

The Relationship between the Learning Ecology System and Students' Engagement: A Case Study in Selangor

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Abstract

School engagement is a relatively new concept in education. However, studies have demonstrated that the concept is useful in predicting students' academic achievement. The present study was conducted to examine Malaysian students' school engagement status and to understand the factors that influenced their engagement. The survey method was used to collect data with a questionnaire measuring the level of students' engagement in three psychological domains (cognitive, affective, and behavior). The influential factors were measured by learning about the ecological factors affecting the students' academic engagement, including their teachers' teaching practice and the support they received from teachers, peers, and parents. A total of 311 (male and female) participants between the ages of 12 -16 years from form one, form two, form three, and form four in a school in Selangor were selected using a random sampling procedure. Data was analyzed using descriptive and correlational analyses. The results showed that male and female students exhibit significantly different levels of engagement. Female students have a higher level of engagement than males. Teachers' teaching practices and the support students received from peers, parents, and teachers were positively correlated with students' engagement level. Although the results of the study support the findings of previous studies, further studies are suggested to verify the present findings. Implications for schools and parenting practices are also discussed.

Keywords: school engagement, academic performance, teacher support, learning ecological system

1. Introduction

Studies about students' engagement lead to examines the relationships between students' engagement with academic performance, burn out, drop out and boredom (Jones, 2009; Alarcon et al., 2010). Gene M. Alarcon et al.(2010) suggest that teaching students adaptive ways of coping and extinguishing maladaptive ways of coping with the academic environment can increase engagement and decrease burnout. It was also found that student who often involved in school activities are basically the students who were feel closed with the school (Johnson, Elder & Crosnoe, 2001). The engagement theme is often used by the researchers as variable in studies to identify and evaluate student participation in all school activities. It was found that student engagement is related to with the beliefs of students who feel that school education is beneficial to them (Johnson, 2001).

In Malaysia, educational success is measured by academic performance (Palaniappan, 2005; Toh, 2003). Such system makes student perform well and insistence to score in academic (Palaniappan, 2005; Toh, 2003). However, according to Zepke and Leach (2010), the aim of education is not only to produce students who are successful in terms of ' hard outcomes ' or appearances for instance in academic performance and the way to find an occupation, but also ' soft outcomes '. Furthermore, school education's agenda is also introduces 'soft outcomes' as a process of implement generic skills among students. Therefore, school is a place of students to obtain experience and knowledge and personality attachment. All these goals can be achieved through student engagement in school. In line with the national education philosophy, education in Malaysia emphasizes a balance of physical, emotional and spiritual (MOE, 1988).

However, there are only few studies on this topic carried out in Malaysia (Jelas & Salleh, 2013). Therefore, the engagement is not a common variable in studies within Malaysian educational context. So this study was conducted to examine whether this construct is able to explain students' learning behavior in relation to gender.

2. Student Engagement

Chapman defines student engagement as “student willingness to participate in routine school activities, such as attending classes, submitting required work, and following teachers’ instructions in class. That includes participating in the activities offered as part of the school program and student participation in school reform activities” (2003; Fletcher). “Students were engaged when they were interested in their work continuously, even though they were faced a lot of circumstances and challenges, but they are happy with their work” (Schlecty, 1994; Fletcher).

Willms (2003), states that researchers often include components of behavior and emotions to make sense of engagement. Students’ emotion is relates with the involvement of students in school. Sue (2002), found that students’ engagement level increased when they feel excited about learning in school. However, Frederick (2004) and Jimerson (2003) had introduced additional component which is cognitive engagement as a symbol of students’ engagement in school. Therefore, the main component used to measure students’ engagement in school, are affective or emotion, cognitive and behavior. Some researchers explain that affective domain reflected by students’ behavior such as interested in learning, having sense of belonging and positive attitude towards learning (Finn, 1989; Marks, 2000; Newman et al., 1992; Willms, 2003). While, the behavioral component is referred as students’ positive action and participation towards school activities. The cognitive component is an assessment, understanding and application of knowledge, learning objective and instill interest in learning (Jimmerson, 2004 and 2003).

Based on an extensive study in the United States of America which involving over 12,000 adolescents from 9 to 12 grade, Resnick et al. (1997) concluded that school connectedness factors such as engagement in school activities, taking part in school activities, and teachers’ fair treatment could protect students against almost every health risk behavior (e.g., emotional distress, delinquency, teenage pregnancy). Therefore engagement is one of the factors that keep students aware from delinquent behavior.

Qualities of the relationship between teachers and students also positively associated with student academic motivation and attitude toward students. Teachers’ support is an independent and positive predictor towards students’ interest in classes, their pursuit of goals and adherence to classroom rules and norms (Wentzel, 1998). Rebeca & Laura study (2010) conducted the 69 Mexican students also found that students will get a better grade in mathematics if teachers a friendly and caring in their studies

Students’ engagement in school was influenced by parental support, too. A review done by Yun Mo & Kusum (2008) found that parents who are caring and show interest in their children academic progress in school resulted in more positive and enthusiastic behavior among the children. They get involved with school activities and improve (indirectly) their academic performance. The importance of parental involvement in learning was identified repeatedly as a critical factor which contributing in academic achievement of school children. Then, Henderson Grolnick, Banjer & Kurowski (1997) found that parents who play their role as a teacher at home and also as a positive problem solving will prefer to commit in cognitive activities of their children. Green et al. (2007) also found that parental involvement at home must be maintains not only in school but in the early middle school when children need strengths to be independent.

Students perception of the relationship peers also have a significant impact on school achievement. The influence of peers on school engagement trace to 3 perspectives of relationships with friends, social efficiency and influence behavior responsive to academic success (Furlong, 2003). Acceptance colleagues indirectly increase students’ interest in school and in direct emotional impact on students (Wentzel, 1991). In fact, according Wentzel, McNamara, Barry, and Caldwell (2004), has proven that teens who have friend at school showed better academic achievement and pro-social behavior and less emotional stress than students without reciprocated friendships.

3. Purpose of the Study

This study aimed to examine the level of student engagement among 311 students in a secondary school in Malaysia. This study also conducted to identify the relationship between teachers’ teaching practices, teachers and peers’ support and parental support with students’ engagement.

This study also will find out the patterns of students’ engagement between male and female students. The engagement will be assessed by three main domains, affective behaviors and cognitive.

3.1 Objective of the Study

The objectives of this study are as follow:

- 1) To determine level of students' engagement among a group of student in one schools in Selangor state.
- 2) To identify the differences of students' engagement based on gender.
- 3) To identify the relationship between teachers' teaching practices with students' engagement in school.
- 4) To identify the relationship between parental support, teachers and peers' support with students' engagement in school.

3.2 Research Questions

Based on the objective of the study stated, some questions of the study are clarified as follows:

- 1) What is the level of students' engagement among one of the school in Selangor area?
- 2) Is there are any significant differences in student engagement based on gender?
- 3) Is there any significant relationship between teachers' teaching practices with students' engagement in school?
- 4) Is there any relationship between parental support, teachers and peers' support with students' engagement?

3.3 Hypothesis Of The Study

- 1) HO1 : There is no significant differences between students' engagement in schools based on gender.
- 2) HO2 : There is no significant relationship between students' engagement in school and teachers' teaching practices.
- 3) HO3: There is no significant relationship between students' engagement in school with teachers and peers' support.
- 4) HO4: There is no significant relationship between students' engagement with parental support.

5. Research Methodology

The design of this current research is a survey method by collecting quantitative data. The population of this study is 2,000 students. The total number of study participant is 311 students, consisting of 128 male and 183 female students who were randomly selected from form one, two, three and four . The size of the sample is considered adequate according to Kerjcie and Morgans' table (1970)

5.1 Data Analysis

Data was analyzed using descriptive statistics, such as frequency, percentage and mean analysis were used to build a profile of the respondents. For the purpose of data analysis, the mean was interpreted according to three categories; 1.00 to 2.34 is low; 2.34 to 3.66 is moderate; and 3.67 to 5.00 is high. A Simple T-test was conducted for a comparison between male and females' score, while Pearson correlation test was used to test the relationship between the variables. The interpretation of the correlation was done following from a table propose by Chua Yan Piaw (2006) as displayed in table 1.

Table 1. The strength of the correlation coefficient value & the size of the correlation coefficient of correlation strength

0.91 to 0.00 or -.91 to -1.00	Very strong
0.68 to 0.90 or -.68 to -.90	Strong
0.50 to 0.70 or -.51 to -.70	Medium
0.31 to 0.50 or -.31 to -.50	Weak
0.01 to 0.30 or -.01 to -.30	Very weak.
0.00	No correlation

Source: Chua Yan Piaw, 2006

5.2 Instrument

A set of questionnaire was use to collect data for the current study. The questionnaire were consist of five parts,

- i) Demographic
- ii) Students' engagement by Lam Shui Fung et. al. (2002)

iii) Teachers' teaching practices iv) Teachers and peers support and

v) Parental support. The engagement scale was translated by Zalizan, Amla and Salmiah (2013). Students' engagement scale measuring student engagement from three domain affective, cognitive and behavior.

A pilot study was carried out on 30 students in a school in Selangor state to test the reliability of the instrument. Table 2 shows the value of alpha cronbach for all the item of the sub construct of students' engagement scale. Table 2 shows the alpha value for each domain of the instruments.

Table 2. The value of Cronbach's Alpha (A) the study variables

Bill Variable	The Item's	Alpha value (α)
Affective	9	0.76
Behavior of	12	0.75
Cognitive	12	0.84
Parental support	8	0.80
Teachers and peers support	6	0
Teachers' teaching practice	6	0.78

6. Results

6.1 Statistical Analysis Descriptive

Table 3 shows that composition of the students involved in the study. Data was obtained from the analysis of descriptive exhibit of 311 respondents, 41.2% (128 people) are students and 58.8% (183 people) are female students. The respondents comprised of 83% Form One's students, 68% Form Two students, 93% are Form Three Students, while 67% are Form Four students.

Profile of respondents by race showed that majority of the Malays of 87.4% (272 people), followed by the Chinese 7.4% 923 people) and India by 5.1% (16 people). Out of the total respondents, the majority came from families earning RM1, 001 - RM3, 000 a month, which is a total of 143 students (46%), followed by earning RM3, 001 - RM5, 000 per month, 79 people (25.4%), followed by income families in RM1000 under 52 people (16.7%) and lastly the students who come from families earning RM5, 001-RM10, 000 a month is a total of 31 people (10%).

Table 3. Profile of respondents

Backgrounds	Frequency	Percentage %
Gender :		
Male	128	41.2
Female	183	58.8
Form :		
1	83	26.7
2	68	21.9
3	93	29.9
4	67	21.5
Ethnic		
Malay & Bumiputera	272	87.4
Indian	23	7.4
Chinese	16	5.1
Family Income		
< RM1,000	52	16.7
RM1,001-RM3,000	143	46.0
RM3,001-RM5,000	79	25.4
RM5,001-RM10,000	31	10
>RM10,000	6	1.9
Total	311	100

Table 4 shows the level of students' engagement in school according to three domains which are affective, behavior and cognitive. In overall, a level of students' engagement in secondary schools based on the domain of affective is the highest, which the analysis of mean is 3.9146 and 0.47382. The Item 'I am enjoy learned new things in class ' has the highest mean (mean = sp = 4.2026 and 0.74941). While the item "I think learning is bored" indicates the lowest level, which is (mean = sp = 3.6334 and 1.00997).

In terms of the domain of behavior, the level of students' engagement was in intermediate with a mean and standard deviation; 3.6072 and 0.48122. The Item 'I strive hard to succeed in school' shows the highest which (mean = 4.1865 and sp = 0 ... 67006), meanwhile the lowest level of item that the researchers determined is "I'm a student who actively participate in school activities such as school sports day and camping.", which (mean = sp = 3.2926 and 1.01341).

In overall, the level of students' engagement in secondary schools referred to the domain of cognitive is high which the overall total of mean is 3.7905 and standard deviation is 0.50227. The item ' While studying, I try to understand what you learn as a link of the matter with things that I should know' resulted the highest mean (mean = sp = 4.0129 and 0.73165). However, the item "While studying, I always associate with the things I learned the same thing from other class" resulted the lowest mean (mean = 3.5016 and sp = . 83810).

Table 4. The level of student engagement in accordance with the affective domain, cognitive and behavior. (N = 311)

Domain	Mean	Sd	Interprate
Affective	3.9146	.47382	High
Behavior	3.6072	.48122	Medium
Cognitive	3.7905	.50227	High

6.2 Inferential Statistics Analysis

HO1: There is no significant difference between students' engagement in schools based on gender.

Table 5 is showing students' engagement in school based on gender of significant value is lower than 0.05 (significant level). This shows that there is a significant difference in students' engagement in school between males and females ($t = -2.966$, $\text{sig} = 0.003$) $p < 0.05$. Researchers also found that the level of females students' engagement in school is higher (mean = 3.812) rather than males students (mean = 3.680) (mean = 3.812) rather than males students (mean = 3.680).

Table 5. Students' engagement in schools based on gender

	Gender	N	Mean	sp	t
Student engagement	Male	128	3.6802	.35937	-2.966
	Female	183	3.8119	.40268	

$P < 0.05$

HO2: There is no significant relationship between students' engagement in school and teachers' teaching practices.

HO3: There is no significant relationship between students' engagement in school with teachers and peers' support.

HO4: There is no significant relationship between students' engagement with parental support.

Table 6 shows the results of Pearson correlation analysis which determined the relationship between teaching practices, teachers' and peers' support and parental support with students' engagement in school. The results obtained from the analysis is the correlation between the teaching practices of teachers and student engagement in school were in a moderate level ($r = 0.536$ **, $p = 0.000 < 0.01$). This shows that there is a significant relationship between students' engagement with school teachers' teaching practices.

The correlation between teachers and peers support with engagement is also stage a modest ($r = 0.504$ **, $p = 0.000 < 0.01$). Thus, there is a positive relationship between the teachers and peers support with students' engagement.

Similarly, the analysis of the correlation between parental support with the engagement of students in school shows a simple relationship ($r = 0.428$ **, $p = 0.000 < 0.01$). Thus, there is a positive relationship between teachers' support with students' engagement in that school.

Table 6. Pearson correlation teachers' teaching practices, parent support, teacher and peers' support with student engagement

Domain	Student engagement
Teachers' teaching practices	.536**
Parental support	.428**
Teachers' and peers' support	.504**

$p < 0.05$

7. Summary and Discussion

From the review of literatures in this current study, it highlighted that the importance of students' engagement in school was develop students' potential. Students' engagement in school was often associated with academic performance as well, and also being a tool to deal with students' disciplinary problems. A high level of engagement in these three elements which are emotional, cognitive and behavioral problems among students in school will formed their generic skills and high personality. There are several factors that linked to students' engagement in school such as teaching practices, teachers' and peers' support, and parental support.

The findings was indicates the level of students' engagement is high. Female students showed the highest result regarding students' engagement rather than male students. As an expected result by the researchers, this study found that teaching practices, teachers' and peers' support, and parental support were correlated with students'

engagement. It shows that students' engagement in school has a significant relationship with teaching practices, teachers' and peers' support and parental support.

Teaching practices had been seen as one of the factors of supportiveness towards students' engagement in school. The role of teachers may increase the level of interest on learning process among the students. Furthermore, students who will be more attractive in class were influenced by the approaches applied by the teacher whether interesting or not (Rebecca & Laura, 2010). Proactive teacher will find the way to help their students in order to improve their own potential, to explore their abilities and to provide opportunities and alternatives to students to become excellent in both areas; curriculum and co-curriculum.

Likewise the peer group influence to students participating in school activities.. During adolescents' period, peers are some of the people who are very significant for most students (Wentzel, 1991). At this stage, adolescents feel important to be accepted by peers. Hence, teens tend to follow the behavior of group where it is in it. In addition, Gene et al. (2011) says a peer social support can help teens to cope with their stress in school. Therefore, the selection of peers is very important so that the students are able to form a healthy life.

The study also found a significant relationship between students' participation by a factor of parental support. This finding is in line with the study of Abd. Razak & Gina (2011) who showed support parents have relevance to academic performance. Parenting practices expressly agreed by the children was the cause of parental involvement in their education while in high school. Parents who practice positive parenting behaviors such as constantly remind children about learning goals, encourage, motivate to improve performance, caring, reading habits were more involved in their children's education

Requirements of parental involvement in children's education interpreted as a claim of responsibility into the family. Sue (2008), in her study found that students from high SES and have parents from professionals who have high involvement in school. A stable financial is an important factor to ensure that the opportunities for students to participate in curricular and co-curriculum activities in school widely open.

The implications of this study shows that parents, teachers, and peers play an important role in supporting students to engage well in all activities organized in school. Thus, the role of teacher is to attract students to learn, while peers were act as social supporters in school. Responsive parents who are concerned and care about the children's education may enhance students' engagement in school.

In order to promote and increase the level of students' engagement, activities conducted in schools preferably take into account contributing factors such as student support teacher engagement, peers and parents. It sounds that parents may take a proactive step to be involved in children's learning in school. The school can use the channels of the parent teachers Association (PTA) to create awareness among parents in a way to encourage parental involvement on children's education effectively and efficiently.

Based on the results of the studies which had been carried out, it can be concluded that students' engagement in school is important for the development and growth of the students. Students' engagement has a positive relationship with the teachers, peers and parental support. Therefore, all of the parties involved such as students, schools, parents and the local community need to work together and co-operate by understanding and supporting this idea in order to increase the level of one of the school in Selangor state, certainly do not reflect the Selangor school students' engagement or Malaysia. So, the findings cannot be generalized as well. With that, it is proposed that more study should carry out so that the result can be representing towards a larger population. A qualitative research is also can be used as one of the methods to understand students' engagement in detail.

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