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THE RELATIONSHIP BETWEEN STUDENT ENGAGEMENT AND QUALITY OF COLLEGE LIFE

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SUMMARY OF DISSERTATION

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Chapter 1. INTRODUCTION

1.1. Problem statement

Over the past decades, higher education institutions (HEIs) have undergone the process of extension and transition, and also confronted a variety of challenges, both domestically and internationally (Chen, 2016; Dao & Thorpe, 2015; Koszembar-Wiklik, 2016). Technological revolution context and trends will dramatically alter the higher education landscape. Colleges, as a result, will no longer enjoy their knowledge provision monopoly, but are supposed to further accentuate their role in inspiring students to show positive learning attitude or educating them in self-training and lifelong pursuit of knowledge. As for students, various options are open to them in terms of locations and methods for knowledge gain. Such changes have influenced the way today's HEIs operate and these are seen as a driving force behind higher education marketing. Therefore, the improved quality of training services, learner attraction matters, and other marketing activities to cater for students (also considered direct customers) become more crucial than ever.

This very issue has been vividly identified by examining student engagement from the multidirectional perspective, and it is thus recommended for research to ameliorate such substantial consequences as learning outcome or quality of academic life (Kahu, 2013). In this context, the author decides to take account of student engagement based on Fredricks et al.'s (2004) cognitive and emotional dimensions for an investigative study carried out for this thesis.

1.2. Research topic

Given existing literature, few studies have explored how student engagement is affected by cognitive dimensions or learner's personal

characteristics, namely perceived service value, purpose in life, absorptive capacity, and grit. While predominantly capturing the impact of external factors (parents, teachers, friends, colleges, etc.) or student perception of external factors (motives, learning missions, familiarity, etc.) on engagement decision, previous studies scarcely consider different factors of personal characteristics. Also detected by the author is the fact that several consequences of student engagement, as documented in most literature, are academic achievement, school dropouts, and student satisfaction, whereas happiness, or quality of school life, has not specifically been considered. In this regard, this thesis investigates the topic of student engagement on the basis of the mentioned gap.

1.3. Research objectives

The overall objectives of the research are to unveil: (i) how cognitive dimensions and personal characteristics (including perceived service value, absorptive capacity, purpose in life, and grit) affect student engagement; and (ii) the linkage between student engagement and quality of college life.

1.4. Research questions

How can cognitive dimensions and personal characteristics be measured and to which extent do they impact student engagement? Besides independent variables, which factors will be explored with their moderating role?

How does student engagement affect quality of college life? Among the four cognitive dimensions and personal characteristics, which has an effect on quality of college life?

Is there any difference in quality of college life between students of different gender and geographical locations?

Do students of different training programs differ in the associations that cognitive dimensions and personal characteristics have with student engagement and quality of college life?

What solutions can be adopted to enhance student engagement and quality of college life?

1.5. Research participants

Survey participants consist of: (i) Full-time first degree students (those devoting most of their daytime to the course of study on a full-time basis); and (ii) Part-time students (those trained at HEIs or affiliated institutes that well meet their demands), including in-service and Master's students.

1.6. Research scope

This research is expected to shed some light on a single scientific matter, which is student engagement in public universities specializing in economics/business education. The sample, therefore, will be collected from five top public universities in Vietnam, whose headquarters are based in Hanoi and Ho Chi Minh City, two centers taking a crucial part in training high-quality human resources across the country. These comprise National Economics University (NEU), Foreign Trade University (FTU) (main campus), University of Economics Ho Chi Minh City (UEH), VNUHCM-University of Economics and Law (UEL), and University of Finance and Marketing (UFM).

1.7. Data and methods

The data are collated from a sample of 1,435 students. CFA and SEM are employed to test the research model and hypotheses, respectively.

1.8. Significance of the research

First, given theoretical contribution, this study re-tests and adds to the scale system six dimensions under discussion including perceived service value, absorptive capacity, purpose in life, grit, student engagement, and quality of college life in the current context of Vietnam's market. The findings are novel, concerning the linkages between cognitive dimensions and personal characteristics (perceived service value, absorptive capacity, purpose in life, grit) and student engagement, and the role of student engagement in their quality of college life. The study also highlights the substance of the self-determination and absorptive capacity theories in clarifying the issue of student engagement in addition to checking the moderating role of the factors of personal characteristics in the association between perceived service value and student engagement. Besides, the new research model (with four independent variables, two dependent variables, pure and mixed moderating variables concurrently analyzed using quantitative research methods, control variables, and group moderating variables) underlines the research method contribution.

Second, with regard to practical contribution, the findings provide the educational management and/or university administrators with some material reference which allows enhanced service value based on learners' perception, reduced student burnout and dropout rates, increased positive learning, and thus improved quality of college life or greater satisfaction derived from the service obtained. This also results in learners' positive evaluation, recommendation, and promotion of their future's college. Furthermore, the thesis is a general reference work, useful for policy-makers, researchers/practitioners, and others, on student engagement at colleges and universities.

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Chapter 2. THEORETICAL BASES AND RESEARCH MODEL

2.1. Review of empirical studies

This section is presented based on two primary discussion points, namely: (i) constructs viewed as antecedents and consequences of student engagement; and (ii) descending order of appearance by the level of popularity detected. As such, antecedents with impact on student engagement comprise school environment (teachers, friends, classroom structure, schools, and school officials), parents, motivation, perceptions, learning missions, confidence in ability, familiarity, character traits, personal emotions, games for learning goals, learners' skills, grit, and purpose in life. Consequences that affect student engagement consist of performance, dropout rates, and student satisfaction.

2.2. Constructs of the research model

2.2.1. Student engagement

As defined by Fredricks et al. (2005) and Yusof et al. (2017), student engagement is a meta-construct illustrating how students behave, feel, and think at school. It consists of three dimensions: behavioral, emotional, and cognitive engagement.

2.2.2. Perceived service value

LeBlanc and Nguyen (1999) were of the opinion that educational service value, perceived by students, is their overall assessment of the utility of the service provided by HEIs through awareness of what they give and what they get in the process of using the service.

2.2.3. Absorptive capacity

Absorptive capacity is such that students gain knowledge from business schools, which includes recognition of the value of the

knowledge, assimilation of it, linking it with the knowledge already possessed, and applying it to their daily tasks (Cohen & Levinthal, 1990; Mariano & Walter, 2015; Tho, 2017).

2.2.4. Purpose in life

The definition of purpose in life is derived from valued goals, which are fundamentally substantial due to providing the purpose to live (Scheier et al., 2006), and therefore in line with the intention to figure out what prompts students to act and maintain their engagement at colleges and/or universities.

2.2.5. Grit

Grit manifests itself through perseverance and passion to accomplish long-term goals or lasting survival ability (Duckworth et al., 2007). It is also shown by attempts to maintain resilience capacity, conscientiousness, self-control, and persistence with problem-solving measures (Bashant, 2014).

2.2.6. Quality of college life

According to Sirgy et al. (2007) and Nguyen et al. (2012), quality of college life refers to students' overall satisfaction with college life, or more precisely, their contentment found with educational experiences throughout the years of studying and living at their institutions.

2.3. Theoretical background

2.3.1. Review of background theories and basis for selecting self-determination theory (SDT)

Apart from reviewing empirical studies to explore the research gap, the study also looks at the background theories suggested in previous studies to opt for the most appropriate one. In general, there are many that examined the factors that facilitate student engagement to minimize dropouts and improve academic performance as well as

satisfaction on quality of college life, and one of these, which was most commonly employed, is self-determination theory (SDT).

Moreover, according to Ryan and Deci (2017), theoretically, major theories in Western psychology of the twentieth century predominantly highlighted the tendency of an individual, without adequate attention to the idea that each individual is embedded within a social organization, and the individual within it is integrated more or less. Therefore, SDT primary concern is how the universal features of human nature (above all, the basic needs), are expressed in a different and satisfied manner through the cultural context, thereby affecting both personal and social well-being. SDT results indicate that the satisfaction of certain desires or actual motives may well be related to illnesses rather than healthiness or well-being (Kasser & Ryan, 2001; Niemiec & Ryan, 2009).

2.3.2. Self-determination theory (SDT)

SDT is an empirically based theory involving human behavior and personality development. It principally addresses psychological aspects, classifying various types of motivation that are constantly changing from control to autonomy, and particularly how social context-related factors advocate or hinder an individual's development by means of fulfillment of basic psychological needs, including competence, relatedness, and autonomy. The theory has been centrally applied in different fields such as education, health care, psychotherapy, sports, and the virtual world, examining the social, political, and cultural dimensions influencing human motivation and satisfaction of basic needs (Ryan & Deci, 2017). Specifically, in education SDT aims at motivating learners to take a keen interest in learning, valued education, and confidence in competence and attributes (Deci & Ryan, 1985; Deci et al., 1981).

2.3.3. Six sub-theories of SDT

The six main sub-theories of SDT comprise cognitive evaluation theory (CET), organismic integration theory (OIT), causality orientation theory (COT), basic psychological needs theory (BPNT), goal contents theory (GCT), and relationships motivation theory (RMT).

Specifically, CET posits that intrinsic motivation relates to the performance of a desired action which leads to the natural satisfaction. Many a scenario and/or situation enhance or diminish intrinsic motivation. Next, OIT seeks to analyze and interpret different levels of extrinsic motivation in an ascending order of their relative autonomy, namely externally regulated behavior, introjected regulation of behavior, regulation through identification, and integrated regulation. The third mini-theory, COT, argues that causality orientation is a tendency to focus on a few environmental aspects and internal competency related to the motivation and causes of behavior that affect certain motivations, general needs, behavior, experiences, and also the efficiency of human engagement with the surrounding environment and psychological well-being. According to BPNT, basic needs are the basis for accelerating the process of: (i) intrinsic motivation, (ii) internalization and integration of behavioral regulation and social regulations and values, bringing about psychological engagement and integrity, and (iii) experiences of wellness and vitality. GCT views goals and life aspirations as a source of motivation that prompts humanity to pursue and achieve their goals and basic need satisfaction, other motivations, and happiness. Last, RMT accentuates the role of needs for relatedness, which help individuals in their building, adjusting, maintaining, and enhancing the quality of close relationships with openness through positive experiences and levels of autonomy respect.

2.3.3. Absorptive capacity theory

Cohen and Levinthal (1990) successfully proposed the concept of absorptive capacity as the ability to process knowledge by recognizing value, assimilating it, and applying new knowledge. Since then, this concept has been widely utilized and rapidly developed in many fields, both theoretical and empirical research, with more than 1,300 citations and over 600 published articles (Volberda et al., 2010). Thus, the theory of absorptive capacity refers to the ability to identify, acquire, integrate, and apply new inputs to enhance competitiveness (Nguyen, 2017). Absorptive capacity allows employees to identify, learn, and gain new knowledge from external sources essential to their current job (Cohen & Levinthal, 1990). Overall, pioneered by Cohen and Levinthal (1990), the absorptive capacity theory would form a sound basis for substantial arguments for the relationships in the research models involving absorptive capacity (Harvey et al., 2015; Lane et al., 2006).

2.4. Research model

2.4.1. Hypotheses

H_1: Perceived service value (PSV) positively affects student engagement (SE).

H_2: Absorptive capacity (AC) positively affects student engagement (SE).

H_3: Absorptive capacity (AC) moderates the relationship between perceived service value (PSV) and student engagement (SE).

H_4: Purpose in life (PL) positively affects student engagement (SE).

H_5: Purpose in life (PL) moderates the relationship between perceived service value (PSV) and student engagement (SE).

H_6: Grit (GR) positively affects student engagement (SE).

H_7: Student engagement (SE) positively affects quality of college life (QL).

H_8: Perceived service value (PSV) positively affects quality of college life (QL).

H_9: Purpose in life (PL) positively affects quality of college life (QL).

Additionally, due to the intention to investigate whether any difference exists in the relationships established in the theoretical framework between full-time and part-time students, the study makes the following predictions.

P_1: The relationship between perceived service value (PSV) and student engagement (SE) of full-time students is weaker than that of part-time students.

P_2: The relationship between absorptive capacity (AC) and student engagement (SE) of full-time students is weaker than that of part-time students.

P_3: The relationship between grit (GR) and student engagement (SE) of full-time students is weaker than that of part-time students.

P_4: The relationship between purpose in life (PL) and student engagement (SE) of full-time students is weaker than that of part-time students.

P_5: The relationship between student engagement (SE) and quality of college life (QL) of full-time students is stronger than that of part-time students.

P_6: The relationship between perceived service value (PSV) and quality of college life (QL) of full-time students is weaker than that of part-time students.

P_7: The relationship between purpose in life (PL) and quality of college life (QL) of full-time students is weaker than that of part-time students.

2.4.2. Theoretical model

Figure 2.1. Theoretical model

(Source: Author's proposal)

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Chapter 3. RESEARCH DESIGN

3.1. Research design

3.1.1. Research procedures

The study follows quantitative research procedures with tests on theoretical perspectives (Nguyen Dinh Tho, 2013). These include three key steps, namely theoretical research, preliminary quantitative research, and formal quantitative research, as illustrated in Figure 3.1.

Figure 3.1. Research procedures

(Source: Author's proposal)

3.1.2. Constructing scales

Table 3.1. Scales of Student Engagement

Symbol	Items
Emotional Engagement (EE)	
EE1	I like being at school.
EE2	I feel excited by my work at school.
EE3	My classroom is a fun place to be.
EE4	I am interested in the work at school.
EE5	I feel happy in school.
Cognitive Engagement (CE)	
CE6	I pay attention in class.
CE7	I complete my work on time.
CE8	I study at home even when I don't have a test.
CE9	I try to watch TV shows about things we do in school.
CE10	I read extra books to learn more about things we do in school.
CE11	If I don't know what a word means when I am reading, I do something to figure it out.
CE12	If I don't understand what I read, I go back and read it over again.
CE13	I talk with people outside of school about what I am learning in class.

(Source: Yusof et al. (2017))

Table 3.2. Scales of Perceived Service Value

Symbol	Items
Functional Value (want satisfaction) (FS)	
FS1	A degree in business will allow me to earn a good salary.
FS2	A degree in business will allow me to achieve my career goals.

Symbol	Items
FS3	The knowledge I have acquired at my business school will allow me to get promotions.
FS4	I believe employers are interested in hiring students from my business school.
FS5	A degree from my business school is a good investment.
FS6	It is better to obtain a post secondary degree than to enter the workforce immediately after high school.
Epistemic Value (EP)	
EP7	The quality of education received from my professors influences the value of my degree.
EP8	Course content influences the value of my education.
EP9	The number of students in my classes influences the value of my education.
EP10	The guidance received from professors effects the value of my education.
EP11	I learn new things in many of my courses.
Image (IM)	
IM12	I have heard positive things about my business school.
IM13	The reputation of my business school influences the value of my degree.
IM14	The image projected by my business school has an influence on the value of my degree.
IM15	I believe that employers would have positive things to say about my business school.
Emotional Value (EM)	
EM16	I like taking courses in business administration.
EM17	I am glad that I chose courses in business administration.
EM18	The value of my education depends on my personal effort.
Functional Value (price/quality) (FQ)	

Symbol	Items
FQ19	When considering the price I pay for tuition, I believe that my business school offers sufficient services.
FQ20	When considering the price I pay for tuition, I believe that the price/quality ratio is good at my business school.
FQ21	I believe that my business school offers quality services
Social Value (SO)	
SO22	I am happy when friends are in my classes.
SO23	I find courses more interesting when friends are in my classes
SO24	Working in groups has a positive effect on the value of my education.
SO25	Social activities at my business school make my studies more interesting.

(Source: LeBlanc and Nguyen (1999))

Table 3.3. Scales of Absorptive Capacity

Symbol	Items
AC1	I have the ability to recognize new knowledge and skills provided by my instructors applicable to my current job.
AC2	I have the ability to absorb the new knowledge and skills provided by my instructors.
AC3	I have the ability to integrate the new knowledge and skills provided by my instructors with my prior knowledge.
AC4	I have the ability to apply the new knowledge and skills provided by my instructors to my current job.

(Source: Tho (2017))

Table 3.4. Scales of Purpose in Life

Symbol	Items
PL1	There is not enough purpose in my life.
PL2	To me, the things I do are all worthwhile

Symbol	Items
PL3	Most of what I do seems trivial and unimportant to me.
PL4	I value my activities a lot.
PL5	I don't care very much about the things I do.
PL6	I have lots of reasons for living.

(Source: Scheier et al. (2006))

Table 3.5. Scales of Grit

Symbol	Items
Consistency of Interests (CI)	
CI1	I have been obsessed with a certain idea or project for a short time but later lost interest.
CI2	I have difficulty maintaining my focus on projects that take more than a few months to complete.
CI3	I often get a goal but later choose to pursue a different one.
CI4	New ideas and new projects sometimes distract me from previous ones.
Perseverance of Effort (PE)	
PE5	I finish whatever I begin.
PE6	I am diligent.
PE7	I am a hard worker.
PE8	Setbacks don't discourage me.

(Source: Duckworth and Quinn (2009))

Importantly, grit is measured by such two dimensions as consistency of interest (CI) and perseverance of effort (PE). In estimating CI, reverse-scored items are employed for rational data process.

Table 3.3. Scales of Quality of College Life

Symbol	Items
QL1	QL1. In general, how satisfied are you with your academic and

Symbol	Items
	social life on campus? (very dissatisfied/ very satisfied)
QL2	QL2. In general, how satisfied are your friends and other classmates with their academic and social life on campus? (very dissatisfied/ very satisfied)
QL3	QL3. Considering all things, how happy are you with your study at this university? (very unhappy/very happy)
QL4	QL4. Considering all things, how happy are your friends and other classmates with their study at this university? (very unhappy/very happy)

(Source: Sirgy et al. (2007) & Nguyen et al. (2012))

3.1.3. Overall assessment of scales

Initially used to test confidence levels of the scales are corrected item-total correlations and Cronbach's Alpha. Then, the EFA technique is applied to evaluate discriminant validity and convergent validity of the scales. The study also employs principal axis factoring along with promax rotation in considering key criteria such as KMO statistic, eigenvalue, number of factors extracted, factor loading, and TVE.

3.1.4. Formal quantitative research

3.1.4.1. Confirmatory factor analysis (CFA)

The CFA technique is first employed to assess the suitability of the used scales in conjunction with market information through the following criteria: Chi-square: CMIN, CMIN/df, GFI, CFI, TLI, and RMSEA. Also, the scale evaluation indices are estimated, including: (i) composite reliability; (ii) total variance explained; (iii) unidimensionality; (iv) convergent validity; (v) discriminant validity; and (vi) nomological validity.

3.1.4.2. Structural equation modeling (SEM)

For assessment of the suitability of the data for the market context, the study utilizes SEM with criteria similar to the

aforementioned CFA method. The ML technique is also applied to measure the model parameters. The estimation results (standardized) of the parameters indicate the associations between the variables with the well-defined significance level ($p < 0.05$).

3.1.4.3. Control variables

Besides the primary objectives, the study takes into consideration the controlling role of gender and geographical regions over quality of college life. These variables, employed as qualitative variables, are dummy coded and incorporated in the SEM model for analysis after the key independent variables have all been considered.

3.1.4.4. Group moderating role

The study uses the multi-group analysis method to account for the differences between the models in training programs (including full- and part-time education paths).

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Chapter 4. DATA ANALYSIS AND RESEARCH FINDINGS

4.1. Estimation results of officially used scales

4.1.1. Sample description

Table 4.1. Sample characteristics

	Group	Number of participants	Percentage (%)
Training program	Full-time	690	48.1%
	Part-time	745	51.9%
Gender	Male	490	34.1%
	Female	945	65.9%
Geographical location	Hanoi	581	40.5%
	Hochiminh City	854	59.5%
Training	NEU	271	18.9%
	FTU	310	21.6%

institution	UEH	323	22.5%
	UEL	252	17.6%
	UFM	279	19.4%
Total		1.435	100%

(Source: Author's calculation)

4.1.2. CFA results

First, a test of measurement scales of multidimensional concepts is to be conducted with satisfactory results. Then, unidirectional scales are considered to further evaluate discriminant validity of the studied concepts through the critical model. The CFA results attained for the critical model indicate very good model fit to the market data, and suggest that the scales applied all meet the evaluation standards, as shown in Table 4.2.

Table 4.2. Summary of results of construct measurement scales

Construct	Dimension	Obs.	Confidence level		Total variance explained	Validity
			Cronbach's Alpha	Composite		
PSV	FS	5	0.825	0.812	47%	Acceptable
	EP	4	0.795	0.804	51%	
	IM	4	0.817	0.828	55%	
	EM	3	0.737	0.769	55%	
	FQ	3	0.905	0.911	77%	
	SO	4	0.775	0.776	48%	
SE	EE	5	0.896	0.898	64%	Acce
	CE	5	0.824	0.832	50%	

Construct	Dimension	Obs.	Confidence level		Total variance explained	Validity
			Cronbach's Alpha	Composite		
GR	CI	4	0.842	0.823	54%	ptable
	PE	4	0.795	0.803	51%	
PL		4	0.817	0.829	55%	
AC		4	0.888	0.882	65%	
QL		4	0.887	0.901	69%	

(Source: Author's calculation)

4.2. Testing theoretical model and research hypotheses

Table 4.3. Regression coefficients (unstandardized) of the relationships

Hypothesis	Relationship	β	se	cr	p-value
H_1	PSV → SE	0.628	0.043	14.731	0.000
H_2	AC → SE	0.090	0.026	3.497	0.000
H_4	PL → SE	-0.004	0.034	-0.116	0.907
H_6	GR → SE	0.282	0.074	3.818	0.000
H_7	SE → QL	1.337	0.157	8.528	0.000
H_8	PSV → QL	-0.063	0.108	-0.583	0.560
H_9	PL → QL	-0.071	0.042	-1.681	0.093

Notes: β: regression coefficient, se: standard error, cr: critical value, p-value: significance level

(Source: Author's calculation)

The SEM results demonstrate that the four hypotheses H_1, H_2, H_6, and H_7 are accepted at significance level of 0.1%, and that the other three H_4, H_8, and H_9 are rejected due to p-value > 5%.

4.3. Testing the model with moderating variables

4.3.1. Absorptive capacity (AC)

The SEM results suggest the suitability of the model with the market data. Accordingly, the hypothesis H_3 (β = 0.054; p < 0.01) is accepted, meaning that AC is a true moderator, and the hypothesis H_2 (β = 0.122; p < 0.001) is also supported, thus implying that AC is a mixed moderating variable.

4.3.2. Purpose in life (PL)

As shown by the SEM results, the model is plausible with good model fit to the market data. The hypothesis H_5 (β = 0.067; p < 0.001) is accepted, meaning that PL is a moderator. Still, The hypothesis H_4 (p > 0.05) is not supported; therefore, PL can merely serve as a pure moderating variable.

Figure 4.1. Overall results (standardized) with SEM analysis

Taken together, the overall results of model parameter and hypothesis test is depicted in Figure 4.1.

4.4. Results of control variable analysis

The results show that the control variable 'gender' does not explain the variance of quality of college life ($p = 0.940 > 0.05$), which suggests that survey participants' gender (male, female) exerts no impact on their quality of college life. Concerning geographical location, on the other hand, quality of college life differs between the group of students residing in Hanoi and in Hochiminh City ($p = 0.007 < 0.01$).

4.5. Results of group moderating variable analysis

It is found that only the prediction P_2 is supported ($t = 2.027 > 2$), so absorptive capacity of the group of full-time students does not impact positively on engagement ($p = 0.996 > 0.05$), but this is not the case for part-time students ($p = 0.001 < 0.01$). The other predictions P_1, P_3, and P_5 are all not supported.

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Chapter 5. CONCLUSION AND SIGNIFICANCE OF THE STUDY

This study evidently identifies cognitive dimensions and personal characteristics which have effects on student engagement and also the linkage between student engagement and quality of college life. A few outstanding results could be summed up as follows.

5.1. Theoretical contribution

First, it sheds some light on the effects of the four factors of cognitive dimensions and personal characteristics on student engagement at Vietnam's universities. The results are as follows: (i)

perceived service value and absorptive capacity impact positively on student engagement, which remains unexplored in the existing literature on higher education; (ii) concerning purpose in life, while previous studies demonstrated its relation to student engagement, no existence of such a linkage can be detected in this study; and (iii) grit is found to have a positive association with student engagement, which is consistent with earlier findings, but the estimation techniques employed in the study are different.

Second, the study indicates the mixed (pure) moderating role of absorptive capacity (purpose in life) in the relationship between perceived service value and student engagement. These findings, previously unattainable, are therefore of crucial importance.

Third, the result showing the profound influence of student engagement on quality of college life is regarded as the empirical evidence of how self-determination theory is applied in the context of higher education, aside from evidence in other fields.

Fourth, the justification for the group moderating effect of type of training, typified by difference levels of the linkage between absorptive capacity and engagement of full- and part-time students, is an exploratory result recommended for further research.

Last, the results of analysis, once again in line with earlier findings, reject gender with its control over quality of college life. Contrarily, region is accepted as a control variable as there exists a gulf in quality of college life between two groups of students in Ho Chi Minh City and Hanoi, which can be fundamentally exploited in further studies.

5.2. Research method contribution

First, specifically added to the existing scale system are different concepts in the current context of the Vietnamese market,

forming a basis for constructing a consistent scale system in multinational studies.

Second, the study results imply that underlying concepts are not to be measured by themselves. Instead, it is advisable to use multiple observed variables to augment the validity and reliability of the scales.

Third, the research model test results validate the importance of evaluating the validity and reliability of the scales.

Finally, the multi-group analysis technique is performed to identify the differences according to different groups of research participants. Also considered a highlight of the methodology is the technique intended to capture the existence of pure and mixed moderating variables.

5.3. Contribution to practice

In formulating higher education administration strategies, it is imperative to constantly boost student engagement. Accurate identification of the relationship that each of the factors discussed in the study has with student engagement and quality of college life will likely give substantial rise to feasible solutions to a more coherent learning environment, through improving the quality of educational services as well as students' personal characteristics. The students, on the other hand, will profit from these solutions, which also maximize their values and enhance the quality of their college life.

5.4. Limitations and suggestions for further studies

5.4.1. Limitations

First, the study results do not fully reflect the suitability of the applied model for the sample of students majoring in other academic fields. Next, only a few typical university were investigated, so the generalization of the results could not be enhanced. Last, the findings

are not highly reflective of the general case due to a relatively short data collection period.

5.4.2. Suggestions

Further research may consider the employment of the model in this study that features a different scope. Additionally, the intermediate role of student engagement can be predominantly captured. Such an exploratory finding as analysis of the group moderating/controlling function should be further examined and verified.

LIST OF AUTHOR'S PUBLISHED PAPERS RELATED TO THE DISSERTATION

1. Sự gắn kết của sinh viên và chất lượng cuộc sống đại học: Nghiên cứu thông qua giá trị dịch vụ cảm nhận và mục đích cuộc sống. *Tạp chí Nghiên cứu Kinh tế và Kinh doanh Châu Á*, *30*(2), 44-66.

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