Effects of Motivation on Student Effort, Involvement, and Commitment in Higher Education

ผลกระทบของแรงจูงใจต่อความทุ่มเท การมีส่วนร่วม และพันธะทางใจที่มีต่อสถาบันของนักศึกษา ในระดับอุดมศึกษา

Nucharee Supatn [1]

[1] Martin de Tours School of Management and Economics, Assumption University

Abstract

Student dropout problem has become critical since the number of dropped students has been increasing. Even though several reasons to dropout were given by the students, the institutional commitment is one of the best factors that can explain the student dropout. This research aims to study the effects of the intrinsic and extrinsic motivation of the students on their effort, involvement, and institutional commitment. The questionnaire survey was designed. The 380 data sets were collected from the students enrolling in a private university in Thailand. Structural equation modeling was applied to test the structural relationships among all constructs. The results indicated that the intrinsic motivation significantly affected student effort, involvement and commitment while the extrinsic motivation influenced the commitment of the student but not their effort and involvement. In addition, the effort and involvement were found to have no effects on the student commitment to the institution.

Keywords: Extrinsic motivation / Intrinsic motivation / Institutional commitment

บทคัดย่อ

ในปัจจุบันมีนักศึกษาในระดับอุดมศึกษาที่เลิกเรียนกลางคันจำนวนมาก โดยต่างก็ให้เหตุผลที่แตกต่างกันไป ปัจจัยที่สามารถอธิบายถึงการเลิกเรียนกลางคันที่ดีที่สุดปัจจัยหนึ่งคือพันธะทางใจที่มีต่อสถาบันของนักศึกษา งานวิจัยครั้งนี้มีวัตถุประสงค์หลักเพื่อศึกษาผลกระทบของแรงจูงใจทั้งภายในและภายนอก ความทุ่มเท และการมีส่วนร่วมของนักศึกษา ที่มีต่อพันธะทางใจที่มีต่อสถาบันของนักศึกษา โดยการใช้การวิจัยเชิงสำรวจ จากนักศึกษา 380 คนในมหาวิทยาลัยเอกชนแห่งหนึ่ง แล้วนำมาวิเคราะห์ด้วยแบบจำลองสมการเชิงโครงสร้าง ผลการศึกษาพบว่าแรงจูงใจภายในมีผลต่อความทุ่มเท การมีส่วนร่วมและพันธะทางใจที่มีต่อสถาบันของนักศึกษาส่วนแรงจูงใจภายนอกมีผลต่อพันธะทางใจที่มีต่อสถาบันของนักศึกษา แต่ไม่มีผลต่อความทุ่มเท และการมีส่วนร่วมของนักศึกษา นอกจากนั้นยังพบว่าความทุ่มเทและการมีส่วนร่วมของนักศึกษา ไม่มีผลต่อพันธะทางใจที่มีต่อสถาบันของนักศึกษา

คำสำคัญ: แรงจูงใจภายนอก / แรงจูงใจภายใน / พันธะทางใจที่มีต่อสถาบัน

Introduction

"Student dropout" in the higher education has been gradually increasing and becomes a problem not only in American and European countries (Field et al, 2010) but also in Thai higher education. Students who dropped from one university may join another university or drop out completely from the higher education. The reasons to dropout are various such as too difficult or not suitable program, un-preferable system of the university, the unaffordable tuition fees and other related expenses or poor grade in the first year. However, one important reason that most students have not mentioned, or may be not aware, is on the large numbers of the studying programs that are available for them. The expansion of the higher education makes students have various alternatives which are not limited to the well-known government universities like the past. Currently, there are many private universities, Rajaphat universities and Rajamangala universities that offer several programs in which the quality is not less than that of the well-known government universities and the entering process is not difficult since the entrance examinations are mostly not required.

Even though switching or dropping out from a university is easy done, it is also a cost of the students. One semester, one year, or more, that the students spent at the previous university together with the tuition fee and other related expense can be considered as the sunk cost of the students. Moreover, changing university means the students have to change the accommodations, transportation, friends, and also life styles. As such, dropping from a university is not only the waste for the university but it is also the waste of the students. Thus, the decision to drop out from a university could be made when the students really have no more commitment to their previous university. So, it is interesting to understand the institutional commitment of the students since it indicates the drop out behavior of the students.

Many researchers and educators believed that students' desirable behaviors and commitment to their studying program are resulted of their motivation. Need to gain knowledge, need to succeed in studying, and need for fun and pleasure from interacting and performing the class activities with friends and teachers are intrinsic motivation while needs for the outcomes or the consequence of the studying are extrinsic motivation that influence student behavior. Intrinsic and extrinsic needs are expected to affect students to commit to their university and try their best to graduate. Intrinsic and extrinsic motivation are also expected to influence the effort and involvement in the class and other related educational activities since both factors are the key behavior that promote student achievement on the program. Thus, the question, "How do the intrinsic motivation and extrinsic motivation affect student effort, involvement, and institutional commitment?" is of interest in this research.

Research Objectives

This research aims to study the effects of the educational motivation of the students on their effort, involvement and institutional commitment. Three objectives can be proposed as follows:

1) To determine the effects of the extrinsic and intrinsic motivation on the student effort and involvement.

2) To determine the effects of the extrinsic and intrinsic motivation on the institutional commitment.

3) To determine the effects of student effort and involvement on the institutional commitment.

Scope of the Research

This research focuses on the motivation in education of the students. The factors that were related to motivation on other issues, not education, were not included in the study. Thus, some factors such as expectation and reinforcement from the family, difficulty of the program, undesirable systems of the university as well as the student background were not emphasized in the research framework. Survey was designed while undergraduate students were targeted as the population of the study. Intrinsic and extrinsic motivation, student effort, involvement and institutional commitment were measured and analyzed.

Literature Review

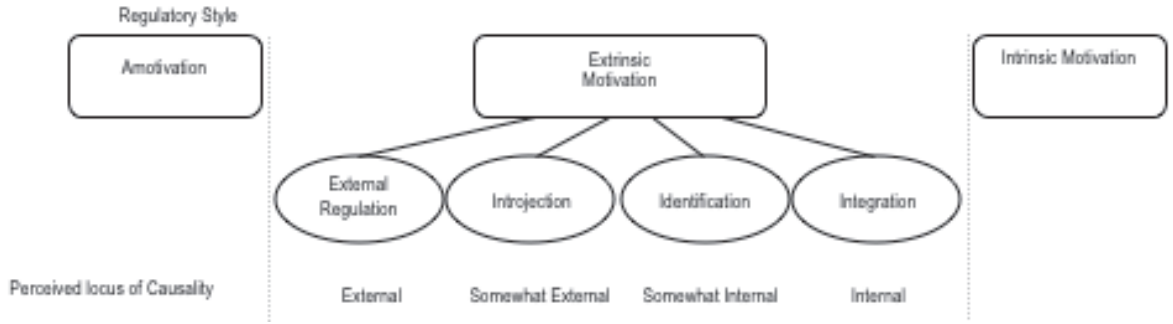
Deci and Ryan proposed the self determination theory, so called "SDT", in 1985 to explain the internal needs that motivate people to perform a series of behavior. Two types of motivation i.e. intrinsic and extrinsic motivation are internal factors that drive people to perform behavior, either consciously or unconsciously. Regarding the reinforcement theory, people perform a behavior because of their needs to gain rewards or to avoid the noxious stimuli. In contrast, the SDT explains that people perform their behavior based on their internal needs, not such external reinforcers.

Intrinsic motivation means an internal force that drives a person to perform a behavior. Person's behavior is driven by his or her inherent force such as self-satisfaction, fun, pleasure, challenges, curiosity, proud, etc. without any external forces, rewards or pressures. In education, student may need to learn or perform any activities because they feel that they are fun to learn, they are clever, they gain positive experience, they can broaden their knowledge, etc. Even though intrinsic motivation is an internal factor, its relationship with the task and social activities are found (Ryan & Deci, 2000). As the self-satisfaction is gained when person can accomplish a task or an activity if that task is interesting and the feeling of success is experienced. Thus, intrinsic motivation is related closely with the task engagement. Lepper et al (1997) concluded from their literature review that there are three important components of intrinsic motivation which are 1) challenge, 2) curiosity, and 3) control. The activities that are not too easy and not too difficult, i.e. possibly to accomplish, are considered as the challenging tasks that promote the intrinsic motivation. For the second component, the tasks that are uncertain, novel, discrepant would promote the sense of curiosity in that a person would perform their behavior intrinsically to fulfill their need to learn. The self-control or self-determination is considered as the third component. People usually exercise and validate their possible control on the external environments as much as they can. For the students, the intrinsic motivation would lead to their effort in learning activities that lead to the success in education and fulfill all three components of intrinsic motivation.

Extrinsic motivation, in contrast, refers to the outside factors such as monetary rewards, grades,

social recognition, and so on that can motivate a person. People may put lots of effort to accomplish the task even though they have no interest on the task at all. Satisfaction is resulted from the rewards that they obtain after performing a behavior. Ryan and Deci (2000) categorized extrinsic motivation into four components, 1) external regulation, 2) introjected regulation, 3) regulation through identification, and 4) integrated regulation. External regulation refers to the social desirable behavior that people perform. Some activities or behaviors are performed to satisfy the external or social demands, not personal interest, in order to gain acceptance from the society. Good life, good job, better salary are parts of the external regulation. Introjected regulation explains the behaviors that people perform to avoid guilty feelings, frustration, or anxiety. Most behaviors are non self-demand but ego-involving that help maintaining self-esteem and pride of themselves and people around them. Students may come to the university everyday in order for their family to feel that they are good students. Next, regulation through identification refers to the behavior that a person performs when he or she believes that it is a valuable behavior. Such behavior is induced by the external forces but verification and judgment are utilized by the person. Lastly, integrated regulation refers to the decision to perform a behavior only when it is congruent with their internal demands and value of the person. A complete transformation from the outside to internal demands is established (Pius, 2006). Ryan and Deci (2000) concluded the components of the intrinsic and extrinsic motivation graphically as seen in Figure 1:

Figure 1: A Taxonomy of Human Motivation



Source: Adapted from Ryan & Deci (2000).

Institutional commitment, as one of the consequence of intrinsic and extrinsic motivation, refers to the willingness to remain being a student in a university because of the feeling of impression, satisfaction, and sense of belonging (Strauss & Volkwein, 2004). Cabrera et al (1993) found that the institution commitment can predict student retention and persistence. Students with high institutional commitment tend to continue learning in their program until graduation. Van den Berg (2011) found that the relationship between motivation and commitment is mediated by the work engagement. Engagement is the popular term used to explain psychological and behavioral components of the students in their willingness to participate in the learning activities. Some student's behaviors such as attending the class, participating to the class activities, answering the teachers' questions, submitting the assignments, following the class directions and so on are said to be the student engagement. Salsman et al (2013) found

the relationship between student engagement and several benefits such as their personal development, professional development, professional advancement, information and knowledge. Student engagement includes the effort and involvement that the students put on their learning activities.

Astin (1999) defined the student involvement as "the amount of physical and psychological energy that student devotes to the academic experience" (p 518). Student with high motivation and high need for achievement may put high efforts on the class since the educational success is their aim. In contrast, high involvement students would spend their time and efforts in all activities at the university, not only class activities. Comparing to the concept of involvement, effort is somewhat narrower since it refers to the attitude, behavior, and activities that students put in their works while involvement covers all physical, psychological and behavioral energy to complete class and non class related tasks.

It is generally agreed that motivation, effort, and student capability are the keys for success of the students in higher education. Ishler and Upcraft (2005) found that getting good grade from hard work as well as effective interaction with peers in the first year influence largely on the student commitment and retention to the university. Student interaction, knowledge and opinion sharing, group work, class work etc. promote interpersonal relationship and help students to adjust themselves to university life. Then, the academic achievement and commitment to the university are consequently illustrtaed (Pascarella & Terenzini, 2005). Roberts and McNeese (2010) found the relationship between student involvement i.e. class interaction with peers and teachers, class activities, service learning projects and sport activities and student commitment and retention in higher education. Thus, three relationships can be hypothesized as:

Hypothesis 1: Extrinsic motivation affects student effort, involvement and institutional commitment

Hypothesis 2: Intrinsic motivation affects student effort, involvement and institutional commitment

Hypothesis 3: Student effort and involvement affect institutional commitment

The relationship between student motivation, effort, involvement and institutional commitment can be proposed graphically in Figure 2 as:

Figure 2: Research Framework

Research Methodology

Research Design, Measurements, and Questionnaire Pre-test

Questionnaire survey was designed. The "Student Motivation Survey" questionnaire was developed to measure the five main constructs which are extrinsic and intrinsic motivation, effort, involvement and institutional commitment. The questions measuring "motivation" were adopted from the "Intrinsic, Extrinsic, and Amotivation in Education" scale proposed by Vallerand et al in 1993. A total of twenty-four measurement items were used, first twelve to measure three dimensions of intrinsic motivation i.e. 1) Curiosity i.e. to know the lessons and things around them, 2) Challenge i.e. toward accomplishment, and 3) Self-control to experience stimulation. Four questions measuring the pleasure, satisfaction and positive experience obtaining from learning the new things were used to identify the "curiosity" component in which the intrinsic motivation was gained from the knowledge received. Next four items asked about the satisfaction and positive feeling experienced when learning something that were beyond the expectation. This measured "challenge" intrinsic motivation from the task accomplishment. Last four items measured "self-control" intrinsic motivation from the experience stimulation. Fun, pleasure, like, and high feeling gaining from the studying were asked. Extrinsic motivation was measured by the rest twelve items. Three dimensions of extrinsic motivation i.e. 1) identified, 2) introjected, and 3) external regulation were measured. Four items measure the potential job, competency and job competitions in the future were used to measure the "identified" extrinsic motivation. The next four items measuring the self-competency, perceived success, intelligence were used to identify the introjected regulation. The last four items asked about the expectation on future salary, payment, and good life as the external regulation of the motivation.

Seven items modified from Guthrie and Anderson (1999) were used to measure student effort and involvements. Four items, "My studies are meaningful and inspire me at the university", "I wish to work hard for a college degree," "I am very organized with my academic workload at the university", and "I read the book even when I do not have a test" were used to measure "student effort." Three items, "I like to make class presentations at the university", "I like to contribute to group-work assignments", and "I like to consult the teacher, if I did not understand a topic" were used to measure the "student involvement." For the commitment, three items modified from Fullerton (2014) i.e." I feel obligated to study at this University", "It would not be right to switch from this university", and "I have never thought of quitting or switching from this University" were applied.

To ensure the quality of the measurement, the questionnaire was pretested. Fifty sets of the questionnaires were distributed. The data were analyzed by the Cronbach's alpha and item-to-total analysis. Satisfactory results were obtained since the Cronbach's alpha coefficients of all constructs (extrinsic motivation = 0.890, intrinsic motivation = 0.900, effort = 0.766, involvement = 0.792, and commitment = 0.743) exceeded the recommended point of 0.7 (Nunnaly, 1978). Thus, the data collection tool was qualified.

Population, Sample, and Data Collection

Undergraduate students were targeted as the population of the study. However, as the faculties, programs and university regulation were different across universities, only one university was focused in this study to control the possible effects of the extraneous factors. Students who were currently enrolling in the bachelor's degree level were focused. Convenience sampling was applied. The students who were in the campus, but not in the classrooms were approached. The data were collected on the volunteer basis. The questionnaires were distributed to the students who agreed to join the survey.

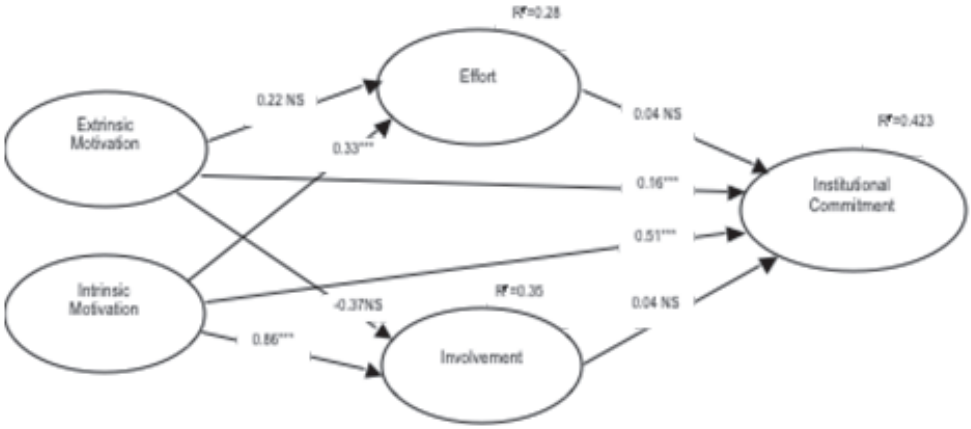
The sample size was determined based on two methods. First, the formula n = Z2pq/E2 (Zikmund & Babin, 2010) was utilized. The sample size was determined based on the possible proportion of success and failure. With the confidence level of 95% (Z = 1.96), the accepted error of 5% and worst case scenario that the proportion of success and failure are equal (p = q = 0.5), the sample size of 385 was determined. On the other hand, the sample size was determined based on the requirement of the structural equation modeling i.e. 5 to 20 samples per variables. As the total variable in the model was 40 (20 endogenous and 20 exogenous variables) with the 10 samples per variable, the suitable sample size should be 400. Considering the two sample size determination methods, the sample size of 400 was targeted.

The data were collected by the ten surveyors who were the current students of the University to avoid the interviewer bias (Zikmund & Babin, 2010). The in-person drop off technique was utilized. The questionnaire was given by hand to each student who agreed to join the survey. A pen was given as a souvenir for the student who answered the questionnaire. Four hundred questionnaires were distributed but twenty sets were found incomplete and were discarded from the data analysis. Thus, only 380 usable sets of data were obtained. Fifty percent were business administration students followed by Arts and Communication Arts students with 30% and 20%. Out of this, 51.2% were male where 48.8% were female. The age ranged from 18 to 24 years old with the average of 21.13 years old. The cumulative GPA varied from 1.31 to 4.00 with the average of 2.89. The proportion of the freshman, sophomore, junior, and senior was 21.8%, 33.1%, 30.7% and 14.4%, respectively.

Data Analysis and Research Findings

Structural equation modeling was used as the main data analysis tool. The confirmatory factor analysis (CFA) was performed first to ensure the construct validity of the measurements. Satisfactory results of the CFA were illustrated. The x 2/df was 2.017 which was less than the cutoff point of 3.00. The goodness fit index (GFI) and other related fit indices i.e. Tucker Lewis index (TLI), Incremental Fit Index (IFI), and Comparative Fit Index CFI were all exceeding the recommended level of 0.9 (GFI = 0.914; IFI = 0.946; TLI = 0.931; CFI = 0.945). The root mean square error approximation (RMSEA) of 0.048 which was less than the recommended point of 0.05 was also illustrated. The good fits of the confirmatory factor analysis model indicated that the measurements of all constructs were useable. Thus, the data could be used for further analysis. The structural equation modeling that related all constructs as hypothesized was developed as:

Figure 3: Proposed Structural Equation Modeling



Remarks: x 2=55.11; DF=29, P=002; x 2/DF=1.900; GFI=0.975; IFI=0.981; TLI=0.963; CFI=0.980; RMSEA=0.049

The numbers shown in the figure are standardized coefficients

** p<0.01; *** p<0.001; NS = Not Significant.

The good fits of the model were shown. The x2/df was 1.900 which was less than the cutoff point of 3.00. The same fit indices as the CFA were considered. As all fit indices exceeded the cutoff points of 0.9 i.e. GFI = 0.975; IFI = 0.981; TLI = 0.963; CFI = 0.980 with the RMSEA of 0.049, the structural model fits were yielded. Since the fits of the proposed model were illustrated, the structural relationships among the key constructs could be considered and the hypotheses could be tested. The paths in the model, estimated beta and their significance are presented in Table 1:

Table 1: Structural Equation Relationship Estimated

Hypothesis and Paths in the Model				Estimated beta		t	p	R^2
				UnSTD	STD			
H1a	Extrinsic Motivation	→	Effort	0.131	(0.222)	2.155	0.031	0.278
H1b	Extrinsic Motivation	→	Involvement	-0.166	(-0.369)	-2.149	0.032	0.350
H1c	Extrinsic Motivation	→	Student Commitment	0.209	(0.162)	2.441	0.001**	0.423
H2a	Intrinsic Motivation	→	Effort	0.220	(0.328)	3.149	***	
H2b	Intrinsic Motivation	→	Involvement	0.440	(0.863)	4.822	***	
H2c	Intrinsic Motivation	→	Student Commitment	0.747	(0.510)	7.065	***	
H3a	Effort	→	Student Commitment	0.081	(0.037)	0.434	0.664	
H3b	Involvement	→	Student Commitment	-0.120	(-0.042)	-0.510	0.610	

Notes: UnSTD = Unstandardized Estimated Relationship Coefficient; STD = Standardized Coefficients

*** t-values are significant at p< 0.001 ** p<0.01

The R-square of the three constructs were also shown. The R-square of 0.278 and 0.350 obtained for the effort and involvement indicated that the intrinsic and extrinsic motivation could explain the student effort by 27.8 % and explain the involvement by 35%. The R-square of 0.423 for the student commitment indicated that the intrinsic, extrinsic motivation, student effort and student involvement could help explaining the commitment of the students towards their studying program by 42.3 %.

Structural equation modeling results indicated that the intrinsic motivation had significant effects on student's effort (β = 0.220, p<0.001), involvement (β = 0.440, p<0.001), and commitment (β = 0.747, p<0.001) showing that Hypothesis 2 was supported by the data. Extrinsic motivation was found to have significant influence on commitment to the program (β = 0.209, p=0.001) but not on student effort (β=0.131, p>0.01), and involvement with the educational activities (β = -0.166, p>0.01). Hence, Hypothesis 1a and 1b were not supported while Hypothesis 1c was supported by the data. Moreover, both student effort and involvement were found to have no influence on the student commitment (β = 0.0815; -0.120, p>0.01). Therefore, Hypothesis 3 was not supported by the data.

Discussion

Intrinsic motivation was found to have significant influence on effort, involvement and commitment to the program. It was no doubts in these findings since the intrinsic motivation means the internal drive to learn which includes the need to get knowledge and information as well as the need to satisfy the curiosity on the basis of the self-actualization (McShane & Glinow, 2014). The results were consistent with previous research (e.g. Harter & Connell, 1984; Lepper et al, 2005). As the learning activities were performed for fun and happiness, the student would try to get involve with the class and class related activities and put full efforts to the class since these activities could satisfy them. Happiness and other positive feeling gaining from the education would lead the student to commit to their programs. Thus, positive relationships between the intrinsic motivation and student effort, involvement, and commitment to the program were illustrated.

The significant influence of the extrinsic motivation on institutional commitment was found. As the extrinsic motivation in education was related largely on the expectation on the social approval, future job, better salary, and so on, its association with the commitment to the program was as expected. In Thailand, a person with a Bachelor's degree, especially from the top government universities, international universities and international programs tended to have higher job opportunity than others. Moreover, regarding the government policy that the graduates who hold Bachelor's degree would have THB 15,000 as the base salary while the income for those who hold less than Bachelor's degree is guaranteed at THB 300 per day or about THB 6000-7000 per month, only, holding Bachelor's degree would ensure the better salary and social approval. Thus, it is undoubtedly that the students with high extrinsic motivation i.e. high expectation on future jobs, future salary, and social concern would have high need to graduate and also commitment to the university. In contrast, the insignificant effects of the extrinsic motivation on the effort and involvement as well as that of effort and involvement on commitment

were also not surprising. For the extrinsic motivation, its focus is only on the graduation which is the results, not the process. To graduate, effort and involvement may be helpful but not necessary. For some programs, grades for each subject were given based solely on the examination, not class activities, assignment, or student projects. Students who focused on how to pass the examination could graduate without concerning on the class effort and involvement. Thus, extrinsic motivation was found to have no influence on the effort and involvement where student effort and involvement was also found to have no influence on commitment. In addition, intrinsic motivation was found to have higher influence on the student commitment than the extrinsic motivation (βintrinsic = 0.510; βextrinsic = 0.162).

Recommendation

As student effort and involvement were found to have no influence on student commitment, only motivation should be concerned if the educators want to enhance student commitment to the program. As student commitment and retention are closely related, enhancing student motivation would increase student retention. To develop the extrinsic motivation, Ryan and Doci (2000) introduced their "internalization process" by focusing on three components of the extrinsic motivation i.e. external regulation, introjections, and identification. For the external regulation, the salience of extrinsic rewards or even possible punishments should be clearly shown. The possible outcomes that the students could be getting when they complete their programs should be presented. Many students may not aware of the opportunity that they may get after their graduation. The information on labor market trends and the requirements of the future bosses are important and should be provided to the students. Moreover, the certificates that acknowledge their success and accomplishment may be provided to ensure the social recognition (Roberts, 2006). The internship programs are also suggested since the student could develop their personal relationship with their possible future employers. For the introjections, the student should recognize that the degree they will get from their current education would make them gain approval from other people in society. The ego involvement feeling obtained from their tasks would make them aware of the importance of the education and set the goal to accomplish it. Commitment to the institution would be a self-endorsement goal to identify them to the society. Some researches may be set to study whether these activities can enhance the extrinsic motivation. Comparing to the western culture, Thai students in higher education level seem to have less maturity. The concept of adult learning using in the western educational culture seems to be less effective since most Thai students appear to feel familiar with the lecturing style, not self-study. To enhance their commitment, the extrinsic motivation may be needed initially. Giving any kinds of rewards and/or awards as well as promoting the significance of the knowledge and self-development to gain social approval would be important for Thai students. However, enhancing intrinsic motivation should also be emphasized, concisely.

To enhance the intrinsic motivation, Ryan and Deci (2000) suggested that the classroom activity should be interesting, enjoy and be able to fulfill the student inherent satisfaction. The activities that enhance their intellectual performance, critical thinking, and problem solving skills would

intrinsically motivate the students. Strong classroom community may be developed. Small group and class work activity would promote involvement and peer support. Allowing the students to establish their short-term and long-term goals would also help the students to get their clear directions which, in turn, would encourage them to commit to their studying programs. Most important, the class activities that allow students to show their capability and their potential would be one of the best ways to fulfill student inherent needs for achievement. Challenging work assignments that make them recognize their expertise and proficiency would, then, be assigned. Again, as these strategies were theoretical suggestions, some researches may be needed to support these ideas and verify the possibility of each suggestion.

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