Available online at https://www.rsu.ac.th/rjas

Rangsit Journal of Arts and Sciences, July-December 2015 RJAS Vol. 5 No. 2, pp. 117-129

ISSN 2229-063X (Print)/ISSN 2392-554X (Online)
DOI : 10.14456/rjas.2015.11

Factors impacting on educational motivation among international students in Thailand

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Submitted 1 May 2015; accepted in final form 1 July 2015
Available online 26 December 2015

Abstract

A major challenge for students within international schools in Thailand is motivation. The purpose of this study was to ascertain students' perceptions of the classroom learning environment, institutional support, social support, academic self-efficacy, and motivation to study. A survey design using a sample of 144 international high school students was employed. T-test and ANOVA found little practical difference for gender and GPA. Multiple regression analysis found that classroom-learning environment, institutional support, and academic self-efficacy explained 30% of the variance of motivation to study.

Keywords**:** *institutional support, learning environment, motivation, self-efficacy*

1. Introduction

Within education, student motivation is in decline (Smith, 2010). In addition to an overall decline in motivation, there is a strong decline in motivation as students move from elementary to high school (Martin, 2009; Maulana, Opdenakker, Stroet, & Bosker, 2013). This leads to the question of what is happening at the high school level that is causing students to loss motivation in studying. Within Southeast Asia, a large amount of research has been conducted to understand student motivation to learn English at the tertiary level (Choosri & Intharaksa, 2011; Wimolmas, 2013). Yet this leads to the question of what is happening at the secondary level in relation to student motivation.

In addition to understanding general motivation at the secondary level, there is also a need to examine what motivates students to study. International students currently learning in the English language are the college students of tomorrow. Students who are not motivated to study are at a much higher risk of not completing college if they choose to enroll after high school (Bean, 2005). In other words, identifying what contributes to student motivation to study at the high school level may contribute to success at the tertiary level. This study is timely as there is concern with the motivation of international students concerning academic matters (Pavasajjanant, 2012). This paper contributes to understanding motivation to study within the context of international schools in Thailand where questions have been raised about motivation (Loima & Vibulphol, 2014). A conceptual model was proposed and tested on how student perception of the classroom environment, social support, academic self-efficacy, and institutional support, explain motivation to study. The purpose of this study is to explain these relationships in order to understand what measures to take in order to increase a student's desire to study. Highly motivated students are often high achieving students (Guay, Ratelle, Roy, & Litalien, 2010). Thus, it is important for teachers and schools to know what they can do to increase the motivation of their students to study.

1.1 Motivation

There are two major forms of motivation and they are intrinsic and extrinsic motivation. Deci (1972) defines intrinsic motivation as choosing to perform a behavior for the simple sake of the activity. Extrinsic motivation is choosing to perform a behavior for a reward. The difference between these two concepts is that intrinsic motivation comes from within the person whereas extrinsic motivation comes from outside of the person. Studies have found that both forms of motivation attribute to the academic performance of students in general and Asian students in particular (Young, Johnson, Arthur, & Hawthorne, 2011; Zhu & Leung, 2011).

There are several prominent theories that attempt to explain motivation, among them are self-determination theory, Maslow Hierarchy of Needs, and attribution theory. Self-determination theory states that humans have three primary psychological needs, which are competence, autonomy, and relationships with others (Deci & Ryan, 2000). However, Komin (1990), in a study in the Thai context, agrees that relationships are highly value in the Thai context but competency and autonomy are not highly valued. As such, self-determination may not serve as a viable model for what motivates students in Thailand.

Maslow's Hierarchy of Needs states that people have socio-emotional and physical needs that motivates or demotivates them to do something (Maslow, 1954). In order of importance, the needs are physiological, safety, belonging, esteem, and self-actualization. However, Schutte and Ciarlante (1998) have proposed an Asian equivalent of Maslow's Hierarchy of Needs. Their model states that Asian needs are physiological, safety, affiliation, admiration, and status. The bottom two levels of physiological and safety are the same as the ones found in Maslow's work. The differences emerge in the final three levels, which are affiliation, admiration, and status, which varies from Maslow's theory. This further indicates that motivation is different in the Asian context. Further exploration of this phenomenon in the context of education is necessary. Attribution theory explains what motivates a person to behave the way they do (Hollyforde & Whiddett, 2002). People will attempt to explain that the reason for their behavior is based on either external or internal motivates. In the context of Asia, people from urban settings attribute their success to personal effort while those from rural settings attribute success to factors beyond their control (Gobel, Thang, Sidhu, Oon, & Chan, 2013).

Students who are highly motivated, particularly intrinsically, are key contributors to the classroom environment through their contribution to cognitive discourse (Rienties, Tempelaar, Van den Bossche, Gijselaers, & Segers, 2009). Extrinsic motivation may not be a negative factor in academic outcomes at the high school level if it is combined with a high level of intrinsic motivation (Wormington, Henderlong, & Anderson, 2012). One study found that there is a difference in motivation based on gender (Velayutham, Aldrige, & Fraser, 2012). Furthermore, other studies found that prior academic performance has an effect on motivation (Bryan, Glynn, & Kittleson, 2011; Emmanuel, Adom, Josephine, & Solomon, 2014). Therefore, it is necessary to consider gender, academic performance when examining motivation.

Each of these theories and studies serve an important function in attempting to explain motivation and how it is expressed among international students in Thailand. As such, they provide a theoretical framework upon which to examine academic motivation of students. However, there is evidence that culture has an impact on academic motivation (Lin, Deng, Chai, & Tsai, 2013). As such, understanding motivation to study in a Buddhist context such as Thailand may help to further grasp this phenomenon.

1.2 Academic self-efficacy

Self-efficacy is a person's perception of their capacity to accomplish a task (Bandura, 1982). Academic self-efficacy is a narrower form of self-efficacy that only examines a person's belief in their ability to complete academic task (Owen & Froman, 1988). Bandura (1997) states that there are four components of self-efficacy, which are, mastery experience, vicarious experience, social persuasion, and emotional state.

Mastery experience relates to the success and failure a person has had in the past (Bandura, 1977). A consistent experience in mastering, not only simple but also gradually more complex task, is important to enhancing self-efficacy (Bong, 2013; Britner, et al., 2012).Student success is a critical component in mastery experience (Borich, 2011).

Vicarious experience is related to Bandura's (1989) social cognitive theory which states that people learn through seeing others perform a behavior or action successfully. Several studies indicate the role of vicarious experience in enhancing self-efficacy (Lastrapes & Negishi, 2012; Loo & Choy, 2013). Bartsch, Case, and Meerman (2012) conducted a study in which a statistics class was divided into two groups. One group experienced peer modeling, which is a form of vicarious experience, and the other group did not. The group that received peer modeling had higher math self-efficacy than the other group. As such, the importance of vicarious experience in self-efficacy is strongly supported in literature.

Verbal persuasion is defined as being encouraged by people that one is able to complete a task (Bandura, 1977). Studies indicate that verbal persuasion is a strong predictor of self-efficacy within the Asian context (Kiran & Sungur, 2012; Lin & Flores, 2013). Lastly, emotional well-being is a person's physiological/emotional state and this affects what a person believes they can do (Bandura, 1977). Through reducing anxiety and other negative emotions, a student's self-efficacy can be increased (Breso, Schaufeli, & Salanova, 2011).

1.3 Classroom learning environment

The classroom-learning environment consists of the intellectual, physical, social, and instructional context in which a student's learning occurs (Liu, 2010). Fraser, McRobbie, and Fisher (1996) have identified seven characteristics of the classroom. The traits are teacher support, involvement, investigation, social cohesiveness, cooperation, equity, and task orientation. Teacher support is the assistance a teacher provides their students in the classroom. Involvement is a measurement of how interested a student is in their studies (Khine, 2001). Investigation is the use of problem-solving skills in the classroom. Social cohesiveness is the degree to which the students have positive relationships with one another. Cooperation is how well the students are able to work together. Equity is a measure of the degree of fairness in the classroom. Lastly, task orientation is the focus of the classroom environment in completing task.

Studies have indicated that an excellent classroom learning environment, based on the characteristics as defined by Fraser, McRobbie, and Fisher (1996) is beneficial to students (Borgioli, 2008; Chionh & Fraser, 2009; Dobbs-Oates, Kaderavek, Guoc, & Justice, 2011; Loyens & Rikers, 2011). A study in China indicates that within the Asian milieu, the classroom learning environment influences motivation (Lee, Yin, & Zhang, 2009).

Several studies involving the classroom-learning environment have been performed in the Asian context (Chionh & Fraser, 2009; Seng & Fraser, 2008). However, these were studies done to confirm the characteristics of the scale and were not used in predicting how they influence other variables. The current study wants to confirm that the environment of the classroom is an adequate predictor of motivation within the context of this study.

1.4 Social support

Social support is defined as the help that is available to a person during a stressful situation (Sarason & Sarason, 1982). Components of social support include informational support, esteem support, practical support, and social network. Informational support is defined as assisting a person and understanding how to deal with a problem and esteem support is the perception that a person feels appreciated by others (Harlow & Webb, 2003). Practical support is the tangible assistance a person offers to someone in the form of literal resources (Kornish & Mann, 2010). Lastly, social network consists of all the relationships people have across organizations and society (Deseve, 2009).

Students who value social support are often more engaged in the classroom and have improved psychological health (Chu, Saucier, & Hafner, 2010; Ruthig, Haynes, Stupnisky, & Perry, 2009). In addition, there is evidence that social support influences motivation of students (Alfaro & Umana-Taylor, 2010; Young, Johnson, Hawthorne, & Pugh, 2011). In a large study amongst French speaking people in Canada, Legault, Pelltier, and Green-Demers (2006) found that social support from relatives and the school plays an important role in increasing motivation and decreasing motivation in school. This is an indication of this relationship in the context of the West, yet there is a need to see how this relationship manifests itself in the Asian environment of international schools.

1.5 Institutional support

Institutional support is defined as the emotional disposition of an individual has that toward the school in which they study (Eisenberger, Huntington, Hutchison, & Sowa, 1986). This construct is based on several psychological theories such as social exchange, norm of reciprocity, and organizational support theory. The theory of social exchange suggests that the decision an individual makes whether to continue a relationship or not is based on the reward of continuing the relationship versus the cost of maintaining it (Homans, 1961). The norm of reciprocity is similar to social exchange theory but it adds the insight that people will reflect the

behavior that they receive from others (Gouldner, 1960). Organizational support theory integrates the norm of reciprocity and social exchange theory but also extends both theories by stating that these theories do not only apply to people but also to organizations in that people ascribe humanlike characteristics to organizations they have relationships with (Eisenberger et al., 1986).

Institutional support may affect the motivation of students. Schools that provided support through providing training sessions in study skills, supply study centers, and offer tutoring service are able to influence students' motivation to graduate from the school (Morrison & Williams, 1993). Institutions that support students through providing academic integration have been documented to influence students' motivation to complete college (Gansemer-Topf & Schuh, 2006). Academic integration may be of even greater importance for Asian students for cultural reasons as this form of support helps in adjusting to the rigors of school (Chhuon & Hudley, 2008).

2. Objectives

1. What are the perceptions regarding the motivational variables in the population selected in this study?
2. Is there a difference among gender and GPA in their perception of the motivational variables of this study?
3. What is the impact of academic self-efficacy, classroom learning environment, institutional support, and social support on educational motivation?

3. Materials and methods

3.1 Participants

Participants were international high school students located in Thailand. Purposive sampling was employed as the sampling technique of this study as it was not possible to employ another sample approach such as a form of random sampling. The criterion for inclusion was matriculation as a student at an international school in Thailand. A total of 144 students participated in this study. Females comprised 50% of the sample in the study compared to 45% for men while the last 5% of the sample did not respond to the item about gender. GPA was divided into four categories 2.00-2.50, 2.51-3.00, 3.01-3.50, and 3.51-4.00. For this study, 6% of the participants had a GPA between 2.00-2.50, 15% had a GPA between 2.51-3.00, 33% had a GPA between 3.01-3.50, and 46% had a GPA between 3.51-4.00.

3.2 Research design

This study used a cross-sectional survey design. Data was collected through the distribution of a survey to several schools in Thailand. Staff at each school collected data. Communication was made with the administration of the school and data was collected at a mutually agreeable time from the student sample population.

3.3 Instruments

The instrument had two parts. The first section included demographic questions and this refereed to gender and GPA. The second section was 38 items of statements students responded to using a Likert scale that measured their perceptions of the variables of this study. All questions in section two were measured using a 5-point scale from 1 (strongly disagree) to 5 (strongly agree).

3.4 Classroom learning environment

The classroom learning environment scale was adapted from Fraser, McRobbie, and Fisher (1996). The components of this scale were questions that assessed investigation, teacher support, equity, involvement, cooperation, and task orientation. The Cronbach Alpha reliabilities given by Fraser, McRobbie, and Fisher (1996) ranged from 0.81 to 0.93. Sample questions of this scale are "My ideas and suggestions are used during classroom discussions" and "I know how much work I have to do".

Confirmatory factor analysis was conducted to determine the appropriateness of the scale for the context of this study. The results revealed a latent variable comprised of three factors that explained 66% of the variance of classroom learning environment. Factor 1 expressed the concept of thinking skills. One item on this factor was "I am asked to think about the evidence for statements". Factor 2 described equity. One item on factor 2 was "I have the same opportunity to contribute to class discussion as other students". Lastly, factor 3 addressed support from the teacher. One item from factor 3 was "The teacher talks with me". The Cronbach Alpha of the modified 9-item scale was 0.83.

3.5 Perceived institutional support

The perceived institutional support scale was adapted from Eisenberger et al. (1986). The components of this scale are questions that assessed procedural justice, socio-emotional support, and discretionary choice. Eisenberger et al. (1986) reported a Cronbach Alpha of 0.81 for this scale. Sample questions for this scale include "I feel I am a part of the school community" and "The school tries hard to be fair to the students".

A confirmatory factor analysis was conducted to assess the appropriateness of this scale for the context of this study. The results of the analysis revealed three factors, which explained 65% of the variance of the latent variable. Factor 1 described the fairness of the institution towards the student. One item from factor 1 was "The school tries hard to be fair to the students". Factor 2 described discretionary choice of the school towards the student. One item from this factor is "The school helps me much more than it has to". Factor 3 described group socio-emotional support. One item from this factor was "I feel a part of the school community". The modified 11-item scale had a Cronbach Alpha of 0.90.

3.6 Academic self-efficacy

The academic self-efficacy scale was adapted from Owen and Froman (1988). This scale assessed a student's confidence to perform various academic tasks such as participating in class, earning good grades, and understanding concepts. Examples from the scale include "Listening carefully during a lecture on a difficult topic" and "I can earn good marks in most courses". Owen and Froman (1988) reported a Cronbach Alpha of .90.

In order to assess the appropriateness of this scale for the context of the study a confirmatory factor analysis was conducted. The results yielded two factors that explained 63% of the variance of the latent variable academic self-efficacy. Factor 1 described efficacy of understanding content and obtaining high academic achievement. One example from factor 1 was "Understanding most ideas presented in class". Factor 2 described efficacy in participating in discussion. One item from this factor was "Participating in a class discussion". The Cronbach Alpha for the modified 8-item scale was 0.85.

3.7 Social support

The social support scale is adapted from Thomas (2014). The components of this scale are questions that assessed esteem, practical support, social network, and informational support. The scale has eight items. Two sample questions from this scale are "When I have a problem in school I can talk to my friends about what to do" and "The relationships I have with my school friends are good". The Cronbach Alpha for this scale in Thomas (2014) was 0.88.

The confirmatory factor analysis revealed two factors that explained 74% of the variance of the latent variable social support. Factor 1 described informational support. One item from this factor was "I have people I can talk to about personal matters". Factor two described esteem support. One item from factor 2 was "The friends I have in school respect me." The Cronbach Alpha for the modified 5-item scale was 0.81.

3.8 Motivation to study

The motivation to study scale was adapted from Castiglia and College (2006). This scale assessed what encourages a student to study. Sample question from the scale include "I am motivated to study because I want to do better than my classmates and friends" and "I am motivated to study because I don't want to disappoint my family". Several questions were remove from the scale because they were not appropriate for the school setting such as "I am motivated to study because excelling in school can help me get a promotion at work" and "I am motivated to study because I don't want to lose my athletic/academic scholarship". The students in this study do not work, none received athletic scholarship, and few receive academic scholarships.

The confirmatory factor analysis revealed two factors that explained 73% of the variance of the latent variable motivation to study. Factor 1 described outward recognition for study. One item from this factor was "I am motivated to study because I want to graduate with Honors". The second factor described inner desires for studying. One item from this factor was "I am motivated to study because I really want to know the material". The Cronbach Alpha for the revised 5-item scale was 0.74.

3.9 Data analysis

Descriptive data was collected in this study. Items such as the mean of the variables as well as individual items were used for analysis. In addition, t-test and ANOVA were conducted to see if there were any differences across sub-groups in order to provide information about the perception of the students when divided by gender and GPA. Lastly, multiple regression was performed to determine to what extent the independent variables of classroom learning environment, social support, perceived institutional support, and academic self-efficacy explain the dependent variable of motivation to study.

4. Results

The overall mean for classroom learning environment was 3.50 with a standard deviation of .50, which indicated that the respondents mildly agreed with the statements of the survey. For example, item 20 indicated that students mildly agree that they explain their ideas to other students in class (M = 3.72, SD = .77). In addition, students also indicated in item 24 that the teacher talks to them as an individual (M = 3.92, SD = .80). This means that students are involved and experiencing fair amounts of teacher support in the classroom.

The overall mean for perceived institutional support was 3.20 with a standard deviation of .70, which indicates the students were mostly neutral in their perception of the support they received from the institution. For example, student were neutral that problems were settled fairly at the school (M = 2.93, SD = 1.09) as indicated in item 4. However, students also indicated in item 8 that the mildly agreed that they felt a part of the school community (M = 3.71, SD = .91). Therefore, the students pointed out that the school is providing a sense of belong even though there may be issues with fairness.

The overall mean for academic self-efficacy was 3.71 and the standard deviation was .67, which indicated that the students had a mild amount of efficacy in performing academic related activities. For example, in item 33, students had moderate amounts of efficacy in their ability to answer questions in a small class (M = 3.87, SD = .91). Students also expressed in item 38 mild efficacy in getting good grades (M = 3.89, SD = .91).

The overall mean for social support was 4.05 with a standard deviation of .63, which indicated the students agree with the statements describing social support. For example, in item 15, students agreed that the relationships they had with friends at school are good (M = 4.24, SD = .79). In item 12, students also indicated that they agree that they can go to friends for advice about their studies (M = 4.15, SD = .82).

The overall mean for motivation to study was 3.74 and the standard deviation was .69, which indicated that the students moderately agreed with the items in the scale. For example, item 31 indicated that students did not want to disappoint their family and this was something that motivates them (M = 4.08, SD = .99). Item 26 indicated that students agree that getting good grades motivates them to study (M = 4.07, SD = .96).

To determine if there were differences across groups, t-test was used for gender and ANOVA was used for the categories for GPA. Table 1 indicates the results for the test of the equality of variance using the Levene statistic for gender. Table 2 indicates the test of equality using the Levene statistic for GPA. The results indicate that the variance was equal across groups.

The results of the t-test for gender indicated no difference in means for classroom learning environment (t(135) = 1.63, p = .14), academic self-efficacy (t(135) = 1.00, p = .10), social support (t(135) = -1.04, p = .29), and motivation to study (t(135) = -.25, p = .79). There was a difference in the means of gender for perceived institutional as men had a mean of 3.42 and women having a mean of 3.07 (t(135) = 2.93, p = .00). However, the difference was small (.34) and lacked practical significance. Table 3 reports the results for gender.

ANOVA was conducted to see if there was a difference among the means as determined by GPA. Results indicated that there were differences based on GPA. Table 4 shares the results of the ANOVA.

Table 1 Test of equality for gender

	F-Value	P
Classroom Learning Environment	3.5	.06
Perceived Institutional Support	.11	.73
Academic Self-Efficacy	1.04	.3
Social Support	.17	.70
Motivation to Study	3.1	.08

Table 2 Test of equality for GPA

	F-Value	P
Classroom Learning Environment	.53	.65
Perceived Institutional Support	.54	.65
Academic Self-Efficacy	2.54	.06
Social Support	2.00	.11
Motivation to Study	1.9	.13

Table 3 T-test for gender

	t	Df	P	Mean difference	95% Confidence interval of Difference
Classroom environment	1.63	135	.10	.14	-.02 - .31
Perceived institutional support	2.93	135	.00	.34	.11 - .57
Academic self-efficacy	1.00	135	.31	.10	-.10 - .31
Social support	-1.04	135	.29	-.11	-.33 - .10
Motivation to study	-.255	135	.79	-.02	-.26 - .20

Table 4 ANOVA of GPA

		Sum of Squares	df	Mean Square	F	Sig.
Perceived Institutional Support Mean	Between Groups	3.957	3	1.319	2.82	.041
	Within Groups	64.857	139	.467		
	Total	68.814	142			
Social Support Mean	Between Groups	6.794	3	2.265	6.29	.000
	Within Groups	50.036	139	.360		
	Total	56.830	142			
Classroom Environment Mean	Between Groups	2.343	3	.781	3.19	.025
	Within Groups	33.934	139	.244		
	Total	36.277	142			
Motivation to Study Mean	Between Groups	6.547	3	2.182	5.04	.002
	Within Groups	60.138	139	.433		
	Total	66.685	142			
Academic Self-Efficacy Mean	Between Groups	16.921	3	5.640	20.81	.000
	Within Groups	37.667	139	.271		
	Total	54.589	142			

A Tukey Post-Hoc test was conducted to determine where the differences in means were within the group of GPA. In every single case, the group with the highest agreement with the items in the survey belonged to those who had a GPA of 3.51-4.00. However, most of the differences, though significant, were not practically significant. For example, for social support, there was a difference in the means of those with a GPA of 3.51-4.00 (M = 4.25, SD = .71) and 2.51-3.00 (M = 3.66, SD = .80) of only .58 points. For motivation to study, there was a difference in the means of those with a GPA of 3.51- 4.00 (M = 3.93, SD = .68) and 2.51-3.00 (M = 3.31, SD = .89) of only .61. However, for academic self-efficacy, not only was there a difference, but the difference was almost one point. Those with a GPA of 3.51-4.00 had a mean of 4.12 with a standard deviation of .48 while those with a GPA of 2.51-3.00 had a mean of 3.27 with a standard deviation of .40. There was no difference in the means of perceived institutional support or classroom learning environment for GPA.

A multiple regression analysis was conducted to explain the variance of motivation to study. Linearity and equality of variance was

assessed through a scatter plot of the predicted versus regressed residuals. Analysis of the scatter plot indicated linearity is met as well as equality of variances. Figure 1 provides the results. A correlational matrix was developed to assess multicollinearity. Results indicate that multicollinearity was not an issue. Table 5 provides the results.

A multiple regression analysis was conducted to explain motivation to study from classroom learning environment, perceived institutional support, social support, and academic self-efficacy. The variables classroom learning environment (B = .20, p = .03), perceived institutional support (B = .34, p = .00), and academic self-efficacy statistically (B = .16, p = .07) significantly explained motivation to study ($F(3, 140) = 20.28$, p = .00, r^2 = .30). Social support was remove from the model as the correlation was weak and not significant statistically (B = .08, p = .26).

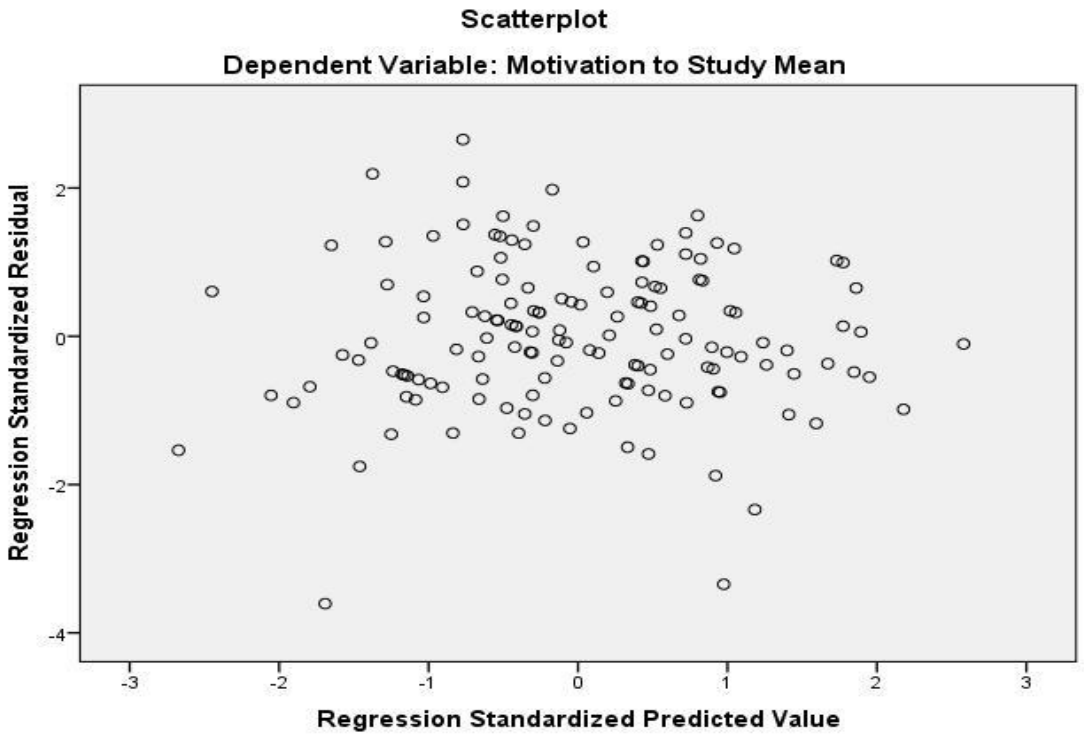

Figure 1 Scatter plot of regression analysis

Table 5 Correlations of the variables

	Perceived Institutional Support	Social Support	Classroom Learning Environment	Academic Self-Efficacy	Motivation to Study
Perceived Institutional Support	1				
Social Support	.08	1			
Classroom Learning Environment	.43*	.39*	1		
Academic Self-Efficacy	.24*	.28*	.28*	1	
Motivation to Study	.46*	.22*	.49*	.35*	1

* correlation significant at the .05 level

5. Discussion

The results of this study led to three major findings. One, the perceptions of the international students was moderate for classroom learning environment (M = 3.50, SD = .50), perceived institutional support (M = 3.20, SD = .70), academic self-efficacy (M = 3.71, SD = .67), and motivation to study (M = 3.74, SD = .69). This indicates overall that the students are not extremely in agreement or disagreement when asked about their perceptions on these variables. However, the perception of social support was in stronger agreement with the items on the survey (M = 4.05, SD = .63). The stronger sense of social support is because of the value of relationships in Thai culture (Komin, 1990). As such, students have friends who respect them and they can go to when they are facing challenges with their studies.

Two, there was no difference, at least practically, when comparisons was made by gender on any of the variables in this study. The implication for this is that measures taken to influence the variables of this study can be the same regardless of gender as gender is not a factor. For GPA, the majority of difference, though significant was not of any practical difference. Whenever, there was a difference it was those with a GPA of 3.51-4.00 that had the higher mean for all variables in this study. These findings confirm the work of Gansemer-Topf & Schuh (2006), Chu, et al. (2010), Lee et al. (2009), Schunk and Pajares (2009). High performing students general have a more positive perception of their classroom environment, support from the school, social support, their ability to complete academic task, and motivation to study.

Three, classroom learning environment (B = .20, p = .03), perceived institutional support (B = .34, p = .00), and academic self-efficacy (B = .16, p = .07) explained 30% of the variance of motivation to study ($F(3, 140) = 20.28$, p = .00, r^2 = .30). The explanation of variance indicates that when there is a change in the perception of the independent variables there is a corresponding change of the dependent variable of motivation to study, at least partially as the variance explained is only 30%. Examining the data, when students are in a classroom in which they have a voice, a teacher that interacts with them, and are expected to think deeply, this influences their motivation to study. When students are at a school that respects them, respects their choices, and is fair, this influences motivation to study. Furthermore, when students have the confidence to participate in class discussion, understand what they read, and answer questions, this also influences their motivation to study.

Social support was removed from the model as the correlation was weak and not significant statistically (B = .08, p = .26). Even though the students had friends who respected them and friends they could turn to for informational support about their studies, this did not influence their motivation to study. Though social report was removed from the regression model, students with GPAs in the 3.51-4.00 group had a much higher perception of social supported.

The results of this study leads to the following recommendations. One, schools must utilize the teacher to motivate students to study. Relationships with peers are important but are not a factor in motivating students to study. However, interaction with the teacher and a positive classroom environment that includes investigation and involvement makes a difference. The teacher has significant control over the classroom environment and needs to be sure that he or she is providing a place that allows for critical thinking, expression of opinion, and the development of rapport with the students.

Two, institutions need to find acceptable ways to allow students some decision making and to maintain or improve fairness. These are components of institutional support. For decision-making, finding ways to improve here will motivate students and is consistent with self-determination theory. For high school students, allowing students to make decision about electives, school social activities, and even choices within the cafeteria give student voice in a way that is not detrimental to the function of the school. Fairness can be improved through communicating rules and expectations with students and adhering to school policies.

The current study explains 30% of the variance of motivation to study. The explanatory power of the model is adequate when one takes into consideration that human behavior is difficult to predict. Nevertheless, further study is needed to improve the model. A study that includes such variables as quality of facilities, time spent using social networking, and or growth versus fixed mindset could help to explain further motivation to study. It may also be useful to look at how

individualism and collectivism may influence motivation. For example, in order to be accepted by friends, it is possible that students show a lack of motivation for social acceptance. Furthermore, though social support was removed from the model, it is possible that this variable indirectly influences motivation to study through one of the other independent variables. As such, a study that analyzes these variables using structural equation modeling may provide a better analysis of the model and the appropriateness of social support.

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