MANAGING STUDENTS' MOTIVATION: AN EMPIRICAL STUDY FROM SELF-DETERMINATION PERSPECTIVE

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ABSTRACT

Purpose/Objective: There always has been serious concern on students' academic performance in schools and institutions of higher learning. Mostly it is addressed in terms of lack of motivation. However, little attention has been given to the reasons of poor motivation. The Self-Determination Theory (SDT) of motivation provides a new perspective of motivation. The paper examines the students' motivation and study engagement using SDT framework. It examines the role of teachers in creating autonomy supportive learning climate that contribute to students' intrinsic motivation and study engagement.

Research Method: The data were collected from 529 undergraduate students of International Islamic University Malaysia representing several study disciplines. Standardized instruments were employed to measure the constructs of learning climate, basic needs, perceived self-determination, and study engagement.

Findings: Results provided strong support to the SDT proposition suggesting that an autonomy supportive learning climate significantly contributed to intrinsic need satisfaction of autonomy, competence, and relatedness. It was also found that the autonomy supportive learning climate and satisfaction of competency need contributed to study engagement.

The study provides good empirical support to the SDT propositions in a non-Western cultural context.

Keywords: Self-determination, Intrinsic motivation, learning climate, study engagement

1. Background of the Study

Motivation is considered to be an important determinant of students learning achievement and academic performance. However, motivation is traditionally being viewed as something that differs in degree, hence parents and teachers would like to *increase* the motivation level of less motivated ones. However, the Self-Determination Theory (SDT) of motivation given by Ryan and Deci (2000) put more emphasis on the type rather than degree of motivation. They argue that people differ in motivation based not only in terms of degree but also in kinds. Thus an individual may engage in an activity because it is of interest to him or her and another person may do the same but expecting some outcomes. Therefore, SDT distinguishes between two types of motivation, namely, intrinsic motivation which means doing something because it is interesting and enjoyable; and extrinsic motivation which means doing an action because it leads to separable outcome. Importantly, behaving intrinsically can be much better in terms of performance and the quality of experience.

Self-determination theory can be seen as a powerful motivational theory, especially in an educational setting. It can be observed that students may only be intrinsically motivated for some courses and not interested in some other. Some may like to go to college not because of their own interest but because they are told to do so. Some others will join college because they have a

perceived value and expect to have some favourable outcomes. As a macro theory of motivation, SDT looks at all these dynamics and provides a better understanding of students' motivation. These motivational processes have an impact on the students' performance, engagement, as well as on their well-being.

2. Literature Review

When intrinsically motivated, people engage in activities for the potential fun, excitement and challenge. These behaviours originate from within the self-associated feelings of curiosity and interest, rather than being brought about by any external contingencies (Niemiec and Ryan, 2009). SDT argues that people have natural motivational tendencies and readiness to learn, to explore, to grow and to assimilate knowledge and to develop new skills. However, these tendencies can be either facilitated and supported or hindered by social contexts (Ryan and Deci, 2000).

Due to the fact that not all activities are intrinsically interesting and enjoyable to derive satisfaction from them, an individual needs some instrumental extrinsic factors to get him/her motivated. Extrinsic motivation refers to doing an activity with the expectations of separable outcomes. SDT argues that extrinsic motivation can fall in degrees and as not one category (Ryan and Deci, 2000). Extrinsic motivation can vary in degree from fully controlled by contingences external to individual, such as expecting reward or avoiding punishment (doing an assignment because students fear losing their grades), to autonomous motivation (doing an assignment because students perceive it valuable to their careers) which can be considered as identical to intrinsic motivation. Doing assignment because of fear of loss and doing it because it is perceived valuable are still extrinsic motivation but they vary in their degree. What differentiates both behaviours is that in the first one, students are pressurized to do so. However, in the second behaviour, it involves some sort of endorsement and relative autonomy (Ryan and Deci, 2000).

Given the classification of motivation (intrinsic and extrinsic) by self-determination theory and how extrinsic motivation can be further divided into sub-groups, it proposes that people have three universal, psychological needs in order for them to develop and function optimally. These three needs are: autonomy, or the perception that one's behaviour is self-congruent and volitional; competence, or the perception that one is capable of influencing the environment in desirable ways; and relatedness, or the feeling of closeness and connectedness with others (Weinstein and Ryan, 2011). It is suggested that the social contextual factors that provide people the opportunity to satisfy these needs will facilitate intrinsic motivation and the integration (the fullest type of internalization) of extrinsic motivation, whereas those that prevent satisfaction of these needs will decrease intrinsic motivation and the integration of extrinsic motivation (Deci and Ryan, 2000). Weinstein and Ryan (2011) describe the state of individuals whose needs are satisfied or dissatisfied by the social environments. They argue that individuals move towards motivational states that are characterized as self-volitional or autonomous when their environments support their needs. But, if environmental factors don't support the basic needs, motivation is pressured or controlled.

According to SDT, satisfying students' basic psychological needs for autonomy and competence can make their intrinsic motivation sustainable. Both needs are important for maintaining intrinsic motivation. Stated differentially, if one need is satisfied and the other is not, intrinsic motivation can be hindered (Niemiec and Ryan, 2009).

Benware and Deci, (1984) conducted a study to test whether students who learn with an active orientation (learn to teach) would be more intrinsically motivated than those who learn with a passive orientation (learn to take exam on the same material given to the active orientation group). The authors used a sample of 40 first year university students. Students were divided into two groups: experimental group (learning to teach), and control group (learning to take an exam). Findings showed that the students with the passive orientation (learn to be examined) were less intrinsically motivated, had lower conceptual learning score and had lower perception of themselves to be more actively engaged with the environment than the students with the active orientation (learn to teach others). Niemiec and Ryan, (2009) reported that two studies conducted in USA (Grolnick and Ryan, 1987) and Japan (Kage and Namiki, 1990) found out that evaluative pressures undermined student's intrinsic motivation for classroom topics and materials, as well as their performance in school, whereas, autonomy support facilitated it.

As postulated by SDT that satisfying students' needs is vital for their academic motivation internalization, Jang *et al.*, (2009) found out that experiencing the feelings of autonomy and competence enhances intrinsic motivation. They conducted a series of studies testing SDT in a collectivistic culture in South Korea using samples of middle-class students. As it is argued that collectivistic culture does not value autonomy, the authors, specifically, wanted to examine whether those students enjoy learning activities that afford basic psychological need satisfactions. Findings showed that the basic assumptions of SDT hold true even a collectivistic culture. It was found that basic needs satisfaction led to more satisfying learning experiences and greater academic achievement.

As self-determination is claimed to be universal and that people share three needs; namely autonomy, competence, and relatedness, some studies (e.g., Brickman and Miller, 2001; as cited in Zhou *et al.*, 2009) suggest that students acquire their needs, values and attitudes from their culture and this cultural element influence students' motivation for learning. Accordingly, children in collectivist cultures are inclined to develop strong need for belonging as these cultures do not value autonomy, whereas children in individualistic cultures are raised to develop strong need for autonomy. Research has shown that autonomous motivation is associated with positive learning outcomes such as interest in course material, conceptual understanding, and classroom adjustment among elementary students and achievement and adjustment among college students. To be autonomously motivated, the three needs should be met. However, it has been suggested that autonomy is not important for school outcomes in collectivist cultures such as China. Using a sample of elementary school students, Zhou et al., (2009) conducted a study, applying SDT, to investigate the motivation for learning of rural Collectivists Chinese children. This study aimed at examining the relationship of autonomous/controlled motivation and three classroom adjustment perceptions including: (a) perceived competence (b) perceived choice; and (c) interest. It also aimed at investigating the relations of teachers' autonomy support to these

classroom adjustment variables. Findings showed that students' autonomous motivation was associated with a higher level of interest, perceived competence, and choice, whereas controlled motivation was related to a lower level of perceived choice and reduced interest. Further, this study suggested that students' perception of teachers autonomy support positively predicted changes in autonomous motivation, controlled motivation and perceived competence (Zhou et al., 2009).

Engaging students in classrooms setting is very important. Not only can engagement predict important outcomes such as learning and development, but it also reveals the underlying motivation (Guay et al., 2001). Engagement refers to the behavioural intensity and emotional quality of a person's active involvement during a task. In this study, it has been argued that the congruence between students' self-determined inner motives and their classroom activity is facilitated by autonomy-supportive teachers through identifying and nurturing students' needs, interests, and preference. In contrast, these inner and self-determined motives could be degraded by controlling teachers as they will shape their agendas of what students should think, feel and do. As teachers agendas are shaped, controlling teachers introduce extrinsic incentives in order to shape students' adherence toward that agenda, which essentially bypass students' inner motives.

As engagement of students is very important and beneficial, Guay et al (2001) argued that teachers can be autonomy-supportive when they are trained to do so. In this study, trained teachers, who participated in an informational session on how to support students' autonomy and who engaged themselves in independent study on the study-specific website, were able to display greater autonomy-supportive behaviours than the non-trained ones. Furthermore, this study suggests that students' engagement was more promoted with teachers who used autonomy support during instruction.

Students differ in their perception of the learning environment and thus their engagement efforts rely on what they perceive. Hardré et al., (2006) mentioned that students' outcomes are results of systematic interactions of factors that involve students, teachers and their educational institutions. The characteristics that teachers and students bring to their educational settings and culture of that setting interact and affect students' outcomes either positively or negatively. To investigate this interaction of factors, students individual differences (need for cognition & perceived ability), perceptions of classroom environments (based on self-determination theory), and goal structures (based on achievement goal theory), and how these collectively and differentially predict high school students' motivation, Hardré et al., (2006) conducted a study using a sample of 6,539 students from 14 high schools in Taiwan (Asian context). This study concluded that individual differences directly predict motivation as well as through classroom perception (teacher support, peer support, teacher interpersonal style). Also, students' engagement and efforts were predicted by goal structures (learning goals, performance-approach goals, performance-avoidance goals, future goals).

According to Katz and Assor (2007), offering choice in classrooms is not motivating by itself; rather teachers should offer choices that meet their students' needs. That is, choice should be

constructed to support students' autonomy, competence and relatedness. To support these basic psychological needs, choice should be constructed to match students' interest and goals (autonomy support); to match their abilities, neither very complex nor too easy (competence support); to match the values of students' families and their original culture (relatedness support). Also, they suggested that when choice is offered in a non-controlling environment, it will contribute greatly to enhancing students' functioning and development.

Lack of motivation toward learning among students is one of the pressing issues in academic contexts. Students lose the desire to do the tasks assigned to them and thus, the feelings of frustration and discontentment arise and their productivity and well-being can be encumbered (Legault et al., 2006). Generally, various positive outcomes are associated with self-determined motivation and negative outcomes are associated with less self-determined forms of extrinsic motivation. In academic context, boredom and poor concentration in class, higher perceived stress at school, poor psychosocial adjustment to college while studying, and high school dropout have been associated with *Amotivation* (Legault et al., 2006). Amotivation is defined as a state in which students lack the intention to learn. Amotivated students are not able to sense the connection between their behaviour and its subsequent outcomes (Deci and Ryan, 2000).

Little attention has been given to amotivation and factors affecting it, whereas motivation has been extensively studied (Legault et al., 2006). Amotivation has been treated as one-dimensional, whereas it is believed to be multidimensional. Legault et al., (2006) conducted three studies to explore and validate this claim and to determine the factors that give rise to academic amotivation. Four dimensions were identified: (1) ability beliefs, (2) effort beliefs, (3) characteristics of the task, and (4) individual values relative to the task. Results show support and validation of the four sub-dimensions of amotivation. It also showed distinct classes of reasons that give rise to students' amotivation. These include lack of belief in their ability, lack of belief in their effort capacity, unappealing characteristics of the academic task, and finally lack of value placed on the task (Legault et al., 2006). This study further showed that inadequate social support (from parents, teachers, and friends) gives rise to amotivation, and thus negatively affects students' academic outcomes (e.g., achievement, academic self-esteem, intention to drop out).

High school students' motivation to attend college varies significantly. Some students may want to attend college because they place high value on it, so they will do it volitionally. Others don't want to attend but their parents will affect their decisions to go to college. In SDT, context surrounding an individual has a great impact on his/her decisions. In the case of adolescents, parents are the closest persons to them. If their basic psychological needs are supported by parents, they will be more autonomous in their decisions. To investigate effects of perceived need support from parents on the adolescents' autonomous self-regulation for academics, and the adolescents' well-being, Niemiec et al., (2006) conducted a study on high school students to explore this relationship. This study demonstrated that parents have an impact on predicting adolescents' wellbeing, mothers being more influential (Perceived need support). Furthermore, the results also showed that higher the autonomous self-regulation for attending college reported by those high school students, higher the well- being (vitality, life satisfaction) and lower the ill-being (depression, externalizing problems). Another study was conducted to examine the effects

of students self-regulation and perceived teachers' autonomy support on their adjustment and performance among college students (Black and Deci, 2000). Findings showed that higher the reported self-regulation for learning organic chemistry, the higher the students perceived themselves as competent and course materials as interesting and enjoyable, as well as the lower anxiety they experienced. Also, similar interesting outcomes were experienced when they perceived their teachers as autonomy supportive.

In their review of SDT application to education, Niemiec and Ryan, (2009) concluded that intrinsic motivation and autonomous types of extrinsic motivation are essential to students' engagement and optimal learning in educational contexts. They also reported that students' autonomous self-regulation for learning, academic performance, and wellbeing is facilitated by the perceptions of their teachers' support of their basic psychological needs for autonomy, competence, and relatedness. Students' academic performance was also found to be influenced by their perceived autonomy and competence (Fortier et al., 1995).

Just recently, an interesting study was conducted to examine SDT theory in educational workplace (Klassen et al., 2012). This time, the concern was on teachers' relatedness with their principal, colleagues and students and its impact on their engagement and well-being. The study revealed that the more the teachers perceived autonomy support from principal, the higher the relatedness with colleagues and students they displayed. Their relatedness with students showed higher work engagement and lower anxiety, anger and emotional exhaustion. Also, autonomy support enhanced teachers' psychological needs, which in turn, are associated with higher levels of engagement and teaching enjoyment.

3. Research Motivation and Hypothesis

The theoretical propositions of Self-Determination Theory of motivation need to be tested in different cultural as well as organizational context. Our literature review indicated that the theory has not been tested in Muslim countries and Islamic institutions. Some of the unique cultural characteristics that may be observed in Asian as well as Muslim countries such as Malaysia include collectivism, relationship orientation, conformity to social and religious norms, face saving, power distance and obedience to authority. There are arguments that the basic propositions of SDT should not apply in such cultures (Bond, 1988; Markus and Kitayama, 2003; Markus *et al.*, 1996 as cited in Jang *et al.*, 2009). According to these scholars in Eastern collectivistic cultures like Malaysia priority is given to maintaining social obligations over autonomy support. The preferred parenting and teaching style, therefore, is characterized by controlling rather than encouraging autonomy (Quoss and Zhao, 1995). As such, psychological need satisfaction proposed in the SDT may not yield the same impact on positive educational outcomes as found in Western contexts (Iyengar and DeVoe, 2003; Tseng, 2004). It would, therefore, be of interest to test the premises of SDT in different cultural context. This was the motivation behind this study. It was conducted on the undergraduate students of International Islamic University Malaysia located in Kuala Lumpur.

However, based on the arguments and related empirical evidence provided in support of the SDT it was hypothesized that the propositions of SDT are universal and will remain valid in different cultural as well as institutional context. Therefore it was hypothesized that:

H1: *The autonomy supportive learning climate, sense of choice and self-awareness will foster the satisfaction of the three basic needs of students.*

H2: *The satisfaction of the three basic needs, which constitute the ingredients of intrinsic motivation, will contribute to students' study engagement.*

4. Methodology

Sample: A sample of 529 undergraduates from several faculties participated in this study. This included 57.7% females and 81.7% Malaysians. The sample largely conformed to the population distribution in terms local vs. international and female vs. male students in IIUM. They represented first to four years of study. Faculty wise distribution of sample is displayed in Table1.

Table 1: Distribution of sample by faculty

Faculty	N	%
Engineering	76	14.3
Economics & Management	122	23.0
Islamic & Human Sciences	113	21.3
Law	84	15.8
Architecture	84	15.8
ICT	47	8.9

Instruments: The following instruments were used to collect data for this study.

1. **Basic Psychological Needs Scale (BPN)**. Central to self-determination theory of motivation is the concept of basic psychological needs that are assumed to be innate and universal. According to the theory, these need—the need for competence, autonomy, and relatedness—must be continuously satisfied for people to develop and function in healthy or optimal ways (Deci and Rayan, 2000). The Scale addresses need satisfaction for competence, autonomy, and relatedness. The 21-item scale has 7 items measuring autonomy, 6 items measuring competence, and 8 items measuring relatedness need satisfaction. However, in the present study only 20 items were used as one item measuring relatedness need was found to have low reliability value. Responses were solicited on a 7-point Likert scale (1 = Not at all true; 7 = Very true). Examples of items are: I feel like I am free to decide for myself how to live my life (Autonomy). People I know tell me that I am good at what I do (Competence). I get along with people I come in contact with (Relatedness). BPN Scale has been widely used in several studies (Deci et

al., 2001; Ilardi et al., 1993; Kasser et al., 1992) and has provided good empirical validity.

2. **The Self Determination Scale (SDS).** This scale is designed by Deci and Ryan (2000) to assess individual differences in the extent to which people tend to function in a self-determined way. It is thus considered as a relatively enduring aspect of people's personalities which reflects: (a) being more aware of their feelings and their sense of self, and (b) feeling a sense of choice with respect to their behavior. The SDS is a 10-item scale with two 5-item subscales. The first subscale is awareness of oneself, and the second is perceived choice in one's actions. Responses are recorded on a 5-point scale. Examples of items are:

   1. A. I always feel like I choose the things I do.
      B. I sometimes feel that it's not really me choosing the things I do.

Only A feels true 1 2 3 4 5 **Only B feels true**

   2. A. I choose to do what I have to do.
      B. I do what I have to, but I don't feel like it is really my choice.

Only A feels true 1 2 3 4 5 **Only B feels true**

   The scale has been extensively used by researchers in several contexts thus providing it the empirical validity (Sheldon *et al.*, 1996; Sheldon, 1995).

3. **Learning Climate Questionnaire (LCQ).** This scale has been developed by Williams, Wiener *et al.*, (1994) and adapted to measure the autonomy support provided to the students by the faculty members. Responses are solicited on a 7-point scale (1 = strongly disagree; 7= strongly agree). Examples of items are:

   1. I feel that my lecturers provide me choices and options.
   2. I feel understood by my lecturers.

   Several studies using this scale in different contexts have provided good empirical support to this construct (Black and Deci, 2000; Williams *et al.*, 1997; Williams *et al.*,).1994).

4. **Study Engagement Scale (SES).** This scale measured the degree to which students feel engaged in their studies. Items of this scale have been adapted from Utrechet's Work Engagement Scale (UWES), (Schaufeli and Bakker, 2004). The construct of work engagement includes Vigor, Dedication, and Absorption. This 9-item scale has been reworded to measure students' study engagement. Responses were obtained using 5-point Likert scale. Items of the scale include:

1. When I get up in the morning I feel like going to the class
2. I am immersed in my studies.

5. **Background Information**. A few relevant pieces of background information were also collected such as gender, nationality (Local/International), Faculty, Department, and year of study

Method of Data Collection. Data were collected during the class time with the support extended by the faculty members. Students were provided instructions on the cover page of the printed questionnaire. They were requested to not disclose their identity anywhere on the questionnaire, thus encouraging them to be candid in their responses.

5. Results

Table 2 summarizes the means, standard deviations, inter-correlations and reliability coefficients for the study variables. The reliabilities for all items were generally good. As shown in Table 2 alphas ranged from .70 to .91.

The mean values of the three basic needs satisfaction indicated fair endorsement in the following order: autonomy (Mean = 5.22), competence (Mean = 4.51) and relatedness (Mean = 4.94) respectively on a seven-point scale. Learning climate was also rated slightly above average (Mean = 4.48). The self-determination constructs (self-awareness and choice) and students' engagement too received moderate to high scores on a five-point scale: choice (Mean = 3.31), self-awareness (Mean = 3.56) and engagement (Mean = 3.46). Almost all the study variables, except CGPA, were significantly correlated to one another (See Table 2)

Table 2: Descriptive statistics, alpha, and correlations

	Mean	SD	Alpha	1	2	3	4	5	6	7	8
1. Autonomy (6)	5.22	.92	.70	-							
2. Competence (6)	4.51	.76	.72	.53**	-						
3. Relatedness (8)	4.94	.79	.78	.42**	.51**	-					
4. L. Climate (15)	4.48	.89	.91	.29**	.23**	.29**	-				
5. Self-awareness (5)	3.56	.77	.79	.33**	.28**	.31**	.21**	-			
6. Choice (5)	3.31	.86	.86	.39**	.24**	.26**	.16**	.29**	-		
7. Engagement (9)	3.46	.60	.86	.27**	.36**	.18**	.35**	.29**	.16**	-	
8. CGPA				.12**	.11*	-.02	.01	.12**	.08	.13**	-

** p < .01; *p <.05, Numbers in parentheses are number of items in the scale.

No significant mean differences were found between male and female students on any variables and so was the case between local and international students.

In summary the descriptive statistics demonstrated that the students were moderately satisfied with the three basic needs, endorsed the learning climate to some extent autonomy supportive. However, the feeling of being self-determined through self-awareness and choice was reported just average. So was the case with study engagement.

5.1 Learning Climate and Basic Needs Satisfaction

According to SDT teachers play an important role in creating a learning climate that is either controlling or providing choice to the students which in turn would determine students' satisfaction of the three basic needs, namely, autonomy, competence, and relatedness.

The theory also posits that individuals differ in the extent to which they tend to function in a self-determined way. It is considered as a relatively enduring aspect of people's personalities which reflects: (a) being more aware of their feelings and their sense of self, and (b) feeling a sense of choice with respect to their behaviour. This could be the result of the way they are exposed to the social environment. Thus a strong and supportive family, school and community environment should foster greater sense of choice in life and the awareness of own feelings and cognitions.

Table 3, 4, and 5 present the multiple regression results to test the hypothesis.

Table 3: Multiple regressions predicting autonomy need satisfaction from learning climate, self-awareness, and choice

Predictors	Std. β	t-value	Significance
Learning climate	.21	5.17	.000
Self-awareness	.19	4.71	.000
Choice	.29	7.24	.000

Adj. R^2 = .23, (F= 53.33, p<.000)

Table 4: Multiple regressions predicting competency need satisfaction from learning climate, self-awareness, and choice

Predictors	Std. β	t-value	Significance
Learning climate	.17	4.09	.000
Self-awareness	.20	4.61	.000
Choice	.15	3.54	.000

Adj. R^2 = .13, (F= 26.73.33, p<.000)

Table 5: Multiple regressions predicting relatedness need satisfaction from learning climate, self-awareness, and choice

Predictors	Std. β	t-value	Significance
Learning climate	.23	5.44	.000
Self-awareness	.20	4.75	.000

Choice	.16	3.87	.000

Adj. R^2 = .16, (F= 34.68, p<.000)

The results were in the expected direction. It supported the universality of the SDT. All the three predictors significantly entered into the equations predicting the satisfaction of autonomy, competency, and relatedness needs and explained 23%, 13%, and 16% variances respectively. Thus, if teachers were perceived as less controlling and more autonomy supportive and if students developed a better sense of choice in life and were more aware of their thoughts and feelings then it resulted into the satisfaction of the basic needs for autonomy, competence, and relatedness.

5.2 Basic Needs Satisfaction, Learning Climate, and Self Determination as Predictors of Students Study Engagement

Table 6 presents the multiple regression results predicting study engagement from basic needs, learning climate, self-awareness and choice constructs. Overall the model explained 49% variance and was highly significant. However, only two variables, namely, competence and learning climate significantly predicted the dependent variable i.e., study engagement

Table 6: Multiple regressions predicting study engagement

Predictors	Std. β	t-value	Significance
Autonomy	-.00	-.06	.94
Competence	.35	5.80	**.000**
Relatedness	-.05	-1.22	.222
Learning Climate	.12	6.66	**.000**
Self-awareness	.08	1.32	.188
Choice	.05	.93	.349

Adj. R^2 = .49; (F = 18.96, p <.000)

6. Discussion

The study was planned to test the universality of the Self Determination Theory of motivation in the cultural and institutional context which were non-Western, collectivistic, and Islamic. The critiques of the theory maintained that in Eastern collectivistic cultures priority is given to maintaining social obligations over autonomy support. The preferred parenting and teaching style, therefore, is characterized by controlling rather than encouraging autonomy (Quoss and Zhao, 1995). As such, psychological need satisfaction proposed in the SDT may not yield the same impact on positive educational outcomes as found in Western contexts (Iyengar and DeVoe 2003; Tseng, 2004). The results, however, did not found it be true. On the contrary it strongly supported the position of SDT. The results supported our hypothesis that the autonomy

supportive learning climate, as well as sense of personal choice and self-awareness will foster the satisfaction of the three basic needs, i.e., autonomy, competence, and relatedness.

When it came to predicting students study engagement the results partially supported our hypothesis. Among the three basic psychological needs, only the need for competence contributed significantly to students' study engagement. The finding is consistent with previous research that suggested competence is related to positive student outcomes and well-being (Jang et al., 2009; Skinner and Chi, 2012).

The SDT posits that the basic psychological needs function as the requisite nutriment for students' active engagement and positive school functioning (Jang et al., 2009), and as the essential ingredient for optimal learning and well-being (Zhou et al., 2009). That is, people whose psychological needs are satisfied will be psychologically healthier and more effective in learning contexts regardless of their cultures. Because of the claim that autonomy is insensitive to culture differences, the SDT received criticism, where it is argued that eastern culture may not value autonomy as western does (Zhou et al., 2009). Though this seems to hold true in this study as well (as neither autonomy nor relatedness need made any significant contributions to students study engagement) however, students' perceptions of autonomy-supportive learning climate enhanced their engagement. This is consistent with previous researches where autonomy-support predicted increase in perceived competence, autonomous self-regulation and enjoyment (Black and Deci, 2000). Also, Roth *et al.*, (2009) found that autonomy-support predicts choice and academic engagement.

The contributions of other variables on study engagement, namely, choice and self-awareness were positive though not significant. As posited by SDT, choice can be either motivating or otherwise. It can promote engagement when it is offered in a way that meets students' needs. For instance, "choice is motivating when the options are relevant to the students' interests and goals (autonomy support), are not too numerous or complex (competence support), and are congruent with the values of the students' culture (relatedness support)" (Katz and Assor, 2007) .

7. Conclusion

This study was mainly planned to address the issue of students' motivation and engagement and how they are facilitated in the context of an Islamic University in Malaysia. The Self-Determination Theory, which proposes that humans naturally have innate needs, which when satisfied, result in optimal functioning and positive outcomes, guided this research. The findings provided empirical validity to the SDT by showing that autonomy supportive learning climate and individual's sense of choice in life as well as being self-aware of thoughts and feelings contributed to the satisfaction of three basic needs for autonomy, competence, and relatedness. Results also provided strong support for the effects of competence and learning climate (autonomy support) on study engagement. Future research may examine how the SDT proposition predicts students' academic performance while controlling for factors such as intelligence and aptitude.

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