Retrieved from www.e-iji.net/dosyalar/iji_2008_1_3.