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Developing a student development index: An evidence from Vietnam

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The purpose of this study was to develop a measure on students' development in the higher educational institutions in Vietnam. The conceptual framework of student development was based on Bandura's self-efficacy and Chickering's seven vectors. Thus, this study focused on students' identity development, primarily on seven vectors of development, which were to develop competence, emotions, interdependence, and maturity in interpersonal relationship, self-identity, purpose, and integrity. A quantitative survey approach is employed in this study among university students in the Ho Chi Minh, Vietnam. 422 usable responses were valid to be analysed. The sampling frame was from university's database provided by the Academic Department 2013. The findings showed there were positive relationships between self-efficacy and Chickering's seven vectors. Self-efficacy was also positively correlated with student satisfaction and institutional image. This study contributed to both of theoretical and practical implications on the university's student development in Vietnam.

Keywords: Student development, self-efficacy, soft skills, Vietnam, chickering's seven vectors

INTRODUCTION

The purpose of this study is to examine the effect of self-efficacy on student development. Student development has to do with the way that a student develops, matures, or builds up his or her developmental potentials as a result of being enrolled in an institution of higher learning or education (Rogers, 1990). Academic efforts are targeted at building up both intellectuality and individuality of students. The focal point of student development is to make sure that students are provided with the necessary and fitting skills; and that they are market-ready to face the challenging working environment that is ahead of them. Student development is steered toward the development of student administration and leadership roles, ingenuity, and originality side by side the vital

aspects of entrepreneurship. In other words student development refers to how students grow, change, and learn as a result of the influences of the environment that surrounds them.

The interest of student development theorists is in the process of development of a person or student who is undertaking higher education. As a result, student development theories are aimed at focusing on human maturation and the surrounding influences and patterns that provide the necessary backdrop to stimulate students' ability to acquire knowledge both in and outside of class. The theories or philosophies provide a grounding on which student affairs specialists can strategically pinpoint and approach pressing student demands, tailor out new programs, establish new policies, and bring about favorable academic environs that boosts genuine student involvement (Evans, Forney, & Guido-DiBrito, 1998). In other words student development aims to rouse learning in higher education that enhances abilities, stirs up character, and adds to student scholarship.

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In addition, the basic assumptions of student development entail that:

1. Each student must be acknowledged as a unique person.
 2. Each student must be treated as the unique individual that they are.
 3. The student's whole environment is educational and must be used to assist the student attain their full growth capability.
 4. Each student is accountable for their personal and social development alongside his/her personal resources.
- Student development theory (SDT) are a set of diverse theories that try to explain the way students develop, grow and mature during the years they are enrolled in a higher education institution (Evans, Forney, & Guido-DiBrito, 1998). Theories are thus used to describe, explain, predict, and/or control student development. As such, several categories of theories exist to represent the different perspectives on the post-secondary student. Long (2012) posits that, theories of student development are helpful for student affairs professionals in several different ways. Theories explain and describe student behavior and create meaning for students' unique perspectives and experiences. Student affairs professionals intentionally design educational experiences and programs using theories of student development. For instance, first-year students are concerned with skills acquisition and developing competency, as suggested by Perry. Therefore, writing workshops, study skills programs, and other programs that emphasize developing competencies in academic skills are more likely to be successful when marketed heavily to first-year students. On the whole, philosophies give room for inquiry, channels to examine, and assumptions to assess. It affords a means in which students' issues can be properly evaluated and addressed (Evans 2003).

Chickering's Seven Vectors (1969)

Chickering's Vectors are well known and often referred to and utilized by student affairs professionals on both micro and macro levels. Consider for example working individually with a student who is distraught over the death of a close friend from home (vector two), or a student struggling to establish her identity as a young adult (vector five) or a student grappling with a moral or ethical dilemma (vector seven).

Chickering's theory implies fluid motion of development, and no two individuals will work through the vectors exactly the same as his or her peers (Chickering, et. al., 1993).

The vectors are:

1. Developing competence
2. Managing emotions
3. Moving through autonomy toward independence
4. Developing mature interpersonal relationships

5. Establishing identity
6. Developing purpose
7. Developing integrity

RESEARCH METHOD

Mainly, survey questionnaire was developed based on the literature review on the key facets of student development practices and from the direct observation and literature analysis.

Descriptive Analysis

Out of 469 sets of questionnaires collected, 47 sets of questionnaires were incomplete due to missing data. Thus, it left 422 sets of completed questionnaires. All the respondents are Vietnamese. 98.3% of the respondents are from public institutions whereas 1.7% are from private college. There are 39.3% male and 60.7% of female involved in this survey. Majority of the respondents fall in the age of 18 - 20 years old followed by 21 - 23 years old and 24 - 26 years old. 50.5% of the respondents preferred to use English language, 49% preferred using Vietnamese language, followed by Mandarin language 0.5%. 49.1% of the respondents graduated from high school, 26.5% obtained bachelor degree and the rest are from master's degree, diploma and PhD. Majority of the respondents yield income less than RM10 000.

Data Analysis

Data analysis was conducted on two stages. First stage involved with descriptive analysis to provide general description on the characteristic of respondents. The internal consistency method using Cronbach's alpha was calculated to confirm the reliability of each construct. SPSS version 21 was employed to analyze the data. In the second stage of analysis, 'family social support' and 'neighborhood climate' were tested its relationships with self-efficacy, 11 hypotheses using self-efficacy as independent variables whereas the dependent variables (outcomes) are namely developing competence, managing emotion, moving through autonomy towards independence, developing interpersonal relationship, establishing identity, developing purpose, developing integrity, communicating effectively, managing problem solving student satisfaction and university image.

RESULTS

Several items were removed from further examination due to its low reliability. In particular, one item "If I face a problem, I have difficulty in telling my family about it" from family social support and one item "I usually feel isolated in my society" from neighborhood climate were deleted during reliability analysis.

Reliability Test

Cronbach's coefficient alpha was used in this research due to its popularity in studies. The reliability test for the variables showed excellent reliability with a coefficient alpha of above 0.7, which is the cut-off point of reliability suggested for theory testing by Nunnally (1978). However, caution must be practiced when interpreting the result related to family social support, neighbourhood climate and moving through autonomy towards independence as these variables showed coefficient alpha of 0.68, 0.64, and 0.69 respectively. The rest of the variables ranges from 0.72 to 0.84 were acceptable for use in further analysis.

Table 1: Cronbach alpha

Construct	Cronbach Alpha
Family social support	0.68
Neighborhood climate	0.64
Self-efficacy	0.74
Developing Competence	0.72
Managing emotion	0.72
Moving through autonomy towards independence	0.69
Developing interpersonal relationship	0.77
Establishing identity	0.78
Developing purpose	0.80
Developing integrity	0.79
Communicating effectively	0.80
Problem Solving	0.81
Student satisfaction	0.84
Institution image	0.81

Hypothesis Testing

H1: There is a significant difference between past experience and self-efficacy

Table 2 shows, Levene's Test for Equality of Variances shows that F value is 0.15 and P value is 0.70 which is greater than critical value of 0.05. Therefore, H1 is rejected and concluded that there is no significant different in the variances of public institutions and private college in their self-efficacy.

Table 3 shows, Levene's Test for Equality of Variances shows that F value is 0.12 and P value is 0.73 which is greater than critical value of 0.05. Therefore, H2a is rejected and concluded that there is no significant different in the variances of gender in their self-efficacy.

Table 4 shows the P-value = 0.75 is greater than 0.05. Therefore, reject H2b. There is no significant difference between age group and self-efficacy.

Table 5 shows the P-value = 0.04 is lesser than 0.05. Therefore, accept H2c. There is significant difference between education level and self-efficacy.

Table 6 shows the P-value = 0.046 is lesser than 0.05. Therefore, accept H2d. There is significant difference between family income and self-efficacy.

Table 7 shows the P-value = 0.204 is greater than 0.05. Therefore, reject H2e. There is no significant difference between language used and self-efficacy.

From Table 8, it can be seen that family social support has a positive influence on self-efficacy where p value is < 0.05 . The R square obtained is 0.099 indicating that only 9.9% of the total variance in self-efficacy can be predicted from family social support. From Table 9, it can be seen that neighbourhood climate has a positive influence on self-efficacy where p value is < 0.05 . The R square obtained is 0.08 indicating that only 8% of the total variance in self-efficacy can be predicted from neighborhood climate.

From Table 10, self-efficacy has a positive and significant influence on developing competence at significant level of $p < 0.01$. The R square obtained is 0.23 indicating that 23% of the total variance in developing competence can be predicted from self-efficacy. In terms of multicollinearity of family social support on self-efficacy, the VIF values do not exceed 5. This indicates that high multicollinearity does not exist to reduce the explanatory power of the predictor variables on self-efficacy.

From Table 11, self-efficacy has a positive and significant influence on managing emotion at significant level of $p < 0.05$. The R square obtained is 0.13 indicating that 13% of the total variance in managing emotion can be predicted from self-efficacy. In terms of multicollinearity of family social support on self-efficacy, the VIF values do not exceed 5. This indicates that high multicollinearity does not exist to reduce the explanatory power of the predictor variables on self-efficacy.

From Table 12, self-efficacy has a positive and significant influence on moving through autonomy towards independence significant level of $p < 0.01$. The R square obtained is 0.24 indicating that 24% of the total variance in moving through autonomy towards independence can be predicted from self-efficacy. In terms of multicollinearity of family social support on self-efficacy, the VIF values do not exceed 5. This indicates that high multicollinearity does not exist to reduce the explanatory power of the predictor variables on self-efficacy.

From Table 13, self-efficacy has a positive and significant influence on developing interpersonal relationship at the significant level of $p < 0.05$. The R square obtained is 0.33 indicating that 33% of the total variance in developing interpersonal relationship can be predicted from self-efficacy. In terms of multicollinearity of family social support on self-efficacy, the VIF values do not exceed 5. This indicates that high multicollinearity does not exist to reduce the explanatory power of the predictor variables on self-efficacy.

From Table 14, self-efficacy has a positive and significant influence on establishing identity at the significant level of $p < 0.05$. The R square obtained is 0.47 indicating that 47% of the total variance in establishing identity can be predicted from self-efficacy. In terms of multicollinearity of family social support on self-efficacy, the VIF values do not exceed 5. This indicates that high multicollinearity does not exist to reduce the explanatory power of the predictor variables on self-efficacy.

Table 2: Independent sample T-Test (Past experience and self-efficacy)

	Levene's Test for Equality of Variances			t-test for Equality of Means			
	F	Sig	t	df	Sig (2 tailed)	Mean Difference	Std Error Difference
Equal variances assumed	0.15	0.70	1.82	420	0.07	0.36	0.20
Equal variances not assumed			1.50	6.1	0.19	0.36	0.25

H2a: There is a significant difference between gender and self-efficacy

Table 3: Independent sample T-Test (Gender and self-efficacy)

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig	t	df	Sig (2 tailed)	Mean Difference	Std Error Difference
Equal variances assumed	0.12	0.73	0.03	420	0.98	0.00	0.52
Equal variances not assumed			0.03	347	0.98	0.00	0.53

H2b: There is a significant difference between age group and self-efficacy

Table 4: ANOVA (Age group and self-efficacy)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.96	6	0.16	0.58	0.75
Within Groups	115	415	0.28		
Total	116	421			

H2c: There is a significant difference between education level and self-efficacy

Table 5: ANOVA (Education level and self-efficacy)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.14	4	1.03	3.86	0.04
Within Groups	111.86	417	0.268		
Total	115.99	421			

H2d: There is a significant difference between family income and self-efficacy

Table 6: ANOVA (Income level and self-efficacy)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.66	4	0.67	2.45	0.046
Within Groups	113.33	417	0.27		
Total	115.99	421			

H2e: There is a significant difference between language used and self-efficacy

Table 7: ANOVA (Language used and self-efficacy)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.88	2	0.44	1.60	0.204
Within Groups	115.12	419	0.28		
Total	115.99	421			

H3a: There is a positive relationship between family social support and self-efficacy

Table 8: The Influence Family Social Support on Self Efficacy

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)
Constant	2.66			
Family Social Support	0.26	0.315	6.80	0.00
R=0.315 R Square = 0.099 Adjusted R Square= 0.097				

H3b: There is a positive relationship between neighborhood climate and self efficacy

Table 9: The Influence Neighbourhood Climate on Self Efficacy

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)
Constant	2.84			
Neighbourhood climate	0.24	0.28	6.1	0.00
R=0.287 R Square = 0.08 Adjusted R Square= 0.08				

H4: There is a positive relationship between self-efficacy and developing competence

Table 10: The Influence of Self efficacy on managing competence

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)	VIF
Constant	1.84				
Self efficacy	0.48	0.48	1.1	0.00	1.0
R=0.48 R Square = 0.23 Adjusted R Square= 0.23					6

H5: There is a positive relationship between self-efficacy and managing emotion

Table 11: The Influence of Self efficacy on managing emotion

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)	VIF
Constant	2.39				
Self-efficacy	0.38	0.37	8.02	0.00	1.00
R=0.37 R Square = 0.13 Adjusted R Square= 0.13					

H6: There is a positive relationship between self-efficacy and moving through autonomy towards independence

Table 12: The Influence of Self efficacy on moving through autonomy towards independence

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)	VIF
Constant	1.98				
Self efficacy	0.49	0.49	11.38	0.00	1.00
R=0.49 R Square = 0.24 Adjusted R Square= 0.23					

H7: There is a positive relationship between self-efficacy and developing interpersonal relationship

Table 13: The Influence of Self efficacy on developing interpersonal relationship

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)	VIF
Constant	2.71				
Self efficacy	0.34	0.33	7.16	0.00	1.00
R=0.33 R Square = 0.11 Adjusted R Square= 0.11					

H8: There is a positive relationship between self-efficacy and establishing identity

Table 14: The Influence of Self efficacy on Establishing Identity

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)	VIF
Constant	1.97				
Self efficacy	0.54	0.47	10.85	0.00	1.00
R=0.47 R Square = 0.22 Adjusted R Square= 0.22					

H9: There is a positive relationship between self-efficacy and developing purpose

From **Table 15**, self-efficacy has a positive and significant influence on developing purpose at the significant level of $p < 0.05$. The R square obtained is 0.30 indicating that 30% of the total variance in developing purpose can be predicted from self-efficacy. In terms of multicollinearity of family social support on self-efficacy, the VIF values do not exceed 5. This indicates that high multicollinearity does not exist to reduce the explanatory power of the predictor variables on self-efficacy.

From **Table 16**, self efficacy has a positive and significant influence on developing integrity at the significant level of $p < 0.05$. The R square obtained is 0.22 indicating that 22% of the total variance in developing integrity can be predicted from self efficacy. In terms of multicollinearity of family social support on self efficacy, the VIF values do not exceed 5. This indicates that high multicollinearity does not exist to reduce the explanatory power of the predictor variables on self efficacy.

From **Table 17**, self efficacy has a positive and significant influence on communicating effectively at the significant level of $p < 0.05$. The R square obtained is 0.26 indicating that 26% of the total variance in communicating effectively can be predicted from self efficacy. In terms of multicollinearity of family social support on self efficacy,

the VIF values do not exceed 5. This indicates that high multicollinearity does not exist to reduce the explanatory power of the predictor variables on self efficacy.

From **Table 18**, self efficacy has a positive and significant influence on managing problem solving at the significant level of $p < 0.05$. The R square obtained is 0.29 indicating that 29% of the total variance in managing problem saving can be predicted from self efficacy. In terms of multicollinearity of family social support on self efficacy, the VIF values do not exceed 5. This indicates that high multicollinearity does not exist to reduce the explanatory power of the predictor variables on self efficacy.

From **Table 19**, self efficacy has a positive and significant influence on student satisfaction at the significant level of $p < 0.05$. The R square obtained is 0.12 indicating that 12% of the total variance in student satisfaction can be predicted from self efficacy. In terms of multicollinearity of family social support on self efficacy, the VIF values do not exceed 5. This indicates that high multicollinearity does not exist to reduce the explanatory power of the predictor variables on self efficacy.

From **Table 20**, self efficacy has a positive and significant influence on university's image at the significant level of $p < 0.05$. The R square obtained is 0.12 indicating that 12%

Table 15: The Influence of Self efficacy on Developing Purpose

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)	VIF
Constant	1.74				
Self-efficacy	0.59	0.55	13.55	0.00	1.00
R=0.55 R Square = 0.30 Adjusted R Square= 0.30					

H10: There is a positive relationship between self efficacy and developing integrity

Table 16: The Influence of Self efficacy on developing integrity

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)	VIF
Constant	2.08				
Self efficacy	0.5	0.47	10.8	0.00	1.00
R=0.47 R Square = 0.22 Adjusted R Square= 0.22					

H11: There is a positive relationship between self efficacy and communicating effectively

Table 17: The Influence of Self efficacy on communicating effectively

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)	VIF
Constant	1.72				
Self efficacy	0.57	0.51	12.27	0.00	1.00
R=0.51 R Square = 0.26 Adjusted R Square= 0.26					

H12: There is a positive relationship between self efficacy and managing problem solving

Table 18: The Influence of Self efficacy on managing problem solving

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)	VIF
Constant	1.60				
Self efficacy	0.60	0.54	13.25	0.00	1.00
R=0.54 R Square = 0.29 Adjusted R Square= 0.29					

H13: There is a positive relationship between self efficacy and student satisfaction

Table 19: The Influence of Self efficacy on student satisfaction

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)	VIF
Constant	2.19				
Self efficacy	0.44	0.35	7.67	0.00	1.00
R=0.35 R Square = 0.12 Adjusted R Square= 0.12					

H14: There is a positive relationship between self efficacy and university's image

Table 20: The Influence of Self efficacy on university image

Independent Variables	Unstandardized Beta	Standardized Beta	t	Sig. (p.value)	VIF
Constant	2.3				
Self efficacy	0.43	0.35	7.6	0.00	1.00
R=0.35 R Square = 0.12 Adjusted R Square= 0.12					

of the total variance in student satisfaction can be predicted from self efficacy. In terms of multicollinearity of family social support on self efficacy, the VIF values do

not exceed 5. This indicates that high multicollinearity does not exist to reduce the explanatory power of the predictor variables on self efficacy.

Concluding Remarks

Based on earlier discussion, H1, H2a, H2b and H2e were not supported whereas the rest of the hypotheses were supported, as is shown below.

H1	There is a significant difference between past experience and self efficacy	Not supported
H2a	There is a significant difference between gender and self efficacy	Not supported
H2b	There is a significant difference between age group and self efficacy	Supported
H2c	There is a significant difference between education level and self efficacy	Supported
H2d	There is a significant difference between family income and self efficacy	Supported
H2e	There is a significant difference between language used and self efficacy	Not supported
H3	There is a positive relationship between family social support and self efficacy	Supported
H4	There is a positive relationship between self efficacy and managing competence	Supported
H5	There is a positive relationship between self efficacy and managing emotion	Supported
H6	There is a positive relationship between self efficacy and moving through autonomy towards independence	Supported
H7	There is a positive relationship between self efficacy and developing interpersonal relationship	Supported
H8	There is a positive relationship between self efficacy and developing purpose	Supported
H9	There is a positive relationship between self efficacy and developing integrity	Supported
H10	There is a positive relationship between self efficacy and communicating effectively	Supported
H11	There is a positive relationship between self efficacy and managing problem solving	Supported
H12	There is a positive relationship between self efficacy and student satisfaction	Supported
H13	There is a positive relationship between self efficacy and university's image	Supported

DISCUSSION

This study provides a useful insight of analyzing the development of Universities Student Development Index among the World Third Countries and the implementation and practices among these countries, as it would be able for them to create a standard benchmarking. It will ensure that these Universities would be able to provide sufficient and relevant Student Development Index in Vietnam.

In addition, the finding from the study will shed information on the relevance and usefulness the Student Development Index in terms of promoting and practicing, how the student turn respond and interact with the implementation of their Universities Student Development Programs such as Starting

School, Finishing School, Entrepreneurship program to name a few, and how those programs can give an impact on students' efficacy.

Indeed, this is among the first study to develop the Student Development Index in Vietnam. Thus, this study is so essential and beneficial to the development and improvement of programs performances itself, as well as to enhance the efficiency of the Third World Countries of University Student Development Programs' mechanism and framework. This study is able to provide solutions and enrichment of knowledge in terms of implementation and enforcement strategies of University Student Development Programs for the government and related authorities. The findings from this research perhaps would be able to address the problems and challenges of the Universities Student Development Programmes in this country towards the new globalization era, and enable to help the authorities to reconstruct or restructure the best mechanism and practices.

CONCLUSION

The employability and the marketability among the Vietnamese graduates have become a major concern in the country. Initiatives taken by many universities through the Department of Student Services Profesional by having linkages with industries have lessen the alarming scenario. Through this linkages, the Student Services Profesional in each university could update all the skills needed by the job market and nurture those soft skills to their students prior to their graduation. It is hope the the continuous effort by Student Service Profesional from each university will help Vietnamese graduates to be more competitive not only on the local market but also on the international market. Indeed, the Vietnamese university should have a strategic collaboration with other Asian country like Malaysia, Cambodia, Thailand and Singapore to improve Student Development practices in Asia.

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