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SELF-REGULATED LEARNING AND ITS RELATIONSHIP WITH STUDENT-TEACHER INTERACTION[#]

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The present study attempted to investigate the relationship between self-regulated learning, and student-teacher interactions. The sample consisted of 322 students from two secondary schools. Students' self-regulated learning was gauged by the Learning Strategies Subscale, (Pintrich, Smith, Gracia, & McKeachie, 1991). An instrument called Student-Teacher Interactions Scale was developed to measure student-teacher interactions in this study. Findings showed that only 17% of the students have high level of self-regulated learning. Other students, on the other hand, have low (12.7%) and moderate (69%) levels of self-regulated learning. The present study also found that students' self-regulated learning was positively, and significantly related to student-teacher interactions. When the dimensions of student-teacher interactions were examined, findings revealed that student-centered learning, and strategy instruction were positively and significantly related to self-regulated learning. The obtained results indicated that students may be more inclined to self-regulate if teachers promote student-centered learning, and teach them self-regulated learning strategies.

Good learning includes effective metacognitive characteristics, such as, planning, managing, and reflecting (Berry & Sahlberg, 1996). This implies that efficient learners have the skills to design and control their learning processes, and are also able to evaluate and reflect on the entire process. In other words, they are self-regulated learners. Researchers unanimously recognize that self-regulated learning is one of the most essential skills that students should possess, particularly in this information age (Chen, 2002; Henderson, 1986; Schraw, 1998; Veenman, Beems, Gerrits, & Weegh, 1999; Wang & Peverly, 1986). As emphasized by Heo (2003), owing to the tremendous explosion of information, it is no longer adequate to continually utilize knowledge that is acquired in a limited time, and with the help of others for a long time. Students must become self-regulated learners seeing that in the

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future, they have to proactively and assertively thrive in an information-rich, and technology-driven society (Lapan, Kardash, & Turner, 2002). Self-regulated learning also plays a major teacher interactions were examined, findings revealed that student-centered learning, and strategy instruction were positively and significantly related to self-regulated learning. The obtained results indicated are vital not only to guide one's learning during formal schooling but also for self-education and updating one's knowledge after leaving school'. The importance of self-regulated learning became more evident when a growing number of research indicated that it has positive effects on students' academic achievement (Dckeyrel, Dernovish, Epperly, & Mckay, 2000; Dolianac, 1994; Pintrich & De Groot, 1990; Wolters, 1999; Zimmerman & Martinez-Pons, 1988). Students who used self-regulated learning strategies tend to perform better.

Researchers are currently looking into the determinants of self-regulated learning to understand why some students use strategies and others do not. Literature reviews suggest that student-teacher interaction is one of the factors that influence students' usage of learning strategies (see, for example, Zimmerman & Schunk, 1989).

According to social cognitive theorists, students' learning behavior is closely related to their social experiences, or interactions with teachers. This is because, students' learning experiences are shaped and influenced by teachers (Schunk, 1989). Students are more inclined to self-regulate if teachers promote student-centered learning, provide them with appropriate feedbacks, and teach them self-regulated learning strategies. Vygotskian theorists share the same view Vygotskian theorists share the same view (Rohrkemper, 1989; Sigelman, 1999). They state that social environment has a pre-eminent role on students' learning. This theory proposes that learning occurs in a sociocultural context and evolves out of students' social interactions (Sigelman, 1999). In other words, students learn how to self-regulate through interactions with more competent learners or with teachers. For instance, teachers can provide 'scaffolding' for students' development. During this 'scaffolding' process, teachers as skillful partners, can structure the learning situations, so that self-regulated learning becomes easier. They can also teach and guide students in self-regulated learning.

Increasingly, learners are perceived to have more responsibilities for their own learning (Chen, 2002; Perkins, 1992). For that reason, teachers have to give more autonomy to students, such as, in making decisions concerning their own academic work. Teachers also have to encourage students to learn independently without relying too much

on them (Bradley, 1991). Giving students the freedom to choose, is viewed as supporting students' decision-making. Allowing students to have a say in establishing priorities in task completion, method of learning, or pace of learning is also a way of imparting responsibility to students (Ames, 1992; Ellington & Earl, 1999).

According to Deci, Schwartz, Sheinman, and Ryan (1981), teachers who value students' autonomy, are more likely to promote confidence and intrinsic motivation in learning on the part of their students. By contrast, teachers who are inclined towards externally controlling learning, produce passive learners. McCombs (1989) support this view. He believes that teachers who give autonomy to students by practicing student-centered learning, may provide more opportunities for students to learn actively and independently, or becoming self-regulated learners. Lee (2000) claim that student-centered environments teacher interactions were examined, findings revealed that student-centered learning, and strategy instruction were positively and significantly related to self-regulated learning. The obtained results indicated-regulated learning ability. Conversely, Boekaerts (1997) believes that when teachers do not allow for choice of tasks, choice of strategies, and time management, they limit the students' opportunities to become self-regulated learners.

Apart from student-centered learning, feedback given by teachers may also influence students' self-regulated learning. Researchers (e.g., Butler & Winne, 1995; Phye & Bender, 1989; Phye & Sanders, 1994) believe that feedback given by teachers is a prime determiner of processes that constitute self-regulated learning. Usually, feedback is not available during learning activities, but is given after a task has been completed, or a test of achievement has been administered. The purpose of such feedback is to confirm or change students' existing knowledge. Butler and Winne (1995) assert that feedback does more than just correct or elaborate a students' knowledge; it can enhance calibration, and therefore student's effective engagement in tasks.

Based on past research, Hall, Villeme, and Burley (1989) have classified teachers' feedback into two categories namely general and specific feedbacks. General feedbacks include general praises (e.g., 'good job!', 'great!') in reacting to students' performance, general feedback immediately after a test, and general written comments on assignments or test that are returned. On the other hand, specific feedbacks include specific information about correct academic performance, additional information about incomplete or incorrect performance, and class discussion on student's responses to specific parts of tests.

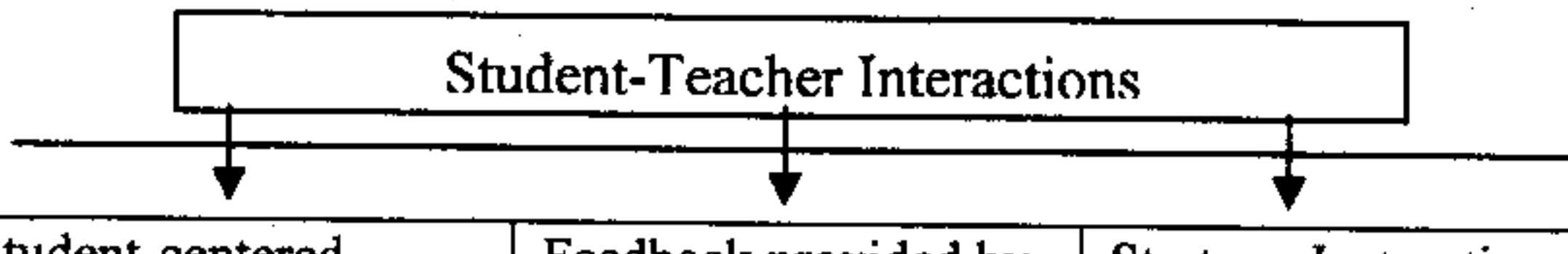
In relation to self-regulated learning, specific feedback is deemed more important. This is because specific feedback serves a corrective function. It does not only confirms or reinforces appropriate responses, but also disconfirms, and provides the basis for correcting inappropriate responses (Phye & Bender, 1989). For instance, if a student is told that his poor performance is due to misunderstanding of a mathematical concept, he/she should have asked for clarification on this particular concept during class. Such specific feedback may help him/her to refine his/her regulating strategies particularly help-seeking strategies. In order to produce better performance in the future, he/she may be more inclined to seek clarification if he/she has difficulties in understanding any mathematical concept in class.

Another important aspect of student-teacher interactions is strategy instruction. It can be defined as instruction that makes salient to students the strategies that improve performance, and convey that they are capable of applying them (Schunk, 1989). In other words, it refers to the teaching of self-regulated learning strategies. Pea (2000) emphasizes that teachers are expected to spend a great deal of time in monitoring and assisting students to become self-regulated learners, particularly in technology-rich classroom. This is because teachers are in a position to provide learning strategies to students, across a variety of subject domains (Rosenshine & Meister, 1994). Self-regulated learning strategies can be taught directly as a separate subject, and indirectly by incorporating them into normal learning lessons. However, when strategies are taught directly in strategies training program, much of what is learnt, seemed to be abandoned once the program ended. This implies that direct strategies training only manage to create short term effects on students' self-regulated learning.

To promote and sustain students' usage of self-regulated learning strategies, teachers not only have to teach students strategies, but also convince them that these strategies will improve their performance and it has benefited other students (Brown, Campione, & Day, 1981; Paris, Lipson, & Wixson, 1983; Zimmerman & Schunk, 1989). Moore (1991) points out that it is not likely that an individual will use a particular strategy in particular context unless the significance of using that strategy is understood. Hence, students who are taught by teachers to use learning strategies, and are aware of the benefits of it may be more prone to use it, in learning (Kulik, Kulik, & Schwalb, 1983).

Based on social cognitive theory and previous studies, this study propose that student-teacher interactions in relation to self-regulated

learning, can be divided into three components, student-centered learning, feedback provided by teachers, and strategy-instruction, as shown in Figure 1.



Student-centered Learning	Feedback provided by Teachers	Strategy-Instruction
Autonomy in: 1) Learning Materials 2) Learning Processes 3) Learning Tasks	1) Learning Materials 2) Learning Processes 3) Learning Tasks 4) Discuss specific responses	1) Teach Learning 2) Provide information on strategy-values

Figure 1. Student-Teacher Interactions

Surprisingly, there are no studies that capture all the three dimensions of student-teacher interactions as proposed by social cognitive theorists such as Zimmerman and Schunk (1989). Therefore, there is a need to look into the relationships between these aspects of student-teacher interactions with self-regulated learning. Given that, there is no available instrument to measure student-teacher interactions based on the components show in Figure 1, this study also attempts to develop and validate Student-Teacher Interaction Scale for this purpose. As self-regulated learning is an important skill in education and learning, this study will determine the levels of self-regulated learning among Malaysian students.

The purpose of this study is to determine the relationships between student-teacher interactions (student-centered learning, feedback provided by teachers and strategy instructions) with self-regulated learning. This study also seeks to establish the validity and reliability of a newly developed scale to measure student-teacher interaction. In addition, this study also aims to determine the distribution of high, moderate, and low self-regulated learners among students in two secondary schools in Malaysia.

METHOD

Sample

The sample for this study comprised 322 Form-Four students (M = 17 yrs; 178 boys and 144 girls) from two secondary schools

Muar Science Secondary School (from the state of Johor) and Muzaffar Shah Science Secondary School (from the state of Malacca).

Instruments

The Learning Strategies Scale

The Learning Strategies Scale was developed by Pintrich et al. 1991 was used to measure students' self-regulated learning. This scale comprises two sections: A motivational section, and a learning strategies section. The Learning Strategies Scale is taken from the learning strategies section. Researchers around the world have used it to measure student's self-regulated learning (see, for example, Chen, 2002; D'Apollonia, Galley, & Simpson, 2001; Fuller, 1999; Lin & Mckeachie, 1999; Rao, Moely & Sachs, 2000; Yamauchi, Kumagai & Kawasaki, 1999). In order to be applied in Malaysian context, some modifications were made to the Learning Strategies Scale. The revised version of the scale has 56 self-rating items concerning students' use of different self-regulated learning strategies. It is a 7-point Likert scale; responses may range from 1 (not at all true of me) to 7 (very true of me). Scale scores are determined by summing the items and taking an average. The reliability of the scale has been tested before the study begun. As the Cronbach's alpha analysis showed that the Learning Strategies Scale has an alpha coefficient of .92, it is highly reliable.

Seven items are negative statements (Items: 2, 6, 9, 21, 29, 46, and 49). These items involved reverse coding. The ratings were reversed with the Statistical Packages for Social Science (SPSS), version 11.5, before the respondents' scores were computed. Scale scores for the modified Learning Strategies Scale are determined by summing the items and taking the average. The scores for learning strategies may range from 1 to 7. Higher scores indicate that more self-regulated learning strategies are used by the respondent. If the obtained score is greater than one standard deviation from the mean, respondent is considered as high self-regulated learner. Conversely, if the obtained score is less than one standard deviation from the mean, respondent is considered as low self-regulated learner. If the obtained score falls within plus minus one standard deviation from the mean, respondent is considered an average self-regulated learner.

Student-Teacher Interactions Scale

The Student-Teacher Interactions Scale is a self-report instrument (12-items), developed by the researchers to gauge interactions between student and teacher during the teaching and learning processes. This scale was in Malay Language. Before its construction, a content specification

has to be spelled out to ensure that the scale measures its intended content area (Wong, 2002). In other words, content specification is considered much like a blue print of an instrument. For this reason, Friedenberg (1995) assert that a good instrument must have a specific and standard content, which serve as the basis for items construction.

The content specification for this scale is based on social cognitive theory and literature reviews pertaining to student-teacher interactions and self-regulated learning. Student-teacher interactions can be divided into three dimensions: Student-centered learning (item nos. 1,4,6,7), feedbacks provided by teachers during the learning processes (item nos. 2,8,9,10) and strategy-instruction (item nos. 3,5,11,12), or the teaching of learning strategies. These student-teacher interactions are the most significant social experiences that affect students' self-regulated learning. This is because teachers who practice student-centered learning provide more opportunities for students to self-regulate. Feedbacks on academic performance or learning tasks on the other hand, help students to refine their learning strategies, particularly self-monitoring strategy. The third dimension, strategy instruction, is able to improve students' knowledge about learning strategies (Ames, 1992; Butler & Winne, 1995; Schunk, 1989).

An example of the items from student-centered learning dimension is 'I have always been given the freedom by teacher to decide the references for my assignment'. Feedbacks dimension contain items such as 'Teacher has never explained to me the mistakes that I have made in exercises' whereas an item from the strategy instruction dimension is 'Teacher taught me ways to plan my learning time efficiently'. The Student-Teacher Interaction Scale is a 7-point Likert scale. Responses may range from 1 (very disagree) to 7 (very agree). Items 4 and 8 are negative statements, which involve reverse coding. Score range is from 12-84 (see Appendix A).

Procedure

The researchers have obtained formal approval from the Educational Planning and Research Division (EPRD), Malaysian Ministry of Education, to carry out this study. Upon receiving permission from the EPRD, clearance from the Education Department of Malacca and Johor was obtained. Prior to data collection, a preliminary visit was made to the schools' authority to explain about the purpose and details of the study. During this visit, information such as the number of students and Form Four classes were collected. The questionnaire was adminisfrated by the researchers. The purpose of the study was explained briefly to the students before they were

required to fill in the questionnaire. Students were assured that their answers are confidential and were also told that the study is not interested in them as individuals, only in the average or norms. Thus, it is important for them to answer the questions honestly. Students only began to fill in the questionnaire after they were clear of the instruction given.

RESULTS AND DISCUSSION

The Reliability and Validity of the Student-Teacher Interaction Scale

The Student-Teacher Interaction Scale has an alpha coefficient of .88. It is considered reliable given that the alpha value is above .80 (DeVellis, 1991). The scale content validity has been established after it was verified by a panel of experts in Educational Psychology. Each item was checked by language experts. Given that, it is a newly constructed scale, factor analysis was carried out to confirm the construct validity of the scale. Before running factor analysis, the assumptions and practical considerations underlying this analysis were examined. This assumption was explored graphically using histogram, stem-and leaf plot, normality probability plot, detrended normal plot and box plot. In addition, the Kolmogorov-Smirnov test, a statistical analysis, was used to test normality. The observed significance level (Kolmogorov-Smirnov =.00) is lesser than .05. This implies that the sample did not come from a normal distribution. Nurusis (1992) stated that whenever the sample size is large, such as in this study (N=322), it is possible to find data that are exactly normally distributed. Thus, it is sufficient that the data is approximately normally distributed. Taking into consideration Nurusis' (1992) view, the results of the visual displays (which showed that the data is normally distributed) and the fact that factor analysis is robust to the assumption of normality (Coakes & Steed, 2000), it is thus concluded that the data is normally distributed.

Next, the suitability of the data for factor analysis was examined. The correlation matrix indicates that the data is suitable for factoring since a number of correlations exceed .30. The Bartlett's Test of Sphericity is significant at .01. This indicates no zero correlation and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy is .89. This value is far greater than .60, the minimum value required to run a factor analysis. Furthermore, the anti-image matrices showed that all the values are above the acceptable level of .50. Therefore, it is deemed appropriate to proceed with factor analysis. Examination of the initial statistics revealed that three factors would be extracted and

these factors have eigen values more than 1. Eigen values greater than 1 were accepted for the latent root criterion based on recommendation by Hair, Anderson, Tatham, and Black (1992). Results for the extraction of common factors are showed in Table 1. Factor I explained 45% of the variance whereas Factor II accounted for 10% of the variance. Factor III explained 9% of the variance. The total variance explained by these three factors was about 64%.

Table 1

Extraction of Common Factors in Student-Teacher Interactions Scale

Factors	Eigen values	Percentage of Variance	Cumulative Percentage
I	5.38	44.83	44.84
II	1.21	10.15	54.98
III	1.04	8.65	63.63

The following scree plot graphically display the eigen values for each factor. Factors above the inflection point of the slope should be retained.

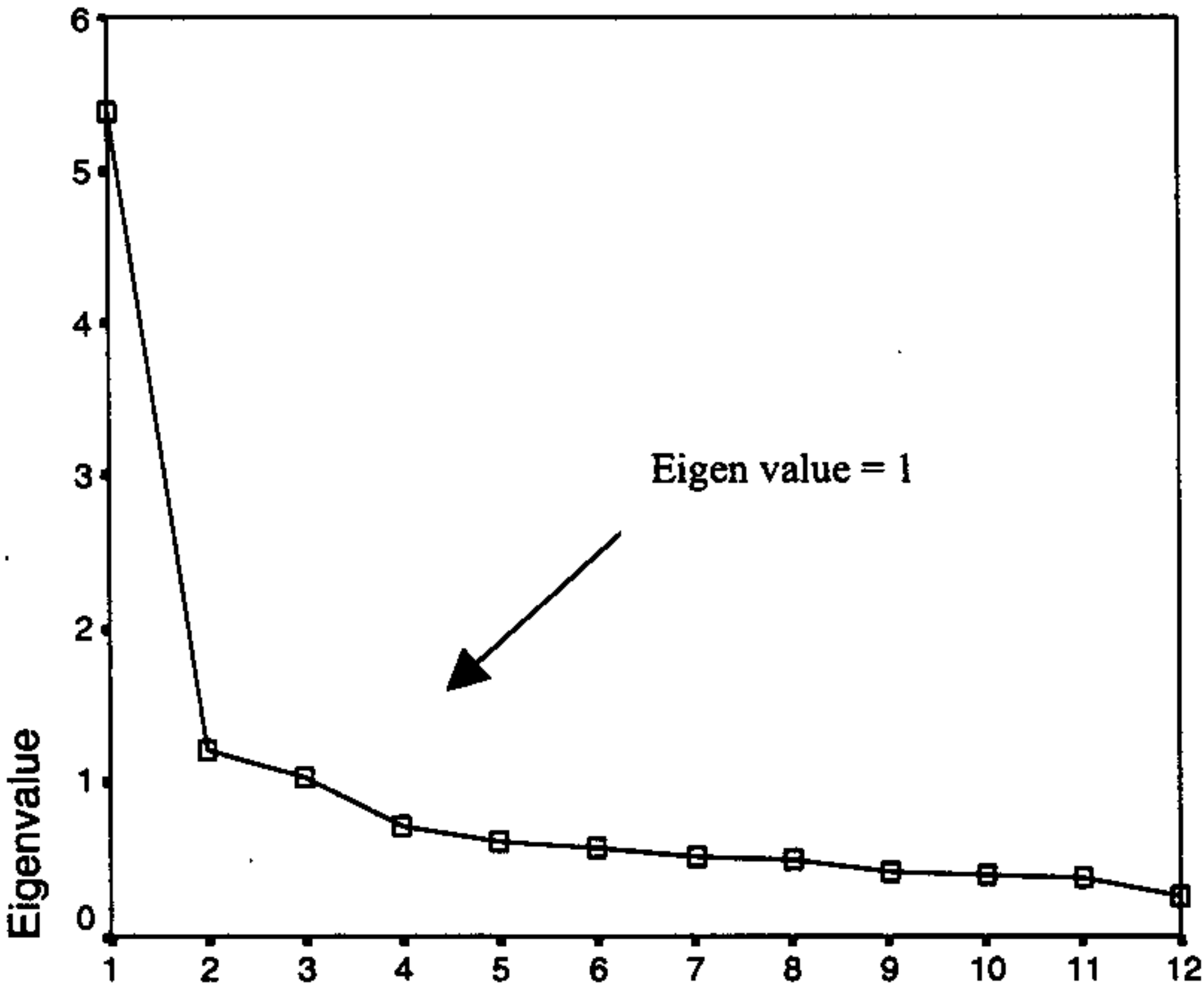


Figure 2. The scree plot displaying eigen values.

The scree plot in Figure 2 suggested that Factor I is a predominant factor and should be kept. As for Factor II and III it is not so clear since

there are two inflection points. After a closer scrutiny of the graph, the researcher opted for a three-factor solution. Factor II and III ought to be kept given that these two factors are above the second inflection point and have eigen values greater than 1. They explained nearly 20% of the variance. Furthermore these factors are interpretable, and congruent with the postulated dimensions underlying the Student-Teacher Interaction Scale.

Varimax rotation method is used to assists the interpretation of the factors. This simple rotation yielded meaningful item groupings. Values of factor loadings of .30 or higher were accepted based on the rule of thumb by Hair, et al. (1992). The result of this analysis is showed in Table 3. There were some items with dual loadings. As items nos. 1 to 12 were designed to measure a single construct, it is expected that the factors extracted would be related. Items that are loaded on dual factors were placed under factors that yielded the highest loadings. The rotated solution indicates that Factor I, II, and III each consist of four items. Factor I comprises items nos. 1, 4, 6, and 7, which measures Student-Centered Learning. Factor II comprises item nos. 3, 5, 11, and 12, which measures Strategy-Instruction, and Factor III comprises items nos. 2, 8, 9, and 10, which measures Specific-Feedback. In short, factor analysis has confirmed that the Student-Teacher Interaction Scale is a multidimensional instrument. It consists of three dimensions or factors as hypothesized by the researcher. All the items have also loaded on its postulated dimension.

Table 3

Factor Loading Matrix using Principal Component Analysis with Varimax

Items	Factor I	Factor II	Factor III
1.	.795		
2.	.344		
3.	.489	.675	
4.	.689		
5.	.387	.696	
6.	.674		.352
7.	.687		.305
8.			.696
9.			.791

Continued....

Items	Factor I	Factor II	Factor III
10.			.659
11.		.799	.300
12.		.784	

Note. Only loadings above 3 is displayed.
Factor I: Student-Centered Learning
Factor II: Strategy Instruction
Factor III: Specific Feedback

Levels of Self-Regulated Learning among Students

Table 4 shows the distribution of respondents according to levels of self-regulated learning. The scores for self-regulated learning were determined by summing the items and taking the average.

Table 4

Distribution of participants according to Levels of Self-Regulated Learning

Levels of Self-Regulated Learning	*N*	Percentage
High	56	17.4%
Average	225	69.9%
Low	41	12.7%
Total	322	100%

In this study, 'respondents' mean score was 4.90 and the standard deviation was .80. As shown in Table 4, only 17.4% of the respondents can be considered as high self-regulated learners. The self-regulated learning scores for these students were greater than one standard deviation from the mean score (more than 5.7). Sixty nine percent of the respondents have average level of self-regulated learning as their obtained scores fell within plus minus one standard deviation from the mean score (within 4.1 to 5.7). The results also show that 12.7% of the respondents have low level of self-regulated learning. Their scores were less than one standard deviation from the mean score (less than 4.1). Generally, the obtained results indicate that majority of the students used strategies to self-regulate their own learning. The numbers of students who are low at self-regulated

learning were also not alarming. These results may give a positive indication about self-regulated learning among Malaysian students.

However the results must be interpreted with caution as the two secondary schools involved in this study, were not randomly selected. Both schools are boarding schools, and students may have higher motivation and abilities to self-regulate as they are generally high achievers. For this reason, generalization of the results may be limited to boarding schools only.

Relationship between Self-Regulated Learning and Student-Teacher Interactions

The relationships between self-regulated learning, and student-teacher interactions as well as its dimensions were examined with Pearson product-moment correlation coefficient. Interpretation on the strength of correlation was based on guidelines proposed by Cohen (1988). The results of this analysis are showed in Table 5.

Table 5

Correlations between Self-Regulated Learning and Student-Teacher Interactions

Variables	Self-Regulated Learning
Student-Teacher Interactions	.50**
Student-Centered Learning	.33**
Specific Feedback	.09
Strategy Instruction	.17**

**$p<.01$

Table 5 shows that, there was a positive and significant correlation between self-regulated learning, and student-teacher interactions, indicating that self-regulated learning increases as student-teacher interactions increases ($r=.50$; $p<.01$). The strength of correlation showed a large effect, according to Cohen's (1988) guidelines. In addition, this analysis revealed, that two of the dimensions in student-teacher interactions were also positively and significantly related to self-regulated learning. Student-centered learning has a medium correlation with self-regulated learning ($r=.33$; $p<.01$) whereas strategy instruction has a low correlation ($r=.17$; $p<.01$). Specific feedback was not found to be significantly related to self-regulated learning ($r=.09$; $p>.01$).

The positive relationship between student-teacher interactions, and self-regulated learning implies that teachers can play an important role in cultivating self-regulated learning among students. They are

able to shape the learning settings, so that it encourages, and facilitates students to be proactive and independent in learning. For instance, teachers may permit students to have ownership, and responsibilities of their own learning processes by giving them freedom to make decisions concerning their own learning activities. Students may be allowed to decide the topic of assignments, its references, and method of presenting it. Teachers can also encourage self-awareness and self-assessment during the learning processes. This is because efficient self-regulated learners always plan, organize, self-evaluate, and self-monitor their own learning (Zimmerman & Martinez-Pons, 1986). Founded on this reason, opportunities should be provided to students to review, and appraise their own performance and progress. This can be done by asking students to assess their achievement, spot their own weak points in a particular subject, and reflect on the commitments and efforts that they have put in. By doing so, students may be able to identify their weaknesses, and strengths in a particular subject and make plans to improve their future performance. To encourage self-regulated learning, teachers should also nurture students' interests and motivations in learning, and not just aiming for good grades or results per se.

No doubt, teachers can play a positive role in promoting self-regulated learning in schools. Yet, many of them either do not know how or do not care to provide students with such opportunities (Corno & Randi, 1999). Learning activities in most schools are still examination-oriented, highly structured, and have little consideration of students' active roles in learning (Heo, 2003). According to Zimmerman (1989), many forms of self-regulated learning such as students' planning, monitoring, or self-reward can be stifled by the highly structured learning activities and restrictive code of classroom conduct in schools. In Malaysian context, the educational system has always been criticized for being too examination-oriented to the extent that students are constantly spoon-fed by teachers and drilled to achieve good performance in examination (Malaysian Strategic Research Center, 1994). In schools, students do not have much opportunity to self-regulate their own learning since teachers always outlined what, how, and when they should learn. The learning materials, learning processes, and learning tasks have also been rigidly set, with the goal to produce good examinations results. Accordingly, little room is left for students to exercise and improve their self-regulated learning skills. In other words, self-regulated learning was not given much attention by the teachers or the schools systems as a whole. Given that, the present study found a strong positive association between self-regulated learning and student-teacher

interaction; teachers can make a difference to improve the situation. Students' self-regulated learning may be enhanced if they practice student-centered learning, and conduct more lessons on learning strategies. However, teachers must also take into account students' personal factors such as their motivational beliefs when promoting self-regulated learning in schools.

This study also discovered that self-regulated learning was positively and significantly related to two dimensions of student-teachers interactions, which were student-centered learning (r=.33; p<.01) and strategy-instructions (r=.17; p<.01). Student-centered learning is a teaching approach which allows students to self-direct, self-access, and self-pace in learning. This approach enables students to determine the content, pacing, and instructional sequence, based on their learning needs, and abilities. Students may be more inclined to self-regulate if they can have a say in the learning processes (Perry, Vandekamp; Mercer, & Nordy, 2002). In view of the fact that student-centered learning has recorded a medium strength relationship with self-regulated learning, teachers should not overlook the importance of this factor.

The teaching of learning strategies or strategy instruction can also affect self-regulated learning positively, as students who received training in self-regulated learning may be able to manage their studies more efficiently as compared to those who did not receive any guidance (Zimmerman & Schunk, 1989). Researchers now realized that many students do not learn strategies automatically (Heo, 2003; Pressley & Harris, 1990). This problem highlighted the need to provide students with knowledge on learning strategies. Based on literature review, strategy instruction can be summarized into two categories:

i. Detached Strategies Instruction

Strategies are taught directly without utilizing the school curriculum. Teachers give extra lessons to students to explain the various types, and values of self-regulated learning strategies. Students will also be informed of the types of tasks for which the strategies are helpful and why (Ormrod, 1999). Such knowledge enables students to utilize and generalize strategy to similar learning tasks.

ii. Embedded Strategy Instruction

Strategies are taught indirectly during formal lessons. Various strategies are embedded in the learning activities, and taught using the curriculum materials (Evans, 1988). With constant usage of the

strategies, students may realize the concrete benefits of strategy use. Teachers only play a facilitative role, as students learn how to execute the strategies independently, teachers will gradually fade out of their supportive role.

Among these two instructions, the later is believed to be more effective, as it allows students to apply strategies in regular learning context.

In the present study, specific feedbacks were not significantly related to self-regulated learning. More studies ought to be carried out to confirm the relationships. This is because literature reviews on self-regulated learning and researches such as Zimmerman and Schunk (1989) strongly suggest that specific feedbacks are positively related to self-regulate learning. One possible reason behind the insignificant correlation between self-regulated learning and specific feedbacks, is that students are able to self-monitor, self-evaluate and self-regulate, their own performance and progress without relying on teacher's feedbacks. This is possible, as majority of the students sampled in this study are high and moderate self-regulated learners. Even so, feedbacks provided by teachers on academic performance and learning tasks are still essential particularly for poor self-regulated learners. These feedbacks may guide them to self-evaluate, and refined their learning strategies (Butler & Winne, 1995).

CONCLUSIONS

To date, not many studies have been carried out on self-regulated learning in Malaysian context, particularly in relation to student-teacher interactions. The results of the present study highlighted teachers' role in promoting self-regulated learning among students. More research should be carried out to refine and extend the scale. Results about the levels of self-regulated learning among students imply that majority of the boarding school students, sampled in this study, use strategies to manage and promote their own learning. There were also students who are poor at self-regulated learning. These students' self-regulated learning may be improved if teachers practice student-centered learning and teach them self-regulated learning strategies. The relationship between self-regulated learning and specific feedbacks, though, has to be confirmed in future studies as it is still not conclusive.

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