

The Mediating Effect of Academic Self Efficacy on Relatedness, Autonomy, and Academic Engagement

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Abstract

The present study looks into the mediating effect of academic self-efficacy on the influence of relatedness and autonomy as it impacts academic engagement. Using self-determination theory framework, it shows how a motivational outcome such as academic engagement is brought about by satisfying the psychological needs such as relatedness and autonomy. This is provided that the individual as a result of the enabling through relatedness and autonomy leads to self-efficacious belief about one's ability. Data were gathered from 334 College students by answering the Relatedness Questionnaire (Gillis, 2011), Autonomy Scale (Reeve, Nix, Hamm, 2003), College Academic Self-Efficacy Inventory (Barney & Finney), and Student Course Engagement Questionnaire (Handelsman, Briggs, Sullivan, & Towler, 2005). A mediational path analysis was conducted to determine the mediating effect of academic self-efficacy. Key results showed that (a) academic self-efficacy has partial mediating effect between relatedness and academic engagement; (b) academic self-efficacy has full mediating effect between autonomy and academic engagement and (c) the model without the direct effect from autonomy to academic engagement yielded the best model fit.

Keywords: Self-efficacy, Academic Engagement, Relatedness, Autonomy

Introduction

Academic engagement is considered an important variable in the field of education because of its impact on academic achievement (Graham, Tripp, Seawright, & Joeckel, 2007; Lee, Tek, Hashin, & Meng, 2011; Sbrocco, 2009; Handelsmann, Briggs, Sullivan, & Towler, 2005). This is particularly important in the context of higher education today as it turns learner-centered and inclusive. With the high demand, many students are found to disengaged and unmotivated in their school life (Appleton, Christenson, & Furlong, 2008). The high demand for learning and achievement, as well as the challenges of transition and integration for learners of different culture and orientation require one to be academically engaged. When a student given the high demands for learning is disengaged, it can result to negative outcomes such as failure or worst, drop out.

Academic or student engagement refers to one's enthusiastic participation in a given task (Reeve, Jang, Carrell, Jeon, & Barch, 2004). Such participation is manifested through the person's effort and positive emotion while actively involved in the task (Hu & Kuh, 2011; Reeve et al., 2004). Academic engagement can be traced from the self-determination theory through motivation. In particular, it serves as motivational outcome.

Self-determination theory is a theoretical framework of motivation that is used in educational setting (Katz, Kaplan, & Gueta, 2010). This theory asserts the need to satisfy the basic psychological needs for autonomy, relatedness and competence in order to lead to intrinsic motivation. In satisfying all these needs, it helps optimize the performance of an individual resulting to various motivational outcomes (Ryan & Deci, 2000). When all these psychological needs are met, it drives an individual to become self-motivated and determined. Intrinsic motivation occurs when a student engage in an academic task because of the desire to learn and improve oneself, or from the pure enjoyment or interest derived from the academic activity or task (Katz et al, 2010). Research have shown that the more intrinsically motivated one feels, the higher is the quality of engagement that will be manifested (Deci & Ryan as cited by Katz et al., 2010).

As a form of motivational outcome, academic engagement requires the satisfaction of the students' psychological needs in order for them to optimize their performance and maximize their learning.

Psychological needs in the context of self-determination theory include relatedness, autonomy and competence. Relatedness is a sense of belonging and feeling of connectedness to persons, group or culture. Autonomy refers to the perceived control in freely choosing something. Competence is the sense of one's ability or skills. When these needs are not met, students may not perform to their full capacity and may result to problems in motivation and well-being (Ryan and Deci, 2000).

Previous studies, relatedness and autonomy have found to be related with student engagement (e. g., Fuller & Skinner, 2003; Hardy & Bryson, 2009; Ryzin, Gravely, & Roseth, 2009; Jang, 2008). In particular, both feeling of peer-related belongingness and teacher-related belongingness as well as one's perceived academic autonomy have positive effect on one's engagement in learning (Ryzin et al., 2009). These serve as social and environmental factors that can result to motivational outcome such as academic engagement.

However, feeling of belongingness/connectedness and feeling of autonomy does not automatically happen when provided. There occurs the variability in how individuals may perceive such social and environmental factors. This variability occurs through cognitive processing brought about by self-efficacy (Schunk, 1991).

Self-efficacy is defined as one's perceived competence in doing particular tasks. A person's self-efficacious beliefs about one's capabilities can affect one's choice of action or activities as well as effort and persistence (Bandura as cited by Schunk, 1991). This suggests that when a student provided with support from teachers and peers in school as well as the autonomy to complete assigned tasks, but does not judge his competency positively, he or she may still avoid the task or may choose to be disengaged in the class activity.

This suggests that psychological factors such as relatedness and autonomy should not be looked into only as predictors of academic engagement. The variable of self-efficacy should be included in the model that explains academic engagement.

In particular, self-efficacy serves as a variable that links both psychological needs and academic engagement.

Several researches have established the impact of academic engagement on achievement. However, some studies have verbalized the need to further study this variable in terms of how and why it contributes to achievement and other positive educational outcomes (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008).

Engagement and academic motivation are outcomes of self-efficacy (Schunk, 2012). This suggests that in order for engagement to occur, one needs to feel self-efficacious. Self-efficacy is a measure of one's belief about his/her capabilities to complete a particular task at a given situation (Warwick, 2008; Schunk, 1991). This concept is equally important with academic engagement when it comes to higher education. Given the high demand to cope with expectations and tasks from the school, it necessitates one to feel confident and feel in control of how he/she intends to learn (Suarez-Orozco, Pimentel, & Martin, 2009).

Warwick (2008) explained the link of self-efficacy with engagement through its actual manifestations such as behavioural, cognitive, and motivational engagement. Behavioral engagement is the tangible and observable actions in one makes in a given task. When a student has self-efficacy, their engagement results to increased attendance, effort, and persistence in completing assigned task. It also makes a student determined and persevering in completing even difficult tasks by asking support from other people.

When a student is self-efficacious, it can also result to cognitive engagement, wherein one becomes mentally engaged, keeping on tasks when instructed or needed. Researches have shown that students who are confident in their capability will persist on task in spite of difficulty. However, when one feels incapable, they are less like to continue being cognitively engaged when they fail in trying or success is not immediate (Warwick, 2008). However, once strong self-efficacy is developed, failure will not have much impact on the student (Bandura as cited by Schunk, 1991).

Motivational engagement also occurs when one has self-efficacy. It drives a student to become academically engaged in a subject matter in spite of non-interest or difficulty. Motivation occurs through self-efficacy when one sees its personal gain, utility of the learning from a subject and alignment of outcomes to long term goals (Warwick, 2008).

In relation to autonomy, self-efficacy is believed to regulate it. According to Gillis (2012), when students feel in control over an activity it helps increase their beliefs about their own capability. Also, it drives them to exert more effort to do something that needs to be done. This in turn, increases their confidence on their ability to perform specific tasks.

On the other hand, there has been less direct research linking relatedness with self-efficacy. Researches have been directly linked with academic engagement (e. g., Furrer & Skinner, 2003). But according to Schunk (1991), there are two sources of self-efficacy beliefs about oneself. A person may judge their capabilities through information from other people or from appraisal of their personal

accomplishments and experiences. In schools, students get information about their capabilities through their teachers and peers. At the same time, they may also appraise their efficacy through their appraisal of one's performance.

In a previous study on attributional feedback, it was found that effort feedback given for prior successes supports one's perception of their progress (Schunk, 1991). This means that when a student receives support from a teacher in a form of feedback related to the effort they exert on a task, it can affect his/her belief on his/her effort. It can also help sustain motivation, increase efficacy for learning (Schunk, 1991). This implies that students tend to create their efficacy beliefs through feedback from teachers and peers in school. Accordingly, successful assessment of one's effort can lead to strong self-efficacy. But if they are not successful, it may result to them avoiding such task or gain low appraisal of their ability (Bandura as cited by Schank, 1991).

This present study will look into the mediating effect on the relationship of relatedness, autonomy and academic engagement. Previous studies on academic engagement have recommended further understanding the concept by clarifying the specifics on how and why it contributes to achievement. This study attempts to describe the dynamics of academic engagement through self-determination theory. In particular, investigate how paths from relatedness and autonomy can particularly lead to academic engagement through self-efficacy. Previous studies have been studying psychological needs and self-efficacy in relation to academic engagement independently. This time, self-efficacy is not only seen as independent variable but mediating variable for relatedness and autonomy. Also, there are only indirect researches available that investigates relatedness in relation to self-efficacy. This variable has been more investigated in relation to academic engagement.

Based on previous studies, it is believed that when a student feels a sense of support and connectedness with peers and teachers; and experiences autonomy, it will result to active involvement in doing school activities and requirements. This is provided that he/she feels confident in completing assigned tasks.

This study determines the mediating effect of self-efficacy on the influence of relatedness and autonomy on academic engagement. In particular, the present study aims to: (a) determine which from the path of relatedness and autonomy will have greater impact on self-efficacy and academic engagement, (b) which from the path of relatedness and autonomy will lead to full mediation, and (c) test if the overall model have a good fit, thus explain a self-determination framework the leads to College academic engagement.

Method

Research Design

This study used cross-sectional explanatory research design to test a model that describes the mediating effect of academic self-efficacy. It also determined the

causal factors that influence the endogenous variable through one time collection of data from the participants.

Participants

There were 334 college students from a private College in the Philippines who participated in this study. With 66.6% female ($f=222$) and 33.2% male ($f=111$), their age range from 14 to 35 years old ($M=19.75$; $SD=3.19$) across first year to fifth year. The respondents were from criminology, psychology, tourism, and nursing courses.

Instruments

Relatedness Questionnaire. This is a 9-item questionnaire which measures the perceived feeling of belongingness and connectedness to teachers and peers (refer to Appendix A for the items). Originally by Pazcarella and Terenzini (1980), this study used the modified form by Gillis (2011), using only the subscales for teacher relatedness and peer relatedness and excluding the subscale for family relatedness. Participants answered the items using a five point scale (1=strongly disagree, 2=disagree, 3=agree sometimes, 4=agree, 5=strongly agree). The subscale on teacher related and peer relatedness has a Cronbach's alpha of 0.81 and 0.77 respectively (Gillis, 2011). For this study, the Cronbach's alpha for teacher relatedness was 0.74, 0.67 for peer relatedness and 0.71 for overall relatedness.

Autonomy Questionnaire. This is a 9-item questionnaire which measures the feeling of being in control of one's actions and choice (refer to Appendix B for the items). Its factors include locus of causality, volition and perceived choice. Originally by Reeve, Nix, and Hamm (2003), the items were modified based on the focus of the study. The participants answered the items using a seven point scale (1=not at all true to 7=very much true). The factor on perceived locus of causality has a Cronbach's alpha of 0.83, while for volition it is 0.81 and 0.85 for perceived choice. In this study, Cronbach's alpha for perceived locus of causality was at 0.27, 0.45 for volition, 0.72 for perceived choice and 0.67 for overall autonomy.

College Academic Self-efficacy Scale. This is a 13-item measure of one's confidence in performing tasks related to College activities and requirements (refer to Appendix C for the items). Originally by Solsberg, O'Brien, Villareal, Kennel and Davis (1993), this study used the modified form by Barry and Finney (n.d.), with 3 subscales namely: (a) course self-efficacy, (b) roommate self-efficacy, and (c) social self-efficacy. But in this study only the subscales of course self-efficacy (7 items) and social self-efficacy (6 items) were used. This instrument is answerable by a ten point scale (1= not at all confident to 10=extremely confident). The Cronbach's alpha of course self-efficacy is 0.91 while for social self-efficacy, it is 0.89 (Barry & Finney,

n.d.). In this study, the Cronbach's alpha for course self-efficacy is 0.80 and 0.85 for social self-efficacy while overall academic self-efficacy is at 0.90.

Academic Engagement Measure. This is a 23-item scale that measures the degree of students' involvement in their college course by Handelsman, Briggs, Sullivan, and Towler (2005). In particular, this looks into the behavioural and affective participation of the students inside and outside the classroom using the following factors: (a) skills engagement, (b) emotional engagement, (c) participation/interaction engagement, and (d) performance engagement (refer to Appendix D for the items). The participants answered this measure using a five point scale (1=not at all characteristic of me, 2=not really characteristic of me, 3=moderately characteristic of me, 4=characteristic of me, 5=very characteristic of me). The Cronbach's alpha coefficient for skills engagement was 0.82, for emotional engagement was 0.82, for participation/interaction engagement was 0.79, and for performance engagement, 0.76 (Handelsman, Briggs, Sullivan, & Towler, 2005). The results of the exploratory factor analysis have reported four factors of academic engagement with 42.69% of the variance being accounted for. In the present study, Cronbach's alpha for skills engagement is 0.82, for emotional engagement at 0.81, for participation/interaction engagement at 0.78, and performance engagement at 0.84. The internal consistency of the overall academic engagement is 0.90.

Demographic Profile. The participants were asked for their age, sex, year level and course to establish their general characteristics.

Procedure

Upon approval from the Academic Deans of the College, three hundred and fifty questionnaires were fielded in the subject school and 334 accomplished forms were returned. The participants were from the subjects holding classes during the schedule of the questionnaire administration. Before answering the multiple-part questionnaire, they were given instructions on how to accomplish it. Part of the instructions asked their consent before answering the form. The participants were guided with the following information: (a) there are no right or wrong answers, thus they were encouraged to respond honestly to all the questions, (b) they were reminded of the confidentiality of their responses. It took the participants around 15 to 20 minutes to accomplish the form.

Data Analysis

Mean, standard deviation, and reliability coefficients were computed to describe the responses in all the manifest variables and its corresponding factors. The required sample size was generated using a-priori sample size calculator for structural equation modelling. In particular, it was computed with anticipated effect size set at 0.5, probability level at 0.05, and desired statistical power set at

0.80. The correlation was also generated to check the relationships among the manifest variables used in the path analysis.

The mediating effect of academic self-efficacy on relatedness, autonomy and academic engagement were computed using AMOS. To describe the mediating effect of self-efficacy, indirect effect was generated. Before proceeding with the computation, bootstrapping was performed in order to address the assumed non-normality of the data as it affects the confidence limits of the reported mediation. Based on research, resampling, in particular, bias-corrected bootstrapping is the best method to improve the confidence limit of the indirect effect which served as guide in determining the mediating effect (MacKinnon, Fritz, Williams, & Lockwood (2007); MacKinnon, Lockwood & Williams (2004). After establishing the mediating effect of self-efficacy, the model was tested for its goodness of fit.

Results

The descriptive statistics of the manifest variables are presented using mean and standard deviation. The internal consistencies of the scales were also determined using Cronbach's alpha. The intercorrelation of relatedness, autonomy, academic self-efficacy and academic engagement were also obtained. The mediating effect of self-efficacy was tested using path analysis. Also, the goodness-of-fit of the proposed model was determined.

Table 1
Descriptive Statistics of Age, Relatedness, Autonomy, Academic Self-efficacy, and Academic Engagement

Variables	<i>M</i>	<i>SD</i>	Cronbach's alpha
Age	19.75	3.19	
Relatedness	4.04	0.48	0.71
Teacher relatedness	3.77	0.62	0.74
Peer relatedness	4.38	0.61	0.68
Autonomy	4.81	0.74	0.67
Perceived locus of causality	4.88	0.88	0.27
Volition	4.60	0.96	0.45
Perceived Choice	4.95	1.18	0.72
Academic Self-efficacy	7.51	1.23	0.90
Course self-efficacy	7.47	1.28	0.80
Social self-efficacy	7.55	1.42	0.85
Academic Engagement	3.83	0.48	0.90
Skills engagement	3.84	0.53	0.82
Emotional engagement	3.92	0.59	0.82
Participation/interaction engagement	3.70	0.66	0.78
Performance engagement	3.91	0.69	0.84

Note. N=334

The mean scores, standard deviation and internal consistencies of the different factors of relatedness, autonomy, academic self-efficacy, and academic engagement are presented in Table 1. The participants of the study reported high sense of connection with teachers and peers in school although they reported higher sense of support from their peers. With autonomy, they students have higher perceived choice relative to perceived locus of causality and volition. The students also reported high confidence in their capacity in accomplishing tasks related to both for course and social activities. In terms of academic engagement, the students have higher emotional and performance engagement.

The highest reported Cronbach's alpha are overall academic self-efficacy and academic engagement, while the lowest alpha coefficient is at 0.27 for perceived locus of causality.

Table 2
Intercorrelation of Relatedness, Autonomy, Academic Self-efficacy and Academic Engagement

Variables	1	2	3	4
1. Relatedness				
2. Autonomy	.317**			
3. Academic Self-Efficacy	.348**	.511**		
4. Academic Engagement	.360**	.420**	.699**	

**p<.01 (two-tailed)

Table 3 describes the intercorrelations among relatedness, autonomy, academic self-efficacy and academic engagement. The results indicate highly significant, moderate to high correlation coefficients. Moderately strong correlation was found between relatedness and academic self-efficacy. This suggests the one's sense of belonging in schools is associated with one's confidence in completing assigned tasks. Also, the students' connectedness with peers and teachers is also associated with one's level of involvement in school activities as shown by the moderately strong correlation between relatedness and academic engagement.

Autonomy and academic self-efficacy have shown high and strong correlation suggesting that one's feeling of having a choice and control over the situation is associated with one's confidence in completing assigned academic tasks. Also, autonomy and academic engagement has reported a moderately strong correlation indicating positive association between one's feeling of having a choice and one's participation in doing academic tasks and requirements. Lastly, academic self-efficacy and academic engagement were found to have a highly significant and highly strong correlation indicating that students who are confident in their ability to complete assigned tasks tend to participate more actively in the course activities and requirements.

Path analysis was used to determine the mediating effect of academic self-efficacy on the influence of relatedness and autonomy on academic engagement.

This analysis intends to verify the significant results of the intercorrelation. It also allows the determination of goodness-of-fit of the proposed path model for relatedness and autonomy. Figure 1 displays the standardized parameter estimates indicating the direct effect of relatedness and autonomy on academic engagement. Both of the unmediated or direct effect on academic engagement are significant at $p < .001$.

Figure 2 shows the corresponding change that happened when academic self-efficacy as mediating variable was introduced in the model. There has been an apparent decrease in the direct effect of relatedness to academic engagement from 0.25 to 0.12, but it still significant at $p = .003$.

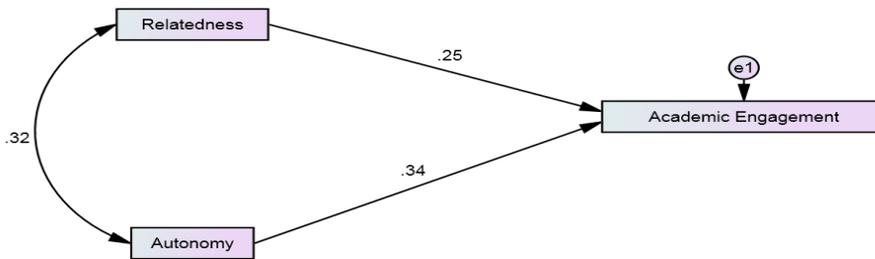


Figure 1.
 Standardized parameter estimates of Relatedness and Autonomy and its effect on Academic Engagement

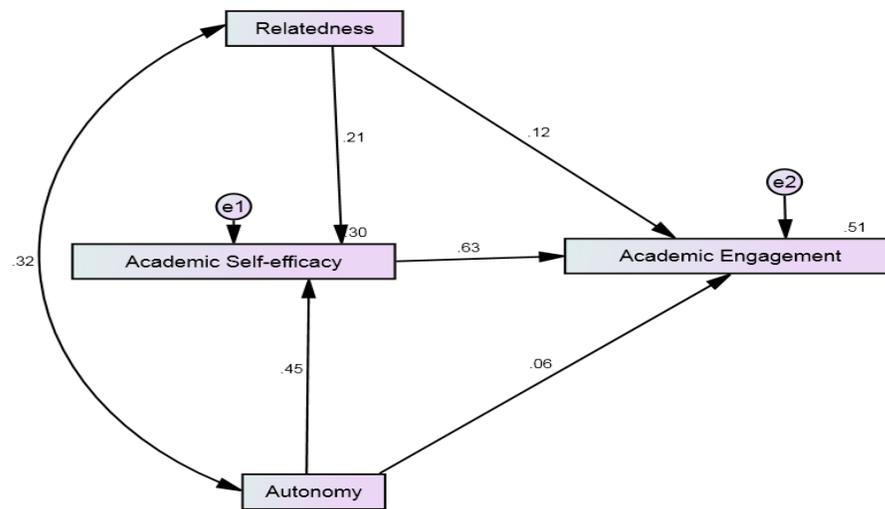


Figure 2
 Hypothesized Mediation Model of Academic Self-efficacy

A big drop in the direct effect of autonomy on academic engagement has been observed from 0.34 to 0.06 and the effect is no longer significant ($p=.188$). The results suggest the partial mediation of academic self-efficacy between relatedness and academic engagement wherein the direct effect continues to be significant but decreases in its value. On the other hand, academic self-efficacy has full mediation between autonomy and academic engagement wherein the significant direct effect lose its effect when the mediating variable was introduced in the model.

The standardized mediating effect of relatedness on academic engagement is at 0.130 which indicates the increase in academic engagement by 0.130 standard deviation (SD) when there is 1 SD increase in relatedness. This is also observed in the standardized mediating effect of autonomy on academic engagement at 0.279 which indicates a 0.279 increase in the SD of academic engagement when there is increase in autonomy. Both indirect effect are significant at $p<.001$. The results of the indirect effect further show the significant mediating effect of academic self-efficacy on relatedness, autonomy and academic engagement.

The proposed mediation model was tested for goodness-of-fit and it attained a good fit using $CFI=1.00$ and $NFI=1.00$ but $RMSEA=.348$ indicates a poor fit. Because academic self-efficacy has reported full mediation, direct effect of autonomy to academic engagement is no longer significant. The proposed mediation model was revised by removing the path indicating the direct effect of autonomy on academic engagement. Figure 3 shows the revised proposed mediation model of academic self-

efficacy. When it was tested for goodness-of-fit, it reported a good fit: GFI=.997, AGFI=.973, NFI=.995, TLI=.987, IFI=.998, CFI=.998, RMR=.005, RMSEA=.049. This suggests that the third proposed model of mediation has greatly improved when the direct effect of autonomy on academic engagement was removed.

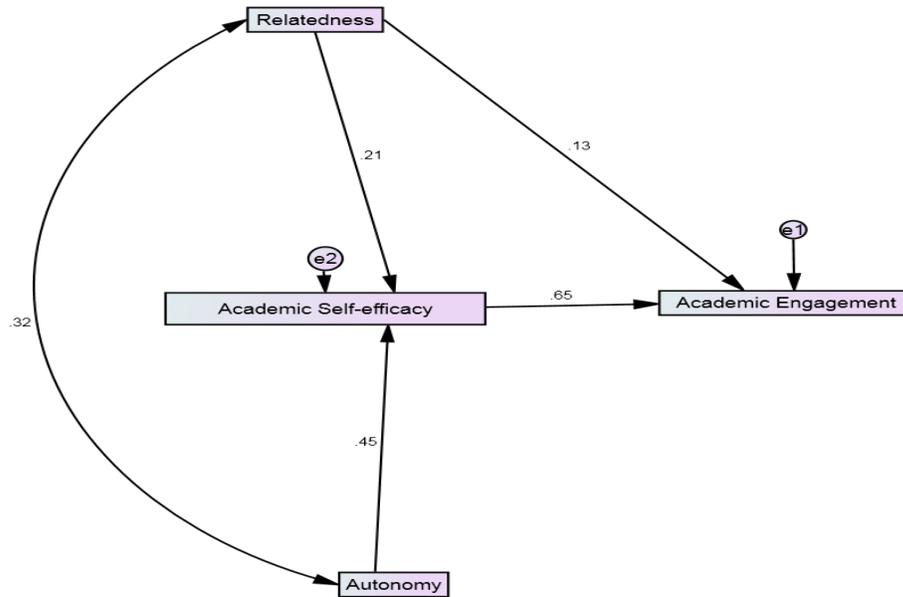


Figure 3.
 Proposed Path Model for the effect of Relatedness, Autonomy, and Academic Self-Efficacy on Academic Engagement

Discussion

The study was undertaken to determine the mediating effect of academic self-efficacy on the influence of relatedness and autonomy on academic engagement. It was hypothesized that academic self-efficacy will mediate the relationship of relatedness and autonomy on academic engagement. Based on the results, it was found that the impact of autonomy on academic engagement is fully mediated by academic self-efficacy. But for relatedness to academic engagement, academic self-efficacy has partial mediation. Although it did not totally support both hypotheses, the results have highlighted the importance of relatedness not only in academic engagement but as well as in bringing about academic self-efficacy.

This places relatedness as an important variable in further understanding self-efficacy. There has been limited, direct, updated, and accessible literature linking self-efficacy with relatedness. On the other hand, partial mediation of self-

efficacy implies the impact of relatedness to both self-efficacy and academic engagement. A portion of relatedness feeds into self-efficacy which in turn results to academic engagement. This has confirmed the need to acquire information from external sources (i.e., teachers and peers) to appraise one's capacity. At the same time, it has direct impact on academic engagement. McInnis and James (1995) have highlighted the importance of connectedness in bringing about engagement.

This further implies the importance of feeling connected and having a sense of belonging in Filipino college learners. Not only it allows one to develop and assess their skills and ability, it also gives them the boost to look forward to and become enthusiastic in their participation in school and social activities related to their course.

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Appendices

Appendix A

Relatedness Questionnaire (modified by Gillis, 2011)

Instructions: The following section contains items about your relationship with your teachers and peers. Please indicate the number that best corresponds to your answer.

- 1 – Strongly Disagree
- 2 – Disagree
- 3 – Agree Sometimes
- 4 – Agree
- 5 – Strongly Agree

1. Teachers in my school care about their students.
2. There is a teacher here I can talk to about academic problems.
3. Teachers in my school respect me
4. Teachers here are interested in my success
5. There is a teacher here I can talk to about my personal problem
6. I have friends here at school
7. I have friends I can talk to about important decisions
8. There is a friend here in school that I can depend on for help
9. I have no friends here in school I can depend on.

Appendix B

Autonomy Scale (Reeve, Nix, & Hamm, 2003) [with revisions]

Instructions: The following section contains items about your sense of autonomy or control in choosing things related to your course. Please indicate the number that best corresponds to your answer.

1	2	3	4	5	6	7
Not						Very
At all True						much
True						

1. I feel that I am doing only what the teachers want me to do
2. I feel that I am doing what I want to be doing in my course
3. I feel that I am pursuing goals that are my own.
4. I feel a sense of personal freedom in doing the activities and requirements of this course
5. I feel free in doing the activities and requirements of this course
6. I feel pressured in the activities and requirements of this course
7. I believe I have a choice on how to do the activities and requirements of this course
8. I make my own choice and decisions on how to do the activities or requirements of this course.
9. I feel I have control in deciding which goals to pursue in this course.

Appendix C

College Self-Efficacy Inventory (CSEI)

Instructions: The following section asks about your confidence in completing tasks related to various aspects of college life. Please indicate the number that best corresponds to your answer.

1	2	3	4	5	6	7	8	9	10
Not at all									Extremely
Confident									Confident

1. Make new friends at college.
2. Talk to college/university staff.
3. Manage time effectively.
4. Ask a question in class.
5. Participate in class discussions.
6. Research a term paper.
7. Do well on your exams.
8. Talk to your professors.
9. Ask a professor a question.
10. Take good class notes.
11. Understand your textbooks.
12. Keep up to date with your schoolwork.
13. Write course papers.

Appendix D
 Student Course Engagement Questionnaire
 (Handelsman, Briggs, Sullivan, & Towler, 2005)

Instructions: This section asks the extent to which the following behaviors, thoughts, and feelings describe you in your course. Please indicate the number that best corresponds to your answer.

- 1 – Not at all characteristic of me
- 2 – Not really characteristic of me
- 3 – Moderately characteristic of me
- 4 – Characteristics of me
- 5 – Very characteristic of me

1. Making sure to study on a regular basis
2. Putting forth effort
3. Doing all the assignments/homeworks
4. Staying up to complete the readings
5. Looking over class notes to make sure I understand the materials
6. Being organized
7. Taking good notes in class
8. Listening intently (carefully) in class
9. Coming to class everyday
10. Finding ways to make the course materials relevant to my life
11. Applying the course materials to my life
12. Finding ways to make the course interesting to me
13. Thinking about the course between class meetings
14. Desiring to learn the materials in my course
15. Raising my hand in class
16. Asking questions when I don't understand the instructor
17. Having fun in class
18. Participating actively in small-group discussions
19. Going to the professor's office for consultation
20. Helping fellow students
21. Getting a good grade
22. Doing well in the tests
23. Being confident that I can learn and do well in class