THE INFLUENCE OF INSTITUTIONAL FACTORS AND INTEGRATION TOWARDS STUDENTS' INTELLECTUAL DEVELOPMENTS: A CASE STUDY OF THREE CAMBODIAN PUBLIC UNIVERSITIES

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by

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LIST OF ABBREVIATION

ACC	Accreditation Committee of Cambodia
AID	Academic and Intellectual Development
ADB	Asian Development Bank
CO-SEM	Covariance Structural Equation Modelling
CUR	Curriculum Syllabus
EVA	Evaluation and Examination
FAC	Facilities
FSI	Faculty Student Interaction
FCS	Faculty Concern for Student Development and Teaching
GoF	Goodness of Fit
HEIs	Higher Education Institutions
M	Mean
MoEYS	Ministry of Education, Youth, and Sports
NUM	National University of Management
IGC	Institutional and Goal Commitment
IIS	Institutional Integration Scale
PGI	Peer-Group Interaction
PLS-SEM	Partial Least Square Structural Equation Modelling
RGC	Royal Government of Cambodia
RULE	Royal University of Law and Economics
RUPP	Royal University of Phnom Penh
SEM	Structural Equation Modelling
SD	Standard Deviation
SPSS	Statistical Packages for the Social Sciences
SSS	Student Support Services
TEA	Teachers' Teaching
UNESCO	United Nations Educational, Scientific and Cultural Organization
WB	World Bank

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PENGARUH FAKTOR INSTITUSI DAN PENYEPADUAN TERHADAP PERKEMBANGAN INTELEKTUAL PELAJAR: SATU KAJIAN KES TIGA UNIVERSITI AWAM DI KEMBOJA

ABSTRAK

Kajian ini mengkaji pengaruh faktor institusi (sukatan pelajaran kurikulum, pengajaran guru, penilaian dan peperiksaan, kemudahan dan khidmat sokongan pelajar) dan integrasi institusi iaitu akademik (keprihatinan fakulti terhadap pembangunan pelajar serta komitmen dan matlamat institusi) dan sosial (interaksi fakulti - pelajar serta interaksi kumpulan rakan sebaya) terhadap pembangunan intelektual dan prestasi akademik pelajar di universiti-universiti awam terpilih di Kemboja. Kajian kuantitatif ini menggunakan rekabentuk tinjauan secara keratan rentas. Satu soal selidik lapor-sendiri telah diedarkan melibatkan 381 orang pelajar tahun ketiga yang dipilih sama rata dari tiga universiti awam Kemboja menggunakan kaedah persampelan rawak berlapis. Kaedah pemodelan struktur persamaan kuasa dua terkecil separa (PLS- SEM) telah digunakan untuk menganalisis data tersebut. Keputusan statistik menunjukkan bahawa lima pemboleh ubah bebas daripada faktor-faktor institusi telah menerangkan anggaran 22% daripada varians adalah di dalam pemboleh ubah bersandar (R^2 = 0. 224). Faktor yang paling signifikan bagi faktor institusi adalah penilaian dan peperiksaan (β = 0.191; p <0.05; t = 2.215 **). Nilai 0.224 adalah lebih besar berbanding nilai pemisahan 0.190, dan ia dianggap sebagai purata. Empat pemboleh ubah bebas daripada faktor integrasi institusi secara signifikannya diterangkan sekitar 59% (R^2 = 0. 59) bagi varians dalam pemboleh ubah bersandar; ia dianggap sangat besar. Faktor yang paling signifikan bagi faktor integrasi institusi adalah interaksi kumpulan rakan sebaya (β = 0.351; p <0.01; t =

4.358***). Dapatan kajian memberikan penunjuk potensi faktor-faktor institusi yang mengintegrasikan pelajar untuk terlibat secara aktif dalam program akademik dan sosial bagi kegiatan-kegiatan akademik dan intelektual mereka di universiti awam Kemboja. Dapatan juga menunjukkan bahawa universiti-universiti awam Kemboja digalakkan untuk menambah baik ahli akademik mereka dan isu berkaitan akademik bagi mentransformasikan pelajar untuk diintegrasikan ke dalam persaingan ekonomi serantau terutamanya komuniti ekonomi ASEAN pada tahun 2015. Akhir sekali, kajian ini juga mengemukakan saranan untuk kajian masa depan berkaitan dengan faktor institusi dan integrasi institusional di institut pengajian tinggi.

THE INFLUENCE OF INSTITUTIONAL FACTORS AND INTEGRATION TOWARDS STUDENTS' INTELLECTUAL DEVELOPMENT: A CASE STUDY OF THREE CAMBODIAN PUBLIC UNIVERSITIES

ABSTRACT

This study examines the influence of institutional factors (curriculum syllabus, teacher teaching, evaluation and examination, facilities, and student support services) and institutional integration factors which are academic (faculty concern for student development and institutional, and goal commitment) and social (faculty student interaction and peer-group interaction) on the students' intellectual development and academic performance in selected public universities in Cambodia. This quantitative study adopted the cross sectional survey design. A self-reported questionnaire was administered involving 381 third-year students, which were chosen equally from the top three Cambodian public universities using the stratified random sampling method. The partial least squares structural equation modelling (PLS- SEM) tools were employed to analyze the data. Statistical results showed that five independent variables of institutional factors explained approximately 22 % of the variance in the dependent variable (R^2=0. 224). The most significant factor of institutional factors was evaluation and examination (β=0.191; p<0.05; t= 2.215**). The value of 0.224 was greater than the cutoff value of 0.190, and it considered as an average. Four independent variables of institutional integration factors have significantly explained about 59% (R^2=0. 59) of the variance in the dependent variable; it was considered as a substantial. The most significant factor of institutional integration factors was peer-group interaction (β=0.351; p<0.01; t=4.358***). The findings provided an indication of potential institutional

factors to integrate students to be actively involved in academic and social programs for their academic and intellectual endeavors in Cambodian public universities. The results also suggested that Cambodian public universities are encouraged to improve their academics and academic related issues in order to transform students to be integrated into the regional economic competition, especially, the ASEAN economic community in 2015. Finally, this study also provided recommendations for future research in relation to the institutional factors and institutional integration in higher education institutions.

CHAPTER 1

INTRODUCTION

1.1 Overview

Higher education plays a crucial role in a national socioeconomic development for the 21st century. It produces human capital with knowledge, skills, values, and attitudes for a country's sustainable development and poverty alleviation (Hang, 2015). The economic growth of any country depends on the quality of higher education provided to its citizen. Similarly, it is undeniable that higher education is a vital investment for national development in developed and developing countries (Chien & Chapman, 2014). That is why higher education is considered as one of the most important pillars in any society. Hence, higher education institutions must restructure their institutional factors that promote an academic environment in order to produce knowledgeable and competent individuals who are able to contribute to the development and prosperity of the society.

Universally, the education system is changing rapidly due to regional and global integrations. Recent developments in higher education have heightened the need for improving the teaching and learning environment. Presently, higher education has increased the number of new students and restructured its system to adapt to new technologies and techniques. This is done in order to improve the quality of teaching and learning experiences of academic staff and students to meet the needs of society and their academic development. Consequently, institutional factors in higher education systems plays a significant role in assisting the quality of campus life and academic environment on all students' learning experiences.

In Asia, higher education enrolment has experienced growth over the last few decades from 20 million students in 1980 to 84 million in 2011 (Chien & Chapman, 2014). In Cambodia, the total annual registration rate has increased dramatically more than four times from 57,828 students to 336,069 students between 2003 and 2014 respectively (Ministry of Education, Youth, and Sport, 2014). To serve this growing enrolment, undergraduate programs and curriculum syllabus needed to expand, both to provide more lecturers and to upgrade existing lecturers' qualifications in response the increasing numbers of undergraduate students. The royal government of Cambodia has tried to reform institutions to improve education service delivery and to strengthen the education quality for students' development. In addition, according to Cambodian Policy on Higher Education Version 2030, the government aims at developing an improved governance system and higher education programs, which respond to the need of socioeconomic development and the labor market (Ministry of Education, Youth, Sport, 2014).

Generally, when educational reform has been introduced in higher education institutions, some problematic issues have resulted from this implementation. A very important in this study is whether students can benefit or suffer from this new reform. What happens if this issue cannot be resolved? Students are seen as the main actors who can suffer or benefit from institutions. Therefore, the influence of institutional factors and integrations on students' academic and intellectual development need to investigate in order to resolve these mentioned problems and to improve the quality of the students' learning environment on the university campus.

The aim of this thesis is to investigate how institutional factors and integrations have contributed and influenced students' academic and intellectual development in Cambodian public universities. Institutional factors in this study are defined as academic factors that facilitate students to attain their academic endeavors. Institutional factors that enhanced students' academic and intellectual development in Cambodian context, included (1) curriculum syllabus, (2) teacher teaching, (3) evaluation and examination, (4) facilities, and (5) student support services.

When studying college environment and students' academic experiences of higher education institution, many studies presented the effects of the academic environment, student involvement, and student integrations on students' intellectual development (Astin, 1984, 1993, 1999; Tinto, 1975, 1993; Pascarella, 1985; 2008; Kuh, 2003). These studies are based on students' various perceptions and experiences in the university setting. Astin (1987) mentioned that student involvement as "the amount of physical and psychological energy that the students devote to academic experiences". The researcher examines students' involvement through their times and hours spending on social and academic activities in their university campuses. In addition, Tinto (1975) identifies that the academic success of a student is resulted from a certain level of involvement in academic and social integration. In this study, academic integration comprised faculty concern for students' development and teaching and institutional and goal commitment. Social integration included peer-group interaction and faculty -student interaction.

Therefore, there is no doubt that the academic success of a student is dependent upon effective institutional factors as well as an improved academic environment within the university. Students must obtain better learning services and supportive environment that assist them to overcoming their obstacles such as academic challenges and endeavors. This research examines institutional factors and investigates the institutional factors and integrations effects students' academic success in three public universities in Cambodia.

1.2 Background of the Study

In recent decades, educational researchers have conducted a plethora of research project about the role of institutional factors and college environment. This research included curriculum syllabus, faculty-student interaction, student support services, involvement of students that are significant and positively influence students' academic development (Bjorklund et al., 2004; Tinto & Pusser, 2005; Richard & Matthew, 2011; Pascarella et al., 2011).

Melguizo (2011) suggested that researchers in higher education should study the relationships between institutional factors and students' academic development to evaluate the initiative program and the influence of faculty characteristics and learning environment on student learning and academic achievement. He pointed out that most studies of the university environment and students' academic success are conducted in quantitative research method by employing simple regression, logistic regression, structural equation models, and hierarchical linear models. He suggested quantitative scholars should expand their methodological toolkit and statistical analysis to achieve more accurate results. Therefore, the researcher employs path

analysis with PLS-SEM to test the relationships between academic environment and institutional integration and students' academic and intellectual development.

However, it seems to be unclear whether the result of previous studies in developed countries can compare with the current study of developing countries. A paucity of studies have been conducted in developing countries. This research was designed and conducted to fill the gaps in previous studies of developed and developing countries. The research was especially concerned with Cambodia, a country that experienced with troubled higher education systems.

Previously, studies were conducted focused on Cambodian higher education. One research conducted by Chen et al. (2007) described the benchmarking of five potential factors that could contribute to students' academic development and education quality in Cambodian universities. Researchers compared institutional factors of five Cambodian universities and one Taiwanese university. Research findings highlighted five potential factors including: (1) curriculum and extra-curricular (2) qualified lecturers, (3) funding and reasonable tuition fees, (4) modern facilities, and (5) faculty-students interaction.

Several studies have revealed the implementation of curriculum development in Cambodian higher education. The result of this study showed that the curriculum and educational programs were not matched with the actual needs of employment markets (Ford, 2006, 2013; Chealy, 2009; Noch, 2009). In addition, a recent study by Heng (2013, 2014) involved the relationships between student engagement and the academic achievement; the effects of faculty behavior on the academic achievement of first- year university students in Cambodia. This study has significant implications

for policy and practice. The evidence of this study suggests that universities should make educational and social activities both on and off-campus to promote student involvement. The university should provide academic support for disadvantaged students with low academic profiles and enable them to interact with their peers and faculty in term of learning cooperatively. Additionally, the university must improve lecturer quality because their support and feedback have an important impact on students' academic achievement.

A number of studies found that academic staff has limited resources to motivate and develop lecturers' teaching and researching capacity in a Cambodian university. Chen et al. (2007) found that only six per cent of lecturers hold a PhD degree, 85 per cent of lecturers never published an academic article, 90 per cent of lecturers never have technical discussion or meeting, and 60 per cent of students noted that lecturers were not available for consultation. A research conducted by Kwok et al. (2011), showed that academic staff have challenges with research capacity because of low academic salary, lack of academic professionalization, and budget allocation constraints of university research.

The Royal government of Cambodia has been undertaking myriad reforms to balance the quality and quantity of education by establishing a wide range of institutions and implementing national and institutional policies since 2002. For example, Cambodia had established the Accreditation Committee of Cambodia (ACC) in 2003 under the supervision of a council of ministers, the National Supreme Council of Education (NSCE) in 2005, the Rectangular Strategy for Growth, Employment, Equity and Efficiency in 2003-2012, the National Strategic

Development Plan Update 2009-2013, Policy on Curriculum Development 2004, National Policy on Cambodian Youth Development in 2011, Policy on Human Resource in Education Sector in 2012, and Policy on Teacher in 2013. In addition, legal education frameworks have been established including the Sub-Degree on Criteria of the University Establishment in 2002, the Resolution on the Credit Exchange System and the Implementation of Curricula in the Credit System and Credit Transfer in 2004, the Royal Degree on Promulgating the Law on Education in 2007, and the Sub Degree on PhD Training Program in 2010.

In a speech at the Education Congress 2014, the Cambodian Prime Minister suggested that Cambodian Higher Education Institutions must strive to reform higher education institutions for educational excellence and improve their teaching methodology, modern curricula, and revise the examination process for the purpose of academic credentials. He also stated that current governmental policies aim at providing a number of priorities to improve the standard of education and to provide financial aid for a better education. This assures a balance of quality and quantity in the Cambodian education system (Sen, 2014).

1.3 Rationale of Study

The academic environment is a part of the institutional factors that can help students to be actively involved in their university experiences. The Cambodian public university needs to examine the weaknesses that are present in their academic support services, and then improve them. To reach this level of excellence, the university must focus on the actual needs of the students and lecturers (Kenneth, 2013).

As highlighted by Sok (2014), Cambodian universities have to reorganise the educational system to respond to the rapid change of an informative technological era in this 21st century. Furthermore, the justification of this research is that the importance of institutional factors and integration has a significant role to promote excellent education and students' academic success at present and in the future. In addition, the quality of education largely depends on the quality of student involvement, institutional integration, learning services, and academic staff. This study, therefore, investigated the existing institutional factors and students' learning experiences in the context of three main public universities located in the heart of Cambodia, in the capital city of Phnom Penh.

1.4 Statement of Problem

Higher education plays a significant role in developing human resource in a country. However, universities in developing countries are currently challenged by issues related to students' academic and intellectual development. Furthermore, developing countries have faced problems with high dropout rates of first year students (UNESCO, 2011). Previous studies conducted in developed nations indicate that institutional integration is a powerful predictor of students' academic and intellectual development and their retention rates (Pascarella and Terenzini 1980; French and Oakes 2004). However, it is questionable that the result of studies carried out in developed countries can be used to formulate strategies for developing countries. Some studies on the effects of institutional integration have been conducted in developing countries, including Cambodia (Sam, Zain, Jamil, 2012). Students have different experiences in term of interaction with their peers and faculty

members, their academic related matters offered by faculty, and their institutional goal and commitment. However, the gaps in the research are many and wide. This study has been designed to fill some of these gaps and to provide information, which administrators and faculty members in Cambodian universities can use to address the above stated issues.

As pointed out above, most research on university students' academic and intellectual development has been carried out in developed countries. Academic and intellectual development (AID) is defined as the outcomes that result from university students' efforts to integrate their social and academic activities as they pursue their studies (Parscarella 1985). These outcomes include the development of (1) adequate general knowledge; (2) various skill sets needed for problem solving, critical thinking, goal setting for intellectual progress, participation in cultural activities, and making decisions about the highest degree they plan to reach, (Endo and Harpel (1982); (3) earning passing grades (Tinto 1993); and (4) changes in attitudes, values, beliefs, and behavior needed to successfully operate in a university environment (Astin 1999).

Without the information obtained from research, Cambodian university administrators, faculty, and other stakeholders cannot form a clear picture of what practices and services contribute to fostering students' academic and intellectual development. This lack of research in Cambodia and other developing countries raises the following question. Is the intellectual development of Cambodian university students significantly influenced by their institutional factors and integration?

The main issue here is how institutional factors that enhance the academic environment contribute to students' academic success in Cambodian public universities. Based on the human development report of 2014, of the 16% of tertiary school-age population (2,400,000), only 14% (33, 6069) were enrolled in Cambodian higher learning institutions (UNDP, 2014). According to UNESCO (2010), the dropout rate of tertiary education students was approximately 34.1 % in Cambodia.

The main objective of the Cambodian government is to make efforts to encourage higher education institutions to establish their policies in enhancing the academic environment to provide better educational services for students' academic success. To obtain this government objective, higher education institutions must strive to restore their academic environment to facilitate students to be successful in their studies for developing human resources and economic growth. Practically, several potential factors have an impact on the effectiveness of the educational policy implementation and students' academic success in Cambodia. Consequently, institutions must focus on resolving these problems. Therefore, these research problems could be examined at institutional levels, student levels or both..

In this study, student demographics are also involved. They refer to students' characteristic background, parental educational background, and social economic status. This research aims to analyze Cambodian students' characteristic background prior to enrollment in their tertiary education. According to McKenzie & Schweitzer (2001); Bruinsma & Jansen (2007), parental education and employment background are significant factors that are related to students' academic success. This finding is also echoed by Melby and Conger (1996) which presented that family income,

parental education, parental involvement and hostility have an influence on the academic experience of students in their secondary and post-secondary education.

Based on the cultural capital theory, students who come from well-educated families obtain success (McMillan & Western, 2000). It is undeniable that low social economic status will have a negative impact on academic success because students cannot access necessary resources for their academic development. In addition, socioeconomic background is also one of the major components of educational quality.

The academic success strongly depends on the social economic status of parents who will economically foster their children to obtain academic success (Graetz, 1995; Considine and Zappala, 2002; Eamon 2005; Jeynes, 2002). Therefore, it can be advocated that the demographic factors affect students' academic success within the Cambodian context. The researcher investigated the students' characteristics and background, prior schooling, English proficiency, motivation, and social economic status characterized by family income, parental education and parental occupation.

This study investigated institutional factors and their integrations influencing Cambodian public university, students' view based on students' self- reported survey regarding academic environment, levels of student involvement, and student integration will be investigated in this study. The findings in this research will help a university to improve the institutional policies for students' retention and academic success (ACT, 2008). Students' perspectives would probably help a researcher to

investigate the critical issues related to learners' needs in order to enhance the quality of the academic learning environment in Cambodian higher education institutions. From the perspective of institutional policies, the study tried to examine the characteristics of university in five main academic environments such as curriculum syllabus, teacher teaching or academic staff, evaluation and examination, facilities, and student support services. The researcher examined the characteristics of students' academic and social involvement and integration.

If the institutional factors have been ignored by universities, the students will not enjoy the benefits of a good education, and they have missed a good opportunity to be successful in their academic development and retention. Furthermore, students could also have a strong academic capacity to further their higher education and to find good jobs. It is time for Cambodian higher education institutions to explore the most important institutional policies to deal with the service problems confronted by the institution itself and the students. Hence, the researcher intends to explore the potential factors of institutional policies in the campus environment that can facilitate students towards academic success.

In order to make sure that institutional factors and integration have any impacts on students' academic development, the relationship study between academic environment and institutional integration on students' academic success had been examined. The relationship between academic environment and students' academic success has been widely investigated (Lotkowski et al., 2004; Akhtar, 2005; Thomas et al. 2005; Glenda and Margaret, 2009; Don et al. 2008). Other studies have considered the association between institutional integration on students'

academic success (Pascarella and Terenzini, 1980; Patric T. Terenzini et al., 1981; French and Oakes, 2004; Richard, 1984; Susan, 2010).

Statistically, five independent variables of institutional factors such as (1) curriculum syllabus, (2) teacher teaching (3) evaluation and examination, (4) facilities, and (5) student support services used to test the relationship with a dependent variable of students' academic and intellectual development. And four independent variables of institutional integration such as (1) peer group interaction, (2) faculty interaction, (3) faculty concern for teachers, and (4) institutional goal and commitment employed to test the relationships with a dependent variable of students' academic success. Hence, the researcher employed path analysis with PLS-SEM to test the relationships between academic environment and institutional integration and students' academic and intellectual development.

From the perspective of the students, the researcher identifies how the institutional factors can help in developing the quality of undergraduate students. Educational reforms have been implemented in the university, but the question remains: How are students perceived on the institutional factors and their integration that contribute to the development of the quality of their studies in Cambodian public universities? Their perceptions could be helpful for policy makers to restructure their institutional factors.

Due to the integration of ASEAN economic community in 2015, Cambodia has been paying more attention to reinforcing its educational system. Educational reforms on institutional factors have been established in responding to the rapid

development of Cambodian higher education institutions. The government has concerns over educational quality provided by Cambodian higher education institutions.

In the process of this educational reform, the researcher investigates institutional factors that influence students' academic and intellectual development. It is no secret that some negative aspects have influenced institutional factors within Cambodian universities. A highly questionable matter is what happens if these impeded factors cannot be resolved. This is basically the problem and the intent of the study. Therefore, recommendations could be helpful for policy makers to reform and upgrade their institutional factors and academic environment.

1.5 Purposes and objectives of the study

1.5.1 Purposes of the study

The main purpose of this research is to investigate institutional factors and integrations that could influence students' academic and intellectual development in Cambodian universities for the sake of finding any potential factors that can contribute to improve the students' learning experiences. It also aims to provide useful information and recommendation for excellent management of these institutions on ways of improving such factors.

1.5.2 Research Objectives

In line with this principal purpose, the objectives of the study are as follows:

RO 1: To investigate students' view on institutional factors and institutional integrations for students' intellectual developments in Cambodian public universities.

RO 1.1: To identify the students' views on the institutional factors for students' intellectual developments in Cambodian public universities.

RO 1.2: To identify the students' views on students' institutional integration for students' intellectual developments in Cambodian public universities.

RO 2: To identify the level of students' involvement in academic and social activities in Cambodian public universities.

RO 3: To examine the relationships between institutional factors and students' intellectual developments in Cambodian public universities.

RO 4: To examine the relationships between the institutional integrations and students' intellectual developments in Cambodian public universities.

1.6 Research Questions

In order to achieve the objectives of this study, the following research questions were developed:

RQ 1: What are the students' perception of the institutional factors and institutional integrations for students' academic and intellectual developments in Cambodian public universities?

RQ 1.1: What are the students' views on the institutional factors for students' academic and intellectual developments in Cambodian public universities?

RQ 1.2: What are the students' views on institutional integration for students' academic and intellectual developments in Cambodian public universities?

RQ 2: How many times and hours that students are involved in their academic and social activities in Cambodian public universities?

RQ 3: Are there institutional factors significantly influence students' intellectual developments in Cambodian public universities?

RQ3.1: Does curriculum syllabus significantly influence the intellectual development of Cambodian university students?

RQ3.2: Does teacher teaching significantly influence the intellectual development of Cambodian university students?

RQ3.3: Do evaluation and examination significantly influence the intellectual development of Cambodian university students?

RQ3.4: Does facilities significantly influences the intellectual development of Cambodian university students?

RQ3.5: Does Student support services significantly influence the intellectual development of Cambodian university students?

RQ 4: Are there institutional integrations that significantly influence students' intellectual developments in Cambodian public universities?

RQ 4.1: Does peer-group interaction significantly influence the intellectual development of Cambodian university students?

RQ 4.2: Does faculty student interaction significantly influence the intellectual development of Cambodian university students?

RQ 4.3: Does faculty concern for student development significantly influence the intellectual development of Cambodian university students?

RQ 4.4: Do Institutional and goal commitments significantly influence the intellectual development of Cambodian university students?

1.7 Research Hypotheses

This study is designed specifically to answer the above questions, and some are translated into the following hypotheses for statistical purposes:

	Hypotheses
H1	Curriculum syllabus would significantly influence students' intellectual development.
H2	Teacher teaching would significantly influence students' intellectual development.
H3	Evaluation & examination would significantly influence students' intellectual development.
H4	Facilities would significantly influence students' intellectual development.
H5	Student support services would significantly influence students' intellectual development.
H6	Peer-group interaction would significantly influence students' intellectual development.
H7	Faculty interaction would significantly influence students' intellectual development.
H8	Faculty concern for student development would significantly influence students' intellectual development.
H9	Institutional and goal commitments would significantly influence students' intellectual development.

1.8 Significance of Research

This study is important because of the following reasons:

Firstly, it is a new study of institutional factors that contribute to students' intellectual development in Cambodia. Many researchers in developed countries have developed theories and different dimensions of educational experiences and academic success at tertiary level education, and these theories could be adopted within the Cambodian context. Therefore, it is hoped that findings from this study will provide some useful information concerning the students' demographic factors and the existing institutional factors. Thus, this study can contribute to the existing knowledge on Cambodian educational experiences and to the improvement of students' academic and intellectual developments in higher learning institutions.

Secondly, this study is most probably the first study of its kind to explore the institutional factors that contribute to students' academic achievement in the educational system. It will pave the way for the evaluation of academic performance of Cambodian universities by producing valid and reliable instruments for this purpose. It is suggested that these instruments be used for further research in the educational research disciplines.

Thirdly, the outcome of this study provides useful sources to policy makers, educational administrators and planners, and relevant ministries for establishing national and institutional strategies in the future.

Finally, the findings of this study provide an insight into ways of improving the rate of graduation, academic development, as well as educational quality of

higher education in the country. In addition, it is beneficial for the improvement of better educational experiences at the universities, teacher training institutions, and Department of Higher Education, and Scientific Research of the Ministry of Education, Youth, and Sport. This study helps future researchers to conduct further studies based on educational experiences such as at student, national, and institutional levels. Furthermore, it is helpful for prospective students in preparing themselves before they enroll at higher learning institutions in the country. This study develops an awareness of academic experiences and institutional factors for the enhancement of students' academic attainment among faculty members and administrators.

1.9 Operational definitions

For the purpose of this study, the following terms have been defined:

1.11.1 Academic and Intellectual Development

For the purpose of this study, the academic and intellectual developments are defined as academic excellence and intellectual endeavours after students have been involved in experiences in social and academic integrations at the university. There is little literature on academic and intellectual developments. According to Endo & Harpel (1982), student educational outcomes include adequate general knowledge, problem-solving development skills, critical-thinking development skills, intellectual progress goals, cultural activity participation, highest degree planned, and academic achievement. In addition, academic and intellectual outcomes refers to students' earning passing grades and intellectual progress (Tinto, 1993). Astin (1999) also identified academic and intellectual developments as the students' resultant characteristics such as knowledge, skills, critical thinking, attitudes, values, beliefs,

and behaviour after involving in the academic environment and the student's level of academic success. Therefore, if students have the perception that they are satisfied with their academic experiences, they will be well prepared in developing their academic and intellectual performances.

1.11.2. Curriculum syllabus

For the purpose of this study, curriculum syllabus refers to all course syllabuses and subject studies designed by the university (ACC, 2009; Chen et al., 2007).

1.11.3. Examination and Evaluation

For the purpose of this study, Examination and Evaluation refer to all kinds of examination and evaluation activities conducted by the university such as assignments, examinations, and tests. Cambodian public universities have adopted a new system of their evaluation and examination process, called "the credit system" (ACC, 2005; MoEYSP, 2014).

1.11.4. Facilities

For the purpose of this study, facilities refer to all academic and non-academic materials and resources equipped by the university to support learning activities. Facilities included university's buildings, libraries, classrooms, lecture halls, laboratories, recreation halls, clinics, canteens, and others.

1.11.5. Faculty Concern for Student Development and Teaching

For the purpose of this study, faculty concern for student development and teaching (FCS) is defined as the perception of a student that faculty has paid more

attention to students' needs in classrooms and outside classrooms. Foremost, faculty members are interested in spending time to help students to improve their academic areas. Tinto (1975, 1993) illustrates that universities have to provide academic and social support services in order to promote student retention and academic achievements so that students achieve academic success. Hence, if students have the perception that they are satisfied with faculty performance and the teaching or learning environment, then they will receive academic and intellectual benefits.

1.11.6. Higher Education Institutions

For the purpose of this study, higher education institutions refer to universities, which provide educational services and award academic degrees, comprising of associate's degree, bachelor's degree, master's degree, and doctoral degree.

1.11.7. Institutional Factors

For the purpose of this study, the term refers to five variables including: (1) Curriculum Syllabus, (2) Teachers' Teaching, (3) Evaluation/Examination, (4) Facilities, (5) Student Support Services that predict the students' academic and intellectual development in the Cambodian context.

1.11.8. Institutional Integrations

For the purpose of this study, the term refers to four variables: (1) Peer-Group Interactions, (2) Faculty-Student Interactions, (3) Faculty Concern and Student Development and Teaching, and (4) Institutional and Goal Commitment that predicts the students' academic and intellectual development in the Cambodian

context (Pascarella & Terenzini, 1980; French & Oakes, 2004; Breidenbach & French, 2004).

1.11.9. Institutional and Goal Commitment

For the purpose of this study, the Institutional and Goal commitments (IGC) are characterized as the motivation and persistence of the university and student. Institutional commitment is the degree of motivation and academic support services of university or college that are provided to students. Goal commitment is the degree of a student's commitment or motivation the student has to persist in their studies for graduation. For example, Students, who have a high goal commitment, will try their best efforts to study, spend much time on campus, participate actively in student associations or organizations, and interact regularly with their friends, administrators, and faculty members (Tinto, 1993).

1.11.10. Faculty-Student Interaction

For the purpose of this study, one of the most significant factors that help students to achieve academic endeavour is the faculty- student interaction. Faculty student interaction (FSI) is defined as the perception of a student that faculty members have made close relationships and paid more attention on students' academic development (Cotten & Wilson, 2006). There are three popular theories about the interaction between the faculty and students in promoting students' development of the university. These three theories are Astin's Theory of Student Involvement (1984), Tinto's Theory of Student's Persistence or Departure (1975), and Pace's College Impress Model (1984). Lecturers develop a better understanding of student learning, knowledge, competence, and willingness in the classroom if they

have effectively communicated with their students (Konidari & Abernot, 2006; McGregor, 2007). If students have the perception that the faculty members are paying attention and supporting them, then they may highly motivated to help them in improving their academic performance and development.

1.11.11. Peer Group Interaction

For the purpose of this study, Peer- Group Interactions (PGI) is defined as the perception of a student who thinks that he developed close relationships with classmates or those who are roughly equal status in the university. Tinto (1993) has suggested that peer group interactions established a social system that leads to student integration. In the same vein, the student's peer group is the most significant resource that influence on students' growth and development during their studies in the college (Astin, 1993). Studies indicate that students who have experienced and interacted with many peers might be influenced for positive academic development. Students need to be supported by their peers when they have academic and personal problems. A study conducted by Witkow & Fuligni (2011) stated that students who received encouragement from peers often have a satisfactory change in their GPA. In summary, if students view that the classmates are helping and cooperating with them, they will be highly motivated to improve their academic performance.

1.11.12. Public University

For the purpose of this study, public university is considered as a university established and recognized by the Royal Government of Cambodia. They are under the supervision of the Ministry of Education, Youth, and Sports (RGC, 2010).

1.11.13. Student Involvement

For the purpose of this study, student involvement refers to the level of the students' commitment in social and academic activities that can predict their academic experiences and successes at the university (Astin, 1999; OSU, 2002)

1.11.14. Student Support Services

For the purpose of this study, academic support services consist of academic and non-academic services. Academic support is established to assist students in refining and strengthening their academic skills necessary for their success at the university such as foundation studies, foreign languages, library services and other facilities. Non-academic support services refer to institutional services mainly focused on extra-curricular activities, financial support, scholarships, and accommodation (ACC, 2009; Chen et al., 2007).

1.11.15. Teacher Teaching

For the purpose of this study, teacher teaching refers to teaching performance of the academic staff or faculty members as well as their personal and professional qualifications (ACC, 2009).

1.10 Limitation and Delimitation of the Study

This study is not free from limitations. The following limitations of the study have provided scope for further research:

Firstly, the study is confined to only three prestigious universities located in the heart of Phnom Penh and under the supervision of the Ministry of Education, Youth, and Sport. These universities included the Royal University of Phnom Penh

(RUPP), the Royal University of Law and Economics (RULE), and the National University of Management (NUM). Therefore, this study employs a purposive sampling method. Secondly, the study is limited to undergraduate students from three public universities in Cambodia. Thirdly, this research focuses on different categories of faculties, and departments, and specializations or disciplines Lastly, this research is limited to the perspectives of only students. The delimitation of this study is that this study is confined to three public universities based in the capital of Phnom Penh. These top three public universities represent all public universities in Cambodia; if these universities have low performances, other universities have faced the same problems. In addition, researcher provided two limitations in data collection and research model as following:

1.10.1. Limitations in Data Collection

The data collection of this study is not free from limitations. There are some weaknesses of the sampling methods used in this study due to the difficulties of large survey data collection. The study was conducted at only three public universities located in the heart of Phnom Penh, capital of Cambodia. It is advisable that other provincial or rural universities should be selected to be studied. The Researcher was limited to sample sizes of 381 students who studied in their third year during the academic year 2013-2014. Third year students could be expected to be mature enough for answering the questionnaire based on their academic experiences and knowledge. The questionnaire was adapted from a developed country, and thus, there are concerns about the educational system and cultural bias.

1.10.2. Limitations in Research Models

There are some weaknesses in the research model study. For the institutional factors, CUR, EVL, FAC, SSS, and TEA explain approximately 22% of the variance in AID It means that this model has other factors related in the institutional factors that could be influenced the academic and intellectual development. Thus, research has to introduce them in this research.

For the institutional integration factors, about 59% of the variance (R^2=0.590) is left unexplained by the research model. This indicates that there are other factors involved in influencing academic and intellectual development, but researcher did not include them in this study.

1.11. Summary of Chapter

This chapter plays as a foundation for the study. It discusses the background of the research and illustrates the statement of the problem, the research objectives and research questions, the conceptual framework, rationale of the study, the significance of the study, operational definition, and limitation and delimitation of the study. The following chapter reviews the existing literature in order to develop a clear understanding of institutional factors and integration that influence students' academic and intellectual development in the Cambodian context.

CHAPTER 2

LITERATURE REVIEW

2. 1. Introduction

The aim of this study is to investigate the institutional factors and integration, and student involvement in Cambodian public universities. It focuses on the views of students' academic experiences in the campus and the influence of institutional activities on their academic and intellectual growth. This chapter presents a representative literature reviewed for this study. The literature review starts with a report of education system and Cambodia higher education institution. The second part concerned with the research variables, including input, academic environment, and output. The third part reviewed the students' retention in higher education. The last part has been presented with research framework such as the theoretical and conceptualizes the framework of the study.

2.2. Educational System in Cambodia

2.2.1. Basic Education

Students have spent approximately 12 years for their basic education from kindergarten to high school or upper secondary school. Students who have successfully completed the Upper Secondary Education will sit for the National Examination and be awarded of the Diploma of Upper Secondary Education *(Baccalaureate Diploma).* Students are required to sit for an entrance exam in order to enter into higher learning institutions is. Some educational institutions only set the acceptance requirements based on grades of Baccalaureate Diploma. The grades

achieved for each examined subject are reported on a transcript of achievement attached to the Diploma of Upper Secondary Education.

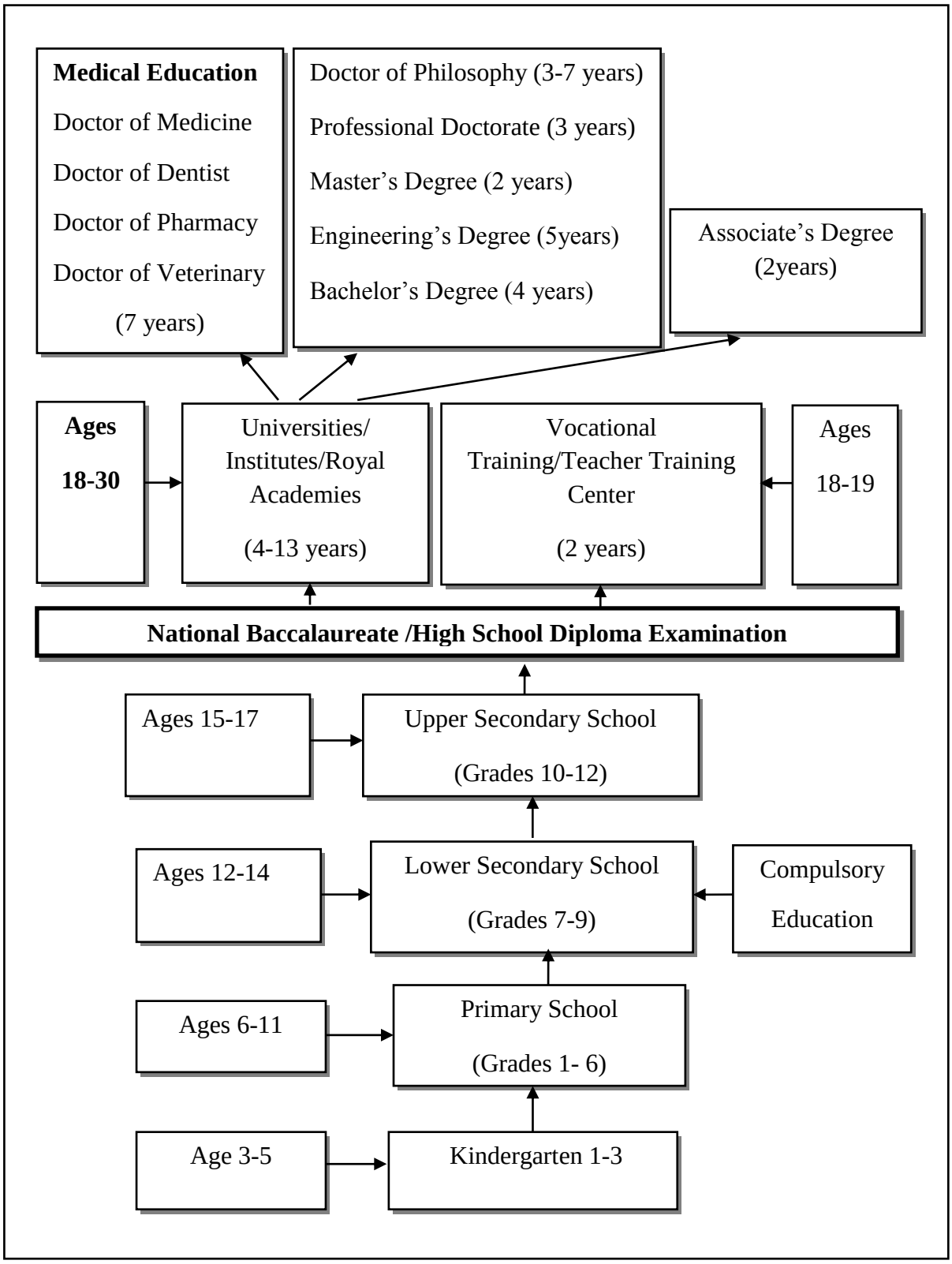

Figure 2.1 Education Structure in Cambodia (MoEYS, 2015)

2.2.2. Higher Education

In tertiary education, students spend from two years to fourteen years of their higher education ranked from associate's degrees to PhD's degree in Cambodia. There are three kinds of higher education institutions included: (1) vocational training centers and regional teacher training centers, (2) institutes, (3) universities, and (4) royal academies. These higher education learning institutions are under nine parent relevant ministries in Cambodia. The researcher will examine current Cambodian higher education institutions and their history of development in the next section.

2.3. Cambodian Higher Education Institutions

Historically, Cambodia established its first higher educational institution during the Angkor Empire, which was a powerful kingdom in the Southeast Asian region in the 12th century. During this glorious period, it had two main universities located in the Preah Khan temple *(Vat Cheysrey)* and Taprom temples *(Raja Vihear)* under the administration of Andradevy, the queen of King Jayavarman VII (1181-1220). In this medieval time, temples had a significant role in promoting educational, cultural, and innovative activities. Consequently, about 1081 ancient famous temples were constructed nationwide because of this fruitful period. Moreover, there were 18 individuals with doctoral degrees (cultural and religious intellectuals) and 740 university teachers to transform the Khmer elite to enhance the national human resource capital of the country (PUB, 2009).

After the decline of Angkor in the 15th century, Cambodian higher learning institutions were destroyed and closed because of wars and invasions from the neighbouring countries included Thailand and Vietnam. In these hardship periods, pagodas became the best educational and professional institutions for Khmer scholars and intellectuals. To stop the aggressive ambition of these two countries, Cambodian King Ang Duong (1797-1860) invited France to be Cambodia's protectorate in 1863. Under the French protectorate and colonization, France tried to transform the Cambodian traditional education system into a modern or western educational system. In addition, many public schools and higher learning institutions were established throughout the country. During the post colonization period, Prince Sihanouk paid more attention to tertiary education through the building up of many higher education institutions nationwide. For example, Unfortunately, Cambodian fell into the cold war in 1970, and tertiary education also experienced growing pains during a turbulent 23 year period (1970-1993) resulting in a decimated educational system. Tragically, during the Democratic Kampuchea regime (DK) between 1975 and 1979, most Cambodian intellectuals, scholars, and academics were lost in the genocide. After the civil war was over in 1998, however, Cambodia has strived to develop and reform her higher education institutions until now.

Therefore, this section investigates the historical perspectives of Cambodian higher education development during the French protectorate and colonization, the Prince Sihanouk period, the Khmer Republic period, the Democratic Kampuchea period, the Vietnamese occupation period, the UNTAC and Coalition government period, and the Hun Sen period.

2.3.1. History of Cambodian higher education development

The higher educational system in Cambodia has been divided into seven stages in its development because each phase presents the ideological and political regime at that point of the history of Cambodia. The country experienced many ideologies and politic which comprised traditionalism, colonialism, Buddhist socialism, monarchy, republicanism, Maoist communism, Vietnamese communism, United Nations Transitional Authority, and a hybrid democracy respectively. Each regime amended the national constitution and educational policies to its own liking. For example, Prince Sihanouk founded the Royal Khmer University (RKU) during his rule on January 13, 1960. This university had changed its name to the Phnom Penh University (PPU) during the Khmer Republic or Lon Nol's regime in 1970. In 1980, it has been converted to the Higher Normal College *(Ecole Normale Superieure)* during the Vietnamese occupation. Ultimately, this name has been changed to the Royal University of Phnom Penh (RUPP) in 1996. This section will highlight a historical perspective in each stage of the development.

2.3.1.1. Under the French protectorate and colonization (1863-1953)

This section discusses the historical perspectives prior to and under French colonization. Prior to the French colonial period, pagodas were the educational and professional training centre of the nation. The Cambodian education system was characterized as community-based pagoda institutions, where Buddhist monks had independent and important educational duties to transfer their knowledge with the integration of religious and cultural instructions. For instance, monks would instruct boys and youth in carpentry skills mixed with Khmer literacy closely associated with the concepts of Buddhism and Cambodian culture. During the pre-colonial period, as

only pagodas were seen as educational centers for the Cambodian people, the majority of the people were illiterate. There were no other schools. Consequently, Ayres has argued that most Cambodian people learned their rich cultural heritage through the country's popular proverbs and sayings, traditional law (didactic poems), epics such as the Reamker (Khmer version of the Ramayana Indian story), and folk tales via word of mouth (Ayres, 2000). Therefore, the main purpose of education during this period was to educate young men with the general knowledge about life and society such as social ethics, life skills, as well as to attain a certain degree of basic literacy (Dy, 2004).

Similarly, during the 90 years of French protectorate and colonization (August 11, 1863 to November 9, 1953), France introduced its own administrative and educational system in Cambodia, which seemed to be somewhat successful in its efforts. After four years of the protectorate, King Norodom (1834-1904), grandfather of Prince Sihanouk, established the first school for 40 students of the royal family using French as the language of instruction. Shortly thereafter, France opened the first public schools in Phnom Penh, Kampot, Kampong Cham, and Kraties in 1873, and founded the first training centre for colonial administrators and officers in 1893 (Masson, 1997). In 1906, King Sisowath issued a royal edict on compulsory education required parents to send their sons and daughters to study basic Khmer literacy and mathematics at the age of eight. The first Cambodian Civil Code was promulgated in 1915 in which articles 356 and 357 stated parents' obligation to provide their children with education. In 1917, the Cambodian School of Aadministration *(Ecole d'Administration Cambodgience)* was founded to train young people to be civil servants in the country. In 1935, Sisowath High School *(Lycee*

Sisowath), the country's oldest and sole secondary school, was opened for Cambodian students with a low standard of education when compared with western secondary schools.

As cited in (Duggan, 1996), Galasso (1990) analyzed the gaps between traditional and modern education. He maintained that most rural children attended pagoda schools, which combined traditional and modern teaching methodologies whereas a small group of provincial towns and Phnom Penh, capital allowed students to access Franco-Khmer schools under a French system with a four year primary program. And another four years of lower secondary school were led to the Franco-Khmer Secondary School Diploma; and then a three year secondary program leading to the Baccalaureate that would allow enrolment in French universities. During that time, there were a few post-secondary schools and higher learning institutions in the country so that only wealthy and state-sponsored outstanding students had opportunities to further their higher learning overseas. Consequently, a small elite group was able to study at French universities in France or Vietnam. As highlighted by Tully, national education during the colonial period faced crucial problems. The vast majority of schools suffered from poor teaching methodology, lack of resources and financial support, unqualified teachers and the misunderstanding of peasants who withheld their children from attending public schools provided by the French colonial power. Also, a clash occurred between the traditional values of the monk-teachers and the content of a new curriculum based on European modern thinking (Tully, 2002).

Surprisingly, the first Cambodian higher learning institution, namely the National Institute of Juridical, Political and Economic Sciences (NIJPES), was

established for Cambodian scholars who intended to be civil servants in the colonial government in 1949 (Ayres, 2000; Howard, 1967; Tully, 2002). A study by Clayton & Ngoy (1997) pointed out that the French government used higher education as a "sorting machine to recruit the best students from basic education for advanced education in order to equip the country with a large number of modern and competent civil servants" (Clayton, 1997). In short, it can be concluded that the educational system during the colonial period experienced some problems with the integration of traditional and western educational systems, with funding constraints, unqualified teachers, and inferior educational quality.

2.3.1.2. Under the Prince Sihanouk (1953 -1970)

Cambodia was granted peaceful independence from France at the Geneva Conference on November 9, 1953. Prince Sihanouk strove to promote educational policies from basic education to tertiary education, to transform the country into an industrialized and technologically advanced modern state in the region. The king subsequently created two very efficient political mechanisms: the People's Socialist Community *(Sangkum Reastr Niyum-SRN),* and the movement of Socialist Youth of the Khmer Kingdom (SYKK). The government of King Sihanouk allocated more than 20 % of its annual national expenditure for a massive educational expansion program to consolidate his ideology of "Buddhist socialism" to educate Cambodian students and youth to adopt loyalty to the monarchy and Marxist egalitarianism," (Ayres, 2000, p. 449). Moreover, he reformed the French- related curriculum, which was a legacy of colonialism, into a Cambodian curriculum covering Khmer culture, history, arts, and science etc. (Clayton, 2005).

As a result of this policy, the number of primary, secondary schools, and new universities increased dramatically throughout the country (Chendler, 2008). Remarkably, seven higher educational institutions were established between 1953 and 1959 including the National Institute for Law, Politics, and Economics (1953), the Royal Medical School (1953), the Royal School for Public Administration (1956), the National Institute of Pedagogy (1958), the Faculty of Letters and Humanity Studies (1959), the Faculty of Science and Technology (1959), and the National School of Commerce (1959) (Chhum, 1973). Furthermore, nine public and prestigious universities appeared in provincial and municipal territories. The Buddhist University, a first university in this regime, was opened in 1954 offering religious studies and Khmer language studies, and the Royal Khmer University followed in 1960. Five years later, six additional universities emerged in 1965 comprise of the Royal Technical University (RTC), the Royal University of Fine Arts (RUFA), the Royal University of Kompong Cham (RUKC), the Royal University of Takeo-Kampot (RUTK), the Royal University of Agricultural Science (RUAS), and the People's University (PU) (Pit, 2004), and lastly, the Royal University of Battambang (RUBB) which opened in 1967.

French was used as the language of instruction in most universities and higher learning institutions. Enrolment in higher educational institutions dramatically increased from approximately 200 students in 1953 to 5753 students in 1970. This signified a great achievement in the history of Cambodian higher education (Howard, 1967). To sum up, it was a significant period of rapid development of the Cambodian modern educational system during the People's Socialist Community.

Table 2.1
The list of Universities and Institute under the Prince Sihanouk (1953-1970)

No.	Universities/Faculties/Institutes/Schools	Date of Establishment
1	The National Institute for Law, Politics, and Economics	1953
2	The Royal Medical School (RMS)	1953
3	The Buddhist University (BU)	1954
4	The Royal School for Public Administration (RSPA)	1956
5	The National Institute of Pedagogy (NIP)	1958
6	The National School of Commerce (NSC)	1959
7	The Faculty of Letter and Humanities (FLH) The Faculty of Science and Technology (FLH)	1959
8	The Royal Khmer University (RKU)	1960
9	The Royal Technical University (RTC)	1965
10	The Royal University of Fine Arts (RUFA)	1965
11	The Royal University of Kompong Cham (RUKC),	1965
12	The Royal University of Takeo-Kampot (RUTK)	1965
13	The Royal University of Agricultural Science (RUAS)	1965
14	The People University (PU)	1965
15	The Royal University of Battambang (RUBB)	1967

2.3.1.3 under the Khmer Republic (1970-1975)

After the coup d'état on March 18, 1970, the Lon Nol government ousted Prince Sihanouk as head of state. He abolished the monarchy, and announced a new constitution that changed Cambodia into the Khmer Republic under the support of the United States government. Similar to Prince Sihanouk's policy, the Lon Nol government had considered education expansion as a priority for the success of the country's development (Ayres, 2000). Unfortunately, higher education in this period was confronted with social and political issues resulting from the cold war, in particular, the influence of the ideology of a new regime dominated by western concepts of republicanism, capitalism, and democracy. The controversy of these political ideologies as well as a nationwide civil war destabilized the education program between 1970 and 1975 (Ayres, 2000; Chendler, 2008). In addition, the Khmer Republican government actively fought against the Viet Cong and the Khmer

Rouge; approximately 600,000 Cambodian citizens were killed by aerial bombardments between 1969 and 1973 (Ear, 1995). Because of war and insecurity, most schools and universities were either destroyed or forced to close with almost 200 foreign lecturers fleeing the universities and the country (Chhum, 1973).

Consequently, few local lecturers had qualified experiences to provide educational services in Cambodian universities. The University of Takeo-Kampot was destroyed by aerial bombardments on 1 May 1970, the University of Kompong Cham was partially destroyed, and the University of Battambang was totally closed in early 1971. According to Tan Kim Houn (1974), there were only five urban and two provincial universities that remained open to provide educational services and these were the University of Phnom Penh (UPP), the University of Fine Arts (UFA), the University of Agronomic Sciences (UAS), the Buddhist University (BU), and the Technical University (TU). In the academic year of 1971-72, the enrolment rates of universities either remarkably increased or decreased because students fled to the countryside or to safe places. For instance, the enrolment of the UPP significantly increased from 4547 in 1970 to 6840 in 1971, while the TU decreased from 573 in 1970 to 298 in 1971, the UFA increased slightly from 117 to 155 and 2 provincial universities decreased from 357 in 1970 to 37 in 1972. In summary, the educational system during the Khmer Republic faced problems of ideological disputes, the cold war, shortage of qualified local lecturers, and reduction in the number of educational facilities, substandard teaching and research work, resulting in inferior educational quality.

Table 2.2
The list of universities under the Khmer Republic (1970-1975)

No.	Universities/College/Institutes	Date of Establishment
1	The University of Phnom Penh (UPP)	1970
2	The University of Fine Arts (UFA)	1970
3	The Technical University (TU).	1970
4	The University of Agronomic Sciences (UAS)	1970
5	The Buddhist University (BU)	1970
6	The University of Takeo-Kampot (UTK)	1970
7	The University of Kompong Cham (UKC)	1970
8	The University of Battambang (UB)	1970

2.3.1. 4. Under the Khmer Rouge (1975 -1979)

After Khmer Rouge took over the country on 17 April 1975, Pol Pot immediately established the Democratic Kampuchea government (DK) led by the Communist Party of Kampuchea (CPK).The DK, imitating the Cultural Revolution of the People Republic of China, implemented the national policy of "self-reliance" and "self-mastery" to turn the country into an agrarian society to develop its economy. Even though the government provided schools throughout the country, they only furnished basic education for the purpose of their political ideology in order to achieve the policy of an agrarian revolution (Ayres, 2000: 106, 118). Over the next three years, eight months and 20 days, the Khmer Rouge systematically eliminated all existing social, economic, political and cultural infrastructure in the country (Chendler, 2008). Cambodian higher education institutions also fared badly.

Under the Democratic Kampuchea regime, about 1.7 million Cambodians were decimated through executions, overworking, starvation, and disease. Eeducational facilities were completely destroyed, and approximately 75 percent of higher education lecturers and 96 percent of university students were lost in the genocide (Pit, 2004). Of the 21,000 trained secondary school teachers in 1975, about

3000 had survived in 1979 (David, 1999). For example, prior to the DK, Cambodia had 5,275 primary schools, 146 secondary schools, and 9 higher education institutions, but about 90 percent of these educational facilities and all their documents were completely destroyed under this regime. In addition, this regime wanted to destroy the legacy of previous regimes by releasing the country from the clutches of capitalism, western ideas, thinking and institutions, poverty and corruption in major cities throughout the country (David Ayres, 1999).

According to Vickery (1984) as cited in (Tomas Clayton, 1998), Pol Pot created new a educational policy, namely, the 1976 Four Year Plan (1976-1980) to build socialism in all areas that required all children to attend at least three years of a part-time primary school program. Pol Pol had an extreme vision to fast track the education of Cambodian students from illiteracy to become an engineering graduate with 10 years of training and practical works. The most popular slogan during this regime was "Study is not important. What's important is work and revolution." As highlighted by Chandler (1993), the DK ignored educational quality by recruiting uneducated peasants, based on their revolutionary positions and honesty, to be teachers and to teach students during lunch breaks in a 14-hour workday.

Moreover, DK introduced many revolutionary songs depicting national sacrifices in the curriculum of reading, writing, arithmetic, geography, natural science, physics, chemistry, history of the Cambodians, the world revolutionary struggle, the party's politics, and moral philosophy in order to transform students and to purify their political consciousness (Ayres, 1999). In short, the failures of DK's extreme communist ideology and its educational policy brought Cambodia to year zero about the destruction of education in the country.

2.3.1.5. Under the Vietnamese occupation (1979 – 1991)

After the collapse of Democratic Kampuchea on January 7, 1979, a new government with the support of Vietnamese forces was established, namely the People's Republic of Kampuchea (PRK) or the United Front for the National Salvation of Kampuchea (UFNSK) guided by the Kampuchea People's Revolutionary Party (KPRP), and led by Heng Samrin. During the Vietnamese invasion and occupation, the war extended contentiously throughout the country. Many Cambodians had little trust in the Vietnamese-backed new government because Vietnam had always been Cambodia's enemy in its longstanding history. The regime also faced controversial disputes with the international community, which imposed economic and political sanctions on both the new People's Republic of Kampuchea (PRK) and Vietnam (Ayres, 2000). ASEAN states (Thailand, Singapore, Malaysia, Philippine, and Indonesia), China, and the United States sponsored Cambodian armed forces resistance along the Cambodia-Thailand border.

During this period of hardship, PRK started to restore the education system by calling survivors to be teachers and trainers in schools and institutions of higher learning. According to Hun Sen, the government implemented its policy of "people with low education teach the ones with no education", "people with high education teach the ones with low education"(Sen, 2011). During this period, five main Cambodian higher and technical education institutions adopted hybrid systems from the Soviet Union, Vietnam, and other Eastern-bloc countries.

These countries provided technical assistance with both human resources and teaching materials at all levels including higher education (Ayres, 2003). Higher

educational institutions had major roles to provide good political and technical training to promote the ideology of socialism. In order to achieve this goal, tertiary students were required to study five main areas including Marxist-Leninist Theories, Global and Cambodian Revolutionary Histories, Situation and the Role of the Revolution and the Policy of the Party, Moral Education and the Revolutionary Way of Life, and Attitude to the Common People (Clayton, 1999).

In December 1979, the new government opened the Faculty of Medicine and Dentistry, the first higher learning institution. Approximately 10-20 medical doctors from the Vietnamese Ministry of Health came to train the few survival Cambodian students who had not completed their medical studies before the DK regime. This faculty offered a six-year medical program. In July 1980, the Teacher Training College was established, and about 40 Vietnamese professors from the Vietnamese Ministry of General Education trained Cambodian students who had not graduated from their higher educational institutions before 1975. This college offered a three-year program to become high school teachers.

In September 1981, the Khmer Soviet Friendship Higher Technical Institute was established with the full support from the Soviet Union financially, technically, and in the area of human resources. About 56 Soviet professors provided lectures in six different majors including Civil Engineering, Electronics and Electrical Engineering, Industrial Chemistry, Agro-Hydrology, Mines and Mining, and Geology from 1980 to 1989. The Institute of Economics was established in September 1984 with the full support of Vietnam by providing all professors, textbooks, as well as the curricula. Approximately 35-40 Vietnamese professors, who

came from the University of Economics in Hanoi, taught the five major areas of Agro-Economics, Industrial Economics, Commerce, Finance, and Economic Planning. In January 1985, the Institute of Agriculture opened under the financial and technical support of the Ukraine Agricultural Academy. About 56 professors from other institutions in the Soviet Union came to teach in the five major areas of Agronomy, Forestry, Fisheries, Veterinary Medicines, and Agricultural Mechanics. In addition, many students were sent to study in friendly countries through educational and cooperation agreements.

According to Virak (2009), 6,509 students were sent abroad to study between 1979 and 1989, among them, 1,426 were females. Cambodian students who received scholarships from receiving countries to study abroad included 159 students in Bulgaria, 60 to Cuba, 300 to the Czech Republic, 1179 in East Germany, 191 to Hungary, 25 in Laos, 30 in Mongolia, 80 in Poland, 3730 in Russia, and 751 in Vietnam (Virak, 2009). In 1989, the People's Republic of Kampuchea (PRK) changed its name to the State of Cambodia (SC) after the withdrawal of the Vietnamese army and the collapse of the Soviet Union (RU).

By 1990, 977 students graduated from Cambodian higher educational institutions to become doctors, dentists, and pharmacists, 2,196 to become high school teachers, 1,481 students as foreign language specialists, 474 students as technical engineers, 400 students as economists, and 184 students as agricultural engineers respectively. In brief, higher education institutions during the Vietnamese occupation were dominated by political ideology of socialism and inferior education, equality and they depended absolutely on the financial and technical support of

countries with friendship agreements, but they were the first professionally trained technical experts in Cambodia. Many women assumed leadership roles that they had never been able to assume before. The girls had equal rights to access higher education, as did boys for the first time in Khmer history.

Table 2.3
The list of Universities and Institute under the Vietnamese occupation

No.	Universities/College/Institutes	Date of Establishment
1	The Faculty of Medicine and Dentistry (FMD)	December 1979
2	The Teacher Training College (TTC)	July 1980
3	The Khmer Soviet Friendship Higher Technical Institute	September 1981
4	The Institute of Economics (IE)	September 1984
5	The Institute of Agriculture (IA)	January 1985

2.3.1.6. Under the UNTAC and the Coalition Government (1991 - 1997)

This period was a new beginning of reform, restructuring and development of Cambodian higher educational institutions. After a decade of civil war, the Cambodian conflicting parties, which were the Cambodian's People Party (CPP), the Democratic Kampuchea (DK), the National United Front for Neutral, Peaceful and Cooperative Cambodia (FUNCEPEC), and the Khmer People's National Liberation Front (KPNLF), signed the Paris Peace Accord on October 23, 199. It was initiated by the United Nations in order to end the longstanding war in Cambodia (UNESCO, 2011). The UN Security Council established the United Nations Transitional Authority in Cambodia (UNTAC) to ensure the implementation of the peace agreement, and the organization of free and fair elections.

During the transition period from 1991-1993, there were very few educational changes conducted by UNTAC because the government retained control over the administration of the existing education sector. After the general election in 1993, the new constitution and a coalition government were established to facilitate the

organization and implementation of national policies. The new government proclaimed its commitment to develop human resources and capacity building by increasing to at least 15 percent of public expenditure of the whole national budget on education although it fell from 11.8 percent in 1996-97 to 8.3 percent in 1998-99 (Ayres, 2000). In 1994, the government together with the sponsoring international development partners created a national development strategy entitled “National Program to Rehabilitate and Develop Cambodia (NPRD)” in which human resource development was one of its key pillars.

A project of the United Nations Development Program (UNDP), "the Capacity Building for Education and Human Resources Sector Management", a support to the government, was eventually converted into the “Program to Rebuild Quality Education and Training in Cambodia” through the government’s ratification at the National Education Seminar in January 1994. Two review projects of the Asian Development Bank, Basic Education Investment Plan (1995-2000) and Education Investment Plan were adopted by the government in December 1994 and were incorporated into the Cambodia’s First Socioeconomic Development Plan, 1996-2000. Furthermore, the government changed two major policies to expand the higher educational institutions in 1997.

First, the government permitted public HEIs to provide classes based on private tuition fees for non-scholarship students in a limited number of institutions. In addition, top government-supported scholarship students were recruited by the Ministry of Education, Youth, and Sports. Second, the government allowed private sectors to be involved in Higher Education investment (Pit, 2004). Virak highlighted

(2009) that between 1989 and 1999, 2,170 Cambodian students were awarded scholarships to study abroad, among them, 187 were female students. Records showed that 112 students went to Australia, 24 to Canada, 22 to the Czech Republic, 32 to France, 148 to Germany, 4 to Hungary, 20 to Indonesia, 142 to Japan, 10 to Laos, 12 in Poland, 769 in Russia, 34 in Thailand, 30 in USA, and 797 in Vietnam (Virak, 2009). Unfortunately, this coalition government broke up following a bloody coup on July 5-6, 1997. In brief, the development of Cambodian higher education in this period was facing many problems in providing educational services because of political instability and civil war.

2.3.1.7. Under the Hun Sen regime (1998-the present)

After the civil war was over, Prime Minister Hun Sen announced a new government in 1998. Hun Sen has ruled the country as Cambodian prime minister for three mandates of government in 1998-2003, 2003-2008, and 2008-2013 respectively. Meanwhile, Cambodian higher education has been analyzed by different educational experts as "a cause for concern," "plagued with difficulty," and "in a ferment of concern." It reflects a number of problems with higher learning institutions: they are centrally supervised by the government ministries; they operate with limited financial resources and are fraught with political interference without transparency of academic recruitment, university leader appointment, and program approval (Ford, 2006). Presently, there are 91 Cambodian higher education institutions, which comprise 34 public and 57 private universities, in 19 provinces and in Phnom Penh, the capital. Not surprisingly, the expansion of higher education institutions is reflected in the growth in the number of enrolments.

According to a report of the Ministry of Education, the total annual registration rate has increased dramatically to more than four times from 41,000 to 173, 000 between 2003 and 2010, with approximately 91 percent of fee-paying students in the public and private HEIs. In particular, in the academic year 2010-2011, there were 981 doctoral students, 12,887 master students, 173,264 undergraduate students, and 20,719 associate students (MoEYS, 2011b). Due to the growth in number of HEIs and enrolments, scholars describe the Cambodian higher education landscape as undergoing a "silent revolution" (Rockefeller Foundation Supported Project, 2006). Many private universities have mushroomed to provide educational services throughout the country. Several factors have been observed during the rapid growth of private higher education institutions in this short period of time.

First, low salaries in the public sector have led to the loss of more and more public university lecturers to private institutions that offer well-paid salaries. Second, conflicting educational and political ideologies between young and old Cambodian scholars have caused young scholars to switch to the private sector. Third, private higher education institutions have striven to develop competitive marketing strategies in producing human capital for the labour market after Cambodia became a member of ASEAN in 1999 and the WTO in 2004 (Leng, 2010). Hence, there are five main critical areas to be urgently reformed in order to effectively improve the educational quality for Cambodian students and to ensure academic success for Cambodian HEIs (Chealy, 2009).

2.3.1.9 Constraints of higher education financing

Financing higher education is virtually limited by the government's annual budget. Overall, educational expenditure amounts to 1.60% of the GDP while public higher education expenditure receives only 0.05 % of the GDP (WB, 2012). For example, the government has been financing public higher education institutions in the amount of 3, 0243.8 million Riels (approximately US$ 8 million) in 2011, and it will be dramatically increased to 5, 4620.0 million Riels (approximately US$ 13 million) in 2012. A large portion of the budget of Higher Education is spent on staff remuneration with a smaller portion on the development of other subsections. Due to financial constraints and lack of support, the government allows public HEIs to run private classes to generate tuition fees to support their institutional operation. There are two components of the government budget to HEIs: the Recurrent Budget (RB), which covered salaries, utilities, water, and non-salary expenditure, and the Program Budget (PB), which covers three subcomponents; example, teachers, students and institutional development.

Besides, the government budget, many international partners and donors have a major role in supporting Cambodian HEIs. The Asian Development Bank (ADB) and the World Bank (WB) were significant contributed to assist Cambodian Higher Education. For instance, ADB currently has a US$ 25 million project to assist in improving the quality of education. In this project, US$ 3 million is targeted to support HEIs in three subcomponents, namely improving the HR department, strengthening the accreditation mechanism, and improving the library of the Royal University of Phnom Penh (ADB, 2010). Furthermore, the World Bank has approved a five year project from 2011 to 2014 to the amount of US$ 23 million to support

HEIs in the following four main areas strengthening the capacity of higher education system (1), and providing competitive development and innovation grants (2). It offered scholarships to disadvantaged students and project management (3), and monitoring and evaluating its project (4) (WB, 2011). Briefly, financing problems are certain important factors that affect the education quality in Cambodian tertiary education.

Table 2.4
Financing plan for higher education in Cambodia (MoEYS, 2013)

	Cost in Riel Millions*				
Activities	2009	2010	2011	2012	2013
Institutional support and operation	6,238.7	6,7524	2,9185.4	5,2708.3	7,8294.0
Monitoring and evaluation and quality, strengthening	256.3	233.6	1,058.4	1,911.7	2,842.0
Resources: Total	6,495.0	6,7757.6	3,0243.8	5,4620.0	8,1136.5

*Source: Report on Goals of the Ministry of Education, Youth, and Sports in Academic Year 20012-2013.

2.3.1.10 Admission requirements

A majority of Cambodian public and private universities do not specify or stipulate admission requirements into their institutions. They rely solely on the results of the final national high school examinations. This means that students who have completed six years of primary and six years of secondary education with passing grades and secondary school diplomas do not need to apply for admission in order to enter tertiary educational institutions. Prior to 2002, similar to Soviet and European admission procedures to higher education, the government ministries prepared examinations to recruit the best candidates to enroll in the public higher educational institutions, but the private HEIs had already been setting their own entrance exams to recruit students under the supervision of the relevant ministries. Consequently, many public and private universities have selected unqualified

students to attend their institutions. Thus, educational quality suffers a negative impact caused by the search for commercial benefits. Therefore, admission requirements cause controversial problems, while human resources, teaching quality, and research capacity is also crucial problems in the current Cambodian HEIs.

2.3.1.11 Human resources, teaching quality, and research capacity problems

The lack of human resources, teaching quality, and research capacity is also a major problem. There are few full time academicians who hold PhD's in Cambodian universities because of insufficient salaries and incentives. The monthly salary together with a basic salary, functional, and subsidiary allowances (risk allowance, regional allowance, health risk allowance, pedagogic allowance, and family allowance) for a full time university lecturer can be as low as Riel 55, 0000 (approximately USD $130), which is insufficient to meet the daily expenses of a family (RGC, 2010), whereas overall academic average monthly salaries of some Asian countries are much higher: they range from USD 1,182 in China, USD 1,547 in India, USD 2,568 in Australia, USD 3,107 in Malaysia, to USD 4,112 in Japan (Rumbley, 2008). Thus, public university lecturers prefer to take up part-time teaching at a number of academic institutions. Without adequate income from a normal teaching load, lecturers have to spend more time on teaching to make a living, leaving no time to do research. In this context, Cambodia needs qualified lecturers, educational experts, and policy makers to restore its system, but the lack of academic professionalization criteria is not encouraging people to work in academic institutions. According to the Cambodian Scientific Department (2010), there are 1510 masters' degree lecturers and 192 doctorates' degree lecturers in private and public HEIs nationwide. However, the Royal University of Law and Economics

(RULE) and the Royal University of Phnom Penh (RUPP), both prestigious universities and member of ASEAN University Network, have only 7 and 16 PhD holders respectively (MoEYS, 2011a). Most universities around the world require their lecturers to fulfil three basic functions: to upgrade the quality of training, to do research, and to provide consultation services.

Conversely, Cambodian HEIs only require their lecturers to upgrade their quality of training. Presently, research work suffers much due to the constraints of the government's financial support and lack of human resources. Cambodian higher education institutions are publishing some academic journals. However, a recent study of five prestigious Cambodian HEIs has found that "only 6 percent of university lecturers hold PhD's degrees and approximately 85 percent have never published any academic or research papers (Chen, 2007). In conclusion, Cambodian higher education institutions need to increase their human capital with highly qualified, experienced and professionally skilled personnel to meet the minimum standards of education quality. Academic relevance is also one of the factors that can allow students to select suitable majors to match the needs of labour markets and society.

Table 2.5
Staff statistics by highest qualification in top public universities

No.	Name of Universities	Total	Bachelor Holder	Master Holder	PhD Holder
1.	Royal University of Phnom Penh (RUPP)	460	2	262	16
2.	National University of Management (NUM)	83	0	58	14
3.	Royal University of Law and Economics (RULE)	111	0	77	7
4.	Chea Sim University of Komchaymea (CSUK)	54	0	25	0

5.	University of Svay Rieng (USR)	73	0	55	0
6.	University of Battambong (UBB)	49	0	43	3
7.	Mean Chey University (MCU)	79	0	57	0
8.	National Institute of Education (NIE)	252	1	78	4
9.	Institute of Technology of Cambodia (ITC)	155	1	71	16

Source: Education Staff Statistics by Status, Cadre, Qualification and Age Group National 2010-2011, the Ministry of Education, Youth, and Sports.

2.3.1. 12 Academic relevance

Relevant skills in universities are not linked to the labour market. The high rate of unemployment among the university graduates is partly due to their lack of skills needed in the labour market. Public and Private HEIs are competing to provide the same subjects in business studies, economics and IT. Currently, employment in these areas is already fully saturated, while science, mathematics, agriculture and health are areas with national needs yet to be filled by skilled workers (Noch, 2009). In 2009, approximately 65,734 students (48 percent of total students) graduated with a Major in Commerce.

Business studies are most popular among Cambodian students in both public and private universities because students and their parents think that these skills will allow them to find well paid salary positions in modernized and comfortable offices. According to a report of the Economic Institute of Cambodia (EIC), only 10 percent of the university graduates found jobs in 2007. However, the government fails to finance public universities to increase pure science majors enrollment because these majors require more spending of the national budget on workshops, laboratories and experiments. Moreover, the government still supports public universities to offer academic curricula that are generally provided by private universities. Therefore, it is evident that public sectors are competing commercially with private sectors within

tertiary education without making any effort to meet social needs and economic growth of Cambodia as stipulated in the government's rectangular strategy (Chealy, 2009).

In short, Cambodian HEIs need to expand their curricula and facilities to provide a wide range of skills to link labour demands nationally and internationally. However, university autonomy and academic freedom are a part of the current problem to improve the education quality in Cambodia.

2.3. 1. 13 Autonomy and academic freedom

The last problem is autonomy and academic freedom within the public universities. Presently, public HEIs which are controlled by centralizing ministry supervision experience serious problems of under-funding and low salaries. According to (Chealy, 2009), Cambodian higher educational institutions are divided into two different categories namely, academic and vocational institutions. Academic institutions are supervised by the Ministry of Education, Youth, and Sport (MoEYS) while vocational institutions are under the supervision of the Ministry of Labour and Vocational Training (MoLVT). In addition, the Royal Academy of Cambodia (RAC), a research institution supervised by the Council of Ministers, offers Master's and PhD's programs to Cambodian students.

Hence, there are twelve specialized ministries and agencies that provide higher education services in Cambodia including the Ministry of Education, Youth, and Sports (MoEYS), the Ministry of Labour and Vocational Training (MoLVT), the Ministry of Health (MoH), the Ministry of Economy and Finance (MoEF), the

Ministry of Agriculture, Forestry, and Fisheries (MoAFF), the Ministry of Culture and Fine Arts (MoCFA), the Ministry of National Defence (MoND), the Ministry of Religious Affairs (MoRA), the Ministry of Interior (MoI), the Ministry of Public Work and Transportation (MoPWT), the National Bank of Cambodia (NBC) and the Office of the Council of Ministers (CoM) (UNESCO, 2006; Virak, 2010).

A few public universities are given legal status as quasi-government institutions or public administration institutions (PAIs). Political parties and parent ministries are actively involved in making important decisions in the administration of an HEI as well as nominate high academic ranking officers based on the political tendency rather than academic qualifications in Cambodian public HEIs. For example, the presidents or rectors of public universities are appointed by the government without opening the positions to public competition and evaluation of academic experiences and competencies.

Cambodian HEIs are not mandated to grant diplomas; only parent ministries and agencies have absolute rights to issue, sign, and stamp on any diploma; high ranking government officers are cordially invited to preside at the graduation ceremony. In the current educational system, academic freedom is in its infancy because the freedom of expression related to politics, human rights, democracy, corruption, transparency, good governance, and social justice debates are banned within the HEIs. In addition, the government has imposed regulations on HEIs advertising their universities through mass media in order to maintain control over all advertisements before reaching the public because the experiences of misconduct of some institutions in the past. Therefore, autonomy and academic freedom were still

controversial problems in the current educational system caused by a legacy of communist ideology in the past.

2.3.2. Existing institutional policies in Cambodian universities

There are many institutional policies associated with academic success and education quality in Cambodia. In existence are two fundamental legal instruments that determine the government's commitment to these educational policies. First, article 65 of the Cambodian constitution stipulates that, "the state shall protect and upgrade a citizen's rights to quality education at all levels and shall take necessary steps for quality education to reach all citizens. The state shall respect physical education and sports for the welfare of all Khmer citizens. In addition, the state shall establish a comprehensive and standardized educational system through the country that shall guarantee the principles of educational freedom and quality to ensure that all citizens have equal opportunity to earn a living (RGC, 1993, admended 1999)".

Second, government strategy on the Rectangular Strategy for Growth, Employment, Equity and Efficiency in Cambodia, rectangle 4 stated that, "the Royal Government will continue to strengthen its partnerships with the private sector and the national and international community to enhance and improve the quality of education services, both in vocational and technical training and in higher education, consistent with international standards and the development needs of the nation (Sen, 2004)". Next section will highlight relevant institutions, educational policies, and regulations that are linked with institutional policies for academic success.

2.3.2. 1 National policies on education

A. Educational Strategic Plan 2006-2013 (Education for All)

There are two stages of implantation of the Education Strategic Plan from 2006 to 2013. The first stage is the Education Strategic Plan (ESP) 2006–2009, which includes the main purposes for the success of the plan. In order to achieve the goals outlined in the plan, the government has introduced the following policies in this strategic plan, including increased access and equity of enrollment opportunity to realize the Royal Government of Cambodia's pro-poor policy. These strategic plans include:

(1) Implement the quality assurance and improvement in both institutional and system levels,

(2) Strengthen institutional management and development ESP 2006–2009 strategies, and

(3) Implement all the above through the Department of Higher Education of the Ministry of Education which has significant roles to implement these plans in order to meet the needs of the rapid higher education expansion (MoEYS, 2010).

The second stage is the Education Strategic Plan (ESP) 2009–2013, which is established to ensure linkages between education policies and strategies within the development and action programs. In this stage, the Ministry of Education continues to provide the highest priority to equitable access with education quality, in particular, to basic education in order to attain goals of the National Education for All (EFA) Plan by 2015. Furthermore, it gives greater chances to expanding early childhood education, non-formal education, technical and vocational training and

opportunities to access secondary education and post-secondary education by establishing good relationship with development partners, private sectors, non-governmental organizations, communities and parents. This strategic plan also has goals to strengthen the implementation of the Education Law, the teachers' code of ethics, and good governance. In conclusion, the key components of the educational, strategic plans 2006-2013 include the equitable access of students to education, the development of educational staff capacity, educational quality and assurance, and encouragement for decentralization (autonomy policy).

B. Master plan for research in the education sector 2011-2015

The Master Plan for Research in the Education sector which supports the seven strategies of the Policy on Research Development in the Education Sector was approved by the Ministerial Meeting on March 14, 2011, and is guaranteed in articles 18 and 28 of the Cambodian Education Law. This master plan has been technically and financially supported by the World Bank's Higher Education Quality and Capacity Improvement Project (HEQCIP), and has mainly focused on three significant purposes to increase the number of articles published by Cambodian academicians in national and international academic journals. These projects are included:

1. To increase the number of national and international research conferences held in Cambodia.
2. To increase the number of national and international research conferences attended by academic staff and
3. To increase the ratio of permanent to part-time or contracted academic staff (RGC, 2011).

The Master Plan also describes strategies and training programs that will facilitate research development in higher education and enhance the research

capacity of academic staff and institutions. Furthermore, it highlights the need for the Cambodian public and private higher education institutions to cooperate with international education institutions to develop research and academic exchange programs that promote the educational quality of graduates for participating in the social and economic development of the country, particularly those that respond to job market demands. In short, these policies will help stimulate Cambodian educational and economic development to conform to the second stage of the Rectangular Strategy of the Royal Government of Cambodia. In addition, higher education's needs for a new legal framework to provide the foundation for high quality of education are also recognized regionally and internationally.

2.3.2.2 Legal frameworks to support tertiary education quality in Cambodia

Cambodia's parliament and government have passed many new laws and regulations to support educational policies for facilitating the functioning of HEIs, improving tertiary educational quality, and strengthening quality assurance. These legal frameworks included the Sub-Degree on Creating and Administering of Higher and Technical Education Institutions of 1992, the Royal Code on promulgating the Law on the Establishment of the Ministry of Education, Youth and Sport in 1996, and the Sub-Degree on Criteria of University Establishment in 2002. Other regulations are passed by the various legislative and executive institutions such as the Royal Degree on the Accreditation of Higher Education in 2003, the Resolution on the Credit Exchange System and the Implementation of Curricula in the Credit System and Credit Transfer in 2004, the Royal Degree on Promulgating the Law on Education in 2007, and the Sub Degree on PhD Training Program in 2010. Besides providing legal frameworks, some institutions actively participate in enhancing the

educational quality of the current Cambodian educational system. Therefore, this paper will investigate educational institutions that support the enhancement of education quality in Cambodia.

2.3.2.3 Educational institutions for enhancing educational quality

There are three prominent institutions that actively participate in helping the government to implement the national educational policies and strategies and to strengthen the educational quality in Cambodian higher education institutions. These institutions are the Accreditation Committee of Cambodia, the Supreme National Council of Education, and the Directorate Department of Higher Education.

A. The Accreditation Committee of Cambodia (ACC)

The Royal Government of Cambodia (RGC) with development partners including the World Bank (WB), The Asian Development Bank (ADB), the United States Agency for International Development (USAID) and other donors have approved the establishment of the Accreditation Committee of Cambodia (ACC), an independent institution supervised by the Council of Ministers. However, it has been functioning as an external but official quality assurance body to evaluate the educational quality of all HEIs throughout the country. According to article 2 of the Sub-Decree on Organization and Functioning of the General Secretary of the Accreditation Committee of Cambodia, the ACC has seven vital missions, which determine accreditation policy and measures to assure academic quality for all HEIs in the Kingdom of Cambodia:

a) Determining the accreditation status of HEIs
b) Approving curriculum for the foundation course for first-year university students in HEIs
c) Maintaining records of institutional and program evaluation involved with quality assurance accreditation
d) Making evaluations on the basis of visits to the HEIs
e) Cooperating with other national and international institutions involved with quality assurance and accreditation, and
f) Securing proper participation of stakeholders concerned with the outcomes of each academic institution that applies for accreditation, concerned ministries and professional associations, and
g) Making broad announcement to the public of the results of the ACC findings in relation to its task of accreditation (RGC, 2003b).

Furthermore, in order to ensure the quality of HEIs, the ACC has implemented institutional accreditation by examining nine minimum quality assurance standards of an HEI, namely its:

1. Mission
2. Governing structure
3. Management and planning
4. Academic program
5. Academic staff
6. Student and student services
7. Learning service
8. Physical plants, financial planning and management, and
9. Dissemination of information

In addition, after receiving a license from the Royal Government of Cambodia to operate its institution, each HEI is subjected to an evaluation of its management system, academic quality, and curricula in order to obtain the accreditation certificate. Only Cambodian HEIs accredited by the ACC, have the right to award bachelor, master and Ph.D. degrees in accordance with article 2 of Royal Decree on the Accreditation of Education Quality in Higher Education (RGC,

2003a). In short, this institution has significant roles to facilitate alignment of HEIs performance to meet the high educational quality standard requirements.

B. The Supreme National Council of Education (SNCE)

Presently, the Supreme National Council of Education (SNCE), directly supervised by the Cabinet of the Prime Minister, is in existence to support the Cambodian Education Law. This institution has three main tasks:

1. Promote educational quality, including proposing long-term educational policies and strategies in response to social and economic development needs of the government.
2. Evaluate work in the areas of education, technical and professional training and their adherence to the policy of the government
3. Mobilize a range of resources for the purpose of education (RGC, 2007)

This council has the highest authority over the Ministry of Education, Youth and Sport (MoEYS) and the Accreditation Committee of Cambodia (ACC). Remarkably, the members of the National Supreme Council of Education are appointed from among high ranking officials who have experience in education, politics, the economy, the sciences, technology and culture. The ministries and committees in charge of education and the accreditation of institutions are the Secretariat of the National Supreme Council of Education. Therefore, this council is a crucial mechanism to achieve the goal of educational quality.

C. The Directorate of Higher Education Department (DHED)

The Directorate of Higher Education in Cambodia, unlike in other ASEAN countries, is structured under the Ministry of Education, Youth, and Sports (MoEYS). It has two main departments: the Department of Higher Education and the Department of Scientific Research. The Department of Higher Education, which employs 64 staff, is managed by a director who is supported by four deputy directors in charge of five offices: namely, the Academic Coordination Office, the Statistical Information Office, the Policy Office, the Inspection Office, and the Administration office. This Department has three key roles in developing policy and strategy for the higher education sector:

1) Providing licenses to HEIs for their operations
2) Assisting HEIs to develop academic curricula and management instruments needed to meet accreditation standards
3) Improving the quality and efficiency of higher education nationwide

The Department of Scientific Research is established to facilitate the educational functioning of HEIs at the master's and PhD degree levels, and to improve the quality of learning-teaching and research at postgraduate levels through updating teaching methodologies and curriculum development, research and innovation, and publication. In short, this department has a fundamental role to assist the government ministries to implement their policies and strategies in order to promote Cambodian tertiary educational quality.

2.3.2.4 Institutional policies for enhancing educational quality in the campus environments

After the end of the civil war in 1998, the Royal Government of Cambodia and her national and international development partners have cooperated to establish various educational policies, projects, legal frameworks, institutions, regulations to support and ensure the education quality of Cambodian higher educational institutions. Strengthening education equality is introduced in the fourth rectangle of the government's Second Stage of Rectangular Strategy (2008-2013) for Growth, Employment, Equity and Efficiency which refers to capacity building and human resource development, p. 20 (Sen, 2004) . However, quality and quantity are controversial problems in Cambodia's current educational system because of the government's limited finances and people's poverty. Most poor students move from their hometowns in remote areas of the provinces to pursue their higher education at Phnom Penh, the capital. During their studies, they face many problems such as limited accommodation, lack of financial support, few scholarships, and lack of study materials.

To resolve these problems, the government has founded new universities in four different provinces such as Chea Sim University of Kamchaymear (former Maharishi Vedic University in 1991) in Prey Veng Province, Svay Rieng University (2006) in Svay Rieng Province, Mean Chey University (2007) in Banteay Meanchey province, and Battambang University (2007) in Battambang Province. In this context, Cambodia needs to increase the quality and quantity of human resource capital to compete with her neighbouring countries in ASEAN community by 2015. Based on the literature, the government has actively taken the lead on institutional

policies through providing financial support or allocations for academic activities such as research and innovations, national policies, legal frameworks, and regulations. It also has important roles to facilitate the institutional functions and their academic supported service environment. In addition, institutions need to have a high commitment to provide excellent support services for facilitating students' academic success and education quality. Institutional commitment refers to "the willingness to invest resources and provide the incentives and rewards needed to enhance student success, p.99" (Tinto, 2005).

In this section, there are two kinds of institutional policies that can be significant factors to support students' education quality progress, and these are academic and non- academic services in this present context. In this paper, academic support services consist of academic foundation studies, foreign languages, library services and other facilities. Non-academic services refer to financial support, scholarships, and accommodation.

2.3.2.5. Academic support services

Cambodian public higher educational institutions have been operating to provide appropriate academic support services in accordance with the national and regional standards including the minimum standards for Cambodian Accreditation of Higher Education Institutions and the ASEAN Network Quality criteria. There are nine minimum standards to promote quality education and academic success. Introduced in the third standard is the academic program, in the fifth standard student and student services, and in the sixth standard learning services (RGC, 2003a). Academic programs are course curricula designed to ensure and enhance the quality

of education in the institutions, and they must comply with national policies, the institutional mission, social needs, the employment market, and students' needs. Student and student services are defined as academic and non-academic services that contribute to the enhancement of educational quality and the student's development of knowledge, competence, and professional skills. Support services include admission services, tuition fees and scholarship services, counselling services, accommodation services, food services, first aid services, security services, and other services. Access to libraries, computer, laboratories, experimental rooms, research stations, the Internet, textbooks, journals, research papers, and so on are considered as learning services as these facilities facilitate students' learning experiences in order to attain their academic success. In the second criteria about teaching and learning of the ASEAN University Network Quality-Assurance, academic support services also include course curriculum, academic staff, student assessment, learning process, environment, health and safety standards and learning resources (ASEAN, 2004).

Hence, Cambodian public universities are effectively implementing some minimum educational quality standards to provide excellent academic and non-academic support services for Cambodian students to achieve their academic development and effectiveness. At the time of writing of this paper, the Cambodian public universities were providing academic support services such as academic foundation studies, English language, library services and other facilities to support the learning environment of Cambodian students.

A. Academic foundation studies

To upgrade and strengthen the general foundation of knowledge of high school students to succeed at the tertiary level, the Royal Government of Cambodia, through the Accreditation Committee of Cambodia, has introduced foundation study programs into Cambodian HEIs in order to promote the education quality of students. Generally, Cambodian HEIs establish their own independent academic foundation departments, which are accredited by the Accreditation Committee of Cambodia. These departments offer foundation studies to first year students in the undergraduate program in the academic year 2005-2006 (ACC, 2005). Thereafter, the ACC has been accrediting undergraduate and postgraduate curricula. In order to obtain a bachelor's degree, freshman students have to successfully complete a one-year foundation studies program. After that, they are awarded with a foundation study certificate of achievement in all subjects in the foundation study curriculum. With this certificate, students have the right to enrol in the second year of the undergraduate program in the same higher education institution or in another accredited higher education institutions anywhere in the country. Currently, 38 Cambodian universities' academic foundation programs have been fully accredited by the Accreditation Committee of Cambodia (ACC, 2008).

According to article 30 of the Royal Degree on the Accreditation of Education Quality in Higher Education, academic foundation curriculums are required to introduce four compulsory disciplines: Arts and Humanities, Mathematics, Natural Science and Computer Science, Social Science, and Foreign Languages respectively (RGC, 2003a). The Discipline of Arts and Humanities includes subjects such as Literature, History, Philosophy, Fine Art, Musicology,

Archaeology, Religious Studies, Khmer Studies, and other courses approved by the ACC. The discipline of Mathematics, Natural Science, and Computer Science includes subjects such as Mathematics, Chemistry, Biology, Physics, Geometry, Environmental Studies, Applied Computer, Computer Science, and other courses approved by the ACC. The discipline of Social Science includes subjects such as Political Science, Public Administration, Sociology, Anthropology, Psychology, Economics, Geography, Demography, and other courses approved by the ACC.

The Discipline of Foreign Languages includes the languages of English, French, and other languages. In this foundation study program, students must complete common courses and orientation courses required by the foundation department of HEIs. For instance, the Royal University of Phnom Penh, the oldest and most prestigious university in Cambodia, offers 40 credits or 600 hours for foundation studies. If students want to earn a bachelor's degree in Science majoring in Mathematics at the RUPP, they are required to study compulsory courses. These coursed included English 1 and 2, Khmer Literature, Khmer Culture and Civilization, General Mathematics, General Chemistry and Physics, Using Library Resources and Demography, Statistics, Computer Applications, General Geography, General Algebra 1 and 2, and General Analysis 1 and 2 (RUPP, 2012f).

Similarly, the Royal University of Law and Economics, one of ASEAN Network University members, provides 36 credits or 540 hours in its academic foundation curriculum. For example, Law students have to study 12 courses including Basic Law, Computer, Culture, Foreign Languages (English, French, and

Japanese), Geography, History, Institutional Law, Statistics, Political Science, and Legal French (RULE, 2012a) . However, the Institute of Technology of Cambodia, which specializes in engineering, provides 70 credits or 3150 hours in a two-year program of foundation studies. In conclusion, foundation studies are very important to broaden Cambodian students' basic knowledge and to achieve success in their undergraduate program.

B. Academic English Support

Academic English Support Services are stipulated in standard number six of the ACC's minimum standards to promote the education quality and students' academic success. It requires that all HEIs offer English training services with highly qualified teachers and modern language learning facilities such as audio language labs and English software programs (ACC, 2009). From a Cambodian historical perspective, higher education institutions use many foreign languages in instruction due to the influence of political ideologies and to the technical and financial support of donor countries. During the 1980s, most universities used the instructional languages of Russian and Vietnamese, for example, the Soviet Friendship Higher Technical Institute used Russian as the instructional medium with Soviet professors.

After the collapse of the Soviet Union, France has donated about US$ 7 million through the Francophone University Agency *(Agence Universitaire de la Francophonie)* to support this institute. Eventually, the French language became the medium of instruction, and France renamed this institute to become the Institute of Technology of Cambodia *(Insitut de Techonologies du Cambodge-ITC)* on September 10, 1993.

However, at that time, most students protested against using French because they wanted to continue their instruction in Russian, Khmer, or English. Although presently Cambodia is one of 56 French speaking state members in the International Organization of the Francophonie (IOF, 2012), Cambodian students are no longer required to use the French language in their tertiary level of studies (Clayton, 2006). There are many controversial problems about language choices between English and French in the current Cambodian higher education institutions.

According to Clayton (2006), most Cambodian academicians and administrators, who worked at RULE, RUPP, NUM, and UHS, have taken every opportunity to convert their French instruction to English; Cambodian students have preferred to study English rather than other languages. For instance, when RUPP and RULE have amended their language policies and allowed students to select their own foreign language options, 80 % of RUPP's students chose English and 84 % of RULE's students selected English. On the other hand, after Cambodia became member state of ASEAN in 1999, English has significantly influenced Cambodian students on their language of choice. English is an official and working language of ASEAN according to article 34 ASEAN's charter (ASEAN, 2007), whereas the Cambodian constitution in article 5 stated that Cambodian official language and script are Khmer (RGC, 1993, admended 1999).

However, Cambodian scholars have always considered English language skills as most important for students' learning, communication, employment, and scholarship opportunities abroad, and it is the first and leading foreign language in the country. The Cambodian Ministry of Education started to introduce an English

curriculum into secondary schools and high schools throughout country in 2000. Because of limited English proficiency among Cambodian students and lecturers, most Cambodian public universities have used only Khmer as the official instructional language. According to Louise Ahens (2000) interviewed in (Clayton, 2006), Cambodian students need to know English because nearly all textbooks are in English. She emphasized that "Cambodia can't afford to develop new textbooks every few year like major academic publishers in the United States do. Thus, if students cannot read English, they simply can't function in higher education." She also suggested that Cambodian students who want to pursue their postgraduate degrees in the region and in English speaking countries must have English proficiency because English is the language of international education at nearly all universities in ASEAN as well as in Europe and North America.

Generally, Cambodian HEIs provide three years or six semesters of English language training to undergraduate students. Cambodian public universities are not setting test scores of English proficiency tests like TOEFL or IELTS in their admission requirements. For example, since 1997, the RUPP has established its institutional policy to offer English services through the English Language Support Unit (ELSU). It provides English language training to students in all faculty, departments except foreign language departments at the Institute of Foreign Languages. RUPP' students are required to complete six semesters of compulsory English courses in order to receive a degree from the university. Before starting classes in first year, students are required to take an English placement test to evaluate their English proficiency. After that, RUPP provides classes for students in various levels depending on their English placement test results, and they have to

attend at least six hours of English classes per week. The ELSU of RUPP has been providing English basic courses and elective courses including general English (from elementary to upper- intermediate levels), English for Employment, Academic Writing, Southeast Asian Studies, Introduction to Research Skills, English Teaching Methodology, and TOEFL Test Preparation (RUPP, 2012d).

As a result, after students successfully complete six semesters, they are able to attain at least basic academic research skills in their field of research. Moreover, if students had an upper-intermediate level of English proficiency in their first year or second year, they will be able to study specific subjects and advance concepts for writing their research report or final thesis (RUPP, 2012e). Beside these courses, the ELSU also provides English services during Summer School to improve English proficiency by offering enrichment courses for all RUPP students and students from other universities in Phnom Penh. These summer courses cover the five macro language skills of Listening, Speaking, Reading, Writing, and Grammar (RUPP, 2012c).

In addition, the Royal University of Law and Economics provides seven semesters of compulsory English training in its law and economics undergraduate curriculum. These English programs are provided in conjunction with the English Language Institute (USA) based at the Royal University of Law and Economics (RULE, 2012b). Because of effective policies of English training services, leading universities, including the Royal University of Phnom Penh, The Royal University of Law and Economics, and the National University of Management have been sending their students to study at English speaking universities in Australia, New Zealand,

United States, Europe, and some countries in Asia. For example, 480 Cambodian students have received the Australian Development Scholarships (ADS) to pursue their postgraduate studies in Australia since 1994 (AKP, 2012), and more than one hundred students have been awarded Fulbright Scholarships (FS) to do their postgraduate studies at universities in the United States (FAAC, 2012). In short, Cambodian public universities have provided appropriate academic English services to support students' learning experiences, academic excellence, and education quality.

C. Library Services

Library services and resources are considered as one of the minimum standards needed to ensure education quality and to facilitate students' learning process to help them succeed (ACC, 2009). Moreover, library services have a positive impact on students' academic success including learning, persistence, retention, faculty research productivity, and student job success. In particular, universities need new teaching technologies and new electronic information sources such as databases, up-to-date textbooks, periodicals, journals, advanced multimedia resources, high-speed Internet access, liquid crystal display projectors (LCD projectors), computer labs, visual and audio equipment so on to facilitate student learning p. 348 (Heyneman, 2001).

Presently, access to Cambodian universities' library resources is limited because of shortages of governmental financial support. However, university students can access textbooks and printing materials for their academic research and learning process. Universities strive to encourage students to use library services effectively. For example, RUPP offers a library orientation program, a compulsory

course on using library resources to all first year students. This course attempts to improve students' research and information seeking skills in the library, teaching them how to use reference books including encyclopaedias, atlases, and dictionaries as well as how to search for documents using technologies such as the Internet, email, CD-ROMs, Video, and microfiche (RUPP, 2012g). The Hun Sen Library of the Royal University of Phnom Penh, the largest library in Cambodia, officially opened on January 7, 1997 under the financial support of the Cambodian government and donors from European countries, the United States, and Japan. The library currently has a floor area of 1600 square meters with seating for 200 users and has approximately 55, 000 textbooks, of which 62% are in English, 22% in Khmer, 15% in French, with others in Japanese, Vietnamese, Chinese, and Thai. The library provides services such as Internet access, word processing and printing, photocopying services, online public Access Catalogue (OPAC), circulation services (loan and general collection), and library orientation workshop services (RUPP, 2012h).

In addition, the Royal University of Law and Economics has two separated libraries for the faculties of law and economics where each library has 495 square meters of space. There are approximately 22,788 general textbooks and 23,788 legal and economic textbooks. Remarkably, at least 550 students per day (RULE, 2010) access the university's library. Beside universities' libraries, most students use the National Library of Cambodia, the biggest library in the country, to research in their academic activities; this library has approximately 10 3,635 textbooks and 23, 000 volumes of books and journals (Post, 2012).

2.3.2.6 Non-academic support services

A. Financial services and Scholarship

Currently, there are 173, 264 undergraduate students (25,045 government scholarship students), 20,719 associate students (3079 government scholarship students), and 55, 149 foundation students (7512 government scholarship students) in Cambodian HEIs (MoEYS, 2011). Both scholarship and non- scholarship students face financial difficulties because they need to spend a lot on living expenses such as food, accommodation, tuition fees, and study materials at the universities of the capital. Presently according to census information in 2010, approximately 80.5% of the Cambodian population lives in rural areas, 55% lives on agriculture, and 35% lives in poverty (NIS, 2008; WB, 2011). About 80% of provincial and rural students pursue their higher learning in universities at Phnom Penh, the capital of Cambodia. Therefore, the Royal Government of Cambodia and higher education institutions annually increase the number of scholarships and establish appropriate policies to set affordable tuition fees for non-scholarship students. The provisions of scholarships and financial supports are based on the following criteria:

1. For outstanding or talented students
2. For deserving students who are not able to afford paying fees for their higher education
3. For students who are studying in prioritized fields or specializations for society's need as determined by the Royal Government of Cambodia, and
4. Other scholarships in response to the policies of the country's leaders

These scholarship awards are based on the proportion of gender, geographic location, and ethnic groups in Cambodia (ACC, 2009; RGC, 2003a). For example, the Royal University Phnom Penh annually awards 770 scholarships to students (RUPP, 2012a) while the University Health Science awards 741 scholarships (UHS, 2012a). The Royal University Law Economics annually provides 390 scholarships included 300 government scholarships, 10 outstanding or talent student scholarships, and 50 Prime Minister's scholarships (RULE, 2010). The tuition fees of current public universities are between USD 250 and USD 1500 per year. It is cheaper when compared with other universities in the Southeast Asian countries. For instance, the RUPP categorizes its annual tuition fees into three groups:

1. USD 250 for the Faculty of Social Science and Humanity
2. USD 300 for the Faculty of Science and
3. USD 450 for the bachelor's degree in Computer Science and English (RUPP, 2012b)

The Royal University of Law and Economics sets tuition fees in the amount of USD 380 for Law and Economics undergraduate programmes. Otherwise, medical studies in the University of Health Science being the most prestigious discipline, demand the highest tuition fees in the country, i.e. USD 1400 for Medicine, Pharmacy, and Dentistry (UHS, 2012b). In Cambodia, government scholarships only cover tuition fees, so students need to rely on parents, family, and part-time employment for living expenses. According to Virak (2010), the budget allocation in higher education is not proportionate to the ratio of students sponsored between the Ministry of Education and other ministries that provide higher education services. For example, some ministries may sponsor 10% of the students, but they receive

about 60% of government grants, whereas the Ministry of Education sponsors 90% of the students, but receiving only 40% of government grants for higher education expenditures.

Moreover, the number of government scholarship in Public HEIs is expanding, but the program based budget (PB) in higher education institutions is shrinking. Beside the government's existing scholarship program, World Bank (WB) and the Cambodian government have a five year project on Higher Education Quality and Capacity Improvement (2010-2015) to provide 1,050 "special-priority" scholarships based on pro-poor targeting and educational criteria in order to increase the retention of poor students in higher education (Virak, 2010). This World Bank collaborative scholarship, which pays between USD 60 and USD 90 depending on the location of provincial or capital universities, is higher than government scholarship because it covers tuition fees and monthly allowances. In conclusion, financial supported services and scholarships are very important to facilitate students to succeed in their academic activities and reach excellence.

B. Accommodation

Accommodation services are spelled out in the Minimum Standard number five for the Accreditation of Higher Education Institutions regarding student and student services. It states that HEIs have to provide good services to their students; these services include accommodation, food services, first aid, security, and other necessary services. Living environment in campuses are vital factors to retain students particularly first year students in college and university. Students who live on campus are able to persist into second year when compared to students who live

off campus. (Jenniefer, 2004; Kenty, 1997). Moreover, students who stay in university accommodation or residential halls are more likely to be actively involved in all university experiences and activities because they have enough times to interact with their peers, administrators, and faculty members (Astin, 1999).

Presently, Cambodian leading public universities in the Phnom Penh do not have their own university accommodation, whereas four public provincial universities including the Chea Sim University of Kamchaymear, Svay Rieng University, Mean Chey University, and Battambang University have their own campus housing offered freely to prioritized female students and other students whose families live far away from university campuses. Actually, most students are challenged with problems to find suitable accommodation during their studies at universities in Phnom Penh. Some students have to stay with relatives and friends, and others have to rent accommodation near their university campus. Fortunately, most male students have a chance to find free accommodations in pagodas because their families are so poor that they cannot afford rental rooms.

As a result, the Royal Government of Cambodia has constructed a six-storey building as a dormitory near the campus of the Royal University of Phnom Penh. This accommodation is for students from poor families, remote provinces, and for females who study at the universities in Phnom Penh (Saoyuth, 2010). The government will finance some national budgets to expand university dormitories to meet the need of rapid enrolment rates of students in Phnom Penh. It also has many projects to build colleges and universities in other provinces throughout the country in order to reduce the number of students coming to Phnom Penh to continue their

education. In short, accommodations are very important to facilitate the education quality in tertiary levels.

The Theoretical foundations of this study are based on the concept of student involved (Astin, 1984, 1993, 1999), concept of student's integrations (Tinto, 1975, 1993), and the concept of students' experiences (Pascarella, 1985).

2. 4. Theoretical Foundation of the Study

2.4.1 Theory of students' learning and living experience

Pascarella (1985) suggests that students' learning and living experience are affected by many factors such as students' background characteristics, the interaction with many actors on campus, and the quality of campus life. He also divided the concept of students' learning and living experiences into five variables are: (1) student background and pre-college characteristics, (2) structural and organizational features of the institution, (3) college or university environment, (4) student interaction with the major socializing agents on campus, and (5) quality of effort by students (p. 185). Based on these five constructs, Pascarella (1985) indicated that student involvement and college environment has the largest impact on the student's university experiences (p. 21). Therefore, it is important to understand the role of institution to promote college students' development.

2.4.2. Theory of "student integrations"

The theory of "student integrations" investigated the student retention and departure in universities or colleges. In 1973, Tinto started working on his theory with the collaboration of his research assistant Cullen, and he pointed out that

academic integration is an indicator of grade performance and students' intellectual development throughout their academic years (Tinto, 1975). In contrast, social integration is defined as peer group associations, extracurricular activities, and faculty and administrator interaction within a college or university. Tinto's (1975) theoretical model of student's attributes and persistence comprised of four elements. The first element refers to pre-entry attributes such as family background (socioeconomic status, parental education level, and expectation), individual attributes (academic ability, race, and gender), and prior schooling (characteristics of the student's secondary school and high school academic grades, and social attainments). The second element includes goal commitment (student's aspiration and institutional goals) and institutional commitments (academicians and faculty interaction, peer group interaction, and curricular involvement). The third element is the academic and social integration, and the last element is the outcomes (departure decision).

According to Tinto (1993), student's persistence or departure is measured by the degree of academic integration and social integration of the student. Academic integration reflects satisfaction with academic achievements, such as earning passing grades and academic progress. Social integration refers to the component of peer-to-peer interaction, faculty- student interaction, and extracurricular activities. It also refers to how the institution's social environment fits into the student's background, values, and aspiration. Tinto asserted that there are two dimensions of commitment which has a direct influence on persistence or departure behaviour: institutional and personal goal commitment. Institutional commitment is the degree of motivation and academic support services of university or college that are provided to students.

Goal commitment is the degree of a student's commitment or motivation the student has to persist in their studies for graduation. Tinto proposed that increased levels of academic and social integration and institutional and goal commitments directly influence a student's commitment and the outcome that is the departure decision: graduate, transfer, or drop out.

Tinto's (1993) theoretical model of student integration relates to the following components, which indicate student persistence in college or university. These include pre-entry characteristics of a student (high school grades and family income), career goals and commitment to the university, academic and social integration of this student within the academic years, goals and institutional commitment over the academic programs, and departure decision. In short, the Tinto's theoretical model (1975, 1993) illustrates the need to provide academic and social support services in order to promote student retention and academic achievements in education institutions so that students achieve academic success. The researcher will discuss the Tinto's theory to determine the institutional environment and academic success of the student.

2.4.3. Theory of Student Involvement

Theory of student involvement provides a means for theoretical studies of the process of academic success and persistence of a student in a Cambodian university. This study also adopts Astin's Input-Environment- Output/Outcome (I-E-O) model to illustrate the connection between students' academic success (Output), students' characteristics and background (Input), and academic environment (Environment). Based on this theory, the input was referred to as personal characteristics of the

student at the time before enrolling in the institution (Astin, 1993). The highlighted characteristics of the input may be family background, marital status, age, gender, race, parental education, housing, academic self -concept, social experiences, achievement expectancies, and past experiences. Environment in this context is defined as institutional resources to facilitate the learning atmosphere of the student, including various programs, policies, faculties, peers and educational experiences (Astin, 1993, p. 7). The outcome is identified as the students' resultant characteristics such as knowledge, skills, critical thinking, attitudes, values, beliefs, and behaviour after involving in the academic environment and the student's level of academic success (Astin, 1993, 1999).

This research has adopted this model because it focuses on the institutional environment which is regarded as the academic and non-academic support services provided by Cambodia's public higher learning institutions. Astin suggested that the significant factors contributing to students' persistence demonstrate the extent of their involvement in college, particularly with their friends, administrators, faculty members, and institutional programs that are offered to them. He also defined "student involvement" as "the amount of physical and psychological energy that a student devotes to the academic experience" (Astin, 1984). Students, who are highly involved in their academic activities, will try their best efforts to study, spend much time on campus, participate actively in student associations or organizations, and interact regularly with their friends, administrators, and faculty members.

In order to facilitate student engagement, the institutions must design more effective learning environment policies that support student involvement, and

provide support services for students to be involved in. In short, Astin's theory suggests that academic achievement is related to various academic and non-academic support services that are provided by higher education institutions. The researcher adapted Tinto's theory to link the academic environment as institutional policies and the students' academic success.

2.5. Research Variables

2.5.1. Demographic Factor

2.5.1.1. Socioeconomic Status

In this study, socioeconomic status refers to students' characteristic background, parental educational background, and their social economic status. Parental education and employment background are one of the significant factors that is positively related to students' academic success (McKenzie & Schweitzer, 2001; Bruinsma & Jansen, 2007). According to Melby and Conger (1996), family income, parental education, parental involvement and hostility have an influence on the academic experience of students in their secondary and post-secondary education. Henry et al. (1993) identified that parental involvement in support, reasoning, punishment, monitoring, and autonomy granting encourage students to successfully navigate their campus life; students who regularly received psychological counselling from their parents, tend to obtain significant skills for their academic success in university.

A study carried out by Jeynes (2002), demonstrated that parents' educational level, occupational status, and income level, which constitute their social economic

status, are associated with academic performance. Based on the cultural capital theory students who come from well-educated families will obtain success (McMillan & Western, 2000). It is undeniable that low social economic status negatively affect academic success because students cannot access much necessary resources for their academic development. In addition, socioeconomic background is one of the major components of educational quality; academic success strongly depends on the social economic status of parents who economically foster their children to get academic achievement (Graetz, 1995; Considine & Zappala, 2002; Eamon 2005; Jeynes, 2002). Based on the literature above, the authors propose the first proposition.

2.5.1.2. Prior Schooling

Prior schooling is defined as the characteristics of the student's high school, his or her academic grades, and social attainments prior to attendance at the college or university. One factor that appears to affect academic success is prior schooling results. Based on the studies of validity of high school grades in predicting student success beyond the first year by Geiser and Santelices (2007), it is found that grade point average (GPA) of high school results is invariably the best predictor of college grades. For instance, one research has investigated how high school grades affect college grades. Researchers have selected 80,000 students as research samples who were admitted to the University of California and observed their four- year college outcomes such as cumulative grade point average (CGPA) and graduation rates in order to find out the linkage of high school record in forecasting a long- term college performance. Based on the findings of this research, high school grades were a strong prediction for a four year college outcomes for all academic disciplines (Geiser &

Studley, 2003). Findings similar to those made by Geiser and Santelics (2007) were confirmed by Anderson, Benjamin and Fuss (1994) whose study on the determinants of academic success and post-secondary education found that students who have good academic performance in high school also have better academic performance in college. As highlighted by Geiser and Santelics (2007); Anderson, Benjamin and Fuss (1994), it was undeniable that high school grades are the best predictors of academic performance in the United States.

In addition, prospective college students who have actively engaged in high school activities have an affirmative predictor of a student's predisposition to participate in college; successful involvement in high school activities is associated with the predisposition to academic success in college (Borus, 1993; Hossler & Gallangher, 1987; Manski & Wise, 1983). The quality of the high school curriculum has an impact on students' academic success in post-secondary education. That is, students who with quality academic experiences in high school will perform well academically will do in college, even though they come from different demographic, social economic background (Florida Department of Education 2005; Gladieux & Swail 1998, Horn & Kojaku 2001; Martinez & Klopott 2003; Warburton, Bugarin, & Nunez 2001). Thus, prior schooling characteristics can be useful predictors of student retention, and the results of these studies could be employed for college admission (Paul, Leslie, & Jill, 1999). However, it cannot explain all of the various attrition rates of students; yet students prefer to stay in school when they are actively involved in campus programs and feel a sense of community at the institution (Astin, 1993; Tinto, 1993; Naretto, 1995).

English proficiency and students' academic success appear to be positively correlated. Most Cambodian universities set English language as an admission requirement for students to enroll in their program. For example, University of Cambodia and Paññāsāstra University of Cambodia required TOEFL scores of at least 500 or IELTS 5.5 for their undergraduate program. Prospective students need to prove their English proficiency prior to entering the university (PUC, 2013; UC, 2013). A number of researchers have investigated how students' language proficiency in English affect their academic achievement in the United States and the United Kingdom (Polyrazli et al. 2002; Swami et al. 2009). According to Polyrazli et al. (2002), English proficiency enables foreign students to succeed in cultural adjustment, social relationships, and in the academic environment at US University.

To succeed in their higher education, Cambodian students need to have higher English proficiency because nearly all the textbooks are written in English. Students who cannot use English, apparently cannot engage well in higher education (Clayton, 2006). Therefore, Cambodian students who want to further their postgraduate degrees in the region and in English speaking countries must have English proficiency because it is the language of international education in the world. That is why all Cambodian Higher Education Institutions are required to provide English courses with qualified teachers and modern language learning facilities (ACC, 2009). From the literature above, the authors propose the third proposition.

2.5.1.3. Motivation

Motivation is the degree of a student's motivation to attend college; students' motivation is positively related to college attendance and academic success.

Prospective student's personal aspirations have a significant impact on the decision to attend college. Furthermore, students' aspirations and career plans are the most important factors affecting college attendance (Carpenter and Fleishman, 1987; Ariffin, Ahmad, & Ibrahim, 2008; Jackson, 1987). As a relative research approach, self-esteem, goal orientation, self-efficacy and self-regulation, and learning styles of students are also associated with academic success (Feick & Rhodewalt, 1997; Zhang & RiCharde, 1997; Niemczyk & Savenye, 2001). According to Molton, Brown and Lent (1991); Bandura (1997), self-efficacy performs a specific task, and academic self-concept, confidence, assertiveness and positive risk-taking, correlate with academic performance. Students' academic talents can carry them far, but in order to become scholars who can manage their own learning, students need to be self-motivated, engaged and disciplined. In a study carried out by ACT (2008), the strongest predictor of academic success is an academic discipline, which the researcher defines as the "*skill component of motivation*", reflecting the levels and quality of students' effort in dedicating to schoolwork and the engagement with the new learning environment. Based on the studies by Choy (2002), adults and peers who value academic success can motivate their friends to enhance an academic achievement. A result of this research shows that students are more likely to enrol in college if their peers or friends intend to enrol in college, too. It is four time times more important than their parental encouragement and support (Choy, 2002).

2.5.2. Institutional Factors

In this study, institutional factors help students to succeed in their studies at university. Institutional factors included (1) Curriculum Syllabus (2) Teacher

Teaching, (3) Evaluation and Examination, (4) Facilities, and (5) Student Support Services.

2.5.2.1. Curriculum Syllabus

Engagement in curricular and extra-curricular activities correlate with students' academic development; it can be considered as one of the most significant factors to transform students to be successful persons with professional skills and knowledge. In a practical sense, a curricular or study program can vary from one institution to another, but it identifies the different levels of students' academic success. In Cambodian context, the academic program is the third standard that can contribute to students' academic success (ACC, 2009). Curricula should be precise, valuable, and useful for students' job opportunities. Teachers have to explain clearly about course goals and objectives to the students in the first session of the course, for instance through a course outline (Mood, 1995). According to Lacke and Neill (2011), the standardized curricula should be designed by universities, and students and teachers to assure that it adapts to students' needs and experiences shall evaluate it.

Additionally, teachers are required to follow up such curricular so that it benefits the students; the curricula and its contents should encourage and engage students to be actively involved in order to acquire knowledge and skills. Similarly, institutions should regularly update their curricular provision in order to respond to the special needs of students. For example, they should develop new approaches to students relating to workshops and other activities targeting particular aspects of needs including study skills, special courses, etc. (Mantz & Bernard, 2004). Besides

that, extra-curricular activities should be introduced to the students so that they have a chance to put their theories into real practice outside and inside the campus. Students can learn through these experiences how to be self-reliant and mature (Seymour, 1992; Wilde, 2002). Based on this, the following hypothesis is proposed:

H.1 Curriculum syllabus would significantly influence students' academic and intellectual developments.

2.5.2.2. Teacher Teaching

Lecturers' quality and their experience have a positive association with student achievement (Greenwald et al., 1996; Hanushek, 1996). As mentioned by Mood (1995) and Parr (2005), a good teacher has a principal role to be a facilitator, assessor, participant, and motivator in order to inspire students to be actively involved in the course. The academic staff is listed as in fourth standard among other eight minimum standards for accreditation of higher education (ACC, 2009). Medway and Penny (1994), and Massy (2003) pointed out that good teaching methodology could draw students to be interested in lectures. In a study carried out by Mclnerney (2000), there are nine core stages for teachers in promoting students' academic success as follows: (1) start the lesson with a quick review of previous learning and outline goals, (2) present material in small steps and allow application after each step, (3) Provide clear and detailed instructions and explanations, (4) ask a large number of questions and check for student understanding, (5) guide students in initial phases of learning and application, (6) provide systematic feedback that is task-based, (7) Monitor students as they work, (8) Provide ample time for completing tasks, identify in advance what material/concept might be difficult.

Research on student learning highlights key essentials regarding educational outcomes. These essentials include: (1) importance of intellectual challenge, (2) clear goals, (3) creating a classroom environment where students take responsibility for their own learning, (4) encouraging cooperation between students, (5) concern and respect for students as learners and people, (6) understanding of what students have learnt and what they still need to learn, (7) quality of instruction, (8) quality and quantity of feedback on learning; viewing teaching as a dialogue rather than a transmission process, and (9) understanding of teaching as a process of enabling learners, rather than a set of recipes (Ramsden, 2005; Walberg, 1981; Walberg, 1984).

One of the most significant factors that helps students to achieve academic success is the student faculty interaction. There are three popular theories about the interaction between students and the faculty in promoting student success in college. These three theories are Alexander Astin's Theory of Student Involvement, Vincent Tinto's Theory of Student's Persistence or Departure, and Robert Pace's College Impress Model. Astin' s theory of student involvement is based on his longitudinal study of college student persistence (Astin, 1984). This study has shown that student involvement contributed to their persistence in college. Conversely, a lack of involvement leads to students' departure from college. Astin pointed out that, " *Quite simply, student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience"* (Astin, 1984, p. 297).

Similarly, student's persistence is evaluated by the degree of academic integration and social integration of the student. Academic integration regards to

academic satisfaction or achievements consists of earning passing grades and academic progress. Most importantly, social integration refers to peer-to-peer interaction, faculty-student interaction, and extracurricular activities (Tinto, 1993). In other words, Pace (1984) asserts that academic success in college is the result of the college environment and the students' effort themselves; he suggests that colleges are responsible for establishing a satisfactory environment for student learning and development, but students themselves have to dedicate their effort and time in college activities.

In addition, according to the World Declaration on Higher Education (1998), teachers and students must implement a workable interactive network involving each other in order to enhance their academic performance, in particular students with their college either local or international levels. Students should be encouraged to learn some social skills such as how to communicate, socialize, and imitate to others; good relationships between the lecturers and their students are a significant factor to help them in academic achievement within the campus environment (Brophy, 1987; Aldridge & Rowley, 1998).

Teachers will develop a better understanding of student learning, knowledge, competence, and willingness in the classroom if they have effectively communicated to students (Chickering & Gamson, 1987; Daniels & Arapostathis, 2005; Konidari & Abernot, 2006; McGregor, 2007). Based on the Principles of Good Practice in Undergraduate Education, Chickering and Gamson (1987) presented seven effective educational practices, which include student-faculty contact, cooperation among students, active learning, prompt feedback, time on task, high expectations, and

respect for diverse talents and ways of learning, which all directly impact on student learning and the quality of their academic performance. Therefore, the following hypothesis is proposed:

H.2 Teacher teaching would significantly influence students' academic and intellectual developments.

2.5.2.3. Evaluation and Examination

Evaluation has a significant role in the teaching and learning process in higher education. It helps the university to judge the valued of the whole education process; it also identifies the students' academic achievement. In the education system in Cambodia, there are two national examinations in basic education organized by the education ministry: (1) Low upper secondary school (grade 9) and upper secondary school (grade 12). But in the tertiary education, the ministry has delegated the evaluation and examination process to the educational institutions.

The existing system of evaluation of higher learning institutions in Cambodia failed to meet the regional and international standards. The system of examination has been criticized by the public for a long time. The weakness of this system allows some universities to offer "supreme" degrees that have little actual value, due to a variety of factors including selection of students with low capacity, teaching by unqualified faculty, minimal evaluation, and corruption (Ford, 2013). Some Cambodian universities have no policies on evaluation and examination. These policies should be covered on plagiarism, cheating, and the punishment.

Cambodian public universities have adopted a new system of their evaluation and examination process, called “the credit system” in 2005 when the accreditation committee of Cambodia had been established.

Table 2.6
The Method of evaluation in Cambodian Higher Education

Criteria/Assessment	Percentage
Attendance/class participation	10%
Research	10%
Review test	10%
Final examination	60%

Table 2.7
Grading system in Cambodian higher education

Percentage	Grade	Grade Point	Definition
85%-100%	A	4.00	Excellent
80%-84%	B+	3.50	Very Good
70%-79%	B	3.00	Good
65%-69%	C+	2.50.	Fairly Good
50%-64%	C	2.00	Fair
<49%	D	1.50	Fail

Thus, it is hypothesized that:

H.3 Evaluation & examination would significantly influence students' academic and intellectual developments.

2.5.2.4. Facilities

The sufficient physical facilities, which include libraries, textbooks, learning and teaching materials, are critical factors to facilitate students toward academic success (Harmon & Wales, 1999; Mavondo et al., 2000). Library services and resources are considered as one of the minimum standards (seventh standard) needed to ensure

educational quality and to facilitate students' learning process to help them succeed (ACC, 2009). Moreover, library services have a positive impact on students' academic success, including learning, persistence, retention, faculty research productivity, and student job success. For instance, libraries must equipped with new teaching technologies and new electronic information sources including databases, up-to-date textbooks, periodicals, journals, advanced multimedia resources, high-speed Internet access, liquid crystal display projectors (LCD projectors), computer labs, visual and audio equipment to facilitate student learning (Heyneman, 2001, p. 348). According to Belanger and Jordan (2000), reliable facilities and equipment must accessible to students; otherwise it can affect their learning environment. Following these arguments, the hypothesis is stated as follows:

H.4 Facilities would significantly influence students' academic and intellectual developments.

2.5.2.5. Student Support Services

Another significant dimension of academic success is financial support or scholarship. Financial difficulty is a major stress factor affecting many of the students. Chickering and Gamson (1987) suggested that the university must have sufficient funds to offer financial aid to students in order to support their educational and research activities. Based on a report of the Norwegian Ministry of Foreign Affairs (2002), a budget should be allocated to students in strengthening their academic commitment and motivation within studying and researching activities. The funds also should be granted to faculty members and staff, building renovation, and modernized facilities. The sources of funds mainly come from government funding, tuition fees, public donations, and research fees. For instance, France, the

UK, Malaysia and Singapore used 18 percent, 22 per cent, 32 per cent and 35 per cent respectively of their government budgets for higher education (Heyneman, 2001). In Cambodia, financial services and scholarships are part of student and student service stipulated in the fifth standard for accreditation of higher education institution that can contribute to students' academic success (ACC, 2009).

The provisions of scholarships and financial supports are based on the following criteria: (1) for outstanding or talented students, (2) for deserving students who are not able to afford paying fees for their higher education, (3) for students who are studying in prioritized fields or specializations for society's needs as determined by the Royal Government of Cambodia, and (5) scholarships in response to the policies of the country's leaders. These scholarship awards are based on the proportion of gender, geographic location, and ethnic groups in Cambodia (ACC, 2009; RGC, 2003). From the literature above, the authors propose the ninth proposition.

Providing student accommodation or housing in the university campus is considered as a vital support service to facilitate students' academic and non-academic activities. In a practical sense, good universities have an obligation to provide their students a comfortable and safe residence. Accommodation service, which is a part of student and student services, is stipulated in the minimum standard for the Accreditation of Higher Education Institutions in Cambodia. It states that higher learning institutions have to provide good services to their students including accommodation, food services, first aid, security, and other necessary services (ACC, 2009; RGC, 2003).

In other words, staying in university campuses is one of the most significant factors to retain students, particularly first year students in college or university. Students who live on campus can persist and move more easily to second year when compared with students who live outside the campus. (Jenniefer, 2004; Kenty, 1997). Furthermore, students who stay in university accommodation or residential halls actively participate in university activities and experiences because they have sufficient times to interact with their friends, administrators, and faculty members (Astin, 1999). Therefore, the following hypothesis is proposed:

H.5 Student support services would significantly influence students' academic and intellectual developments.

2.5.3. Institutional Integrations

Many factors influence students' decisions to drop out their studies. Universities have main roles to increase the retention rate, especially, the most difficult subjects or unpopular areas of study (e.g. Science, Engineering, and Agriculture). In order to assist students to succeed in their studies, universities should understand the construct of integration into their universities, which has been suggested as a predictor of student persistence. According to Tinto (1975), the decision to withdraw voluntarily from university is influenced primarily by a student's academic and social integration into the university.

Academic and social integration are two components that comprise the broader construct of institutional integration, a critical component in models of the college student withdrawal process (Milem & Berger, 1997; Tinto, 1975). The Institutional Integration Scale (IIS; Pascarella & Terenzini, 1980), a Likert scale

based on Tinto's (1975) theoretical framework, was developed to assess student self-reported levels of social and academic integration. The IIS contains 30 items that comprise the sub-scales of (a) Peer-Group Interactions (7 items), (b) Interactions With Faculty (5 items), (c) Faculty Concern for Student Development and Teaching (5 items), (d) Academic and Intellectual Development (7 items), and (e) Institutional and Goal Commitment (6 items). The IIS was developed almost 30 years ago, but it still being employed in retention studies around the world (e.g. Bordes et al., 2006; Caison, 2007). Therefore, the researcher wants to adopt this school to study retention in the Cambodian context as a developing country.

Table 2.8
Previous studies of institutional integrations

Researcher	Title of Research	Items	Alpha Values
1. Pascarella, E. T., & Terenzini, P. T. (1980)	Predicting persistence and voluntary dropout decisions from a theoretical model. Journal of Higher Education 51 (1), 60-75.	30	0.71-0.84
2. Patrick T. Terenzini, Wendell G. Lorang, & Ernest T. Pascarella (1981)	Predicting freshman persistence and voluntary dropout decisions: A replication. Journal of Research in Higher Education 15 (2), 109-127	30	0.63-.0.87
3. Brian F. French & William Oakes (2004)	Reliability and Validity Evidence for Institutional Integration Scale. Educational and Psycho-logical Measurement 64 (1), 88-98	34	0.76-0.88
4. Richard N. Fox (1984)	Reliability and Discriminant Validity of Institutional Integration Scales for Disadvantaged College Students. Educational and Psychological Measurement, 44 (1), 1051-1057	30	0.72-0.80
5. Susan M. J. (2010)	Factor influencing intent to	30	0.70-0.85

	persist in higher education of participants in U.S. army reserve officers training corps (ROTC) program

2.5.3.1 Peer-Group Interactions

Peer- Group Interactions (PGI) is defined as the perception of a student who thinks that he made close relationship with classmates or those who are roughly equal status in the university. Tinto (1993) has suggested that peer group interactions established a social system that leads to student integration. In the same vein, the student's peer group is the most significant resource that influence on students' growth and development during their studies in the college (Astin, 1993). Studies indicate that students who have experienced and interacted with many peers might be influenced in their academic development. Students need to be supported by his peers when they got academic and personal problems. A study conducted by Witkow & Fuligni (2011), students who received encouragement from peers will often have a satisfactory change in their GPA. In sum, if students view that the classmates are helping and cooperating with them, they will have high motivation in improving their academic performance. Following these arguments, the hypothesis is stated as follows:

H. 6 Peer-group interaction would significantly influence academic and intellectual developments positively.

2.5.3.2 Faculty Student Interactions

One of the most significant factors that help students to achieve academic endeavour is the faculty- student interaction. Faculty student interaction (FSI) is defined as the perception of a student that faculty members have made close

relationships and paid more attention on students' academic development (Cotten & Wilson, 2006). There are three popular theories about the interaction between the faculty and students in promoting students' development of the university. These three theories are Astin's Theory of Student Involvement (1984), Tinto's Theory of Student's Persistence or Departure (1975), and Pace's College Impress Model (1984). Lecturers develop a better understanding of student learning, knowledge, competence, and willingness in the classroom if they have effectively communicated with their students (Konidari & Abernot, 2006; McGregor, 2007). If students have the perception that the faculty members are paying more attention and supporting them, then it may highly motivated to help them in improving their academic performance and development. Thus, it is hypothesized that:

H. 7 Faculty-student interaction would significantly influence academic and intellectual developments positively.

2.5.3.3. Faculty Concern for Student Development and Teaching

Faculty concern for student development and teaching (FCS) is defined as the perception of a student, that faculty has paid more attention to students' needs in classrooms and outside classrooms. The most importantly, faculty members are interested in spending time to help students to improve their academic areas. Tinto (1975, 1993) illustrates that universities have to provide academic and social support services in order to promote student retention and academic achievements so that students achieve academic success. Hence, if students have the perception that they are satisfied with faculty performance and teaching or learning environment, and then they will receive well academic and intellectual benefits. Therefore, the following hypothesis is proposed:

H. 8 Faculty concern student development and teaching would significantly influence academic and intellectual developments positively.

2.5.3.3 Institutional and Goal Commitments

The Institutional and goal commitments (IGC) are characterized as the motivation and persistence of the university and student. Institutional commitment is the degree of motivation and academic support services of university or college that are provided to students. Goal commitment is the degree of a student's commitment or motivation the student has to persist in their studies for graduation. For example, Students, who have a high goal commitment, will try their best efforts to study, spend much time on campus, participate actively in student associations or organizations, and interact regularly with their friends, administrators, and faculty members (Tinto, 1993). Based on this, the following hypothesis is proposed:

H. 9 Institutional and goal commitments would significantly influence academic and intellectual developments positively.

2.5.4 Student Involvement

According to Astin (1984), students who involve in learning and university campus life have succeeded in their studies. He indicated that certain environmental factors like on-campus residence have a significant positive impact on student involvement (Astin, 1973, 1977, 1982). He also defines involvement as "the amount of physical and psychological energy that the student devotes to the academic experience" (Astin, 1993: 297). Astin's student involvement theory has five assumptions: firstly, involvement refers to the investment of physical and psychological energy in various objects; the object or activity can be general, such as, preparing for a basketball game or studying for an examination, secondly, the

degree of involvement varies depending upon the activity, and students will exert different degrees of involvement in different objects at different times. Thirdly, student involvement can be measured both quantitatively (number of hours spent on an activity) and qualitatively (the seriousness and attention a student devotes to the activity). Fourly, student learning and personal experience relates to the quality and quantity of student involvement in that program. Finally, the effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement (Arnold & King, 1997, p. 252).

From these five assumptions, Astin (1984) higlighted that the theory of student involvement is primarily the study on behavioral mechanisms or processes that facilitate student experience (p. 301). On the other hands, Tinto (1993) identifies student involvement as a sense of "competent membership" (p. 208) resulting from, among other factors, student interaction with faculty and staff. Though the two scholars hold different viewpoints, both suggested that student educational experiences (e.g., student performance, faculty/student interaction, and extracurricular activities) are influenced by student involvement (Barnett, 2011). Some researchers also noted that for learning and development to take place, students need to be actively engaged with their university environment.

Students should be actively participated in academic activities (e.g., contacts with advisors and faculty, go to the library), social activities (e.g., extracurricular activities and interactions with other students), and/or goals and adjustment to college (e.g., progress toward academic goals, graduating from the university, etc.). However, student involvement at university increase students' learning and living

experience, participation in courses, as well as engagement in campus activities (Barnett, 2011). Moreover, student involvement can be measured by the level of energy or time students spent studying and preparing for a class in universities.

Therefore, students who are generally involved on campus make drastic gains towards their learning compared to those who are less involved (Flowers, Osterlind, Pascarella, & Pierson, 2001). Astin's theory of student involvement is different from other theories because his primary research deals with how the college environment impact students' learning and living experience as well as their academic success. His theory helps researchers to understand deeply about students' academic outcomes.

2.5.5. Academic and Intellectual Development

The academic and intellectual developments are defined as academic excellence and intellectual endeavours after they have experienced in social and academic integrations at the university. There is little literature on academic and intellectual developments. According to Endo & Harpel (1982), student educational outcomes are included adequate general knowledge, problem-solving development skills, critical-thinking development skills, intellectual progress goals, cultural activity participation, highest degree planned, and academic achievement. In addition, academic and intellectual outcomes referred to students' earning passing grades and intellectual progress (Tinto, 1993). Astin (1999) also identified academic and intellectual developments as the students' resultant characteristics such as knowledge, skills, critical thinking, attitudes, values, beliefs, and behaviour after involving in the academic environment and the student's level of academic success. Therefore, if students have the perception that they are satisfied with their academic

experiences, and then they will well performed in developing their academic and intellectual performances.

2.5. Conceptual Framework of the study

The researcher developed the framework of institutional factors and integrations that influence students' academic and intellectual development within Cambodian university context. This research adopted the theories advocated by Astin (1984, 1988, 1999) and Tito (1993, 1997) to associate the idea of institutional factors with students' academic success within the Cambodian context. As discussed in the previous section, the relationship between Astin's (1984, 1993, 1999) theory of student involvement and Tito's (1975, 1993) integration theory of student departure has implications on students' interaction and persistence within the college or university.

These theoretical models suggest that students must be actively engaged in academic experiences in order to achieve their successful academic and social integration during their studies. Moreover, this successful integration depends mainly on daily interaction between the faculty and the students. Such models are supported by the principles of good practice in undergraduate education that stipulate seven engagement indicators, which indirectly influence the education quality of the students. These engagement indicators are encouraging student-faculty contact, encouraging cooperation among students, encouraging active learning, giving prompt feedback, emphasizing time on task, communicating high expectation, and respecting talents and ways of learning (Gamson, 1987).

This study is based on the combination of Tinto's student retention model (1975, 1993) and Astin's Input-Environment-Output Model (1984, 1993, 1999) because these models clearly point out various institutional support services and environmental experiences (e.g. Faculty-student interaction, university programs, and pedagogical techniques) that have an impact on student engagement and integration as well as student retention in the United States. In addition, these models are employed to associate the concept of institutional factors and Cambodian students' academic development because they show a relationship between the institutional experiences of students which are deemed to be relevant to the current state of the Cambodian educational system. These models are echoed by Chen's model of institutional policies to promote academic success within the Cambodian context, which include coherent academic curriculum, extracurricular activities, qualified teaching staff with effective teaching method, adequate funding and reasonable tuition fees, sufficient and modern facilities, and effective interactive networking (Chen et al., 2007).

Besides institutional factors, however, there are many stakeholders that are involved in promoting quality education consisting of (1) professional bodies, (2) associations, and (3) particularly government ministries. The government, institutions, and students are responsible for the quality of learning. Students are obligated to increase their capacity building in order to develop knowledge and skills while the government and institutions have to provide available and appropriate environments to facilitate students' learning. To provide a general theoretical perspective for this study, a conceptual framework for enhancing excellent education

in Cambodian university is adopted by adapting two models proposed by Tinto (1975, 1993) and Astin (1984, 1993, 1999).

Furthermore, these academic support services are stipulated in quality assurance that contributes to students' academic performance, such as (1) curriculum syllabus, (2) Teacher Teaching, (3) Examination and Evaluation, (4) Facilities, and (5) Student Support Services. Additionally, institutional integration and student involvement in the university campus were included in this study. Institutional integration is divided into two main parts. First, academic integration includes (1) faculty concern with student development and teaching and (2) institutional and goal commitment. Second, social integration comprises of (1) peer-group interaction and (2) interaction with faculty. Student involvement also divided into two parts, such as (1) academic involvement and (2) social involvement.

Based on these theories and policy concepts above, the following conceptual model can be used as guidance for this research on institutional policies that affect Cambodian students' academic success as shown in Figure 2.2.

With the literature review, a research model is proposed.

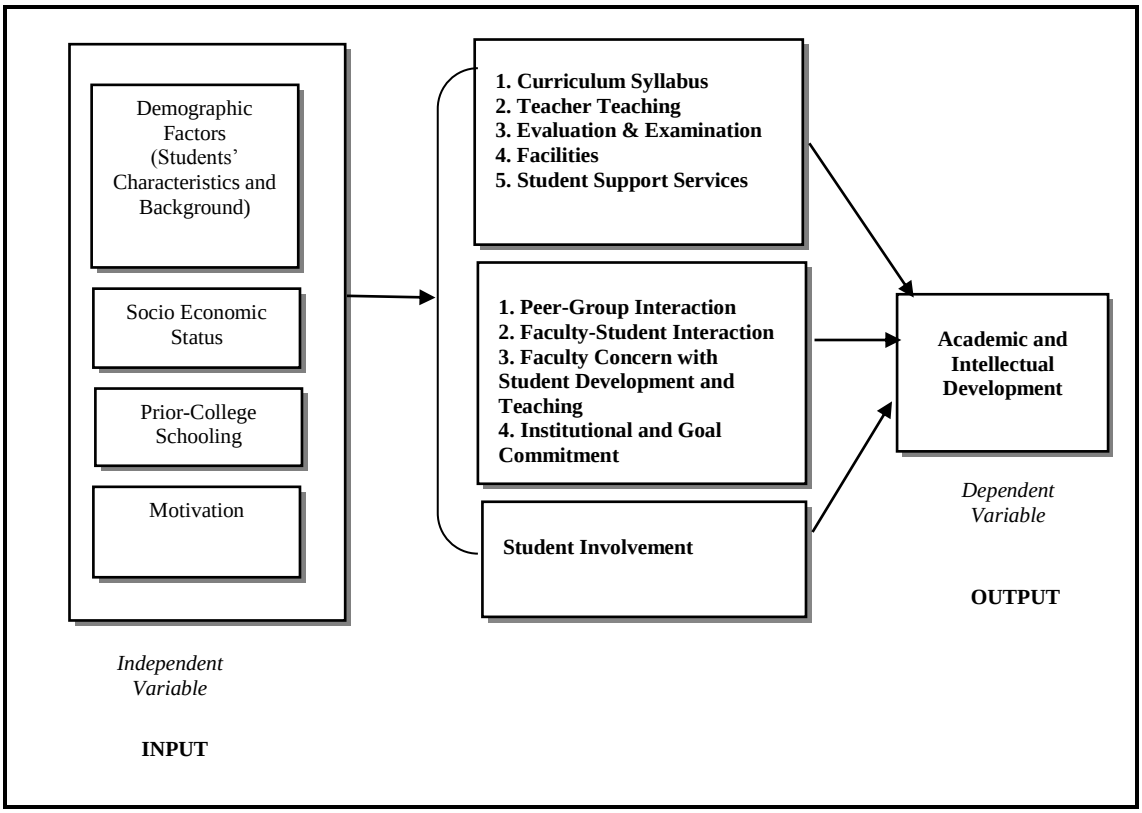

Fig.2. 2 The conceptual model of research

2.6. Research models

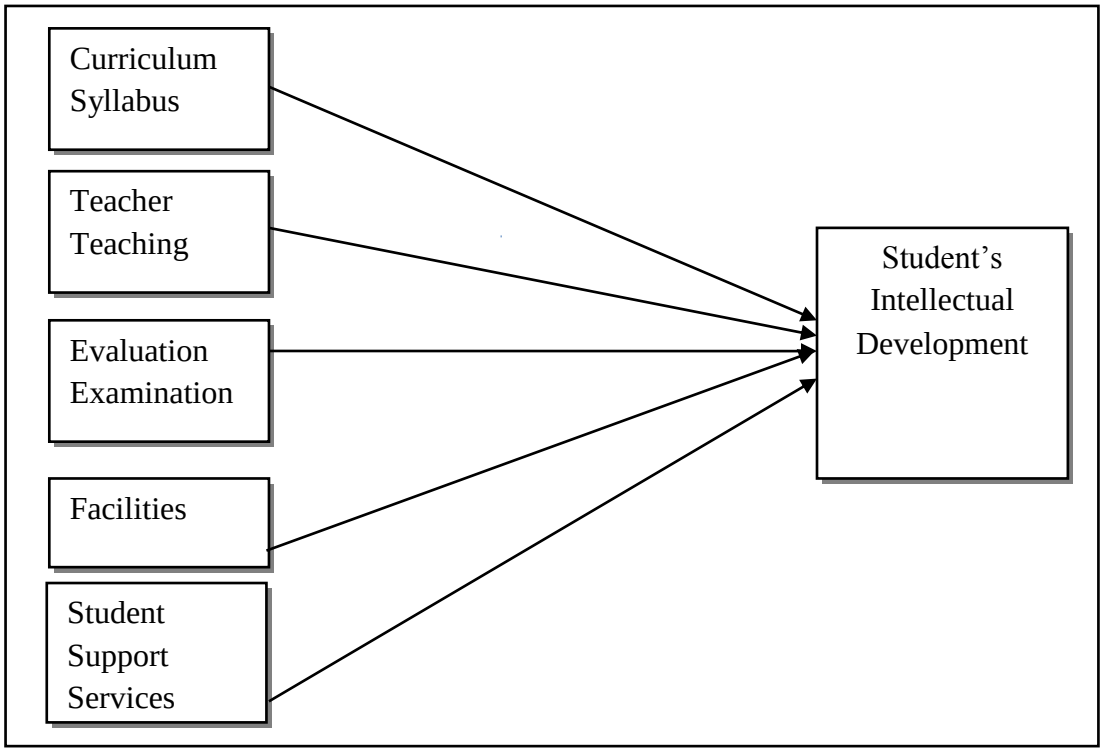

Figure.2. 3 The influence of institutional factors on Academic and Intellectual Development

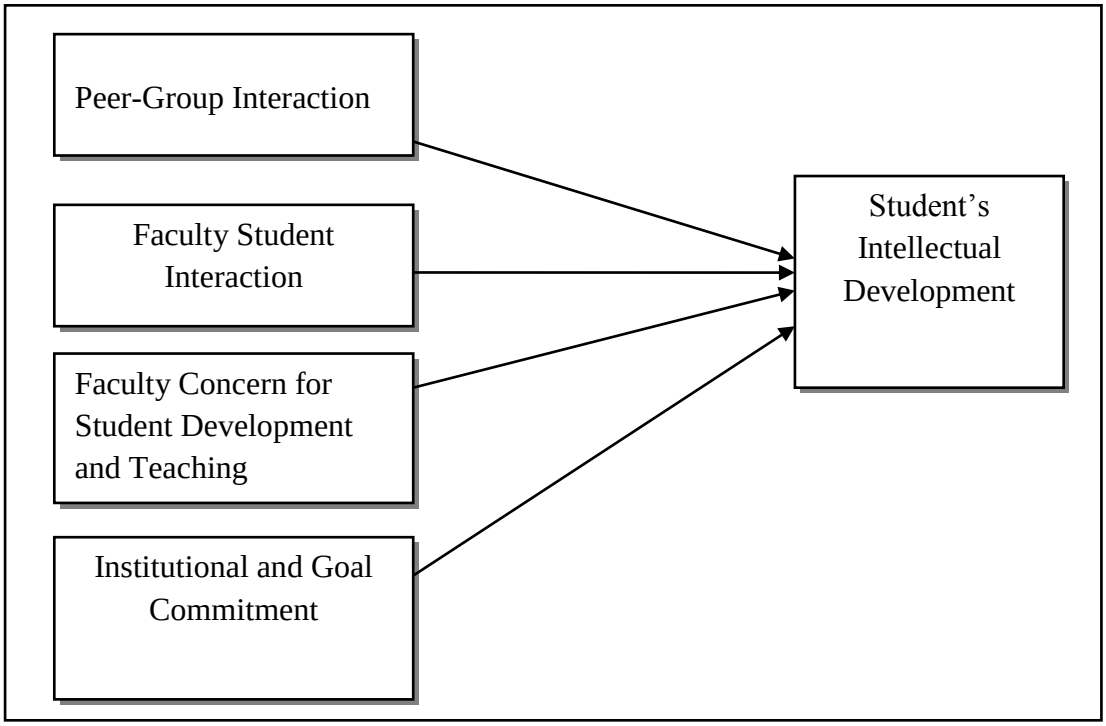

Figure.2. 4 The Influence of Institutional Integration on Intellectual Development

2.7. Summary of the chapter

This study aims to explore the effects of institutional policies on students' academic success. This chapter provides a review of the Cambodian educational system, previous studies, and theories that can be applied to students' academic success in the Cambodian context. Based on the result of a literature review, there are some variables affect students' academic success, including demographic factor, prior schooling, motivation, curriculum syllabus, teacher teaching, facilities, evaluation and examination, student support services.

In other words, this conceptual framework focuses particularly on institutional policies as academic environment and institutional integration, which

are concerned with campus environment that can increase students' retention and academic achievement in Cambodia. However, it seems possible that the academic success concept will differ from one country to another country because of various educational, economic and cultural backgrounds.

CHAPTER 3

RESEARCH METHODOLOGY

3.1. Introduction

This chapter outlines a detailed description of the methodology and procedures that was employed in this study. It presents research paradigm, research design, and location of the research, population and sample size, instrument development, pilot study, data collection, exploratory data analysis, data analysis and summary of the chapter. Theoretically, research method is explained as the types of quantitative or qualitative designs that provide specific guidelines in research procedure approach (Creswell, 2011). Moreover, the research methodology is considered as a technical stage to direct how to answer research objectives and research questions. As mentioned by Creswell (2011), researchers have to carefully take into account of selecting methodology because it can direct researcher in conducting the research on the right path in order to acquire the quality of research results.

For this study, a positivistic paradigm is adopted for two reasons: (1) quantification in data collection and analysis, and (2) testing the relationships between theory and research (Bryman & Bell, 2007). Survey research is commonly used by many researchers in social science research (Cresswell, 2011). Therefore, a survey research methodology is adopted in this study because it helps to provide standardized information to describe variables as well as the relationship between variables (Malhotra & Galletta, 1998).

3.2 Research Paradigm

According to Guba & Lincoln (1994), paradigm is defined as "the basic belief systems or world view that guides the investigator". Additionally, Taylor et al. (2007) defined paradigm as "a broad view or perspective of something". It helps researchers to decide what kind of methodological choice is suitable for their research. Research paradigm helps researcher to think about their fundamental assumption relating the world and the foundation of knowledge (Guba & Lincoln, 1994). Three principal research paradigms, which are positivism, constructivism, and critical theory, commonly guided researchers for their research approach. Researcher discusses these three main research paradigms (Guba & Lincoln, 1994).

Cresswell (2011) asserted that a positivist research paradigm usually is related with a quantitative research that presume empirical study can be used to discover the reality. In this sense, researchers perceive that they are neutral observers, and research findings are not influenced by their values, beliefs, and biases (Guba & Lincoln, 1994). Therefore, within a positivist paradigm, researchers are required to be neutral investigators in their research subjectivity in order to avoid any bias or objectivity during the data collection and analysis phases (Bryman & Bell, 2007).

In other words, a constructivist paradigm assumes that subjective meanings of people's experiences can be developed by researchers in order to understand a certain phenomenon (Cresswell, 2011). A qualitative research approach has often collaborated with a constructivist paradigm. In this sense, researchers are permitted

to interact with the subjects so that the researchers can interpret the meaning of the subjects concerning a phenomenon.

Lastly, the critical research paradigm assumes that social, political, cultural, economic, and ethnic and gender values constructed the reality. In this sense, the researcher has the main objective to obtain a single apprehensible reality in which this reality is produced by social values and other influences.

Table 3. 1
Summary of three main research paradigms

Criteria	Positivism	Constructivism	Critical Theory
Theory testing	Postulate theories that can be tested in order to confirm or reject. Test theories in a controlled setting, empirically supporting or falsifying hypotheses through a process of experimentation.	Theories are constructed from multiple realities. Theory is shaped by social and cultural context.	Theories are built from analyzing power relationships (deconstructing the world)
Role of researcher	Uncover reality Scientifically explain, describe and predict phenomena	Study social, cultural and mental phenomena reveal why people behave in certain ways	Political emancipation and increasing critical consciousness
Nature of reality	Objective, true reality exists in the unchangeable natural cause-effect laws The reality is generalized Researchers and	Reality is constructed, interpreted and experienced by people in their interactions with each other and wider social systems	The reality is shaped by social, political, cultural, economic, ethical and gender values

	reality are independent		
Nature of Knowledge	Knowledge is based on verified hypotheses	Knowledge is based on subjective beliefs, values, reasons and understanding	Knowledge is consisted of the live experience and the social relations that structure these experiences

Adopted from: Guba and Lincoln (1994) and Bryman and Bell (2007)

Base on table 3.1, researcher selected the positivist research paradigm in this study because it is suitable tool can be utilized to guide the research. The process of this paradigm reflects the nature of knowledge and reality with the positivist ways. The positivist research paradigm assumes that knowledge is based on verified hypotheses; an objective and true reality exist; the reality can be generalized; and researcher and reality are separated. Hence, this study mainly focuses on theory testing; and developing and testing hypotheses in order to predict the institutional factors and institutional integration toward students' academic and intellectual development.

3.3. Research Design

According to Leedy (2012), the research design is the strategy, the plan, and the structure of conducting a research study and this design provides the overall framework for collecting the data. During the development of the research design, considerations have been given on the following five basic aspects of research design as suggested by Sekaran (2003) such as the purpose of the study, types of investigation, researcher interference, the unit of analysis and time horizon.

A quantitative, cross-sectional design was applied for this study and questionnaires were used to collect data. Survey questionnaires were distributed to students to gather information on perception towards their academic experiences in Cambodian public universities. Third year students were asked to respond to questions in the survey questionnaire because of their mature and academic experiences. This method was benefits to the researcher because researcher can obtain the data more efficiently as time, energy and costs are minimized (Sekaran, 2006).

Furthermore, this method provides an excellent means of measuring the attitudes and orientations in a large population that can, therefore, be generalized to a larger population (Babbie, 2002). The standardization of the data collected is also another advantage of this method (Babbie, 2002).

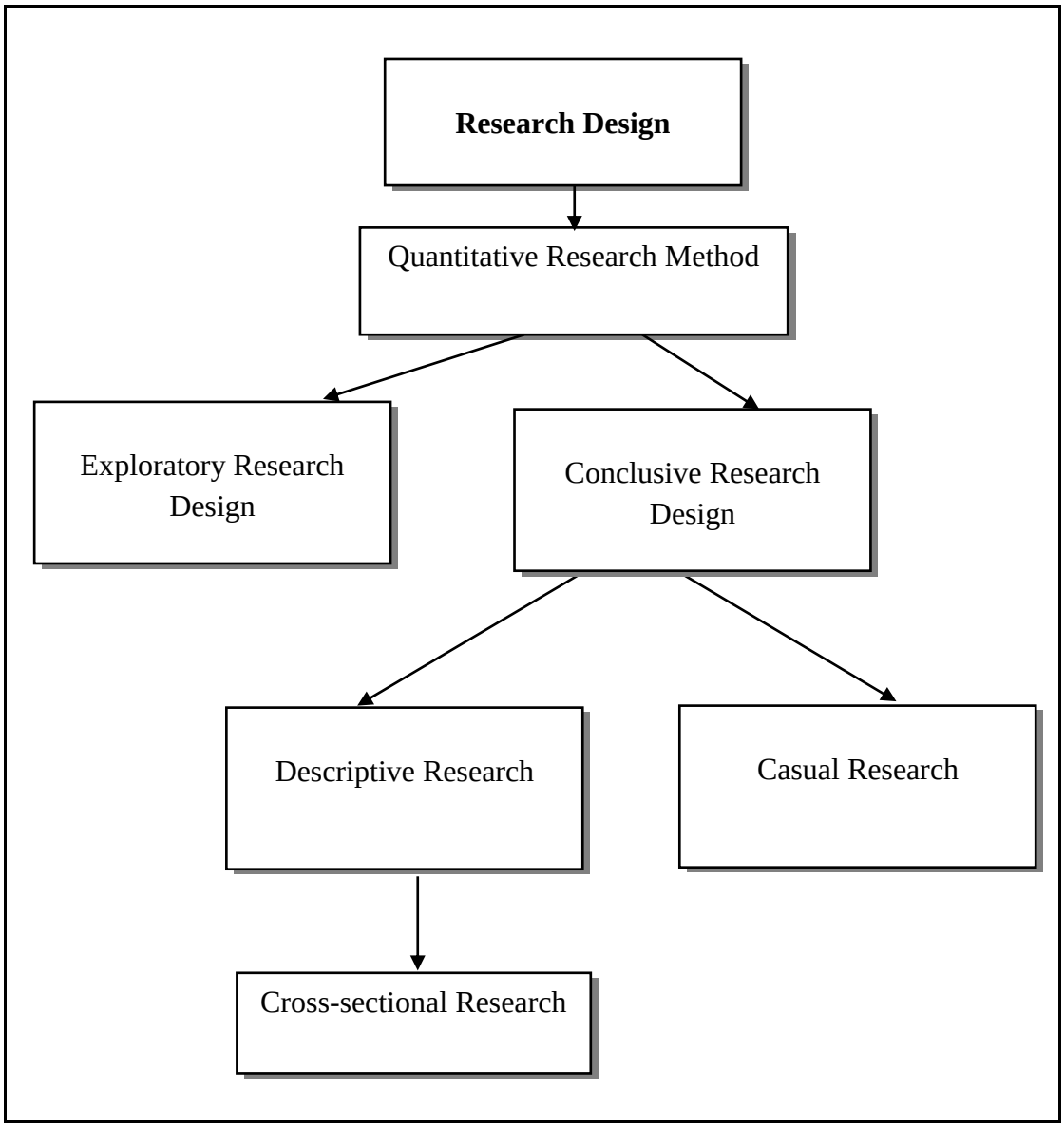

Figure 3.1 A Research Design

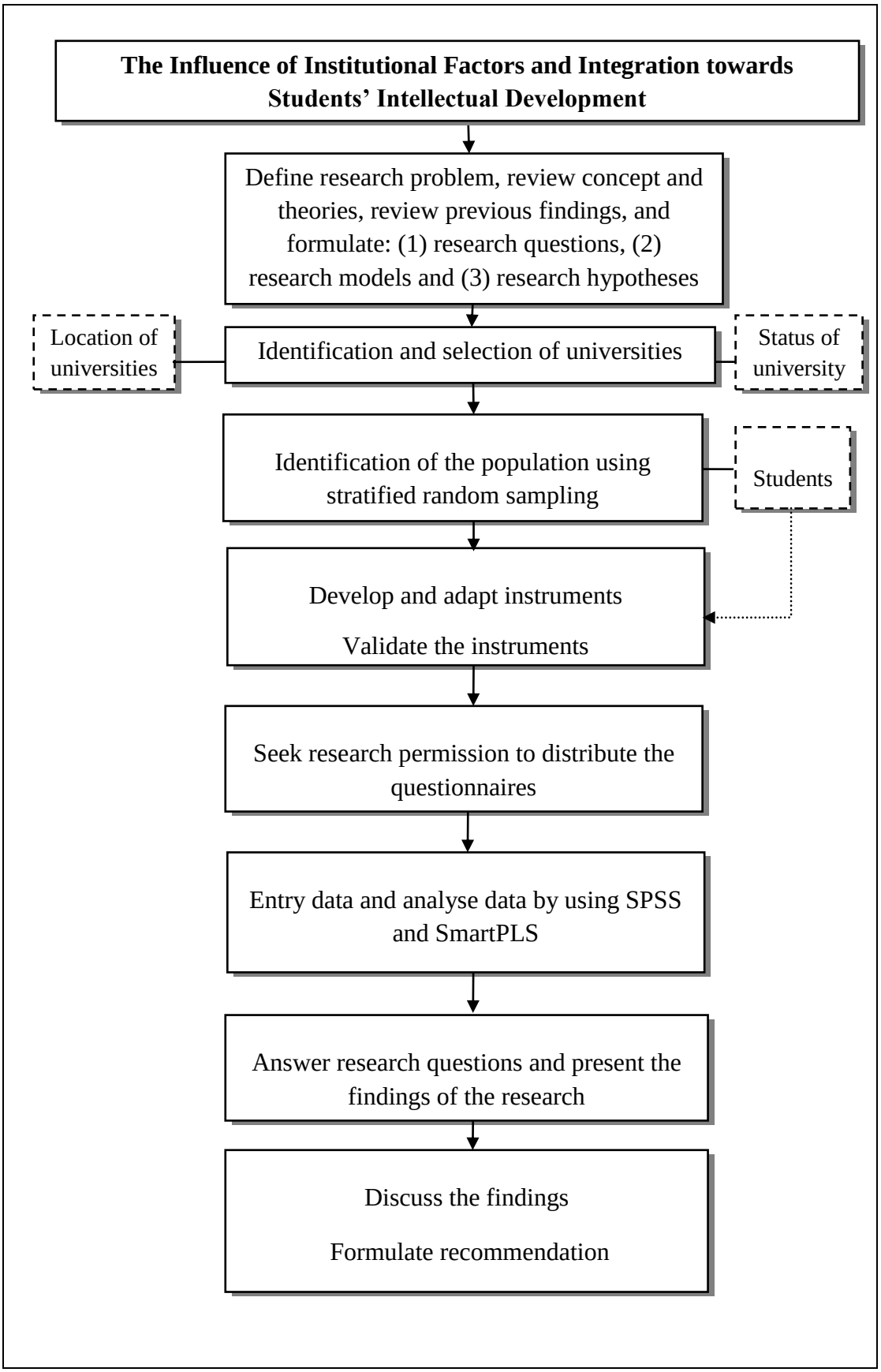

Figure 3.2 Procedure of the study

3.4. Location of the Study

In this study, the researcher employs a non-probability sampling method to select three public universities amongst six public universities, which are under the supervision of the Ministry of Education, Youth, and Sport. The three main universities are members of the Asian University Network (AUN).

University A has four faculties and one institute: the Faculty of Science, the Faculty of Social Sciences and Humanity, the Faculty of Engineering, the Faculty of Development Studies, and the Institute of Foreign Languages. Next, the second higher education institution, University B has six faculties such as the Faculty of Management, the Faculty of Economics, the Faculty of Tourism, the Faculty of Law, the Faculty of Informatics Economics, and the Faculty of Finance and Accounting.

Finally, the third public university, University C has four faculties, including the Faculty of Law, the Faculty of Public Administration, the Faculty of Economics and the Management, Faculty of Informatics Economics.

Table 3.2
List of universities, faculties, and location

University	Faculty	Location
University A	1. Faculty of Science 2. Faculty of Social Sciences and Humanity 3. Faculty of Engineering, 4. Faculty of Development Studies 5. Institute of Foreign Languages	Phnom Penh
University B	1. Faculty of Management 2. Faculty of Economics 3. Faculty of Tourism 4. Faculty of Law 5. Faculty of Information Economics 6. Faculty of Finance and Accounting	Phnom Penh

University C	1. Faculty of Law 2. Faculty of Public Administration 3. Faculty of Economics and the Management 4. Faculty of Information Economics	Phnom Penh
Total=3 Universities	Total=15 Faculties	

All information regarding these academic institutions will be held in strict confidence and will be used for the purpose of this research only. Names of institutions and individuals will be held anonymously.

Figure 3.3 Map of Cambodia
Source: http://www.cruiserswiki.org/wiki/Cambodia

3.5. Population and Study Sample

3.5.1 Population

Sampling is the act, process, or technique of selecting a suitable sample, or a representative part of a population for determining the parameters or characteristics of the whole population (Merriam-Webster, 2003). A sample is a set of respondents selected from a larger population for the purpose of the survey. The population of

this study will consist of all undergraduate students who study in the three main public universities in Cambodia.

According to Best and Kahn (1998), population is any group of individuals that has one or more characteristics in common that are of interest to the researcher. Gay, Mills and Airasian (2009) defined population as the group of interest to the researcher, the group of which the results of the study will ideally generalize. However, Sekaran (2006) defined the population as the entire group of people, events, geographical locations or things of interest that the researcher wishes to investigate.

The targeted population of the participation in this current study was undergraduate students who were studying in Cambodian public universities. Due to the cost and time constraints, only third year undergraduate students in the academic year 2013 -2014 were involved in the present study. It was assumed that these third-year students are mature enough to make valid and careful judgment to ensure useful responses to the items in questionnaire surveys.

3.5.2 Sampling method

In this study, stratified random sampling was used for collecting quantitative data because this method can help to obtain a more efficient sample compared to the sample random sampling (Zickmund, 2000). In this method, each element of the population must be included in a stratum. Moreover, the sample will reflect the population based on criterion used for stratification (Zickmund, 2000). It also considered appropriate and accurate. Additionally, stratification is an efficient

research sampling design because it provides more information with a given sample size.

The sampling process for this study is presented in Figure 3.3. For the purpose of this study, the researcher used a purposive research method to select three public universities in Phnom Penh, the capital of Cambodia. Then, the researcher stratified three public universities: University (A), University (B), and University (C). Next, the researcher stratified random faculties according to the department that has been selected. Finally, from the selection of the faculties and departments, the researcher stratified students as the population of the study. Students were randomly selected from each faculty and department. The researcher has followed the equation of Krejcie and Morgan (1970). The total population in this study is 69738 students from three public universities in Cambodia. Therefore, according to the equation of ratio and proportion, the total sample of students will be 381 for this study as shown in Table 3.2.

$$S = \frac{X^2 \times N \times P(1-P)}{d^2 \times (N-1) + X^2 \times P(1-P)}$$

S= required sample size.

X^2 = chi-square (3.841).

N= the population size

P= the population proportion (0.50)

d = the degree of accuracy expressed as a proportion (0.05)

$$S = \frac{(3.841) \times 69738 \times 0.50 \times (1 - 0.50)}{(0.05)^2 \times (69738 - 1) + 3.841 \times 0.50\ (1 - 0.50)} = 381$$

Table 3.2:

Total sample size of students in the quantitative study

University	Faculty	Total Sample Size	
		Total Population	Selected Sample
University A	5	26338 (37.76%)	144 (37.76%)
University B	6	22100 (31.69%)	120 (31.69%)
University C	4	21300 (30.54%)	117 (30.55%)
Total	15	69,738 (100%)	381 (100%)

*Source: Cambodian Ministry of Education, Youth, and Sport (2013

Table 3.3

Total sample size of students from university, faculty, and department

University	Faculty	Department	Sample
University A	1. Faculty of Science	1. Khmer Literature	29 students
144 Students	2. Faculty of Social Sciences and Humanity	2. Mathematics	30 students
	3. Faculty of Engineering,	3. IT Engineering	26 students
	4. Faculty of Development Studies	4. Community Development	28 students
	5. Institute of Foreign Languages	5. English Literature	31 students
University B	1. Faculty of Management	1. Management	20 students
120 Students	2. Faculty of Economics	2. Economics	19 students
	3. Faculty of Tourism	3. Tourism	20 students
	4. Faculty of Law	4. Business Law	19 students
	5. Faculty of Information Economics	5. Information Economics	19 students
	6. Faculty of Finance and Accounting	6. Finance and Accounting	24 students
University C	1. Faculty of Law	1. General Law	31 students
117 Students	2. Faculty of Public Administration	2. Public Administration	28 students
	3. Faculty of Economics	3. Economic Development	29 students
	and the Management	4. Information Economics and Law	28 students
	4. Faculty of Information Economics		
Total=3 Universities	Total=15 Faculties	Total=15 Department	Total=381

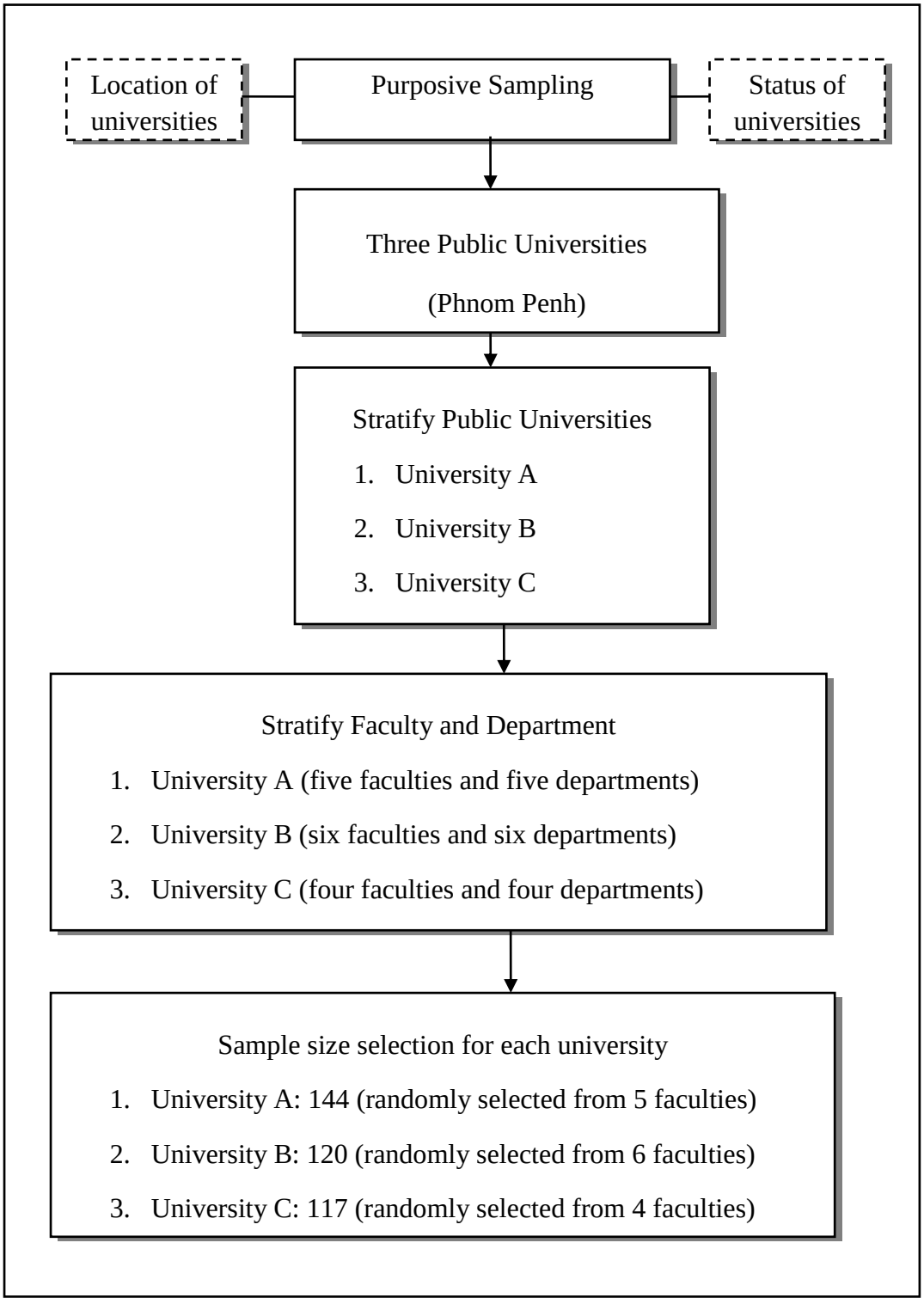

Figure 3.4 Sampling framework

3.6. Research Instrument

After conducting a literature review, consisting of books, academic journals, official documents, reports, and proceedings, the researcher prepared questionnaire with the help of supervisors. Quantitative instrument was solely utilized in this study. The quantitative method was used to survey the students. Therefore, the survey questionnaire was translated into Khmer language version, but the researcher administered in both English and Khmer language version to help respondents understand the statements. There were 133 questions (including demographic items) in this questionnaire for students (Appendix C).

3.6.1. Questionnaire Development and Adaptation

It is undeniable that choosing and organizing all items in the questionnaire is a more difficult matter. It is also advised that questionnaire items and statements should answer the research objectives and questions (Bryman, 2008). The researcher followed some useful guidelines for developing and adapting the questionnaire. These guidelines were suggested by Oksenberg et al. (1991); Leary (1995); Krosnick & Presser (2010) as follow:

1). Use precise terminology in phrasing the questions

2). Write the statement or questions in a simple way, avoiding vagueness, ambiguity, unwarranted presupposition, and unnecessary jargon

3). Provide the key ideas of the question, the question

4). Never use double-barreled statement

5). Choose an appropriate response format

6). Use pre-test the questionnaire

In the process of constructing the questionnaire, the researcher employed the Question Understanding Aid (QUAID) software developed by the University of MEMPHIS to check the reliability of the questionnaire. The QUAID is a software tool that can help a researcher and designer of questionnaires in improving the wording, unfamiliar technical term, syntax, and semantics of questions. This software can be accessed online at http://mnemosyne.csl.psyc.memphis.edu/QUAID/quaidindex. html. In this study, the questionnaire included only close-ended statement which were developed and adapted to be administered among students who studied at the three public universities in Cambodia.

According to Gass and Mackey (2007), the questionnaire question types should be based on the research objectives. The literature relevant to the institutional factors and integration were reviewed before developing and adapting the questionnaire. The literature and documents provide useful data on measurement and surveys. This survey questionnaire contained five sections: A, B, C, D, and E (Appendix C) as follows:

Section A. Demographic information

It was designed to obtain the background information of respondents in order to allow the researcher to report the findings in a context of student input. There were four components and thirteen items such as demographic background, socioeconomic status, high school background, and motivation. This section based on theories of Tinto and Astin (1975, 1984, 1993, 1999).

Table 3. 3
Demographic information questionnaire

Components	Questionnaire Items	Number of Items
Demographic Background	1-6	6
Socioeconomic Status	7-9	2
High School Background	10-12	2
Motivation	13-16	3
Total number of items = 13 (adapted questionnaire)		

Section B: Student Involvement

The questionnaire was adapted from a student involvement survey of the Ohio State University (2002), which was based on Astin's theory (1999). There were three components and fifteen items to be investigated how much time and hours that students have spent per week, month, and year. This questionnaire answers objective number three.

Table 3.4
Student Involvement Questionnaire

Components	Questionnaire Items	Number of Items
Weekly	1-5	5
Monthly	6-9	3
Yearly	10-15	5
Total number of items = 15 (adapted questionnaire)		

Table 3.5: Items, coding, and references of the student involvement questionnaire

N^0	Construct	Items	Coding	References
1	Student involvement By spending their times per week	How many hours do you spend <u>each week</u> studying outside classes?	WEE1	
			WEE2	
		How many hours do you spend <u>each week</u> doing assignments at home?	WEE3	Astin (1999)
			WEE4	OSU (2002)
		How many hours do you spend <u>each week</u> doing assignments at the university?	WEE5	
		How many hours do you spend <u>each week</u> using social		

		communication (e.g. Facebook, Skype, Chart, phone call)?		
		How many hours of the following activities did you participate in each week?		
2	Student involvement By spending their times per month	How many times have you been to the library per month?	MON1	Astin (1999) OSU (2002)
		How many times have you been discussed with your friends per month?	MON2	
			MON3	
		How many times have you been discussed with your lecturers per month?	MON4	
		How many weekends each month do you spend on campus?		
3	Student involvement By spending their times per year	How many books do you read for your studies and own pleasure?	YEA1	Astin (1999) OSU (2002)
		How many cultural events do you attend (e.g., concerts, performances)?	YEA2	
		How many conversations about educational plans, problems, or progress do you have with the following people?	YEA3	
			YEA4	
			YEA5	
			YEA6	
		How many conversations about research/assignments did you have this academic year?		
		How many times have you talked with a career advisor this academic year?		
		Approximately how many of your friends are currently attending your university?		

Section C: Institutional factors

This questionnaire was developed based on some literatures, previous studies, and policy documents (Chen, 2007; Accreditation Committee of Cambodia, 2009; Mood, 1995; Lack & Neill, 2011; Ramsden, 2005). This questionnaire was designed to answer research objective number two and four. It composed of five components, which were curriculum syllabus, teacher teaching, evaluation & examination, facilities, and student support services. There were 55 items with 5-point Likert scale, ranging from 1=strongly disagree to 5=strongly agree. Regarding the validity of this questionnaire, the researcher has asked seven experts in education and statistics to provide critical comments and suggestions. Questionnaire validity forms were sent to the experts, and the result of feedback are discussed in the validity and reliability section.

Table 3.6
Institutional factor questionnaire

Components	Questionnaire Items	Number of Items
Curriculum Syllabus	1-10	10
Teachers' Teaching	11-25	15
Evaluation and Examination	25-35	10
Facilities	36-46	10
Students Support Services	47-57	10
Total number of items		55

Table 3.7
Items, coding, and references of the institutional factor questionnaire

N^0	Construct	Items	Coding	References
1	Curriculum Syllabus	The curriculum is relevant to the social needs and the employment market.	CUR1	
		The curriculum is well - prepared for students.	CUR2	
		The curriculum provides	CUR3	Chen et al. (2007)

		students with an opportunity to understand the concepts and practice the skills gradually.		ACC (2009) Mood (1995)
		The curriculum has the system of credit system and credit transfer.	CUR4	Lack & Neill (2011)
		The curriculum has specific steps and teaching methodology.	CUR5	
		The curriculum challenges me personally and academically.	CUR6	
		The curriculum has been completed in time.	CUR7	
		The curriculum has been updated, reviewed, and assessed frequently.	CUR8 CUR9	
		The current curriculum helps students to find a prospective job.		
2	Teachers' Teaching	There are not enough teachers for some courses in my university.	TEA1	
		The teachers are highly qualified (Master, PhD holders).	TEA2	Chen et al. (2007)
		The teachers are able to disseminate their expert-knowledge well.	TEA3	Accreditation Committee of Cambodia (2009)
		The teachers are available when I have got questions.	TEA4	Mclnerney (2000)
		The teachers are interacting with students.	TEA5	Ramsden (2005)
		Students are satisfied with teachers' teaching.	TEA6	McGregor (2007)
		The teachers are professional teaching.	TEA7	
		The teacher preserves discipline	TEA8	

		and professional ethics.		
		The teachers use Informatics Communication Technology in teaching.	TEA9	
		Teachers focus more on qualitative rather than quantitative outcome.	TEA10	
		Teachers are able to provide opportunities and experiences for students to achieve success in university.	TEA11	
		Students appreciate the teachers' efforts in the classroom.	TEA12	
		The teachers are generally research based.	TEA13	
		Teachers try to maintain a positive working atmosphere in the classrooms.	TEA14	
		Teaching is based on student-centered approach.	TEA15	
3	Evaluation and Examination	There is an evaluation of students' progress each semester.	EVA1	
		The examination is fair and justice.	EVA2	
		Examination results are true reflection of students' achievement.	EVA3	Chen et al. (2007)
		Examination procedure is fully equipped to evaluate all types of learning outcomes.	EVA4	Accreditation Committee of Cambodia (2009)
		Evaluation techniques based on specific criteria.	EVA5	RGC (2003)
		Methods used in the evaluation system to inform students of their level of academic progress.	EVA6	

		Exams have made students become more attentive to their lesson.	EVA7	
		Examination for students is part of the continuous evaluation of the university.	EVA8	
		Most examination questions are relevant to the subject content.	EVA9	
		The university has a policy on the punishment of all kinds of academic frauds (cheating, plagiarism…)	EVA10	
4	Facilities			
		The campus is a great place to study.	FAC1	
		The library has enough up to date materials (e.g. Textbooks, journals, periodicals, thesis)	FAC2	Chen et al. (2007)
		Most of textbooks reach the students at the proper time.	FAC3	Accreditation Committee of Cambodia (2009)
		Classroom buildings are large and suitable for learning.	FAC4	
		Resource learning facilities are adequate for all classrooms.	FAC5	Mavonda et al. (2000)
		There are enough parking spaces.	FAC6	Heyneman (2001)
		There are restrooms for students and teachers.	FAC7	RGC (2003)
		There are learning resource centers, laboratories, and audio labs.	FAC8	
		There are adequate learning facilities such as LCD projectors, computers, printers, and copying machines available in the university.	FAC9	
		There are adequate physical		

		facilities for sport, culture, and social networking (sport facilities, hall, café, canteen…)	FAC10	
5	Student Support Services	There are a variety of association and clubs (sports, cultural, and social groups).	SSS1	
		Student Association is available to provide useful advice and help.	SSS2	
		The university has a health care centre.	SSS3	
		The university has accommodation or hostel.	SSS4	Accreditation Committee of Cambodia (2009)
		The student canteen offered good quality food and drinks at a reasonable price.	SSS5	Chen et al. (2007)
		The University's Career Placement Center helps students with job-hunting.	SSS6	Jenniefer (2004)
		Student advisors are available to provide useful advices.	SSS7	Royal Government of Cambodia (2003)
		The university's infrastructure is able to meet environmental health and safety standards.	SSS8	
		The university provides scholarship and financial support.	SSS9	
		The university provides funds and facilities for your research project.	SSS10	

Section D: Institutional Integration

This questionnaire was adapted from Breidenbach and French (2004). The researcher has received permission from the authors to use this scale (refer to Appendix 8: Permission Letter of Study Instrument).

Table 3.8:
Institutional integration questionnaire

Components	Questionnaire Items	Number of Items
Peer -Group Interaction	1-10	10
Faculty-Student Interaction	11-16	5
Faculty Concern for Student Development and Teaching	17-21	5
Institutional and Goal Commitments	22-27	6
Total number of items = 26 (adapted questionnaire)		

Table 3.9
Items, coding, and references of the institutional integration questionnaire

N^0	Construct	Items	Coding	References
1	Peer-Group Interaction	I have developed close personal relationships with other students in my university.	PGI1	French & Oakes (2004) Breidenbach & French (2004)
		I am satisfied with my classmate relationships.	PGI2	
		My personal relationships with other students have positively influenced my personal growth, attitudes, and values in my university.	PGI3	
		My personal relationships with other students have positively influenced my intellectual growth and thinking in my university.	PGI4	
		It has been easy for me to meet and to make friends with other students in my university.	PGI5	
		Many students I know would be willing to listen to me and help me if I had a personal problem.	PGI6	
		Most students at this University have values and attitudes similar to mine in my university.	PGI7	

		I have been happy during my study at this university.	PGI8	
		The student friendships I have developed have been personally satisfying in my university.	PGI9	
		I am satisfied with the opportunities to participate in organized extra-curricular activities in my university.	PGI10	
2	Faculty-Student Interaction	My non-classroom interactions with faculty have positively influenced my personal growth, values, and attitudes in my university.	FSI1	
		My non-classroom interactions with faculty members have positively influenced my intellectual growth and thinking in my university.	FSI2	French & Oakes (2004)
		My non-classroom interactions with faculty members have positively influenced my career goals and aspirations in my university.	FSI3	Breidenbach & French (2004)
		I have developed a close, personal relationship with at least one faculty member in my university.	FSI4	
		I am satisfied with the opportunities to meet and interact informally with faculty members in my university.	FSI5	
3	Faculty Concern for Student Development and Teaching	Many faculty members I have had contact with are genuinely interested in the students.	FCS1	French & Oakes (2004)
		Many faculty members I have had contact with are genuinely outstanding or superior teachers.	FCS2	Breidenbach and French (2004)

		Many faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance with students.	FCS3	
		Many faculty members I have had contact with are interested in helping students grow in more than just academic areas.	FCS4	
		Most faculty members I have had contact with are genuinely interested in teaching.	FCS5	
4	Institutional and Goal Commitments	An institution committed to the welfare of students.	IGC1	French & Oakes (2004)
		I am confident that I made the right decision in choosing to attend this university.	IGC2	Breidenbach and French (2004)
		I will probably register at this university next semester.	IGC3	
		It is important to me to graduate from this university.	IGC4	
		I have an idea about what I want to major in.	IGC5	
		Getting good grades is important to me.	IGC6	

Section E: One component of the academic and intellectual development based on theories of Tinto and Astin (1975, 1984, 1993, 1999) and adapted from Breidenbach and French (2004).

Table 3. 10
Academic and intellectual development questionnaire

Components	Questionnaire Items	Number of Items
Academic and Intellectual Development	1-8	8
Total number of items = 8 (adapted questionnaire)		

Table 3.11
Items, coding, reference of academic and intellectual development

N^0	Construct	Items	Coding	References
	Academic and Intellectual Development	I am satisfied with the extent of my intellectual development.	AID1	
		This year, my academic experience has had a positive influence on my intellectual growth and thinking.	AID2	French & Oakes (2004)
		I am satisfied with my academic experience at this University.	AID3	Breidenbach and French (2004)
		Most of my courses have been intellectually stimulating.	AID4	
		My interest in ideas and intellectual matters has increased since starting classes.	AID5	
		I am more likely to attend a cultural event (e.g., a concert, lecture, or art show) now compared to a few years ago.	AID6	
		I have performed academically as well as I had anticipated.	AID7	
		In addition to required reading assignments, I have read many of the recommended books in my courses.	AID8	

3.7. Pilot Study

The researcher has conducted pilot testing in order to appraise further and purify the instrument as suggested by Lewis et al (2005). Moreover, pilot study aims to drop and verify any problems related to the instrument from the perception of a similar target samples. Therefore, a pilot study is considered as a “dress-rehearsal” of

the instrument with a small sample and it needs the number of respondents that are similar to the actual sample (Lewis et al., 2005; Cohen et al., 2011).

The study administered questionnaires among 200 students. They were requested to give suggestions freely for the improvement of the questionnaire. They were also asked to correct the questions and to simplify the language and to make the question simple and understandable. The questionnaires were revised in accordance with their suggestions. Then, the final version of the questionnaire has been developed.

Table 3.12

Respondent's demographic information for pilot study

Demographic	Frequency (N=200)	Percentage (%)
Gender		
Male	120	60%
Female	80	40%
Age		
Below 20	30	15%
20-21	90	45%
22-23	60	30%
Above 23	20	10%
University		
University A	80	40%
University B	60	30%
University C	60	30%
Major		
Khmer Literature	20	10%
Mathematics	20	10%
Psychology	20	10%
Engineering	20	10%
Law	20	10%
Economics	20	10%
Public Administration	20	10%
Management	20	10%
Accounting	20	10%
Finance and Banking	20	10%

3.7.1. Validity and Reliability Consideration

Validity

The researcher has asked individuals who are experts in education and statistics to verify the instrument. The validity of the instrument is done in two stages. In the first stage, the researcher has developed the instrument based on theories, previous literatures, and Cambodian policies and emailed the questionnaire to the review panel, comprising of seven individuals (refer to Appendix E for experts' profile).

As expected, the review expert responses have helped the researcher in providing helpful information on the instrument. As the panel comprises of experts in educational policies and higher education, they were able to give feedback and suggestions to improve the content of the research instrument so that it can actually measure what is supposed to be measured (refer to Appendix G for expert feedback).

The summary of penal expert feedback on five components of institutional factors which relates to students' experiences is shown in Appendix G. A summary of the panel expert feedback indicated that 55 items relate to institutional factors in Cambodian public universities. The mean scores for all 55 items were high ranging from 2.00 to 4.00.

In conclusion, based on the comments and suggestions from the panel expert, the researcher has decided to maintain all the 55 items in the institutional factor instrument. This is because the mean score for items related to curriculum syllabus,

student learning, evaluation/examination, and student support services were high as they range from 2.75 to 4.00, which indicate that 55 items in the questionnaire.

Additionally, the validity of the survey's translation was examined. First, the instruments were translated and to verify them, they were translated using back-translated technique as recommended by Deutscher (1973:165). The instrument was translated back to back from English to Khmer language. The purpose of translating the instrument is to help respondents have a clear understanding of the statements when they respond to the questionnaire. The researcher has emailed the instrument to two language experts. This is done for validity, as the translated version of the instrument needs to establish linguistic equivalence with the English version of the instrument. After receiving the translated version of the instrument, the researcher compared it with the original instrument and the differences were resolved through discussion with experts.

Similarly, in the second stage, the validation of the instrument was done after the pilot testing of the instrument to further validate the instrument. The validation of the instrument on stage two is necessary to assess whether or not all the items are related to the students' experiences in Cambodian public universities. The panel selected to validate the form were based on seven panels of experts from a Malaysian university and Cambodian public universities (refer to Appendix H for experts' profile).

The validation form (refer to Appendix I) was designed by the researcher based on a scale from 1= Not related at all to 4= Most related. In order to get the

experts' feedback, the researcher emailed to 7 experts to respond to the validation form. Due to the late response from the panel of experts, the researcher decided to set up an appointment and to meet the panel experts personally.

Reliability

To examine the reliability of the questionnaire, the researcher has employed SPSS to check the internal consistency reliability of constructs. The research also used SmartPLS to check the reliability of constructs (Cronbach's Alpha).

Internal Consistency Reliability of Construct

According to Sauders et al. (2003), reliability refers to the degree to which data collection method is consistent with the findings. The purpose of the reliability analysis is to determine whether the data are trustworthy or not. The aim of reliability testing is to measure consistency in the data that is defined as "an assessment of the degree of consistency between multiple measurements of a variable" (Hair, 1998). According to Hair (1998), a commonly accepted type of measuring reliability is internal consistency, which applies to the consistency between the variables in the scale. The concept of internal consistency is that the individual item or an indicator of the scale should measure the same construct and thus be highly correlated.

In this study, Cronbach's Alpha is used to check the reliability of the constructs, since it is a method that is frequently used in assessing the consistency of the entire scale and generally agreed that it should exceed 0.70 for reliability (Hair, 1998). However, a score exceeding 0.50 is adequate for research. On the other hand, in social science research, the Cronbach's coefficient alpha exceeding 0.60 is

considered acceptable. Additionally, Sekaran (2006) stated that the higher the coefficients the more reliable is the research instrument. Table 3.3 shows Sekaran's rule of thumb for internal consistency reliability.

Table 3. 13
Sekaran's Rule of Thumb Related to Internal Consistency Reliability

Internal Consistency Reliability (Cronbach Alpha)	Indicator
1. The closer the reliability coefficient to 1.00	Very good
2. Reliability coefficient above 0.80 range	Good
3. Reliability coefficient in the 0.70 range	Acceptable
4. Reliability coefficient less than 0.60	Very poor

Table 3.14
Internal Consistency Reliability of the Institutional Factors

Components	Items	Cronbach Alpha
Curriculum syllabus	1-10	.808
Teacher teaching	11-25	.854
Evaluation/Examination	26-35	.843
Facilities	36-46	.807
Students support services	47-57	.865

Table 3.15
Internal Consistency Reliability of the Institutional Integrations

Components	Items	Cronbach Alpha
Peer -Group Interaction	1-10	.846
Faculty-Student Interaction	11-16	.702
Faculty Concern for Student Development and Teaching	17-21	.743
Institutional and Goal Commitments	22-28	.806

Table 3.16
Internal Consistency Reliability of the Academic and Intellectual Development

Components	Items	Cronbach Alpha
Academic and Intellectual Development	1-8	.812

3.7.2 Pilot Study of the Questionnaire

3.7.2.1. Factor Analysis

Exploratory Factor Analysis of the Institutional Factors (IF) Questionnaire

The exploratory factor analysis method was conducted on the IF items in order to extract the underlying factors characterizing institutional factors. Factor analysis is a statistical procedure, which is able to bring together a cluster of items bound together by one common underlying factor (Macaro, 2003). Factor analysis in this study involved the four steps suggested by George and Mallery (2001).

1. Computation of the correlation matrix

2. Factor extraction-to determine the number of factors necessary to represent the data,

3. Factor rotation through the Varimax rotation method with Kaiser Normalization to make the factor structure more interpretable,

4) Determining how many factors to interpret and then assigning labels to these factors.

The sample size of the factor analysis procedure was based on Hair, Anderson, Tatham, and Black (1998) suggest that the minimum is to have at least five times as many observations as there are variables to be analysed, and the maximum would have a ten -to -one -ratio. As there were 54 items in the institutional factor questionnaire, the data from 200 respondents (1 item=3 observations) were computed and analyzed with Statistical Package for Social Science (SPSS) version 20.

Examination of the correlation matrix indicated that a considerable number or correlation exceeds 0.3 in the output. Besides, the inspection of the anti-image collation matrix revealed that all the measures of sample adequacy were well above the acceptable level of 0.5. According to Coakes and Steeds (2003), a matrix that yields a considerable number of correlations exceeding 0.3 and anti-image correlation of above 0.5 is suitable for factoring.

In addition, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Barlett Test of Sphericity were taken into consideration before conducting the factor analysis. The KOM and Bartelett test of Sphericity results are shown in Table 3.17

Table 3.17
Kaiser-Meyer-Olkin (KMO) and Banrtlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.828
Bartlett's Test of Sphericity	Approx. Chi-Square	4090.218
	df	1431
	Sig.	.000

As indicated Ed in Table 3.17, the Bartlett's Test of Sphericity is significant and that the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is 0.82. According to Spincer (2005), a value of KMO more than 0.5 is regarded as indicating a structure that is acceptable for factor analysis. Furthermore, Hair, et al. (1998) regard 0.8 as meritorious value. The above results provided further evidence of the factorability of the items. Subsequently, factors were extracted based on the following criteria:

1). Eigenvalue > 1 (Hair, et al., 1998; Hatch & Lazaraton, 1991; Spicer, 2005),

2). The loading score for each factor> 0.40 (Bernard, 2003)

Table 3.18
Total Variance Explained

	Rotation Sums of Squared Loadings		
Factor	Eigenvalue	% of Variance	Cumulative %
1	14.437	13.432	13.432
2	3.412	10.800	24.233
3	2.443	7.593	31.826
4	2.080	7.572	39.397
5	1.800	5.365	44.762

Extraction Method: Principal Axis Factoring.

As shown in table 3.18, the Varimax rotation methods generated five factors with eigenvalue greater than one and outline that these five factors together accounted for 44.76% of the variance. The loadings, their consistent items, and total of variance for each factor are shown in Table 3.18. According to Comery and Lee (1992), a loading above 0.71 (50%) explains variance excellently, 0.63 (40%) very good, 0.55 (30%) good, 0.45 (20%) moderate and 0.32 (10%) week. In addition, Hair et al. (1998) suggest that a necessary factor loading values to be considered significant for a sample 200 should exceed 0.40.

Table 3.19
Factor Loadings of the Institutional Factor Items

Factor	Variables	Factor Loadings	Eigenvalue	Percentages of Variance
1. Curriculum syllabus Cronbach's Alpha=0. 808			4.437	13.432%
	1. The curriculum is relevant to social needs and the employment market.	.666		
	2. The curriculum is well - designed for students.	.601		
	3. The curriculum provides students with an opportunity to understand concepts and develop skills.	.504		
	5. The curriculum has specific stages and teaching methodology.	.442		
	6. The curriculum challenges me personally and academically.	.457		
	7. The curriculum was completed in time.	.450		
	8. The curriculum has been updated, reviewed, and assessed frequently.	.476		
	9. The current curriculum helps students to find jobs.	.666		
2. Teachers' Teaching Cronbach's Alpha= 0.855			**3.412**	**10.800%**
	11.The teachers are highly qualified (Master, PhD holders).	.480		
	12. The teachers are able to disseminate their expert-knowledge well.	.547		
	13. The teachers are available whenever I have questions	.590		
	14. The teachers interact with students.	.589		

	15. Students are satisfied with the teaching.	.593		
	16. The teachers are professional in their teaching.	.454		
	17. The teachers preserve discipline and professional ethics.	.717		
	18. The teachers use Information and Communications Technology in teaching.	.621		
	19. The teachers focus more on qualitative rather than quantitative outcomes.	.723		
	20. The teachers are able to provide opportunities and experiences for students to achieve success at university.	.579		
	21. Students appreciate the teachers' efforts in the classroom.	.510		
	22. Teaching is generally research-based.	.608		
	23. The teachers try to maintain a positive working environment in the classrooms.	.455		
	24. Teaching is based on a student-centered approach.	.497		
3. Evaluation and Examination Cronbach's Alpha=0. 843			**2.443**	**7.593%**
	26. The examinations are fair.	.653		
	27. Examination results are a true reflection of the students' achievements.	.761		
	28. Examination procedures are fully equipped to evaluate all types of learning outcomes.	.727		
	29. Evaluation techniques are based on specific criteria.	.539		
	30. Methods used in the evaluation system inform students of their academic progress.	.440		
	31. Examinations have made students more attention to their lessons.	.489		
	32. Examinations for students are part of the continuous	.492		

	evaluation of the university.			
	33. Most examination questions are relevant to the subject content.	.483		
	34. The university has a policy where all kinds of academic fraud (cheating, plagiarism…) are punished.	.502		
5. Facilities Cronbach's Alpha=0.807			**2.080**	**7.572%**
	35. The campus is a great place to study.	.420		
	36. The library has enough up-to-date materials (e.g. textbooks, journals, periodicals, thesis).	.639		
	38. Classroom buildings are large and suitable for learning.	.599		
	40. There are enough parking spaces.	.691		
	41. There are restrooms for students and teachers.	.457		
	42. There are learning resource centers, laboratories, and audio labs.	.470		
	43. There are adequate learning facilities such as LCD projectors, computers, printers, and copying machines in the university.	.412		
	44. There are adequate learning facilities such as LCD projectors, computers, printers, and copying machines in the university.	.576		
6. Student Support Service Cronbach's Alpha= 0.865			**1.800**	**5.365%**
	45. There are a variety of associations and clubs (sports, cultural, and social groups).	.547		
	46. The Student Association is available to provide useful advice and help.	.497		

	47. The university has a health care center.	.776
	48. The university has accommodation or a hostel.	.758
	49. The student canteen offers good quality food and drinks at a reasonable price.	.652
	50. The University's Career Placement Center helps students with job-hunting.	.628
	51. Student advisors are available to provide useful advice.	.671
	52. The university's infrastructure meets environmental health and safety standards.	.483
	53. The university provides scholarships and financial support.	.487
	54. The university provides funds and facilities for your research projects.	.527

Extraction Method: Principal Axis Factoring. Rotation method: varimax with Kaiser Normalization. Rotation converged in 5 iterations. Reported only the loading scores for each factor above 0.40
KMO= 0.82

As shown in Table 3.19, all factors' Cronbach's alpha values were above 0.807, which is indicated that the internal consistency reliability of each identified factor met the established reliability criterion at a satisfactory value (Litwin, 1995; McMillan & Schumacher, 1989; Sekaran, 2003). There are eight items loading on factor 1. Three items (item 1, 2, 9) generally received high loadings of Factor 1 which ranged from 0.60 to 0.66. Another five items received a leading 0.44 to 0.50. According to Hair et al. (2007), variables with higher loadings are considered more important and have greater influence on the name or label selected to present a factor as factor 1 was labelled as *Curriculum Syllabus*.

There are thirteen items loading on factor 2. Three items (item 26, 27, 28) received a high loading of Factor 2 which ranged from 0.65 to 0.72. Another ten items received moderate loading 0.45 to 0.59. This factor labelled as *Teacher Teaching*. Factor 3 shows loadings from three items (item 26, 27, 28) receiving high loadings 0.65, 0.72, and 0.76 respectively. Another six items (item 29, 30, 31, 32, 33, 34) received moderate loadings 0.44 to 0.53. This factor labelled as *evaluation and examination*.

There are eight items loading on Factor 4. It also captured two items with item 36 and item 40 receiving high loadings 0. 63, and 0.69 respectively. Another five items (item 35, 38, 41, 42, 43, 44) received moderate loading 0.41 to 0.59. Factor 4 labelled as *facilities*. Factor 5 also captured ten items loading with item 47, 48, 49, 50, and 51 receiving high loadings 0.77, 0.75, 0.65, 0.62, and 0.67 respectively. This factor labelled as student support services. Another five items (item 45, 46, 52, 53, 54) received moderate loading 0.48 to 0.54. After the rejection

and elimination of low items loading (item 4, 5, 10, 25, 37, 39), the final version of the Institutional Factor Questionnaire only has 48 items.

Exploratory Factor Analysis of the Institutional Integration (IIQ) Questionnaire

Table 3.20
Kaiser-Meyer-Olkin (KMO) and Banrtlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.853
Bartlett's Test of Sphericity	Approx. Chi-Square	2029.384
	df	561
	Sig.	.000

As indicated in Table 3.20, the Bartlett's Test of Sphericity is significant and that the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is 0.85. According to Spincer (2005), a value of KMO more than 0.5 is regarded as indicating a structure that is acceptable for factor analysis. Furthermore, Hair, et al. (1998) regard 0.8 as meritorious value. The above results provided further evidence of the factorability of the items. Subsequently, factors were extracted based on the following criteria:

1). Eigenvalue > 1 (Hair, et al., 1998; Hatch & Lazaraton, 1991; Spicer, 2005),

2). The loading score for each factor> 0.40 (Bernard, 2003)

Table 3.21
Total Variance Explained

	Rotation Sums of Squared Loadings		
Factor	Eigenvalue	% of Variance	Cumulative %
1	9.762	12.159	12.159
2	2.254	11.787	23.946
3	1.868	10.940	34.886
4	1.575	8.553	43.438
5	1.304	5.866	49.305

Extraction Method: Principal Axis Factoring

As shown in table 3.21, the Varimax rotation methods generated five factors with eigenvalue greater than one and outline that these five factors together accounted for 49.30% of the variance. The loadings, their consistent items, and total of variance for each factor are shown in Table 3.21. According to Comery and Lee (1992), a loading above 0.71 (50%) explains variance excellently, 0.63 (40%) very good, 0.55 (30%) good, 0.45 (20%) moderate and 0.32 (10%) week. In addition, Hair et al. (1998) suggest that a necessary factor loading values to be considered significant for a sample 151 should exceed 0.40.

Table 3.22
Factor Loadings of the Institutional Integration

Factor	Variable	Factor Loadings	Eigenvalue	Percentage of Variance
Factor 1= Peer- Group Interaction Cronbach's Alpha= 0.846			9.762	12.159%
	1. I have developed close personal relationships with other students.	.696		
	2. I am satisfied with my dating relationship.	.669		
	3. My personal relationships with other students have positively influenced my personal growth, attitudes, and values.	.586		
	4. My personal relationships with other students have positively influenced my intellectual growth and thinking.	.428		
	5. It has been easy for me to meet and to make friends with other students.	.461		
	6. Many students I know would be willing to listen to me and help me if I had a personal problem.	.503		
	7. Most students at this University have values and attitudes similar to mine.	.616		
	8. I have been happy during my study at this university.	.706		
	9. The student friendships I have developed have been personally satisfying.	.467		
	10. I am satisfied with the opportunities to participate in organized extra-curricular activities at this University.	.439		
Faculty-Student			**2.254**	**11.787%**

Interaction Cronbach's Alpha=0.702				
	11. My non-classroom interactions with faculty have positively influenced my personal growth, values, and attitudes.	.616		
	12. My non-classroom interactions with faculty members have positively influenced my intellectual growth and thinking.	.531		
	13. My non-classroom interactions with faculty members have positively influenced my career goals and aspirations.	.588		
	14. I have developed a close, personal relationship with at least one faculty member.	.475		
	15. I am satisfied with the opportunities to meet and interact informally with faculty members.	.648		
Faculty Concern for Student Development and Teaching Cronbach's Alpha=0.743			**1.868**	**10.940%**
	16. Many faculty members I have had contact with are genuinely interested in the students.	.417		
	17. Many faculty members I have had contact with are genuinely outstanding or superior teachers.	.541		
	18. Many faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance with students.	.691		
	19. Many faculty members I have had contact with are interested in helping students grow in more than just academic areas.	.607		
	20. Most faculty members I have had contact with are genuinely interested in teaching.	.580		
Institutional and Goal			**1.575**	**8.553%**

Commitments Cronbach's Alpha=0.806				
	22. I am confident that I made the right decision in choosing to attend this university.	.465		
	23. I will probably register at this university next semester.	.549		
	24. It is important to me to graduate from this university.	.556		
	25. I have an idea about what I want to major in.	.651		
	26. Getting good grades is important to me.	.583		
Academic and Intellectual Development Cronbach's Alpha=0.812			**1.304**	**5.866%**
	27. I am satisfied with the extent of my intellectual development.	.491		
	28. This year, my academic experience has had a positive influence on my intellectual growth and thinking.	.713		
	29. I am satisfied with my academic experience at this University.	.485		
	30. Most of my courses have been intellectually stimulating.	.641		
	31. My interest in ideas and intellectual matters has increased since starting classes.	.439		
	32. I am more likely to attend a cultural event (e.g., a concert, lecture, or art show) now compared to a few years ago.	.483		
	33. I have performed academically as well as I had anticipated.	.615		
	34. In addition to required reading assignments, I have read many of the recommended books in my courses.	.474		

Extraction Method: Principal Axis Factoring. Rotation method: varimax with Kaiser Normalization. Rotation converged in 5 iterations. Reported only the loading scores for each factor above 0.40
KMO= 0.8

As shown in Table 3.22, all factors' Cronbach's alpha values were above 0.70, which is indicated that the intenal consistency reliability of each indenfified factor met the establised reliability criterion at a satisfactory value (Litwin, 1995; McMillan & Schumacher, 1989; Sekaran, 2003). There are ten items loading on factor 1. Four items (item 1, 2, 6, 7) generally received high loadings of Factor 1 which ranged from 0.61 to 0.70. Another six items received loadings 0.42 to 0.58. According to Hair et al. (2007), variables with higher loadings are considered more important and have greater influence on the name or label selected to present a factor as factor 1 was labelled as *Peer Group Interaction*.

There are five items loading on factor 2. Two items (item 11, 15) received a high loading of Factor 2 which ranged from 0.61 to 0.64. Another three items received moderate loading 0.47 to 0.58. This factor labelled as *Faculty Interaction*.

Factor 3 shows loadings from two items (item 18, 19) receiving high loadings 0.60 and 0.69 respectively. Another three items (item 16, 17, 20) received moderate loadings 0.41 to 0.58. This factor labelled as *faculty concern for student development and teaching*.

There are five items loading on Factor 4. It also captured one item with item 25 receiving high loadings 0. 65. Another four items (item 22, 23, 24, 26) received moderate loading 0.46 to 0.58. Factor 4 labelled as *Institutional and Goal Commitment*. Factor 5 also captured eight items loading with item 28, 30 and 33 receiving high loadings 0.71, 0.64, and 0.61 respectively. Another five items (item 27, 29, 31, 32, 34) received moderate loading 0.43 to 0.49. This factor labeled as Academic and Intellectual Development. After the rejection and elimination of one

item loading (item 20), the final version of academic the Institutional Integration Questionnaire only has 33 items.

3.8. Data Collection

This study employed a quantitative research method; data collection for this study was collected from three public universities in Cambodia from October to November 2014.

3.8.1 Questionnaire

To conduct the data collection, the researcher wrote to the Ministry of Education, Youth, and Sports of Cambodia for permission to conduct the research. Upon approval to conduct the research from the ministry and universities, the researcher requested assistance from each faculty dean and academic staff in three public universities to distribute the survey. All respondents are required to answer the research questionnaire, distributed by a representative appointed by the researcher in the respective universities. Prior to distribution of the research questionnaire to respondents, the researcher had given a short briefing by the researcher for the purpose of the study. Researcher also explained how to respond to the questions in the questionnaire. The researcher designs the research questionnaire comprehensively, starting with the explanation to respondents the purpose of the research, the roles of the respondents and the details of the questionnaire. This is done to avoid ambiguity and unintelligible questions raised by the respondents.

For data collection, all respondents are provided thirty minute to complete the questionnaires and the researcher awarded a pen for all respondents as an incentive to answer the questionnaire and to return the questionnaire on time.

3.9 Data Analysis

The data has been analyzed by using a quantitative methodological approach, which is a survey questionnaire. The researcher has opted for quantitative method is appropriate for the achievement of the research objectives. Thus, the characteristics of this method include collecting and analyzing quantitative data. The researcher uses different statistical analyses after the data collection. The researcher utilized descriptive statistics throughout the study to analyze the quantitative data (researcher objectives from one to three). The descriptive statistics are employed to summarize the findings of all the dependent and independent variables. Zickmund (2000) defined descriptive statistics as explaining or summarizing information about a population or sample and inferential statistics as making judgments or assumptions about a population based on a sample.

The researcher used the Partial Least Squares Structural Equation Modelling (PLS-SEM) to examine the relationships among study variables (research objectives from four to five) Statistical package SPSS version 20 and SmartPLS version 2 are used for analysis quantitative data. Table 3.25 shows the statistical analysis that will be utilized according to the research objectives.

3.9.1 Rules of Thumb for selecting CB-SEM or PLS-SEM

To understand the assumptions underlying these statistical methods can help the researcher determine which statistical method is appropriate to use. According to Hair et al. (2011), the selection between CB-SEM and PLS-SEM can be made based on a few factors such as research objective, types of measurement model specification, the modelling of the structural model, data characteristics and model

evaluation. These authors suggest five useful rules of thumb, which can be used as a guideline when selecting between PLS-SEM and CB-SEM.

This study adopts PLS-SEM as the statistical method to assess the research model based on the following reasons:

a) The focus of the analysis in this study does not involve the measuring of model invariance. The focus of this study is on predictive factors related to members' continuous knowledge sharing intention. Hence, the use of latent variable scores is important to examine the underlying relationship between the latent variables.

b) This study uses a large number of latent variables and complex modelling of a research model. According to Henseler et al. (2009), PLS is suitable for large and complex models with many latent variables. According to Urbach & Ahlemann (2010), large and complex model refers to a research model that has 100 constructs and 1,000 indicators.

c) The focus of this study is to test the relationships, according to prior theoretical knowledge. The ability of PLS-SEM to estimate the correlations between the residuals and assess their impacts on the model make this technique the appropriate approach.

3.9.2 Partial Least Square (PLS)

PLS was originated by an Econometrician named Herman World in the '60s and '70s (Chin, 1998b). PLS is a family of alternating least squares algorithms, which extend principal component and canonical correlation analysis (Henseler et al., 2009). Its path models are usually defined using two sets of linear equations known as the measurement model and structural model (Henseler et al., 2009). The

measurement model specifies the relationships between unobserved or latent variables, whereas the outer model specifies the relationships between a latent variable and its manifest variables. The inner and outer model is also known as the structural and measurement model.

The PLS algorithm is essentially a sequence of regressions in terms of weight vectors (Henseler et al., 2009). The basic PLS algorithm involves the following stages:

1. Stage 1: Iterative estimation of latent variable scores consisting of a four-step iterate procedure that is repeated until convergence is obtained:
    a. Outer approximation of the latent variable scores,
    b. Estimation of inner weights,
    c. Inner approximation of the latent variable scores, and
    d. Estimation of the outer weights.
2. Stage 2: Estimation of outer weights/loading and path coefficients.
3. Stage 3: Estimation of location parameters.

3.9.3 Reflective and Formative Constructs

In this study, all LVs are modelled as reflective measures. The causality flows of each latent variable are based on prior knowledge gathered during the literature review phase. Using prior knowledge to determine the causality flow is very important to avoid measurement misspecified model (Henseler et al., 2009).

3.9.4 Evaluating Measurement and Structural Model Using Partial Least Square

In this study, the research model is assessed using a two-step process: 1) the assessment of the measurement model and 2) the assessment of the structural model. In general, the purpose of model validation is to determine whether both measurement and structural model fulfil the quality criteria for empirical work (Urbach and Ahlemann, 2010). The following subsections discuss the guidelines used in this study to assess both the measurement and structural model of this study.

3.9.4.1 Measurement Model

Based on previous studies, the validation of a reflective measurement model can be established by testing its internal consistency, indicator reliability, convergent validity and discriminant validity (Lewis, Templeton, & Byrd, 2005; Straub, Boudreau, & Gefen, 2004).

3.9.4.2 Internal Consistency

Traditionally, a measurement item's internal consistency is evaluated using Cronbach's alpha (CA). Constructs with high CA values mean that the items within the construct have the same range and meaning (Cronbach, 1971). Using CA provides an estimate for the reliability based on indicator inter-correlations. However, within PLS, internal consistency is measured using composite reliability (CR) (Chin, 1998b). This is because even though both CA and CR measure the same thing (internal consistency), CR takes into account that indicators have different loadings. CA provides a severe underestimation of the internal consistency reliability where it does not assume tau equivalent among the measures and assuming all indicators are equally weighted (Werts, Linn, & Joreskog, 1974).

Despite which particular reliability coefficient is used, an internal consistency reliability is considered satisfactory when the value is at least 0.7 in the early stage and values above 0.8 or 0.9 in more advanced stages of research, whereas value below 0.6 indicate a lack of reliability (Nunnally and Bernstein, 1994).

3.9.4.3 Indicator Reliability

When assessing indicators' reliability, the researcher is evaluating the extent to which a variable or a set of variables is consistent with what it intends to measure (Urbach and Ahlemann, 2010). The reliability construct is independent of and calculated separately from other constructs. According to Chin (1998b), indicator loadings should be significant, at least at the 0.05 level and the loading must be greater than 0.7. This is because with the loading value at 0.707, an LV is said to be able to explain at least 50 percent of its indicator's variance.

The significance of the indicator loadings can be tested using a re-sampling method such as bootstrapping or jackknifing. According to Hensler et al. (2009), taking into consideration PLS characteristics of consistency at large, one should be careful when deciding to eliminate an indicator. It makes sense to eliminate an indicator only when the indicator's reliability is low and the elimination of that indicator goes along with a substantial increase of CR.

3.9.4.4 Convergent Validity

Convergent validity involves the degree to which individual items reflect a construct converging in comparison to items measuring different constructs (Urbach and Ahlemann, 2010). Using PLS, convergent validity can be evaluated using the value of the average variance extracted (AVE). According to Fornell and Larcker (1981), sufficient convergent validity is achieved when the AVE value of a construct is at least 0.5.

3.9.4.5 Discriminant Validity

Discriminant validity is used to differentiate measures of a construct from one another. In contrast with convergent validity, discriminant validity test whether the items do not unintentionally measure something else (Urbach & Ahlemann, 2010). In PLS, two measures of discriminant validity are commonly used—cross loading (Chin, 1998b) and Fornell-Larcker's criterion (Fornell and Larcker, 1981).

According to Chin (1998b), cross-loading is obtained by correlating each LV's component scores with all of the other items. If each indicator's loading is higher for its designated construct compared to any other constructs, then it can be inferred that the different constructs' indicators are not interchangeable.

Using Fornell-Larcker's criterion requires an LV to share more variance with its assigned indicators than with any other LV. Thus, the AVE of each LV should be greater than the LV's highest squares correlation with any other LV. The summary of validity guidelines to assess a reflective measurement model is listed in Table 3.23.

Table 3. 23

Summaries of Validity Guidelines for Assessing Reflective Measurement Model

	Validity Type	Criterion	Guidelines
1	Internal consistency	CR	CR>0.7 (for exploratory study) CR>0.8 (advance research) CR>0.6 (Lack of reliability)
2	Indicator reliability	Indicator loadings	Item's loading>0.7 and significant at least the 0.05 level
3	Convergent validity	AVE	AVE>0.50
4	Discriminant validity	Cross loading Fornell and Larcker	Item's loading of each indicator is highest for its designated constructed The square root of the AVE of a construct should be greater than the correlations between the construct and other constructs in the model

Therefore, in this study, the measurement model's validity is satisfactory when:

1. CR is greater than **0.8**.

2. Item's loading is greater than **0.7** and significant at least at the **0.05** level.

3. The AVE value for each construct is larger than **0.50**.

4. Item's loading of each indicator is highest for its designated constructed.

5. The square root of the AVE of a construct should be greater than the correlations between the construct and other constructs in the model.

3.9.5 Structural Model

Validating the structural model can help the researcher to evaluate systematically whether the hypotheses expressed by the structural model are supported by the data (Urbach and Ahlemann, 2010). The structural model can only be analyzed after the measurement model has been validated successfully. In PLS, a structural model can be evaluated using coefficient of determination ***(R^2)***, and path coefficients.

The first important criterion for assessing the PLS structural model is to evaluate each endogenous LV's coefficient of determination *(R^2)*. R^2 measures the relationship of an LV's explained variance of its total variance. According to Chin (1998b), a value of R around 0.670 is considered substantial; values around 0.330 are average and values of 0.190 and lower are considered weak.

While by examining the path coefficient value, a researcher is able to know the strength of the relationship between two LVs. To examine the relationship between two LVs, the researcher should check the path coefficients, algebraic sign, magnitude and significance. According to Huber et al. (2007), the path coefficients should exceed 0.100 to account for a certain impact within the model and be significant at least at the 0.05 level of significance.

Table 3. 24

Summarizes the guidelines to validate the structural model

	Validity Type	Criterion	Guideline
1	Model validity	Coefficient of determination (R^2)	0.670= substantial 0.333= Moderate 0.190= weak
2		Path coefficients	The path coefficient must be at least 0.100 and at a significant level at least 0.05

Therefore, in this study the structural model is evaluated using the following test:

1. Coefficient of determination must be larger than 0.19.

2. The path coefficient between LVs must be at least 0.1, follow the correct algebraic sign (in the case of this study—positive) and significant (at least 0.05)

Table 3.25
Research focus, research questions, research methodology and data collection, and analysis

Research Focus	Research Objectives	Research Questions	Research Method and Data Collection	Analysis
Students' view on institutional policies on academic environment, institutional integration, and involvement	**RO1.** To investigate students' view on institutional factors and institutional integrations for students' academic and intellectual developments in Cambodian public universities. **RO1.1:** To identify the students' views on the institutional factors for students' academic and intellectual developments in Cambodian public universities.	**RQ1**. What are the students' perception of the institutional factors and institutional integrations for students' academic and intellectual developments in Cambodian public universities? **RQ1.1:** What are the students' views on the institutional factors for students' academic and intellectual developments in Cambodian public universities?	❖ A survey using a questionnaire developed and adapted from Cambodian academic policies (Accreditation Committee of Cambodia, 2009), institutional integration (Breidenbach and French, 2004) ❖ 381 students will be randomly	❖ Descriptive statistics-Mean and standard deviation. ❖ Using SPSS (Version 20)

	RO 1.2: To identify the students' views on students' institutional integration for students' academic and intellectual developments in Cambodian public universities.	**RQ 2.2:** What are the students' views on institutional integration for students' academic and intellectual developments in Cambodian public universities?	selected from three Cambodian public universities	
Student involvement in academic and social activities	**RO 2:** To identify the level of students' involvement in academic and social activities in Cambodian public universities.	**RQ 2:** How many times and hours that a student is involved in their academic and social activities in Cambodian public universities?	❖ Student involvement survey adapted from Ohio State University, 2002	
Relationships between academic environment and students' academic success	**RO3:** To examine the relationships between institutional factors and students' academic and intellectual developments in Cambodian public universities.	RQ3. Are there institutional factors influence students' developments in Cambodian public universities?	❖ The survey is used a questionnaire developed from	❖ Partial Least Square Analysis ❖ Path Analysis ❖ Direct Effect Analysis ❖ Using SPSS (Version

			Cambodian academic policies (Accreditation Committee of Cambodia, 2009), ❖ 381 students were randomly selected from three Cambodian public universities	20) and Smart PLS (Version 2)
Relationships between institutional integration and students' academic success	**RO4.** To examine the relationships between the institutional integrations and students' academic and intellectual developments in Cambodian public universities.	**RQ4.** Are there institutional integrations influence students' intellectual developments in Cambodian public universities?	❖ Survey used questionnaire adopted from institutional integration (Breidenbach and	❖ Partial Least Square Analysis ❖ Path Analysis ❖ Direct Effect Analysis ❖ Using SPSS (Version

		French, 2004) ❖ 381 students were randomly selected from three Cambodian public universities	20) and Smart PLS (Version 2)

3.10 Accessibility and Ethical Consideration

Participants and locations are always involved in educational research. That is why participants are carefully respected (Cohen et al. 2011), and locations or sites are seriously protected (Creswell, 2011). Research ethics are taken into account as best practices in conducting social and scientific research (Gay et al., 2011). It is undeniable that conduct of research in educational institutions may encounter some obstacles because of their internal regulations and schedules.

In Cambodian context, researcher is advised to send a letter to request the research permission letter from the Minister of the Ministry of Education, Youth, and Sports. All supported documents and USM letter are enclosed with this letter (Appendix A). This approval letter was very useful for authorizing the process of getting authorization and cooperation to enter the selected universities and to meet the students.

When the researcher obtained this permission letter (Appendix B), the researcher wrote letters, which enclosed with the minister's letter, to request permission letters from the rectors of universities. After receiving the official approval letters from rectors, the researcher started to conduct data collection with the cooperation of academic staff and faculty members. Next, selected participants are given the informed consent form (Appendix C) and brief outline of the research (Appendix K) for starting data collection suggested by (Gay et al., 2011). All students should sign their informed consent form prior to complete the questionnaires (Bryman, 2008). According to Cohen et al. (2011), consent form is encouraged,

students participate in this research because some clauses stated the confidentiality and provided them the rights to complete or not complete certain items in the questionnaire and allowed them to withdraw from this research.

3.11 Summary of the chapter

The purpose of this study is to survey the institutional factors and institutional integrations within three public universities in Cambodia. The population of this study is undergraduate students. The number of 381 students are chosen as the quantitative study samples. A questionnaire is used to collect quantitative data. The result of this survey is analyzed in the form of descriptive statistics by employing the SPSS statically software and path analysis by using Smart PLS software.

CHAPTER 4

ANALYSIS OF DATA AND RESEACH FINDINGS

4.1 Introduction

This chapter presents the result of the study from the data analyses of the actual study. This study aims at finding the answers to the research questions and hypotheses in chapter one; the results and findings of this study will be reported in five sections. At the beginning of the chapter, researcher reported the univariate normality test results, profile of the participants, and measurement model assessment. In the first section, this study seeks to discuss students' characteristics, socioeconomic status, prior college schooling, and motivation. The second section discusses the students' perception of the institutional factors and institutional integrations for students' academic and intellectual developments in Cambodian public universities. The third section examines times and hours that students are involved in their academic and social activities, while the four sections investigates the influence of institutional factors toward students' academic and intellectual developments in Cambodian public universities. Then, the fifth section investigates the influence of institutional integration factors toward students' academic and intellectual developments. Finally, the summary of findings of research questions from one to five is presented.

4.2 Participants' Profile Information

For the purpose of this study, 381 questionnaires were distributed to third year students, which has stratified into three public universities, fifteen faculties, and fifteen departments. With the good cooperation and assistance from class monitors and university administrators, researcher has distributed 381 questionnaires to participants in their classrooms. Universities had provided researcher approximately 30 minutes to administer this data collection. As a result, 381 respondents (100%) completed the questionnaires. Therefore, from the total number of 381 respondents in this study, females comprised 49 % of the sample in the study compared to 51 % for males. These numbers are consistent with the national gender demographic for undergraduate students in Cambodian higher education institutions. Respondents' age groups, as indicated by the demographic data, ranged from below 20 years to above 23 years old. The biggest percentage (46.0 percent) of respondents was from age group of 20 to 21 years old. Respondents were from three public universities, fifteen faculties, fifteen departments, and fifteen academic disciplines.

Table 4.1

Participants' profile

Demographic/characteristics	Category	Frequency (N=381)	Percentage (%)
Institution	University A	144	37.76
	University B	120	31.69
	University C	117	30.55
Gender	Male	194	51.00
	Female	187	49.00
Age	Below 20	11	2.90

	20-21	172	46.00
	22-23	166	44.40
	Above 23	25	6.70
Major	Khmer Literature	28	7.50
	Mathematics	29	7.80
	IT Engineering	25	6.70
	Community Development	28	7.50
	English Literature	31	8.30
	Management	19	5.10
	Economics	19	5.10
	Tourism	19	5.10
	Business Law	19	5.10
	Informatics Economics	19	5.10
	Finance and Accounting	24	6.40
	General Law	31	8.30
	Public Administration	28	7.50
	Economic Development	28	7.50
	Informatics Economics and Law	27	7.20

4.3 Normality Test of the Collected Data

Before analyzing the collected data, researcher had used SPSS 20 statistical software to explore the characteristics of the data. The data files were carefully screened; researcher immediately corrected several data-entry errors and out-of-range values. The researcher found 15 missing values in data files. In this case, the

researcher decided to assign the mean middle values to fill in the missing data because the researcher did not want to delete these missing data cases as suggested by Babbie (2008).

In this study, the researcher employed an exploratory data analysis that described a case related to a single variable or univariate analysis (See Appendix 12). To assess the normality of the distributions of variables in this study, researcher utilized the Skewness and kurtosis values and normal probability plots (Q-Q plot). According to Coakes & Steeds (2003), values of Skewness and Kurtosis are zero in the case of the observed distribution is exactly normal. In order to normalize the data distribution, researcher removed seven cases that considered as extreme outliers and were not representative of the population (Table 4.2).

Table 4.2
Results of Exploratory Data Analysis

Variables	Outliers/Cases	Cases Deleted
Curriculum syllabus	356, 59	59
Teacher teaching	54, 59	59
Evaluation/Examination	7, 77, 120, 371	7, 371
Facilities	255	None
Students support services	7, 44, 59, 91, 255, 371, 374	7, 59, 374, 371
Peer Group Interaction	10, 59, 68, 121, 374	59, 10, 121, 374
Faculty-Student Interaction	10, 28, 57, 374	10, 28, 374
Faculty Concern for Student Development and Teaching	10, 59, 68, 121, 374	10, 59, 121, 374
Institutional and Goal Commitments	28, 121, 201, 281, 356, 374	28, 121, 374
Intellectual Development	28, 31, 59, 65, 88, 121, 168, 266, 330, 374	28, 59, 121, 374

After the outliers were deleted, graphs showed that most of the plotted values were distributed around the diagonal line (see Appendix 12). Results were not considered striking. According to Hair et al. (1998); Coakes and Steed (2003), the distribution of data can then be considered as normal when the data distribution closely follows the diagonal line.

The values of Skewness and Kurtosis ranked between +3 and -3 indicated that the distribution scores did not again the assumption of normality (Kline, 1998). Values of Skewness and Kurtosis are shown in Table 4.2.

Table 4.3
Skewness and Kurtosis Value

Variables	Skewness	Kurtosis
Curriculum syllabus	-.14	-.59
Teacher teaching	-.32	.12
Evaluation/Examination	.63	.74
Facilities	-.31	-.26
Students support services	-.51	-.08
Peer Group Interaction	-.22	-.17
Faculty-Student Interaction	-.27	-.23
Faculty Concern for Student Development and Teaching	-.54	.17
Institutional and Goal Commitments	-.48	.27
Academic and Intellectual Development	-.41	.20

The Skewness and Kurtosis values for all the variables in this study shown in Table 4.3 were ranked between -.59 and +.63 after seven extreme outliers were removed from the data file. The results showed that the distribution scores in this

study did not violate the assumption of normality (see Appendix 12). These results suggest that the sample of the study was from a normal distribution. Hence, due to samples were obtained from a normal distribution, the analysis of the data using parametric statistics was appropriate (Coakes & Steed, 2003).

4. 4 Reliability of Scales

For reliability, reliability coefficient (Cronbach's alpha) was employed to determine the internal consistency of the entire scale. As indicated in Table 4.4, all scales were reported high with alpha value ranging from 0. 802 to 0.865. It was consistent with the result of the pilot study, which obtained from the alpha value ranging from 0. 802 to 0.865. Hence, it was concluded that scales, utilized in this study, are reliable and consistent suggested by Hair et al. (1998).

Table 4.4
Summary of the scale reliability (n=374)

Components	Cronbach alpha
Institutional Factors (Overall)	.835
Curriculum syllabus	.808
Teacher teaching	.854
Evaluation/Examination	.843
Facilities	.807
Students support services	.865
Institutional Integration (Overall)	.825
Peer -group interaction	.846
Faculty- student interaction	.802
Faculty concern for student Development and teaching	.843
Institutional and goal commitments	.806
Academic and Intellectual Development (Overall)	.830
Academic and Intellectual Development	.830

4.5 Findings According to Research Question

Table 4.5 shows students' gender, age group, scholarship status, universities, and disciplines. The total of 91.7 % were not scholarship students, while only 8.3 % were scholarship holders supported by government or other agencies. As indicated in table 4.5, students approximately spent for their studies and living costs in a total of USD 102.81 per month. 57, 8 of students' parents have earned monthly incomes less than USD 150. In case of English proficiency, 61. 8 % of students were fair, whereas 17.1 % of students were poor.

Table 4. 5

Students' characteristics, socioeconomic status, prior college schooling

Variables	Description	N	Mean	SD
Students' Characteristics				
Gender	1=male	190 (50.8 %)		.501
	2=female	184 (49.2 %)		
Age	Below 20	11 (2.9 %)		.664
	20-21	172 (46.0 %)		
	22-23	166 (44.4 %)		
	Above 23	25 (6.7 %)		
Scholarship holder	1=Yes	31 (8.3 %)		.276
	2=No	343 (91.7 %)		
University	1= University A	141 (37.7 %)		.824
	2= University B	118 (31.8 %)		
	3= University C	115 (30.5 %)		
Major taking	1= Khmer Literature	28(7.5 %)		4.544
	2= Mathematics	29(7.8 %)		
	3= IT Engineering	25(6.7 %)		
	4= Community Development	28(7.5%)		
	5= English Literature	31(8.3%)		
	6= Management	19 (5.1%)		
	7= Economics	19 (5.1%)		
	8= Tourism	19 (5.1%)		

	9= Business Law	19 (5.1%)		
	10= Informatics Economics	19 (5.1%)		
	11= Finance and Accounting	24 (6.4%)		
	12= General Law	31 (8.3%)		
	13= Public Administration	28 (7.5%)		
	14= Economic Development	28 (7.5%)		
	15= Informatics Economics and Law	27 (7.2%)		
Socioeconomic Status				
Students' monthly expenditure	Average monthly expense (in US dollar)		102.81	47.820
Parents' monthly income	1=less than USD 150	216 (57.8%)		.646
	2=150-500	127 (34.0 %)		
	3=more than USD 500	31 (8.3 %)		
Number of children in family	Average of children in family (≃ 4 persons)		3.94	1.785
Fathers' university experience	1=yes	49 (13.1 %)		.338
	2=no	325 (86.9 %)		
Mothers' university experience	1=yes	28 (7.5 %)		.264
	2=no	346 (92.5 %)		
Fathers' occupation	1=civil servant	105 (28.1 %)		.792
	2=farmer	188 (50.3 %)		
	3=private sector	65 (17. 4 %)		
	4=unemployed	16 (4.3 %)		
Mothers' occupation	1=civil servant	53 (14.2 %)		1.067
	2=farmer	147 (39.3 %)		
	3=private sector	58 (15.5 %)		
	4=Housewife	116 (31.0 %)		
Prior college schooling				
Type of high school	1=public	337 (90.1 %)		.299
	2=private	37 (9.9 %)		
Location of high school	1=province	250 (66.8 %)		.471
	2=Phnom Penh	124 (33.2 %)		
High school diploma grade	1=E (pass)	68 (18.2 %)		.752

	2=D (fair)	193 (51.6 %)	
	3=C (good)	10 (26.7 %)	
	4=B (very good)	13 (3. 5 %)	
	5=A (excellence)	0 (0.0 %)	
English levels at high school	1=D (poor)	64 (17.1 %)	.666
	2=C (fair)	231 (61.8 %)	
	3=B (above average)	71 (19.0%)	
	4=A (very good)	8 (2.1%)	

Table 4.6 shows the mean scores and standard deviations of the frequency students' motivation prior to enrol in the university. The mean scores of six items ranged from 3.34 to 4.50. This shows that students have selected their disciplines to enrol in the university based on their parents' motivation (M=4. 46, SD=. 712). This is followed by item number one (M=4. 34, SD=. 813); they wanted to develop their professional skills.

Table 4. 6

Students' motivation prior to enrol in the university

Items	*M*	*SD*
I decided to pursue my tertiary education because:		
1. I wanted to develop my professional skills.	4.34	.813
2. My teachers motivated me to pursue tertiary education.	4.11	.679
3. My friends motivated me to pursue tertiary education.	3.89	.782
4. My parents motivated me to pursue tertiary education.	4.46	.712
5. I selected my major based on my personal interests.	4.21	.827
6. I selected my major based on my parents' suggestion.	3.34	1.205
Total	4.50	.836

4.5.1 Research Question 1

RQ 1: What are the students' perception of the institutional factors and institutional integrations for students' academic and intellectual developments in Cambodian public universities?

RQ 1.1: What are the students' views on the institutional factors for students' academic and intellectual developments in Cambodian public universities?

This section discusses the findings of the statistical analysis on the perception of students on the institutional factors such as curriculum, teacher teaching, examination and evaluation, facilities, and student support services in Cambodian public universities.

Table 4.7 shows the mean scores and standard deviations of the frequency students' perception on curriculum in the university. The mean scores of nine items ranged from 3.71 to 4.06. This shows that students have agreed that the curriculum has a credit system and credit transfer components (M=4. 06, SD=. 806). This is followed by item number one indicated that the curriculum is relevant to social needs and the employment market (M=3. 97, SD=. 795); whereas the item "the curriculum has been updated, reviewed, and assessed frequently" was the least frequently agreed by students.

Table 4.7:
Mean and Standard Deviation of Curriculum

Items	*M*	*SD*
1. The curriculum is relevant to social needs and the employment market.	3.97	.795
2. The curriculum is well - designed for students.	3.76	.860
3. The curriculum provides students with an opportunity to understand concepts and develop skills.	3.77	.937
4. The curriculum has a credit system and credit transfer components.	4.06	.806
5. The curriculum has specific stages and teaching methodology.	3.95	.766
6. The curriculum challenges me personally and academically.	3.93	.744
7. The curriculum was completed in time.	3.82	.853
8. The curriculum has been updated, reviewed, and assessed frequently.	3.71	.850
9. The current curriculum helps students to find jobs.	3.87	.856
Total	3.87	.829

Table 4.8 shows the mean scores and standard deviations of the frequency students' perception on teacher teaching in Cambodian public universities. The mean scores of fifteen items ranged from 4.21 to 3.14. This shows that students frequently perceived on teacher qualification (M=4. 21, SD=. 625). This is followed by item four numbers indicated the teachers are available whenever students have questions (M=4. 01, SD=. 704); whereas the item "there are enough teachers for all courses in my university" was the least frequently agreed by students.

Table 4.8
Mean and Standard Deviation of Teacher Teaching perceived by students

Items	*M*	*SD*
1. There are enough teachers for all courses at my university.	3.14	.998
2. The teachers are highly qualified (Master, PhD holders).	4.21	.625
3. The teachers are able to disseminate their expert-knowledge well.	3.89	.703
4. The teachers are available whenever I have questions.	4.01	.704
5. The teachers interact with students.	3.62	.778
6. Students are satisfied with the teaching.	3.79	.749
7. The teachers are professional in their teaching.	4.05	.643
8. The teachers preserve discipline and professional ethics.	3.96	.742
9. The teachers use Information and Communications Technology in teaching.	3.87	.780
10. The teachers focus more on qualitative rather than quantitative outcomes.	3.84	.815
11. The teachers are able to provide opportunities and experiences for students to achieve success at university.	3.90	.727
12. Students appreciate the teachers' efforts in the classroom.	3.90	.730
13. Teaching is generally research-based.	3.83	.751
14. The teachers try to maintain a positive working environment in the classrooms.	3.89	.663
15. Teaching is based on a student-centered approach.	3.83	.792
Total	3.84	.746

Table 4.9 shows the mean scores and standard deviations of the frequency students' perception on examination and evaluation in Cambodian public universities. The mean scores of ten items ranged from 3.68 to 4.02. This shows that students frequently perceived that examinations for students are part of the continuous evaluation of the university (M=4. 02, SD=. 667). This is followed by

item number seven indicated the teachers are available whenever students have questions (M=4. 01, SD=. 704); whereas the item "examination procedures are fully equipped to evaluate all types of learning outcomes" was the least frequently agreed by students (M=3. 68, SD=. 831).

Table 4.9
Mean and Standard Deviation of Evaluation perceived by students

Items	*M*	*SD*
1. There is an evaluation of students' progress each semester.	3.72	.755
2. The examinations are fair.	3.77	.805
3. Examination results are a true reflection of the students' achievements.	3.83	.774
4. Examination procedures are fully equipped to evaluate all types of learning outcomes.	3.68	.831
5. Evaluation techniques are based on specific criteria.	3.78	.732
6. Methods used in the evaluation system to inform students of their academic progress.	3.87	.766
7. Examinations have made students more attention to their lessons.	3.98	.769
8. Examinations for students are part of the continuous evaluation of the university.	4.02	.647
9. Most examination questions are relevant to the subject content.	3.93	.747
10. The university has a policy where all kinds of academic fraud (cheating, plagiarism…) are punished.	3.77	.947
Total	3.83	.777

Table 4.10 shows the mean scores and standard deviations of the frequency students' perception on facilities in Cambodian public universities. The mean scores of ten items ranged from 3.61 to 3.96. This shows that students frequently perceived that there are restrooms for students and teachers (M=3.96, SD=.767). This is followed by item number six indicated that there are enough parking spaces (M=3. 91, SD=. 729) whereas the item ten stated "there are adequate physical facilities for sports, cultural activities, and social interaction (sport facilities, halls, cafés, canteens…)" was the least frequently agreed by students (M=3.61, SD=.865).

Table 4.10
Mean and Standard Deviation of Facilities perceived by students

Items	*M*	*SD*
1. The campus is a great place to study.	3.78	.884
2. The library has enough up-to-date materials (e.g. Textbooks, journals, periodicals, thesis)	3.86	.857
3. Most textbooks reach the students at the proper time.	3.67	.801
4. Classroom buildings are large and suitable for learning.	3.83	.799
5. Resource learning facilities are adequate for all classrooms.	3.50	.896
6. There are enough parking spaces.	3.91	.729
7. There are restrooms for students and teachers.	3.96	.767
8. There are learning resource centers, laboratories, and audio labs.	3.64	.857
9. There are adequate learning facilities such as LCD projectors, computers, printers, and copying machines in the university.	3.73	.838
10. There are adequate physical facilities for sports, cultural activities, and social interaction (sport facilities, halls, cafés, canteens…)	3.61	.865
Total	3.74	.916

Table 4.11 indicates the mean scores and standard deviations of the frequency students' perception on student support services in Cambodian public universities. The mean scores of ten items ranged from 3.34 to 3.77. This shows that students frequently perceived that the university provides scholarships and financial support (M=3.77, SD=.826). This is followed by item number eight shows that the university's infrastructure meets environmental health and safety standards (M=3.68, SD=.773) whereas the item fourth stated "the university has accommodation or a hostel" was the least frequently agreed by students (M=3. 34, SD=1. 089).

Table 4.11
Mean and Standard Deviation of Student Support Services perceived by students

Items	*M*	*SD*
There are a variety of associations and clubs (sports, cultural, and social groups).	3.50	.866
The Student Association is available to provide useful advice and help.	3.59	.835
The university has a health care center.	3.44	.958
The university has accommodation or a hostel.	3.34	1.089
The student canteen offers good quality food and drinks at a	3.36	.983

reasonable price.		
The University's Career Placement Center helps students with job-hunting.	3.34	.928
Student advisors are available to provide useful advice.	3.46	1.005
The university's infrastructure meets environmental health and safety standards.	3.68	.773
The university provides scholarships and financial support.	3.77	.826
The university provides funds and facilities for your research projects.	3.51	.902
Total	3.49	.916

Table 4.12 indicates the mean scores and standard deviations of the frequency students' perception of academic and intellectual development in Cambodian public universities. The mean scores of eight items ranged from 3.80 to 4.03. Item one and four show that students frequently perceived that they are satisfied with their academic and intellectual development (M=4. 03, SD=. 702) and they agreed that most of their courses have been intellectually stimulating (M=4.03, SD=.666). This is followed by item number seven shows that the university's infrastructure meets environmental health and safety standards (M=3.68, SD=.773) whereas item number four stated "I am satisfied with my critical thinking skills" was the least frequently agreed by students (M=3. 80, SD=. 746).

Table 4.12
Mean and Standard Deviation of Academic and Intellectual Development

Items	*M*	*SD*
I am satisfied with the extent of my academic and intellectual development at this university.	4.03	.702
My academic experience has had a positive influence on my intellectual growth and thinking.	3.88	.692
I am satisfied with my academic experience at this university.	3.98	.690
Most of my courses have been intellectually stimulating.	4.03	.666
My interest in ideas and intellectual matters has increased since starting classes.	3.90	.692

My academic experiences help me to pursue my further education successfully.	3.85	.786
I am satisfied with my critical thinking skills.	3.80	.746
I can apply my social and leadership skills.	3.91	.658
Total	3.92	.704

RQ 1.2: What are the students' views on institutional integration for students' intellectual developments in Cambodian public universities?

This section discusses the findings of the statistical analysis on the perception of students on the institutional integration such as peer-group interaction, faculty-student interaction, faculty concern for student development, teaching, and institutional goal, and commitment.in Cambodian public universities.

Table 4.13 presents the mean scores and standard deviations of the frequency students' perception of peer-group interaction in Cambodian public universities. The mean scores of ten items ranged from 3.45 to 4.08. Item nine shows that students frequently perceived that they are satisfied with their friendship development (M=4. 08, SD=. 627). This is followed by item number three shows that "My personal relationships with other students have positively influenced my personal growth and thinking" (M=3. 95, SD=. 683) whereas the item seven states that most students have values and attitudes similar to them was the least frequently agreed by students (M=3. 45, SD=. 858).

Table 4.13
Mean and Standard Deviation of Peer-Group Interaction perceived by students

Items	*M*	*SD*
I have developed a close personal relationship with other students in my university.	3.73	.805
I am satisfied with my classmate relationships.	3.57	.788
My personal relationships with other students have positively influenced my personal growth and thinking in my university.	3.95	.683
My personal relationships with other students have positively influenced my intellectual growth and interest in ideas in my university.	3.91	.727
It has been easy for me to meet and to make friends with other students in my university.	3.82	.734
Many students I know would be willing to listen to me and help me if I had a personal problem.	3.61	.823
Most students at this university have values and attitudes similar to mine.	3.45	.858
I have been happy with my living during I study at this university.	3.86	.761
The student friendships I have developed have been personally satisfying.	4.08	.627
I am satisfied with the opportunities to participate in organized extra-curricular activities in my university.	3.93	.717
Total	3.79	.752

Data in Table 4.14 indicates the mean scores and standard deviations of the frequency students' perception of faculty-student interaction in Cambodian public universities. The mean scores of five items ranged from 3.58 to 3.78. Item three shows that students frequently perceived that their non- classroom interactions with faculty members have positively influenced their career goals and aspirations (M=3. 78, SD=. 772). This is followed by item two shows that their non- classroom interactions with faculty members have positively influenced their intellectual growth and thinking (M=3. 73, SD=. 788) whereas the item four states that they have

developed a close, personal relationship with at least one faculty member was the least frequently agreed by students (M=3. 58, SD=. 959).

Table 4.14

Mean and Standard Deviation of Faculty- Student Interaction perceived by students

Items	*M*	*SD*
My non-classroom interactions with faculty have positively influenced my personal growth, value, and attitudes.	3.67	.880
My non-classroom interactions with faculty members have positively influenced my intellectual growth and thinking.	3.73	.788
My non- classroom interactions with faculty members have positively influenced my career goals and aspirations.	3.78	.772
I have developed a close, personal relationship with at least one faculty member.	3.58	.959
I am satisfied with the opportunities to meet and interact informally with faculty members.	3.64	.838
Total	3.68	.847

Table 4.15 indicates the mean scores and standard deviations of the frequency students' perception on faculty concern for student development and teaching in Cambodian public universities. The mean scores of five items ranged from 3.61 to 3.93. Item five shows that students have frequently percieved that most faculty members are genuinely interested in teaching (M=3.93, SD=.678). This is followed by item four shows that many faculty members are interested in helping students grow in more than just academic areas (M=3. 86, SD=. 735), whereas the item one states that they many faculty members are genuinely interested in the students was the least frequently agreed by students (M=3.61, SD=.786).

Table 4.15

Mean and Standard Deviation of Faculty Concern for Student Development and Teaching

Items	*M*	*SD*
Many faculty members I have had contact with are genuinely interested in the students.	3.61	.786
Many faculty members I have had contact with are genuinely outstanding or superior teachers.	3.76	.775
Many faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.	3.72	.808
Many faculty members I have had contact with are interested in helping students grow in more than just academic areas.	3.86	.735
Most faculty members I have had contact with are genuinely interested in teaching.	3.93	.678
Total	3.77	.756

Table 4.15 indicates the mean scores and standard deviations of the frequency students' perception on the institution and goal commitment in Cambodian public universities. The mean scores of five items ranged from 3.77 to 4.29. Item four shows that students frequently perceived that It is important to me to graduate from this university (M=3.93, SD=.678). This is followed by item five shows that they have a clear goal to select their majors or disciplines (M=4. 26, SD=. 645) whereas the item one state that their universities have committed to the welfare of students was the least frequently agreed by students (M=3.61, SD=.786).

Table 4.16
Mean and Standard Deviation of Institution and Goal Commitments

Items	*M*	*SD*
1. My university has committed to the welfare of students.	3.77	.857
2. I am confident that I made the right decision in choosing to attend this university.	4.03	.674
3. I will mostly register at this university next semester.	4.15	.705
4. It is important to me to graduate from this university.	4.29	.688
5. I have a clear goal to select my major.	4.26	.645
Total	4.10	.713

4.5.2 Research Question 2

RQ 2: *How many times and hours that students are involved in their academic and social activities in Cambodian public universities?*

This section discusses the findings of the statistical analysis about a number of times and hours that students spent for their academic and social activities per week, per month, and per year suggested by Astin's (1993) theory of student involvement, Tinto's (1993) theory of academic and social experience, and Pascarella's (1985) theory of student engagement. Pascarella (1985) pointed out that quality of student involvement influence academic environment as an institutional factor. According to Tinto (1993), academic and intellectual development of a student is achieved through a certain level of engagement in academic and social integration; students who have high levels of involvement in academic and social communities in the institution, they more likely to succeed in their intellectual development.

WEEKLY

Table 4.17.1 exhibits the mean and standard deviation scores of a number of hours that students spent studying outside classes for three universities. Cambodian students spent approximately 7.18 hours per week for their studies at outside classes.

Table 4.17.1
A number of studying hours that students spending outside classes

University	Mean	*N*	*SD*
University A	8.68	141	8.117
University B	6.20	119	6.555
University C	6.40	114	6.629
Total	7.18	374	7.254

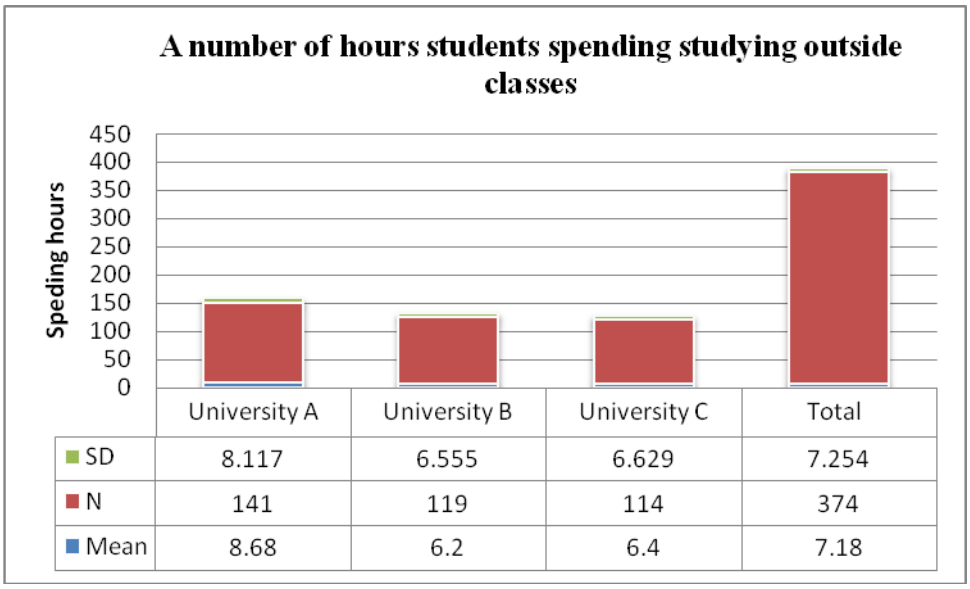

Figure 4.1 A number of studying hours that students spending outside classes

Table 4.17.2 exhibits the mean and standard deviation scores of a number of hours that students spent for doing assignment at home. Cambodian students spent approximately 6.87 hours per week for their studies at home.

Table 4.17.2 A number of hours students spending doing assignment at home

University	Mean	*N*	*SD*
University A	8.00	141	6.303
University B	5.72	119	4.624
University C	6.75	114	6.565
Total	6.87	374	5.963

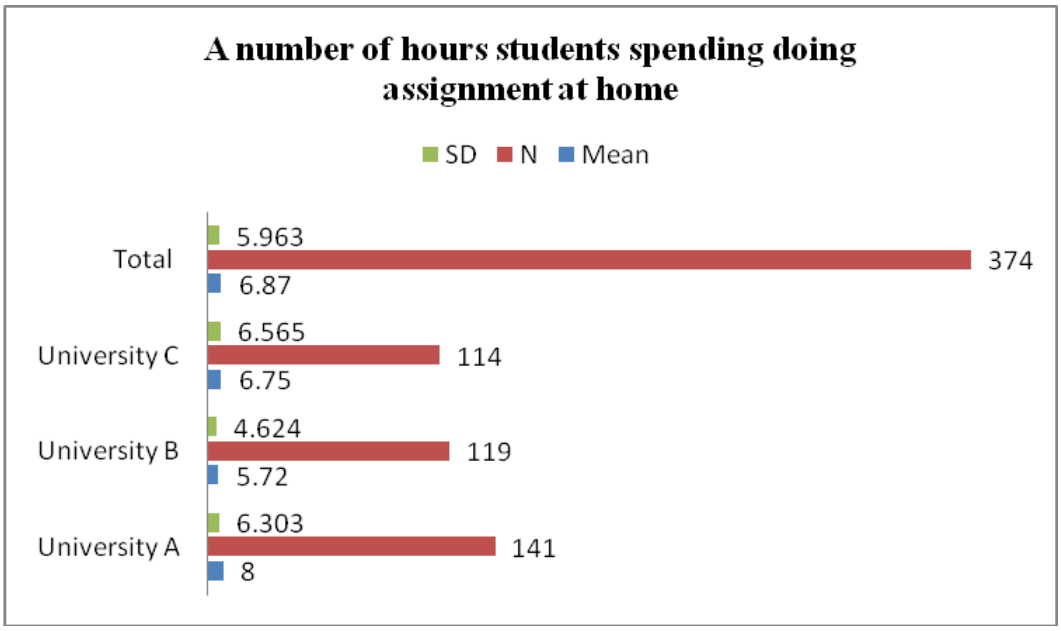

Figure 4.2 A number of hours that students spent for doing assignment at home

Table 4.17.3 exhibits the mean and standard deviation scores of a number of hours that students spent for doing assignments at university. Cambodian students spent approximately 5 hours per week for their studies at university.

Table 4.17.3
A number of hours students spending doing assignments at university

University	Mean	*N*	*SD*
University A	6.21	141	6.007
University B	3.96	119	4.071
University C	4.58	114	5.180
Total	4.99	374	5.267

Table 4.17.4 exhibits the mean and standard deviation scores of a number of hours that students spent using social communication (callings, Facebook, YouTube Etc.). Cambodian students spent approximately 6.42 hours per week for their social communication.

Table 4.17.4
A number of hours that students spend for using social communication

University	Mean	*N*	*SD*
University A	6.84	141	8.513
University B	6.61	119	7.190
University C	5.76	114	6.604
Total	6.42	374	7.522

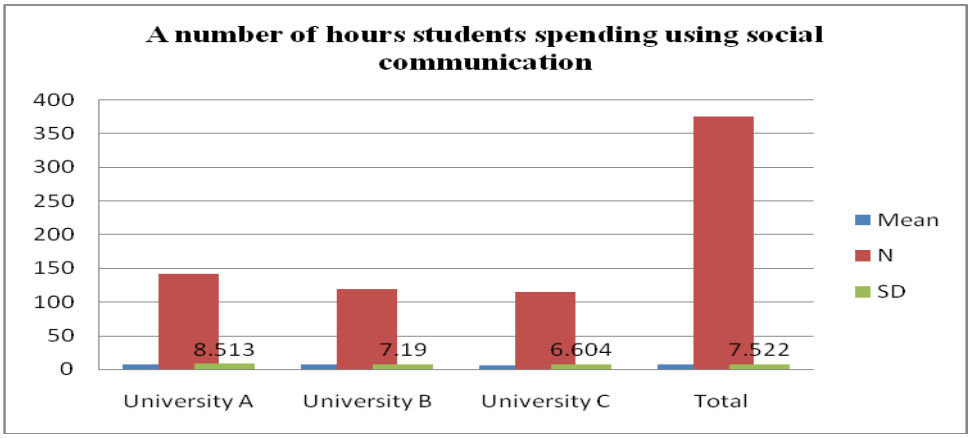

Figure 4.3 A number of hours students spending using social communication

Table 4.17.5 presents the mean and standard deviation scores of a number of hours that students spent in social and academic activities per week such as volunteer services, academic development, campus recreation, and university's activities. Cambodian students have spent approximately 1.67 hours per week for their studies.

Table 4.17. 5
A number of hours that students spent in social and academic activities per week

Activities	Mean	*N*	*SD*
5.1 Volunteer Services	2.60	374	3.843
5.2 Academic Development	2.38	374	3.869
5.3 Campus Recreation	1.59	374	1.859
5.4 University's Activities	1.80	374	2.705
Total	1.67	374	2.455

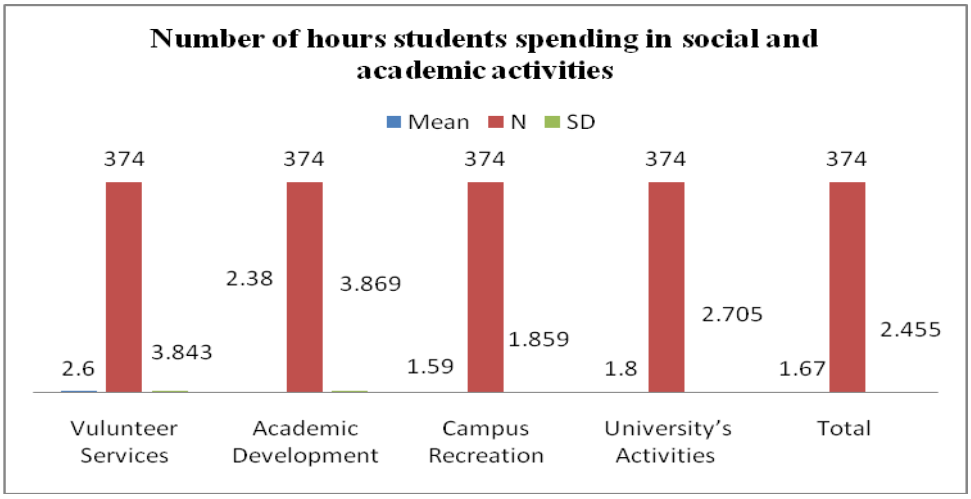

Figure 4.4 A number of hours that students spent in social and academic activities per week

MONTHLY

Table 4.18.1 presents the mean and standard deviation scores of an amount of time spent on the library per month. Cambodian students have spent approximately 5.91 times per week for their studies. Students from University A spent their time in the library were much more than those from University B and C.

Table 4.18.1
A amount of time spent at the library per month

University	Mean	*N*	*SD*
University A	7.34	141	8.186
University B	5.21	119	5.392
University C	4.95	114	5.532
Total	5.91	374	6.676

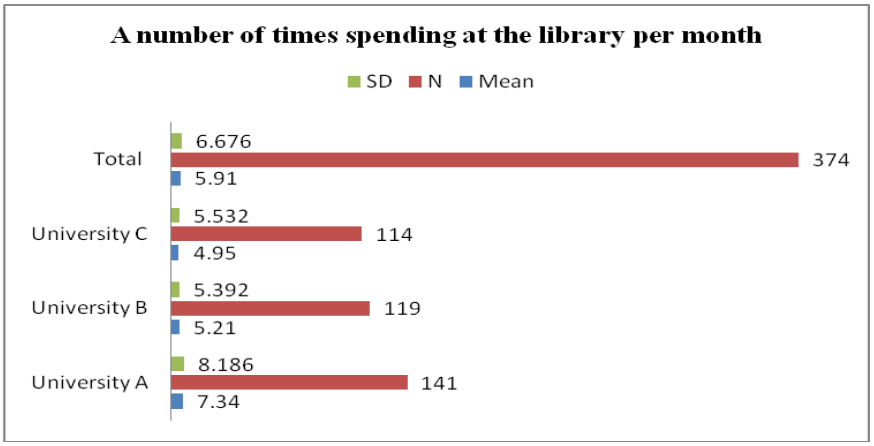

Figure 4.5 A amount of time spent in the library per month

Table 4.18.2 presents the mean and standard deviation scores of a number of time spent discussing with friends per month. Cambodian students have spent approximately 7.95 times per week for their studies.

Table 4.18.2
A number of times discussing with friends per month

University	Mean	*N*	*SD*
University A	8.05	141	6.935
University B	9.24	119	8.135
University C	6.39	114	6.042
Total	7.95	374	7.194

Table 4.18.3 presents the mean and standard deviation scores of a number of time spent discussing with lecturers per month. Cambodian students spent approximately 4.45 times per week for their studies.

Table 4.18.3
A number of times discussing with lecturers per month

University	Mean	*N*	*SD*
University A	4.84	141	5.280
University B	4.68	119	5.541
University C	3.76	114	4.067
Total	4.45	374	5.023

Table 4.18.4 presents the mean and standard deviation scores of a number of times spent at weekend on campus per month. Cambodian students have spent approximately 3.79 times per week for their studies.

Table 4.18.4
A amount of time spent at weekend on campus per month

University	Mean	*N*	*SD*
University A	3.66	141	4.778
University B	3.87	119	5.193
University C	3.92	114	5.032
Total	3.79	374	4.855

YEARLY

Table 4.19 presents the mean and standard deviation scores of a book reading for their studies and own pleasure per year. Cambodian students spent approximately 12.09 books per year for their studies.

Table 4.19.
A number of books reading for their studies and own pleasure per year

University	Mean	*N*	*SD*
University A	15.70	141	18.089
University B	8.61	119	12.175
University C	11.31	114	16.569
Total	12.09	374	16.124

Table 4.19.1 presents the mean and standard deviation scores of a number of cultural events students have attended per year. Cambodian students have spent 4.60 times per year.

Table 4.19.1
A number of cultural events students have attended

University	Mean	*N*	*SD*
University A	6.22	141	9.766
University B	3.40	119	5.358
University C	3.49	114	3.428
Total	4.60	374	7.413

Table 4.19.2 presents the mean and standard deviation scores of a number of conversations about educational plans, problems, or progress with academic advisors and faculty members per year. Cambodian students have spent 4.03 times per year.

Table 4.19.2
A number of conversations about educational plans, problems, or progress with the following people

University	Mean	*N*	*SD*
Academic advisor/Class supervisor	3.76	374	5.773
Faculty Member	4.31	374	6.351
Total	4.03	374	4.041

Table 4.19.3 presents the mean and standard deviation scores of a number of conversations about research/assignment this academic year. Cambodian students spent 6.28 times per year.

Table 4.19.3
A number of conversations about research/assignment this academic year

University	Mean	*N*	*SD*
University A	7.10	141	8.532
University B	5.48	119	5.706
University C	5.92	114	6.301
Total	6.28	374	7.118

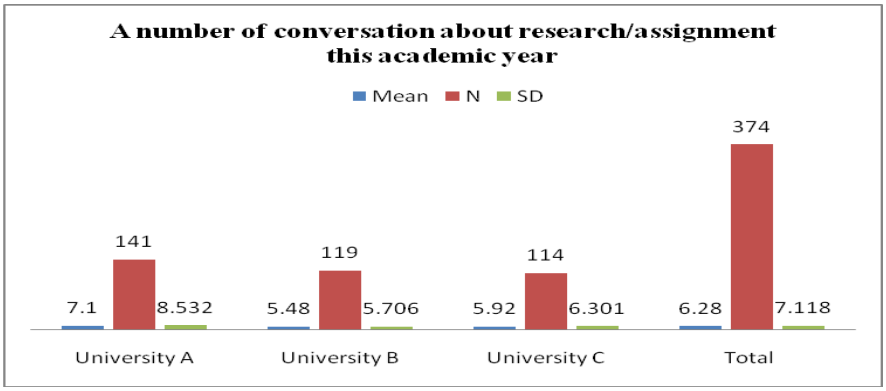

Figure 4.7 *A number of conversations about research/assignment this academic year*

Table 4.19.4 presents the mean and standard deviation scores of a number of times talked with a career advisor this academic year. Cambodian students have spent a number of 2, 60 times talking with a career advisor each year.

Table 4.19.4
A number of times talked with a career advisor this academic year

University	Mean	*N*	*SD*
University A	4.27	141	6.399
University B	3.64	119	5.897
University C	2.60	114	2.488
Total	3.61	374	5.407

Table 4.19.5 presents the mean and standard deviation scores of a number of friends who students know currently attend their university. Cambodian students have about 6, 75 friends within their studies at university.

Table 4.19.5
A number of friends who students know currently attend their university

University	Mean	*N*	*SD*
University A	6.74	141	7.366
University B	6.76	119	6.771
University C	6.74	114	5.360
Total	6.75	374	6.578

4.5.3 Research Question 3

RQ 3: Are there institutional factors significantly influence students' intellectual developments in Cambodian public universities?

4.5.3.1 Data Analysis

This study employed PLS-SEM to analyze the data based on structural equation modelling techniques recommended by Genfen & Straub (2005). There were two reasons to apply this statistical analysis. First, PLS-SEM has more potential compared to CB-SEM with not so many assumptions to be followed, and most importantly; fewer indicators can be conducted. PLS-SEM required less demand on the underlying data distribution and sample sizes; it was also applied with both reflective and formative indicator analyses (Chin, 1998 b; Chin & Newsted, 1999). For CB-SEM, sample sizes are required based on these criteria: 100 =poor, 200=fair, 300=good, 500=very good, and 1000 or more= excellent suggested by Comrey & Lee (1992).

Second, PLS analysis is now commonly used in conducting social science research and provides a significant way of analyzing survey data (Chin, 1998a; Chin, Marcoline, & Newsted, 2003; Genfen & Straub, 2005; Genfen, 2000). This study employed the reflective measurement model only because there were not items appropriate for formative measurement. In order to analyze the psychometric properties of the reflective measurement, researchers assessed the reliability and validity in order to achieve their consistency. There are three types of validity including the construct, convergent, and discriminant validity. Researchers also assessed the structural model for hypothesis testing. There are three types of this

testing such as path coefficients in term of direct effects (β); coefficient of determination (R^2), and the global measure of global goodness of fit.

The parameter estimates of the research model based on the PLS analysis are illustrated in Figure 4.8, and summarized in the parameter estimates of the measurement model in Table 4. 24. Table 4.20 gives the descriptive statistics for each variable. The high mean scores for each variable shows that the respondents have perceived high values. The small value of Standard Deviation reflects the small deviation of the mean score from the actual score. This shows that the data is good to proceed with hypothetical analysis.

Table 4.20:

Descriptive statistics for each variable (N=374)

Latent Variable	Number of Items	Likert Scale	Mean	SD
CUR	9	1-5	3.87	0.829
TEA	15	1-5	3.84	0.746
EVA	10	1-5	3.83	0.777
FAC	10	1-5	3.74	0.829
SSS	6	1-5	3.49	0.916
AID	8	1-5	3.92	0.704

4.5.3.2 Reliability Analysis

Reliability is the extent of how reliable is the measurement model consistently in measuring intended latent variables. The Cronbach's Alpha is employed to access the inter item consistency of the measured variables. Table 4. 22 shows that all alpha values are above 0.60 and regarded as satisfactory as suggested

by Nunally & Bernstein (1994). Composite reliability values from 0.78 to 0.86 are considered as significant as recommended by Gefen (2000) whereas values beyond 0.60 indicate a lack of reliability. However, composite reliability values of 0.60 to 0.70 are considered acceptable in exploratory research (Fornell & Larcker, 1981). Thus, the results provided support to conclude that the measurements for each latent variable were reliable.

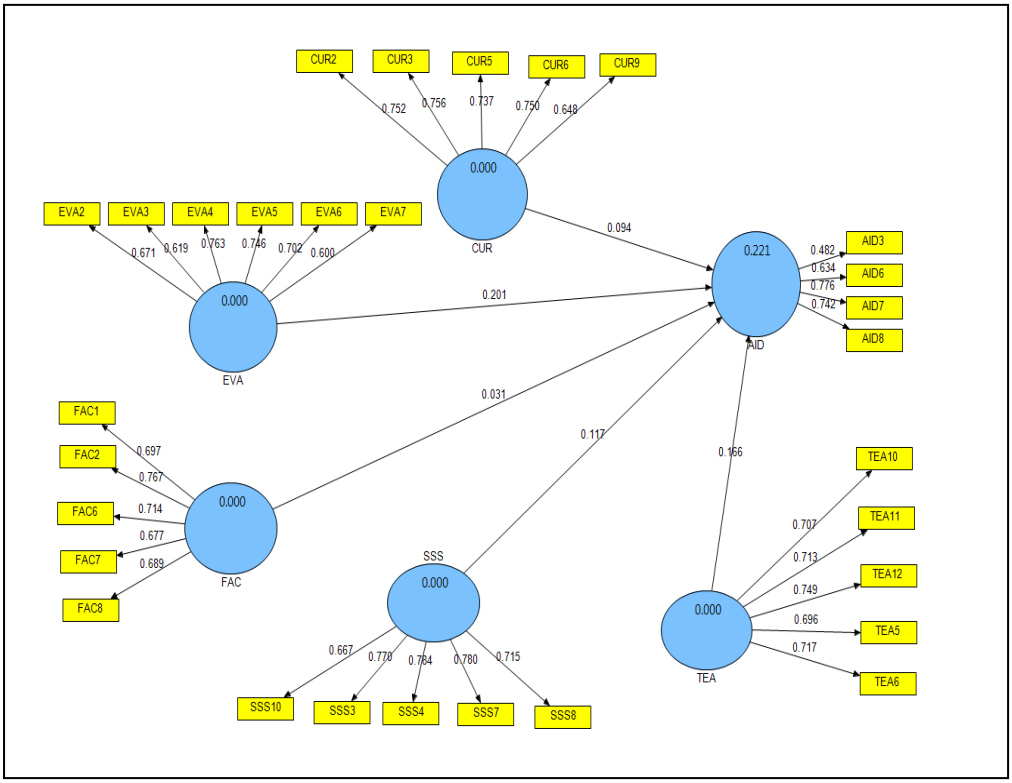

Figure 4. 8 Result of partial least squares analysis

4.5.3.3 Construct Validity

According to Sekaran & Bougie (2010), construct validity testifies to how well the results obtained from the use of the measure fit the theories supporting the constructs of interest. Construct validity can be examined through convergent and discriminant validity.

Table 4.21

Loadings and cross loadings

	Intellectual Development	Curriculum	Evaluation	Facilities	Student Support	Teacher
AID6	**0.641**	0.164	0.201	0.248	0.236	0.222
AID7	**0.800**	0.283	0.324	0.230	0.274	0.337
AID8	**0.766**	0.235	0.328	0.211	0.217	0.282
CUR2	0.195	**0.746**	0.337	0.335	0.221	0.376
CUR3	0.193	**0.750**	0.327	0.308	0.257	0.380
CUR5	0.263	**0.740**	0.372	0.381	0.241	0.368
CUR6	0.288	**0.758**	0.289	0.339	0.279	0.374
CUR9	0.163	**0.644**	0.322	0.312	0.172	0.436
EVA2	0.229	0.336	**0.670**	0.398	0.237	0.408
EVA4	0.313	0.263	**0.773**	0.342	0.253	0.418
EVA5	0.310	0.391	**0.778**	0.386	0.333	0.475
EVA6	0.304	0.353	**0.750**	0.351	0.255	0.404
FAC1	0.180	0.382	0.405	**0.682**	0.296	0.338
FAC2	0.198	0.341	0.401	**0.765**	0.380	0.321
FAC6	0.237	0.310	0.331	**0.721**	0.276	0.363
FAC7	0.226	0.301	0.302	**0.674**	0.347	0.211
FAC8	0.232	0.317	0.320	**0.699**	0.444	0.342
SSS10	0.215	0.321	0.279	0.354	**0.671**	0.287
SSS3	0.221	0.261	0.263	0.407	**0.765**	0.262
SSS4	0.238	0.217	0.186	0.352	**0.786**	0.199
SSS7	0.298	0.178	0.302	0.334	**0.789**	0.226
SSS8	0.232	0.270	0.318	0.408	**0.702**	0.359
TEA10	0.224	0.397	0.394	0.313	0.258	**0.703**
TEA11	0.306	0.289	0.432	0.288	0.222	**0.711**
TEA12	0.353	0.388	0.443	0.349	0.274	**0.759**
TEA5	0.223	0.378	0.355	0.262	0.221	**0.697**
TEA6	0.226	0.451	0.407	0.381	0.298	**0.708**

Bold valued are loadings for items which are above the recommended value of 0.5

Table 4.22

Results of the measurement model

Latent Variable	Manifest variable	Loading	CA	CR	*t* value	AVE
AID	AID6	0.641	0.65	0.78	7.63***	0.55
	AID7	0.800			18.91***	
	AID8	0.766			13.82***	
CUR	CUR2	0.746	0.78	0.85	10.56***	0.53
	CUR3	0.750			11.50***	
	CUR5	0.740			12.60***	
	CUR6	0.758			15.72***	
	CUR9	0.644			10.27***	
EVA	EVA2	0.670	0.73	0.83	8.98***	0.55
	EVA4	0.773			18.49***	
	EVA5	0.778			17.63***	
	EVA6	0.750			12.22***	
FAC	FAC1	0.682	0.75	0.83	8.82***	0.50
	FAC2	0.765			14.69***	
	FAC6	0.721			12.48***	
	FAC7	0.674			9.73***	
	FAC8	0.699			11.38***	
SSS	SSS10	0.671	0.80	0.86	9.75***	0.55
	SSS3	0.765			14.94***	
	SSS4	0.786			15.67***	
	SSS7	0.789			16.31***	
	SSS8	0.702			10.26***	
TEA	TEA10	0.703	0.77	0.84	9.36***	0.51
	TEA11	0.711			15.69***	
	TEA12	0.759			17.61***	
	TEA5	0.697			12.55***	
	TEA6	0.708			10.87***	

CA represents Crobach's Alpha (α). CR represents composite reliability. CR= (square of the summation of the factor loadings)/ {(square of the summation of the factor loadings) + (square of the summation of the error variances)}

AVE represents the average variance extracted. AVE= (summation of the square of the factor loadings)/ {(summation of the square of the factor loadings) + (summation of the error variances)}

Parentheses represent the parameter estimates before items deleted. Parameter estimates after item deleted (in bold). *p<.10 (t-value>1.64); **p<.05 (t-value>1.96); *** p<. 01 (t-value>2.58)

4.5.3.4 Convergent Validity

Convergent validity is the extent of the degree in which multiple items to measure the same concept are in agreement. For convergent validity, researchers examined the average variance extracted (AVE), and Composite Reliability (CR). Standardized loadings indicate the strength of the relationship between the construct and its indicators. AVE measures the amount of variance captured by the indicators relative to the measurement error.

AVE value of 0.50 and higher indicates a sufficient degree of convergent validity (Fornell & Larcker, 1981); it means that a latent construct, share more variance with assigned indicators than with other latent variables in the structural model. Table 4.22 shows that AVE has the range of 0.51 to 0.55. These values were greater than the cutoff value of 0.5 recommended by Fornell & Larcker (1981); Bagozzi & Yi (1988).

Composite reliability (CR) measures the internal consistency reliability; it is based on standardized factor loadings and error variances (Raykov, 1997). Table 4.23 shows composite reliability has the range of 0.71 to 0.74; these values were higher than 0.708 suggested by Hair, Hult, Ringle, & Sarstedt (2014).

In short, CUR, EVL, FAC, SSS, TEA, and AID were validly measured by their respective manifest variables based on the parameter estimates and statistical significance.

4.5.3.5 Discriminant Validity

The discriminant validity of the measurement refers to the degree to which items differentiate among constructs. For discriminant validity, researchers employed two measures to assess it such as the square root of AVE and the correlation of latent constructs.

$$DV = \sqrt{AVE}$$

According to Afthanorthan (2013), the correlation value for each construct should be lower than the square root of AVE in order to obtain the validity of measurement model. Fornell & Larcker (1981) indicated that the items should load highly on their respective construct. In addition, the average variance shares between each construct and its measures should be greater than the variance shared between the construct. Table V shows that square roots of AVE are greater than the correlation values either across rows or across columns. The results indicated that the discriminant validity was warranted. In conclusion, the structural model exhibited adequate convergent and discriminant validity.

Table 4.23

Discriminant Validity of the measurement model

Latent Variable	AID	CUR	EVA	FAC	SSS	TEA
AID	**0.74**					
CUR	0.31	**0.72**				
EVA	0.39	0.44	**0.74**			
FAC	0.30	0.46	0.49	**0.71**		
SSS	0.32	0.32	0.36	0.49	**0.74**	
TEA	0.38	0.52	0.57	0.44	0.35	**0.71**

Diagonals *(in bold)* represent the square root of AVE while the other entries represent the squared correlation

5.4.3.6 Path Coefficient

In this study, researchers examined the structural model: the direct effect of CUR, EVL, FAC, SSS, and TEA, on AID. A path coefficient magnitude indicates the strength of the relationship between three latent variables. Urbach & Ahlemann (2010) argue that the path coefficient should exceed 0.1 to account for a certain impact within the model. Details about direct effects are presented in Table 4.24.

Table 4. 24 shows that CUR has not influence on AID (β=0.078, p<0.65). In fact, the relationship between EVA and AID was considerably strong based on the beta value. SSS was found to have a positive and significant direct effect on AID (β=0.163, p<0.10), and TEA was found to have an influential predictor with positive and significant direct effect on AID (β=0.168, p<0.10). In sum, the result provided support for H2, H4 and H5. In contrast, FAC was not a significant predictor of AID (β=0.021, p<0.54). Therefore, H3 was not supported.

Table 4.24

Summary of path coefficients and hypothesis testing

Hypothesis	Relationship	Beta	SE	t-value	Decision
H1	CUR -> AID	0.078	0.077	1.013	Not Supported
H2	EVA -> AID	0.191	0.086	2.215**	Supported
H3	FAC -> AID	0.021	0.085	0.250	Not Supported
H4	SSS -> AID	0.163	0.083	1.953*	Supported
H5	TEA -> AID	0.168	0.090	1.862*	Supported

Beta=regression weight. SE=standard error. The *t* –values were obtained through using a bootstrapping algorithm with 1200 cases and 500 samples.

*p<.10; **p<.05; *** p<.01

Table 4. 25

Summary of hypothesis statement and decision

	Hypothesis statement	Decision
H1	Curriculum syllabus would significantly influence students' academic and intellectual developments.	Not Supported
H2	Evaluation & examination would significantly influence students' academic and intellectual developments.	Supported
H3	Facilities would significantly influence students' academic and intellectual developments.	Not Supported
H4	Student support services would significantly influence students' academic and intellectual developments.	Supported
H5	Teacher teaching would significantly influence students' academic and intellectual developments.	Supported

5.4.3.7 Coefficient of determination (R^2)

In PLS, a structural model can be evaluated using the coefficient of determination (R^2), and path coefficients. The first important criterion for assessing

the PLS structural model is to evaluate each endogenous latent variable's coefficient of determination (R^2). R^2 measures the relationship of the latent variable's explained variance to its total variance; a value of R^2 around 0.67 is considered substantial; values around 0.330 are average and values of 0.190 and lower and considered weak Chin (1998). Figure 1 shows CUR, EVL, FAC, SSS, and TEA explain approximately 22% of the variance in AID (R^2=0.224). Therefore, the value of 0.224 was greater than the cutoff value of 0.190, and it was considered as average.

5.4.3.8 Global Goodness of Fit

Goodness of Fit (GoF) is a single measure to evaluate the PLS modelling result and is defined as the geometric mean of the average commonality and average R^2 values for endogenous variables (Tenenhaus, Vinzi, Chateline, & Lauro, 2005; Shintaro, 2012). GoF is employed to determine the overall predictive power of the model by accounting for the performance of both measurement and structural parameters (Chin, 2010). This study obtained a GoF value of 0.39 that exceeded the cutoff value of 0.36 for large effect size of R^2 (Wetzels, Schroder, & Oppen, 2009) using the following formulate:

$$GoF = \sqrt{\overline{AVE}} \times \sqrt{\overline{R^2}}$$

The result indicated that the overall model has excellent explanatory power in comparison to the baseline values (GoF_{small}=0.10, GoF_{medium}=0.25, GoF_{large}=0.36). The GoF value further provides adequate support to validate the research model globally.

4.5.4 Research Question 4

RQ 4: Are there institutional integrations significantly influence students' intellectual developments in Cambodian public universities?

4.5.4.1 Data Analysis

This study employed the reflective measurement model only because there were not items appropriate for formative measurement. In order to analyze the psychometric properties of the reflective measurement, researchers assessed the reliability and validity in order to achieve their consistency. There are three types of validity including the construct, convergent, and discriminant validity. Researchers also assessed the structural model for hypothesis testing. There are three types of this testing such as path coefficients in term of direct effects (β); coefficient of determination (R^2), and the global measure of global goodness of fit.

The parameter estimates of the research model based on the PLS analysis are illustrated in Figure 4.9, and summarized in the parameter estimates of the measurement model in Table 4.30 Table 4.26 gives the descriptive statistics for each variable. The high mean scores for each variable shows that the respondents have perceived high values. The small value of Standard Deviation reflects the small deviation of the mean score from the actual score. This shows that the data is good to proceed with hypothetical analysis.

Table 4.26

Descriptive statistics for each variable (N=374)

Latent Variable	Number of Items	Likert Scale	Mean	SD
PGI	10	1-5	3.79	0.880
FSI	5	1-5	3.68	0.847
FCS	5	1-5	3.77	0.756
IGC	6	1-5	4.10	0.713
AID	8	1-5	3.92	0.704

4.5.4.2 Reliability Analysis

Reliability is the extent of how reliable is the measurement model consistently in measuring intended latent variables. The Cronbach's Alpha is employed to access the inter item consistency of the measured variables. Table IV shows that all alpha values are above 0.60 and regarded as satisfactory as suggested by Nunally & Bernstein (1994). Composite reliability values from 0.80 to 0.88 are considered as significant as recommended by Gefen (2000) whereas values beyond 0.60 indicate a lack of reliability. However, composite reliability values of 0.60 to 0.70 are considered acceptable in exploratory research (Fornell & Larcker, 1981). Thus, the results provided support to conclude that the measurements for each latent variable were reliable.

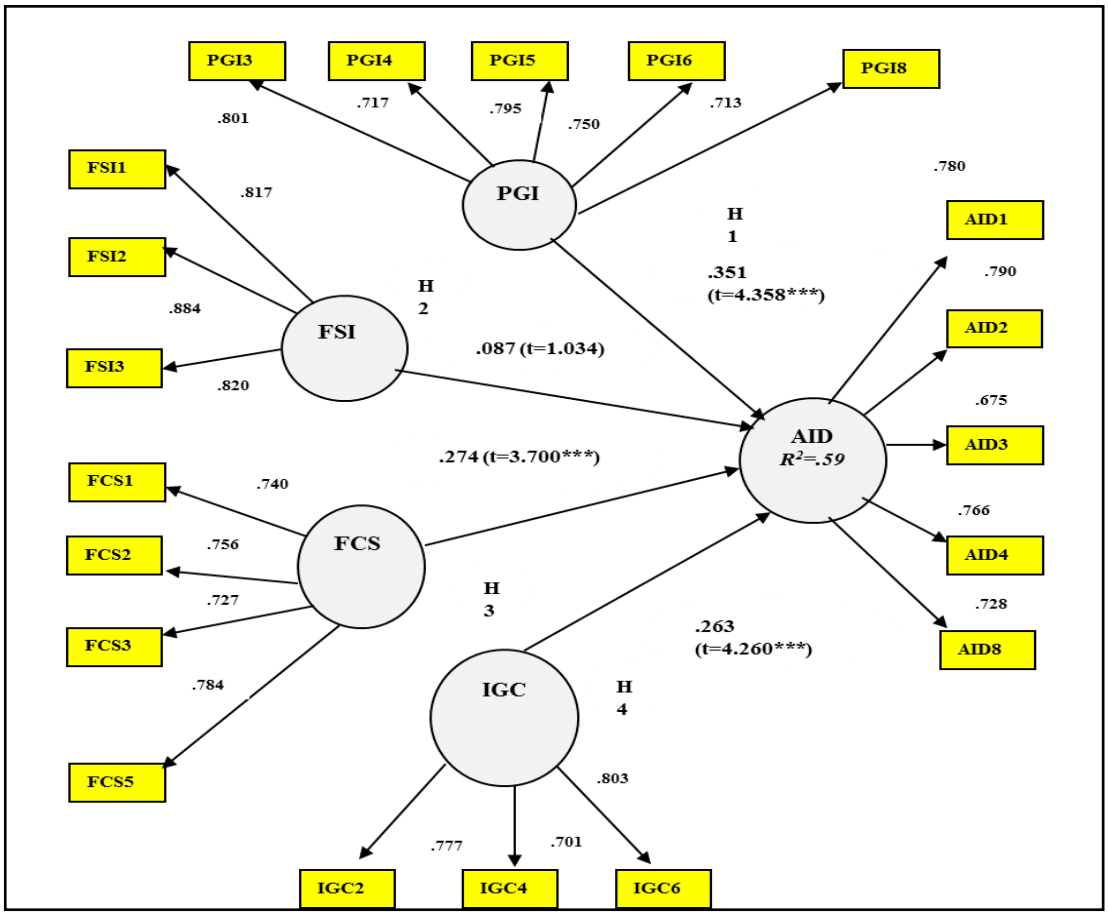

Figure 4. 9 Result of partial least squares analysis

4.5.4.3 Construct Validity

According to Sekaran & Bougie (2010), construct validity testifies to how well the results obtained from the use of the measure fit the theories supporting the constructs of interest. Construct validity can be examined through convergent and discriminant validity.

Table 4.27

Loadings and cross loadings

	Academic and Intellectual Development	Faculty Concern for Student Development	Faculty – Student Interaction	Institutional and Goal Commitment	Peer-Group Interaction
AID1	**0.780**	0.456	0.536	0.438	0.584
AID2	**0.790**	0.506	0.368	0.344	0.512
AID3	**0.675**	0.402	0.309	0.416	0.506
AID4	**0.766**	0.523	0.451	0.402	0.436
AID8	**0.728**	0.541	0.525	0.521	0.556
FCS1	0.473	**0.745**	0.521	0.270	0.472
FCS2	0.502	**0.756**	0.537	0.375	0.466
FCS3	0.402	**0.727**	0.452	0.227	0.435
FCS5	0.564	**0.784**	0.461	0.309	0.486
FSI1	0.432	0.482	**0.817**	0.366	0.493
FSI2	0.557	0.615	**0.884**	0.312	0.521
FSI3	0.496	0.537	**0.820**	0.386	0.553
IGC2	0.499	0.367	0.439	**0.777**	0.480
IGC4	0.390	0.282	0.229	**0.701**	0.254
IGC6	0.403	0.242	0.256	**0.803**	0.303
PGI3	0.574	0.424	0.488	0.295	**0.801**
PGI4	0.487	0.474	0.393	0.386	**0.717**
PGI5	0.525	0.507	0.546	0.334	**0.795**
PGI6	0.574	0.467	0.478	0.427	**0.750**
PGI8	0.460	0.476	0.437	0.329	**0.713**

Bold valued are loadings for items which are above the recommended value of 0.5.

Table 4.28

Results of the measurement model

Latent variable	Manifest variable	Loading	CA	CR	*t* value	AVE
PGI	PGI1	(0.681)	(0.84)0.80	(0.86)0.87	(9.13)	(0.55) 0.57
	PGI2	(0.642)			(6.30)	
	PGI3	0.801			20.60***	
	PGI4	0.717			9.43***	
	PGI5	0.795			19.40***	
	PGI6	0.750			(10.23)	
	PGI7	(0.499)			(3.76)	
	PGI8	0.713			18.65***	
	PGI9	(0.672)			(8.13)	
	PGI10	(0.642)			(8.54)	
FSI	FSI1	0.817	(0.70)0.75	(0.81)0.88	21.59***	(0.66) 0.71
	FSI2	0.988			47.39***	
	FSI3	0.820			22.04***	
	FSI4	(0.658)			(8.45)	
	FSI5	(0.542)			(3.18)	
FCS	FCS1	0.745	(0.74) 0.79	(0.83) 0.84	11.57***	(0.59) 0.57
	FCS2	0.756			15.16***	
	FCS3	0.727			10.69***	
	FCS4	(0.685)			(11.13)	
	FCS5	0.784			20.54***	
IGC	IGC1	(0.400)	(0.60)0.74	(0.85) 0.80	8.42***	(0.54) 0.58
	IGC2	0.777			14.02***	

	IGC3	(0.626)			4.65	
	IGC4	0.701			9.42	
	IGC5	(0.556)			5.72	
	IGC6	0.803			13.48***	
AID	AID1	0.780	(0.81)0.81	(0.86) 0.86	16.77***	(0.54) 0.56
	AID2	0.790			15.17***	
	AID3	0.675			9.14***	
	AID4	0.766			18.45***	
	AID5	(0.637)			8.40	
	AID6	(0.628)			11.02	
	AID7	(0.617)			6.17	
	AID8	0.728			13.81***	

CA represents Crobach's Alpha (α). CR represents composite reliability. CR= (square of the summation of the factor loadings)/ {(square of the summation of the factor loadings) + (square of the summation of the error variances)}

AVE represents average variance extracted. AVE= (summation of the square of the factor loadings)/ {(summation of the square of the factor loadings) + (summation of the error variances)}

Parentheses represent the parameter estimates before items deleted. Parameter estimates after item deleted (in bold). *p<.10 (t-value>1.64); **p<.05 (t-value>1.96); *** p<.01 (t-value>2.58)

4.5.4.4 Convergent Validity

Convergent validity is the extent of the degree in which multiple items to measure the same concept are in agreement. For convergent validity, researchers examined the average variance extracted (AVE), and Composite Reliability (CR). Standardized loadings indicate the strength of the relationship between the construct

and its indicators. AVE measures the amount of variance captured by the indicators relative to the measurement error.

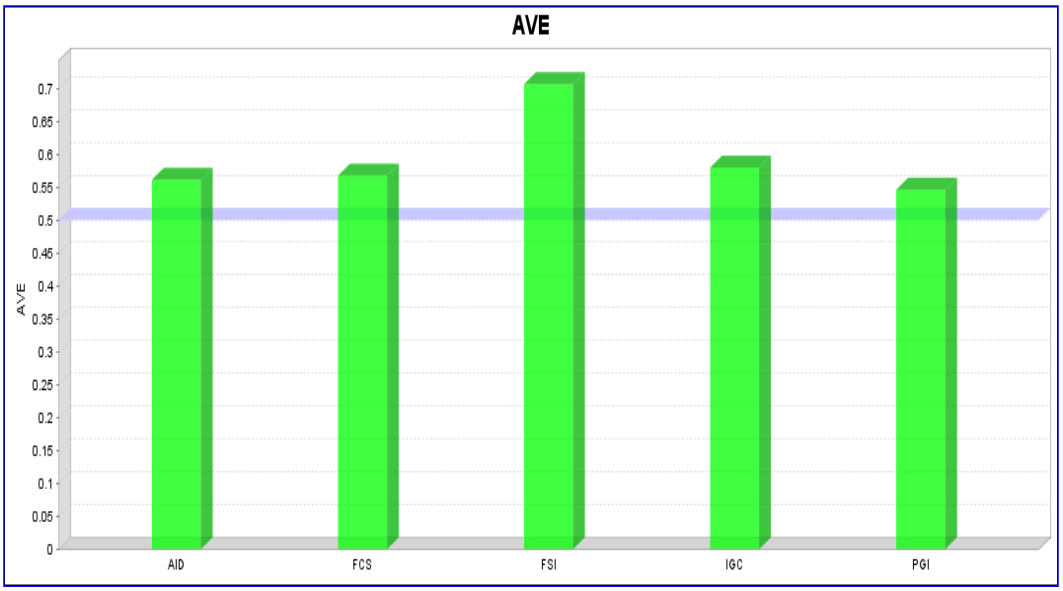

Figure 4. 10 The cutoff value of the average variance extracted (AVE)

AVE value of 0.50 and higher indicates a sufficient degree of convergent validity (Fornell & Larcker, 1981); it means that a latent construct, share more variance with assigned indicators than with other latent variables in the structural model. Figure 4.10 shows that AVE has the range of 0.56 to 0.71. These values were greater than the cutoff value of 0.5 recommended by Fornell & Larcker (1981); Bagozzi & Yi (1988).

Composite reliability (CR) measures the internal consistency reliability; it is based on standardized factor loadings and error variances (Raykov, 1997). Figure 4.11 shows composite reliability has the range of 0.80 to 0.88; these values were higher than 0.708 suggested by Hair, Hult, Ringle, & Sarstedt (2014).

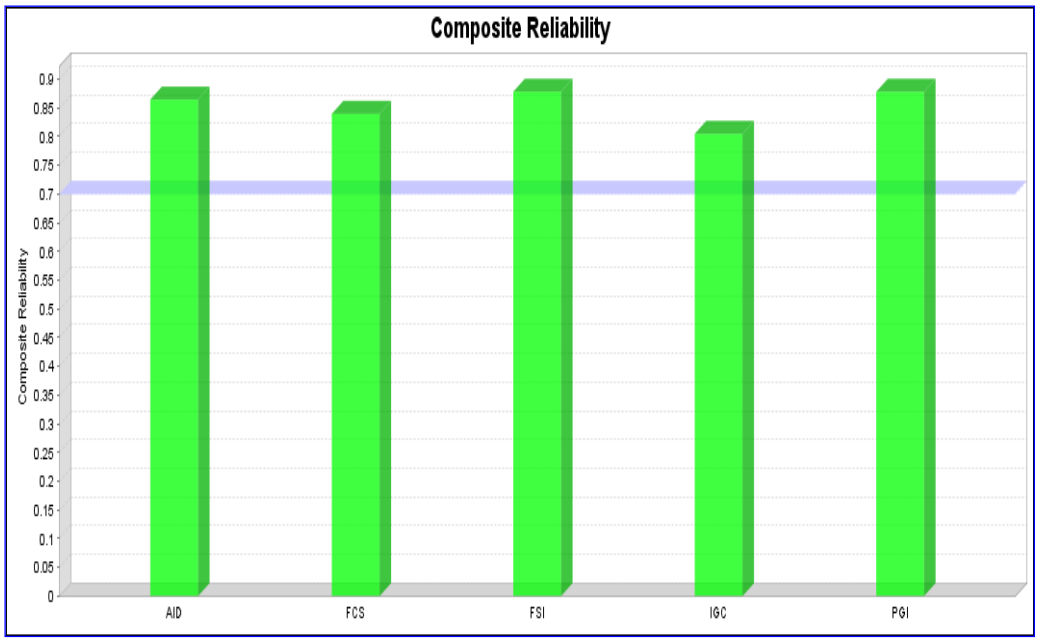

Figure 4.11 Cutoff value of composite reliability

In short, PGI, FSI, IGC, and AID were validly measured by their respective manifest variables based on the parameter estimates and statistical significance.

4.5.4.5 Discriminant Validity

The discriminant validity of the measurement refers to the degree to which items differentiate among constructs. For discriminant validity, researchers employed

$$DV = \sqrt{AVE}$$

two measures to assess it such as the square root of AVE and the correlation of latent constructs.

According to Afthanorthan (2013), the correlation value for each construct should be lower than the square root of AVE in order to obtain the validity of measurement model. Fornell & Larcker (1981) indicated that the items should load

highly on their respective construct. In addition, the average variance shares between each construct and its measures should be greater than the variance shared between the construct. Table 4.28 shows that square roots of AVE are greater than the correlation values either across rows or across columns. The results indicated that the discriminant validity was warranted. In conclusion, the structural model exhibited adequate convergent and discriminant validity.

Table 4.29

Discriminant Validity of the measurement model

Latent Variable	AID	FCS	FSI	IGC	PGI
AID	**0.75**				
FCS	0.65	**0.75**			
FSI	0.59	0.65	**0.84**		
IGC	0.57	0.40	0.42	**0.76**	
PGI	0.70	0.62	0.62	0.47	**0.57**

Diagonals *(in bold)* represent the square root of AVE while the other entries represent the squared correlation

4.5.4.6 Path Coefficient

In this study, researchers examined the structural model: the direct effect of PGI, FSI, FCS, and IGI on AID. A path coefficient's magnitude indicates the strength of the relationship between three latent variables. Urbach & Ahlemann (2010) argue that the path coefficient should exceed 0.1 to account for a certain impact within the model. Details about direct effects are presented in Table 4.29.

Table 4.30 shows that PGI has positive and direct effect on AID (β=0.351, p<0.01). In fact, the relationship between PGI and AID was considerably strong based on the beta value. FCS was found to have a positive and significant direct effect on AID (β=0.274, p<0.01), and IGC was found to have an influential predictor with positive and significant direct effect on AID (β=0.263, p<0.01). In sum, the result provided support for H6, H8 and H9. In contrast, FSI was not a significant predictor of AID (β=0.087, p<0.54). Therefore, H7 was not supported.

Table 4.30

Summary of path coefficients and hypothesis testing

Hypothesis	Relationship	Beta	SE	*t* -value	Decision
H 6	PGI → AID	0.351	0.081	4.358***	Supported
H 7	FSI → AID	0.087	0.084	1.034 (ns)	Not Supported
H 8	FCS → AID	0.274	0.074	3.700***	Supported
H 9	IGC → AID	0.263	0.062	4.260***	Supported

Beta=regression weight. SE=standard error. The *t* –values were obtained through using a bootstrapping algorithm with 1200 cases and 500 samples. *p<.10; **p<.05; *** p<.01

Table 4.31

Summary of hypothesis statement and decision

	Hypothesis statement	Decision
H6	Peer-group interaction would significantly influence students' academic and intellectual developments.	Supported
H7	Faculty Interaction would significantly influence students' academic and intellectual developments.	Not Supported
H8	Faculty concern for student development would significantly influence students' academic and intellectual developments.	Supported
H9	Institutional and goal commitments would significantly influence students' academic and intellectual developments.	Supported

4.5.4.7 Coefficient of determination (R^2)

In PLS, a structural model can be evaluated using the coefficient of determination (R^2), and path coefficients. The first important criterion for assessing the PLS structural model is to evaluate each endogenous latent variable's coefficient of determination (R^2). R^2 measures the relationship of the latent variable's explained variance to its total variance; a value of R^2 around 0.670 is considered substantial; values around 0.330 are average and values of 0.190 and lower and considered weak Chin (1998). Figure III shows that PGI, FSI, FCS, and IGC explain approximately 59% of the variance in AID (R^2=0.590). Therefore, the value of 0.590 was greater than the cutoff value of 0.190, and it was considered as substantial.

4.5.4 .8 Global Goodness of Fit

Goodness of Fit (GoF) is a single measure to evaluate the PLS modeling result and is defined as the geometric mean of the average communality and average

R^2 values for endogenous variables (Tenenhaus, Vinzi, Chateline, & Lauro, 2005; Shintaro, 2012). GoF is employed to determine the overall predictive power of the model by accounting for the performance of both measurement and structural parameters (Chin, 2010). This study obtained a **GoF value of 0.52** that exceeded the cutoff value of 0.36 for large effect size of R^2 (Wetzels, Schroder, & Oppen, 2009) using the following formulate:

$$GoF = \sqrt{\overline{AVE}} \times \sqrt{\overline{R^2}}$$

The result indicated that the overall model has excellent explanatory power in comparison to the baseline values (GoF_{small}=0.10, GoF_{medium}=0.25, GoF_{large}=0.36). The Goodness of Fit value further provides adequate support to validate the research model globally.

4.6 Summary of the Chapter

The summary of results of the analysis is shown in Table 4. 31

Table 4.3

Summarized Results of the Analysis

Nº	**Research Questions**	**Results**
RQ1	What are the students' perception of the institutional factors and institutional integrations for students' academic and intellectual developments in Cambodian public universities?	Students have perceived positively on institutional factors and institutional integrations that could be influenced on their academic and intellectual developments in Cambodian public universities.
RQ1.1	What are the students' views on the institutional factors for students' academic	

	and intellectual developments in Cambodian public universities?	
RQ1.2	What are the students' views on institutional integration for students' academic and intellectual developments in Cambodian public universities?	
RQ 2	How many times and hours that a student is involved in their academic and social activities in Cambodian public universities?	The findings shown that Cambodian students were less involved in their academic and social activities. They spent approximately 6, 87 hours per week for doing assignment at home. They went to library only 5, 19 times per month.
RQ3	Are institutional factors influence students' intellectual developments in Cambodian public universities?	Five independent variables have significantly explained about 22% (R^2=0.224) of variance in a dependent variable. Hyphothesis testings shown results as bellow: **H1** was not supported **H2** was supported **H 3** was not supported **H 4** was supported **H 5** was supported

RQ4	Are there institutional integrations influence students' intellectual developments in Cambodian public universities?	Four independent variables have significantly explained about 59% (R^2=0.59) of variance in a dependent variable. Hyphothesis testings shown results as bellow: **H6** was supported **H7** was not supported **H8** was supported **H9** was supported

CHAPTER 5

DISCUSSION, IMPLICATIONS, AND RECOMMEDATIONS

5.1 Introduction

This chapter reviews the summary of the study and discusses the findings in line with existing studies and theories. It also discusses the implication of this study and recommendations. The discussions on the findings are organized into five main sections. The first section discusses the students' characteristics, socioeconomic status, prior college schooling, and motivation in Cambodian public universities. In the second section, the discussions of the findings are presented. These include (1) the students' view on institutional factors and (2) the students' view on institutional integrations. The third section discusses the level of students' involvement in academic and social activities in Cambodian public universities. The fourth section discusses the relationships between institutional factors and students' academic and intellectual developments in Cambodian public universities. The last section discusses the relationships between institutional integration factors and students' academic and intellectual development. Recommendations for further research will be established in this chapter.

5.2 Summary of Major Findings from Research Question One to Four

The results of the statistical data analysis have provided answers to the stated research questions and have supported the study's hypotheses. The findings are summarized below:

5.2.1 *Findings Related to Students' perception of the institutional factors and institutional integration for students' intellectual development in Cambodian public universities*

The students' perceptions are positive toward institutional factors and institutional integrations that are influenced on their academic and intellectual developments in Cambodian public universities. Examination of the five components of institutional factor indicate that Student Support Services were least recognized by students, whereas the Curriculum syllabuses were high frequency and recognized by students. This means that students were not satisfied with support services provided by the university. For example, the question that asked if the university has accommodation or a hostel received a negative response and therefore, most of Cambodian universities have not provided students' hostels or accommodation.

An analysis of the four components of institutional integration revealed that students least frequently agreed with the Faculty Student Interaction, but the Institutional Goal Commitment was a high frequency agreed with by students. It means that students were likely to be afraid or reluctant to interact with faculty members because of cultural aspect and university environment. For example, a common response was "I have developed a close, personal relationship with at least one faculty member."

5.2.2 *Findings Related to Students' Academic and Social Activities in Cambodian Public Universities*

The findings shown that Cambodian students were less involved in their academic and social activities. They spent approximately 7 hours per week for doing assignment at home. They went to the library only 5 times per month. They read textbooks and other books approximately 12 textbooks for their studies and pleasure per year. The finding also show that students spent around 1 to 6 hours per week for participating in academic and social activities such as volunteer services, academic development, compus recreation, and activities. However, students spent around 7 hours per week using social communication such as Facebook, mobile phone, and enjoyable activities that could limit their academic and social activities in their university.

5.2.3 *Findings Related to Institutional Factors Influence Students' Intellectual Development in Cambodian Public Universities*

The finding disclosed that five independent variables have significantly explained 22% (R^2=0. 224) of the variance in a dependent variable. Curriculum did not have an influence on AID (β=0. 078, p<0.65). In fact, the relationship among Evaluation and Examination and AID was significantly strong based on the beta value. Student Support Service was found to have a positive and significant direct effect on AID (β=0. 163, p<0.10), and Teacher Teaching was found to have an influential predictor with positive and significant direct effect on AID (β=0. 168, p<0.10). In summary, the result provided support for H2, H4 and H5. In contrast, Facilities were not a significant predictor of AID (β=0. 021, p<0.54). Therefore, H3 was not supported.

5.2.4 *Findings Related Institutional Integration Influence Students' Intellectual Development in Cambodian Public Universities*

The findings indicated that four independent variables have significantly explained about 59% (R^2=0. 59) of the variance in a dependent variable. Peer Group Interaction has a positive and direct effect on AID (β=0. 351, p<0.01). In fact, the relationship between PGI and AID was significant based on the beta value. FCS was found to have a positive and significant direct effect on AID (β=0. 274, p<0.01), and IGC was found to have an influential predictor with positive and significant direct effect on AID (β=0. 263, p<0.01). In sum, the results contributed support for H6, H8 and H9. In contrast, FSI was not a significant predictor of AID (β=0. 087, p<0.54). Therefore, H7 was not supported.

5.3 Discussion

The study supports students' perceptions of the influence of institutional factors toward academic and intellectual development through using partial least squares (PLS) techniques in testing hypotheses. Existing curriculum syllabi do not influence academic and intellectual development. There are many challenges of academic program and its curriculum in Cambodian university context. This study produced results, which corroborate the findings of a great deal of the previous study conducted by Chet, 2009; Noch, 2009; DRFC, 2010. These findings indicated that the current academic program in Cambodia did not match with the current labor market and the development of knowledge based economy. In addition, the findings

of the present study indicate that creation and implementation of curriculum are inconsistent with that of Lacke and Neill (2011) who state that the standardized curricula shall be evaluated by students and teachers to assure that it adapts to students' needs and experiences.

Furthermore, this study reported that the present state of facilities were not a significant complement to academic and intellectual development. This finding of the current study is consistent with those of Pit and Ford (2004); Ros (2010); Vann (2012) who found that most of Cambodian universities lack academic and non - academic facilities such as libraries, textbooks, academic journals, research facility, classrooms, working office for faculty members, canteens, and hostels. In contrast to the results of the present study, Belanger and Jordan (2000) stated that reliable facilities and equipment must be accessible to students; the lack of these can affect their learning environment.

The study endorses students' perception of the influence of institutional integrations on academic and intellectual development through using partial least square (PLS) techniques in testing hypotheses. The paper also examines the effectiveness of a measurement model through assessing the validity and reliability of the measures. The findings support convergent and discriminant reliability as acceptable. Both the Cronbach alpha values and composite reliability were satisfactory with cutoff value criteria stipulated by other establishes researchers.

Therefore, the measures in the model were determined to be reliable. Based on the findings of the hypotheses, students,who are satisfied and more active in

social and academic activities, may have a higher perception of their academic and intellectual development. The positive perceptions of peer-group interaction directly influence academic and intellectual developments. The findings of this study revealed that peer-group interaction have a relationship with a dependent variable. This finding is consistent with Tinto's theory (1993) that suggests that students who have better peers tend to improve their own academic performance. It is also consistent with previous research findings from Smith and Griffin (1993); Kuh (1995); Martin (2000); Ammermueller and Pischke (2006); Ding and Lehrer (2006).

However, faculty-student interaction has not significantly influenced academic and intellectual developments in the Cambodian context. This finding is contrasted with previous studies in developing countries that conducted by Konidari and Abernot (2006); McGregor (2007); Reason et al. (2007). The result of FSI suggests that students might have problems with faculty interaction because of cultural sensitivities and the educational system. Like other Asian students, Cambodian students seem to be afraid and therefore inactive when trying to communicate with faculty. The study showed low levels of class participation (Pit and Ford 2004; Chen et al. 2007; Heng 2014). Pit and Ford (2004) asserted that Cambodian students rarely ask questions to their teachers during the teaching hours. These negative attitudes may be a barrier of interaction with the faculty.

A recent research study in Thailand by Kerdpon D. (2009), reported that Thai students faced problems in communicating with faculty. For example, one student shared his interaction in class with an intimidating faculty member saying "I am afraid to ask questions. When the faculty member asks, 'Do you understand?' I

don't feel comfortable responding candidly. I will say "I do understand' even if I don't." In a study carried out by Thang, Azarina (2007) it was found that the majority of Malaysian students in public and private universities have experienced "teacher-centered learning methodology" and students lacked "personal autonomy".

There were "negatively passive participation" in the classroom. These findings are similar with the research results mention that Asian students have a low level of in-class participation (Tani 2005, Dasari 2009). Faculty concern, student development, and teaching directly influence academic and intellectual developments positively. This indicates that faculty support has a direct effect on students' development. This finding is consistent with Tinto's theories (1975, 1993). Institutional and goal commitments directly influence academic and intellectual developments positively. This result is consistent with Tinto's theory (1993). In sum, the four hypothesized relationships were supported by data. In this model, four independent variables were significantly influenced a dependent variable.

5.4 Implications

Based on the findings of the study, implications are implied for the Higher Education Institutions (HEIs), the Education Ministry, students, and policy makers as following:

5.4.1 Theoretical Implication

This study has several important theoretical implications. First, this study provided a better understanding of the theory of student integrations (Tinto, 1975,

1993) by investigating the student retention and departure in universities. Student's (did you mean to change and make this singular?) persistence or departure was measured by the degree of academic integration and social integration of the student. Academic integration reflects satisfaction with academic achievements, such as earning passing grades and academic progress; social integration refers to the component of peer-to-peer interaction, faculty- student interaction, and extracurricular activities. This suggests that the theory can be observed and applied to Cambodian university context. Cambodian Higher Education Institutions should provide academic and social support services in order to promote student retention and academic achievements and encourage students to achieve academic success.

Second, this study also offered a better understanding of the theory of institutional factors or students' learning and living experience that was affected by many factors such as students' background characteristics, the interaction with many actors on campus, and the quality of campus life (Pascarella, 1985). According to Pascarella (1985), students' learning and living experiences include: (1) student background and pre-college characteristics, (2) structural and organizational features of the institution, (3) college or university environment, (4) student interaction with the major socializing agents on campus, and (5) quality of effort by students. These components also indicated that student involvement and college environment has the largest impact on the student's university experiences. Therefore, Cambodian universities should understand the role of the institution to promote university students' learning and living experience as well as students' intellectual development.

Finally, this study also imparted a better understanding of the theory of student involvement (Astin, 1984, 1993, 1999) that contributed to the students' intellectual development in Cambodian context. According to Astin (1984), "student involvement" was "the amount of physical and psychological energy that a student devotes to the academic experience." Therefore, students, who are highly involved in their academic activities, will try their best efforts to study, spend much time on campus, participate actively in student associations or organizations, and interact regularly with their friends, administrators, and faculty members. In order to facilitate student involvement, Cambodian universities must design more effective learning environment policies that support student involvement, and provide non-academic and academic support services in which students can be involved.

5.4.2 Practical Implication

5.4.2.1 Implication for the Higher Education Institutions

This study has important implications for Higher Education Institutions (HEIs); both universities and faculty members. Institutional factors included curriculum syllabus, evaluation and examination policies, facilities, teacher teaching, and students support services play very important roles to improve the quality of students' academic and intellectual development. Since further statistical analysis showed that curriculum and facilities were not significantly influence students' academic and intellectual development. Therefore, universities have to upgrade and update their curriculum syllabus and academic program to match with students' qualification, the social needs, and current labor market. In addition, universities

have to equip academic and non-academic facilities in order to provide access to a better learning environment.

Conversely, the results of the study show the important influence of social and academic integrations on the students' academic and intellectual development. Faculty members must be aware that they have a primary responsibility to interact with students and to help them to achieve their academic endeavors and development. In such matters, faculty members and universities have to initiate many social and academic programs, including curricular and extra-curricular activities in order to allow students to have opportunities to develop their interactions. This research also has important implications for policy and practices on both the institutional and student levels.

Furthermore, Cambodian universities need to focus on supporting their faculty members so that the faculty members are able to sacrifice their time and energy for students in both in-class and out-of-class academic activities. Affordable salary and incentive policies should be reformed and offered for university lecturers. Universities need to provide for lecturers' professional development programs and motivation in order to encourage them to transfer their knowledge and create more interactions with students.

Universities also need to focus on providing special courses and programs and socializing opportunities for students. These programs have an influence on the students' academic and intellectual progress. Universities have a moral obligation to help students to reach their personal goal commitments for their academic achievement, prospective employment, and further education It is the responsibility

of the University to prepare students to compete in the world job market as successful citizens.

5.4.2.2 Implication for the Ministry of Education

The findings of the study have implications for the Ministry of Education as follows:

1. The Ministry of Education, Youth, and Sport should review and amend the policy on teacher that was created in 2013 by encouraging and motivating teachers to perform their duties in a professional manners. Teachers should be involved in interacting with students in class and activities outside of class .

2. The Ministry of Education should attend to supervision of the Higher Education Institutions (HEIs) to improve areas of Curriculum Development and to modernize the institutional factors.

3. Since English is the official language of ASEAN and the world, the Ministry of Education should encourage the HEIs to upgrade the curriculum to increase emphasize on new teaching and learning methodology, modernized teaching methods, and student-center/student-engagement classroom methods.

4. Since students involvement were not active in academic and social activities, the Ministry of Education should create programs and initiate educational campaigns to motivate those involved to participate actively inside and outside universities.

5.4.2.3 Implication for Students

Students should sacrifice their time and energy to be more engaged in academic and social activities provided by their universities. Students have to be aware that academic and intellectual endeavors resulted from their hard working, goal commitment, and persistence in both inside and outside the classrooms of academic related activities. Moreover, they have to find possible ways to interact with peer-groups and faculty members or lecturers so that they have opportunities to discuss, to share, and to exchange ideas as well as to increase networking with e others. Most importantly, they should spend become involved in volunteerism activities such as school associations, local community activities, and social works.

5.4.2.4 Implication for Policy Makers

The findings of this study have implications for policy makers to improve the institutional factors and integration as follows:

1. A significant number of high school students exhibited poor English proficiency (17.1%) . Policy makers should establish guidelines to introduce English programs as s compulsory from primary school to high school.

2. Policy makers should attempt to create any policies and regulations to upgrade some institutional factors such as academic program and curriculum, student support service, and facilities for Cambodian universities.

3. Policy makers should restructure the Cambodian Educational System to enhance the quality of education through establishing some policies related to the new curriculum, the introduction of new subjects, revision of the evaluation and

examination, reducing class size (student and teacher ratio), and introduction of extracurricular programs.

5.5 Recommendations

The result of the study indicate that student involvement in academic and social activities, students' perception of institutional factors and integration, and the influence of these factors toward the students' academic and intellectual development. Therefore, the researcher provides some recommendation as follows:

First recommendation, universities in Cambodia should have an induction program in order to guide students to select the majors that match their educational background and attitude with actual needs of the labor market. This study shows that students have selected their disciplines to enroll in the university based on their parents' motivation. It could be a high risk of dropout and unemployment.

Second recommendation, the Royal Government of Cambodia should provide full scholarships for students who receive government's scholarship. Currently, the government offers only tuition fees. According to this research finding, 57.8 % of parent monthly income were less than USD 150, and students' monthly expenditures were USD 102. Financial difficulties might be impacted on students' academic success. In addition, the government should increase the national budgets for higher education in order to upgrade the institutional facilities and teachers' salaries.

Third recommendation, the Ministry of Education should provide enough qualified teachers to work at Cambodian HEIs. Based on this study, students agree that there are not enough teachers for all courses at my university. Such problems

could be impacted on faculty and student interaction. On the other hand, the Ministry of Education should provide a number of academic programs that can make a good relationship between students and students, and students and faculty members.

The last recommendation is for students to spend their time becoming involved in academic and non-academic programs provided by their universities and relevant educational institutions. These activities could expose them to a real working environment rather than book theories in the universities.

5.6 Suggestions for Future Research

The findings of this study establish a starting point for further research in the field of higher education. In addition, this study has several limitations that may provide opportunities for further research.

The following suggestions could be a springboard for future research:

First, this study should be replicated within other public universities in Cambodia in order to examine the generalization of this study results. Therefore, it is suggested that the study should be expanded to other public universities located in urban and provincial areas throughout Cambodia so that the findings can be generalized to public universities in Cambodia.

Second, since this study focuses on only three public universities in Cambodia; future research should focus on a comparative study. For example, future research can focus on a comparative study between private and public universities.

Third, since this study used only a quantitative research method, future research can focus on a mixed method. The qualitative method provides understanding and provides further insight on the variables.

Fourth, since the researcher employed PLS-SEM as a statistic tool of data analysis with medium sample sizes. It is suggested that the Covariance Based Structural Equation Modelling (CM-SEM) should be applied with a larger simple size in order to conduct a confirmatory factor analysis (CFA) in the further research.

Finally, future research should add more stakeholders such as administrators, faculty members, and officers from the Ministry of Education.. Furthermore, future research should focus on other variables such as social support, self-efficacy, learning environment, and facilities that could influence on students' development in the Cambodian context. In short, the findings of this study suggest that further research should be conducted in areas related to academic policy, academic success, institutional factor, and integration.

5.7 Research Contribution

The primary purpose of this study is to investigate institutional factors and integrations that could influence students' academic and intellectual development in Cambodian universities for the sake of finding any potential factors that can contribute to improve the students' learning experiences. Based on the researching findings, institutional factors included curriculum syllabus, teacher teaching, evaluation and examination, facilities, and student support services. Institutional integration factors are academic (faculty concern for student development and

institutional and goal commitment) and social (faculty -student interaction and peer-group interaction) integrations.

Furthermore, this study developed and validated a new scale of institutional factors and adapted a scale of institutional integrations with desirable psychometric properties. Overall, this study contributed to the existing research on institutions and integration factors in the higher education institutions. The result of this study provided evidence of the dimensionally, reliability, and validity of the scale.

5.8 Conclusions

In conclusion, this study provided data about the influence of institutional factors and integrations on students' academic and intellectual development. This study provided useful information for students, faculty members, policy makers, educational administrators and planners, and relevant universities for restructuring their institutional policies and performances in the future. It is suggested that students' academic and intellectual development could be improved through improving curriculum and extra-curricular syllabus, evaluation or assessment policy, facilities, student support services, teacher teaching, peer –group and faculty- student interactions, and through faculty members' attention and responsibility as well as universities and students' goal commitments to achieve their goal of academic excellence. Universities have the responsibility to find ways to improve the interactions or relationships, faculty support, and students' goal commitment or motivations if they want to increase of the rate and quality of students' academic and intellectual development. Future research should focus on other variables such as social support, self-efficacy, learning environment, and facilities that could influence on students' development in the Cambodian context.

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APPENDICES

APPENDIX A

Letter of School of Educational Studies, USM to Cambodian Minister of the Ministry of Education, Youth, and Sports

UNIVERSITI SAINS MALAYSIA

Pusat Pengajian Ilmu Pendidikan
School of Educational Studies

Universiti Sains Malaysia
11800 USM Pulau Pinang
Tel.:(6)04-653 3888 ext.3235/2572,
(6)04-653 3255 (Direct);
Fax.:(6)04-657 2907;
Email : dean_edu@usm.my
Website : education.usm.my

Our Ref: USM/PPIP/PS/P-PD0215/11(R)

Date: 23 December 2013

H.E. Dr. Hang Chuon Naron
Minister of the Ministry of Education, Youth, and Sports
80 Blvd. Preah Norodom, Phnom Penh, Cambodia

Dear H.E. Dr. Hang Chuon Naron,

I am writing to seek your permission to allow Mr. Sam Rany to conduct his doctoral research titled "A Study of the Effects of Institutional Policies on Undergraduate Sudents' Academic Success: The Case of Cambodian Public Universities."

Mr. Sam Rany is a PhD student in the School of Educational Studies at Universiti Sains Malaysia. For his thesis, he plans to conduct research on institutional policies at three Cambodian public universities: the Royal University of Phnom Penh (RUPP), the Royal University of Law and Economics (RULE), and the National University of Management (NUM).

The aim of this research is to explore and understand, from the perspective of key participants in higher education (such as undergraduate students, lecturers and administrators), the institutional policies that contribute to the academic success of students at Cambodian higher education institutions.

Therefore, I am writing a letter to ask your kind cooperation to grant Mr. Sam Rany to conduct his studies at universities under your ministry's supervision.

Your cooperation in this regard will be highly appreciated.

Yours sincerely,

[ASSOC. PROF. DR. HAZRI BIN JAMIL]
Deputy Dean of Research

ASSOC. PROF DR. HAZRI JAMIL
Deputy Dean (Research)
School of Educational Studies
Universiti Sains Malaysia

APPENDIX B

Approval Letter of Research Permission from the Cambodian Ministry of Education

KINGDOM OF CAMBODIA
Nation Religion King

MINISTRY OF EDUCATION, YOUTH AND SPORT
No : ๐๗ MoEYS/Adm

Mr. Sam Rany
Universiti Sains Malaysia
School of Educational Studies
11800 USM, Penang, Malaysia

17 January 2014

Dear Mr. Sam Rany,

With reference to your letter dated 24 December 2013, the Ministry of Education, Youth and Sport grants you permission to conduct the research on "A Study of the Effects of Institutional Policies on the Undergraduate Students' Academic Success: The Case of Cambodian Public Universities" of the three top public universities as you have requested.

Best Regards,

Dr. Hang Chuon Naron
Minister
Ministry of Education, Youth and Sport

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Pusat Pengajian Ilmu Pendidikan
School of Educational Studies

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Date: 25 Ogos 2014

Sam Rany
School Of Educational Studies
11800 University Sains Malaysia
Penang

COMPLETION OF RESEARCH PROPOSAL

We are please to inform you that the Dean of School Educational Studies has endorsed your main supervisor's recommendation that your grade for research Proposal be upgraded from **"IC" (Incomplete) to "C" (Complete)** after you made the necessary changes as required. You may now continue with your research and writing of your thesis. Wishing you all the best.

Thank you.

[PROFESOR MADYA DR. ABDUL RASHID MOHAMAD]
Deputy Dean
Graduate Studies & Research

c.c. Profesor Dr. Ahmad Nurulazam Md Zain
Main Supervisor
School of Educational Studies

Profesor Madya Dr. Hazri Jamil
Co-Supervisor
School of Educational Studies

RASH/nhah-PU

APPENDIX C

STUDENT QUESTIONNAIRE (English and Khmer Versions)

Dear Student,

I am working on a PhD research project entitled **"The Influence of Institutional Factors and Integrations Towards Students' Intellectual Developments: A Case Study of three Cambodian Public Universities"** in the School of Educational Studies, the Universiti Sains Malaysia (USM). Your valuable opinion matters a lot in the completion of this research. Kindly fill in the attached questionnaire by putting a tick (✓) or circle () in the relevant box in front of each statement indicating your degree of agreement or disagreement. Information provided by you will be treated as confidential and be used only for the research purpose. I shall be thankful for your good cooperation.

Yours faithfully,

Sam Rany

Section A. Input Variable

Part 1. Demographic Background

1. Indicate your gender ☐ Male ☐ Female
2. I am a scholarship/fellowship student ☐ Yes ☐ No
3. What is your university?
   - ☐ Royal University of Phnom Penh (RUPP)
   - ☐ Royal University of Law and Economics (RULE)
   - ☐ National University of Management (NUM)
4. Indicate your major taken

   ☐ Khmer Literature ☐ Mathematics ☐ Psychology ☐ Engineering ☐ Law
   ☐ Economics ☐ Public Administration ☐ Management ☐ Accounting
   ☐ Finance and Banking ☐Computer Science ☐ English Literature
   Other_____
5. How old are you?
   - ☐ Below 20 ☐ 20-21 ☐ 22-23 ☐ Over 23

Part 2. Socioeconomic Status

6. Please provide an approximate of your parents or guardians' income monthly.
   ☐ Less than USD 150 ☐ USD 150-500 ☐ More than USD 500

7. How much have you spent per month? _____in USD
8. Your parents' university experiences?
   a. Father
      ☐ Yes ☐ No
   b. Mother
      ☐ Yes ☐ No

9. Number of Children in Family: 1☐ 2 ☐ 3☐ 4 ☐ 5 ☐ 6☐ More_____
10. Please rate the status of your parents/guardian in terms of occupation.
    a. Father/ Male guardian
       ☐ Civil Servant ☐ Businessman
       ☐ Farmer ☐ Unemployed
    b. Mother/Female guardian
       ☐ Civil Servant ☐ Businesswoman
       ☐ Farmer ☐ Housewife

Part 3. High School Background

11. My high school is
    ☐ Public ☐ Private
    ☐ Province ☐ Phnom Penh

12. What is your high school diploma grade?

Grade	**Pass**	**Fair**	**Good**	**Very Good**	**Excellence**
	E	D	C	B	A

13. How would you rate your level of English proficiency in High School?

	Poor	**Fair**	**Above Average**	**Very Good**
Your English Proficiency	D	C	B	A

Part 4. Motivation

14. For each sentence below, please circle the letters which show the extent to which you AGREE or DISAGREE as following statement: 1=Strongly Disagree, 2= Disagree, 3=Uncertain, 4=Agree, 5=Strongly Agree
I decided to pursue my higher education because…

N^0	Items	Scale				
		SD	D	U	A	SA
14.1	I wanted to develop my professional skill.	1	2	3	4	5
14.2	My teachers motivated me to pursue my tertiary education.	1	2	3	4	5
14.3	My friends motivated me to pursue my tertiary education.	1	2	3	4	5
14.4	My parents motivated me to pursue my tertiary education.	1	2	3	4	5
14.5	I have selected the major based on my personal interests.	1	2	3	4	5
14.6	I have selected the major based on my parents' suggestion.	1	2	3	4	5

Section B. Student Involvement

Please check/ circle the following.

WEEKLY

_____1. A number of hours you spend each week studying outside classes.

_____2. A number of hours you spend each week doing assignment at home.

_____3. A number of hours you spend each week doing an assignment at the university.

_____ 4. A number of hours you spend each week using social communication (e.g. Facebook, Skype, Chart, phone call).

5. How many hours of the following activities did you participate in?

Number Hours

_____ Vunteer Services (Red Cross, social activities, community, civil society)

_____ Academic Development (workshop, seminar, conference)

_____ Campus Recreation (sports, tennis, football, basketball)

_____ University's activities (Club, association, religious and cultural activities)

MONTHLY

Question 6 through 9 asks you about how much time you spend per month doing a certain activity.

_____6. How many times have you been to the library per month?

_____7. How many times have you been discussed with your friends per month?

_____8. How many times have you been discussed with your lecturers per month?

_____9. How many weekends each month do you spend on campus?

YEARLY

Question 10 through 16 asks how much time you spend per year doing certain activities.

_____10. A number of books you have read for your studies and own pleasure.

_____11. A number of cultural events you have attended (e.g., concert, performance)?

12. How many conversations about educational plans, problems, or progress did you have with following people?

_____ Academic Advisor/Class Supervisor

_____ Faculty Member

_____13. How many conversations about research/assignment have you had this academic year?

_____14. How many times have you talked with a career advisor this academic year?

15. About how many friends you know currently attend your university? _____

16. Average number of students per class? _____

Section C. Institutional Factors

This section aims to investigate the students' views on academic factors in Cambodian public universities that affected on students' academic success.

For each sentence below, please circle the letters which show the extent to which you AGREE or DISAGREE as following statement: 1=Strongly Disagree, 2= Disagree, 3=Uncertain, 4=Agree, 5=Strongly Agree.

N	Items	Scale				
		SD	D	U	A	SA
Curriculum syllabus						
1	The curriculum is relevant to the social needs and the employment market.	1	2	3	4	5
2	The curriculum is well -prepared for students.	1	2	3	4	5
3	The curriculum provides students with an opportunity to understand the concepts and practice the skills gradually.	1	2	3	4	5
4	The curriculum has the system of credit system and credit transfer.	1	2	3	4	5
5	The curriculum has specific steps and teaching methodology.	1	2	3	4	5
6	The curriculum challenges me personally and academically.	1	2	3	4	5
7	The curriculum has been completed in time.	1	2	3	4	5
8	The curriculum has been updated, reviewed, and assessed frequently.	1	2	3	4	5
9	The current curriculum helps students to find a prospective job.	1	2	3	4	5
Teachers' teaching						
1	There are enough teachers for all courses at my university.	1	2	3	4	5
2	The teachers are highly qualified (Master, PhD holders).	1	2	3	4	5
3	The teachers are able to disseminate their expert-knowledge well.	1	2	3	4	5
4	The teachers are available when I have got questions.	1	2	3	4	5
5	The teachers are interacting with students.	1	2	3	4	5
6	Students satisfied with teachers' teaching.	1	2	3	4	5
7	The teachers are professional for teaching.	1	2	3	4	5

8	The teacher preserves discipline and professional ethics.	1	2	3	4	5
9	The teachers use Informatics Communication Technology in teaching.	1	2	3	4	5
10	Teachers focus more on qualitative rather than quantitative outcome.	1	2	3	4	5
11	Teachers are able to provide opportunities and experiences for students to achieve success in university.	1	2	3	4	5
12	Students appreciate the teachers' efforts in the classroom.	1	2	3	4	5
13	The teachers are generally research based.	1	2	3	4	5
14	Teachers try to maintain a positive working atmosphere in the classrooms.	1	2	3	4	5
15	Teaching is based on student-centered approach.	1	2	3	4	5
Evaluation/Examination						
1	There is an evaluation of students' progress each semester.	1	2	3	4	5
2	The examination is fair and justice.	1	2	3	4	5
3	Examination results are true reflection of students' achievement.	1	2	3	4	5
4	Examination procedure is fully equipped to evaluate all types of learning outcomes.	1	2	3	4	5
5	Evaluation techniques based on specific criteria.	1	2	3	4	5
6	Methods used in the evaluation system to inform students of their level of academic progress.	1	2	3	4	5
7	Exams have made students become more attentive to their lesson.	1	2	3	4	5
8	Examination for students is part of the continuous evaluation of the university.	1	2	3	4	5
9	Most examination questions are relevant to the subject content.	1	2	3	4	5
10	The university has a policy on the punishment of all kinds of academic frauds (cheating, plagiarism…)	1	2	3	4	5
Facilities						
1	The campus is a great place to study.	1	2	3	4	5
2	The library has enough up to date materials (e.g. Textbooks, journals, periodicals, thesis)	1	2	3	4	5
3	Most of textbooks reach the students at the proper time.	1	2	3	4	5
4	Classroom buildings are large and suitable for learning.	1	2	3	4	5

5	Resource learning facilities are adequate for all classrooms.	1	2	3	4	5
6	There are enough parking spaces.	1	2	3	4	5
7	There are restrooms for students and teachers.	1	2	3	4	5
8	There are learning resource centers, laboratories, and audio labs.	1	2	3	4	5
9	There are adequate learning facilities such as LCD projectors, computers, printers, and copying machines available in the university.	1	2	3	4	5
10	There are adequate physical facilities for sport, culture, and social networking (sport facilities, hall, café, canteen…)	1	2	3	4	5
Student Support Services						
1	There are a variety of association and clubs (sports, cultural, and social groups).	1	2	3	4	5
2	Student Association is available to provide useful advice and help.	1	2	3	4	5
3	The university has a health care center.	1	2	3	4	5
4	The university has accommodation or hostel.	1	2	3	4	5
5	The student canteen offered good quality food and drinks at a reasonable price.	1	2	3	4	5
6	The University's Career Placement Center helps students with job-hunting.	1	2	3	4	5
7	Student advisors are available to provide useful advices.	1	2	3	4	5
8	The university's infrastructure is able to meet environmental health and safety standards.	1	2	3	4	5
9	The university provides scholarship and financial support.	1	2	3	4	5
10	The university provides funds and facilities for your research project.	1	2	3	4	5

Section D. Institutional Integrations

This section aims to investigate the students' views on the institutional integration in Cambodian public universities that affected on students' academic success.

For each sentence below, please circle the letters which show the extent to which you AGREE or DISAGREE as as following statement: 1=Strongly Disagree, 2= Disagree, 3=Uncertain, 4=Agree, 5=Strongly Agree.

Nº	Items	Scale				
		SD	D	U	A	SA
Peer-Group Interaction						
1	I have developed a close personal relationship with other students.	1	2	3	4	5
2	I am satisfied with dating relationship.	1	2	3	4	5
3	My personal relationships with other students have positively influenced my personal growth, attitudes, and values.	1	2	3	4	5
4	My personal relationships with other students have positively influenced my intellectual growth and interest in ideas.	1	2	3	4	5
5	It has been easy for me to meet and to make friends with other students.	1	2	3	4	5
6	Many students I know would be willing to listen to me and help me if I had a personal problem.	1	2	3	4	5
7	Most students at this University have values and attitudes similar to mine.	1	2	3	4	5
8	I am happy with my living during I study in this university.	1	2	3	4	5
9	The student friendships I have developed have been personally satisfying.	1	2	3	4	5
10	I am satisfied with the opportunities to participate in organized extra-curricular activities at this University.	1	2	3	4	5
Faculty- Student Interaction						
11	My non -classroom interactions with faculty have positively influenced my personal growth, value, and attitudes.	1	2	3	4	5
12	My non- classroom interactions with faculty members have positively influenced my intellectual growth and interest in ideas.	1	2	3	4	5
13	My non- classroom interactions with faculty members have positively influenced my career goals and aspirations	1	2	3	4	5
14	I have developed a close, personal relationship with at least one faculty member.	1	2	3	4	5
15	I am satisfied with the opportunities to meet and interact informally with faculty members.	1	2	3	4	5
Faculty Concern for Student Development and Teaching						
16	Many faculty members I have had contact with are genuinely interested in the students.	1	2	3	4	5
17	Many faculty members I have had contact with are genuinely outstanding or superior teachers.	1	2	3	4	5
18	Many faculty members I have had contact with are	1	2	3	4	5

	willing to spend time outside of class to discuss issues of interest and importance to students.					
19	Many faculty members I have had contact with are interested in helping students grow in more than just academic areas.	1	2	3	4	5
20	Most faculty members I have had contact with are genuinely interested in teaching.	1	2	3	4	5
Institutional and Goal Commitments						
21	My university has committed to the welfare of students.	1	2	3	4	5
22	I am confident that I made the right decision in choosing to attend this university.	1	2	3	4	5
23	I will mostly register at this university next semester.	1	2	3	4	5
24	It is important to me to graduate from this university.	1	2	3	4	5
25	I have an idea about what I want to major in.	1	2	3	4	5
26	Getting good grades is important to me.	1	2	3	4	5

SECTION E. ACADEMIC AND INTELECTUAL DEVELOPMENT

For each sentence below, please circle the letters which show the extent to which you AGREE or DISAGREE as following statement: 1=Strongly Disagree, 2= Disagree, 3=Uncertain, 4=Agree, 5=Strongly Agree.

Nº	**Items**	**Scale**				
		SD	**D**	**U**	**A**	**S A**
Academic and Intellectual Development						
1	I am satisfied with the extent of my intellectual development.	1	2	3	4	5
2	This year, my academic experience has had a positive influence on my intellectual growth and interest in ideas.	1	2	3	4	5
3	I am satisfied with my academic experience at this University.	1	2	3	4	5
4	Most of my courses have been intellectually stimulating.	1	2	3	4	5
5	My interest in ideas and intellectual matters has increased since starting classes.	1	2	3	4	5
6	My academic experiences help me to pursue my further education successfully.	1	2	3	4	5
7	I am satisfied with my critical thinking skills.	1	2	3	4	5
8	I can apply my social and leadership skills.	1	2	3	4	5

សាកលវិទ្យាល័យវិទ្យាសាស្ត្រម៉ាឡេស៊ី

មហាវិទ្យាល័យសិក្សាអំពីការអប់រំ

(ឧបសម្ព័ន្ធ គ)

<u>កម្រងសំណួរសម្រាប់និស្សិត</u>

ប្អូនៗនិស្សិតជាទីរាប់អាន!

ខ្ញុំកំពុងធ្វើការសិក្សាស្រាវជ្រាវនិក្ខេបបទ ថ្នាក់បណ្ឌិតលើប្រធានបទស្តីអំពី «**ឥទ្ធិពលនៃកត្តាស្ថាប័ននិងសមាហរណកម្មចំពោះការអភិវឌ្ឍន៍ប្រាជ្ញាញាណរបស់និស្សិត៖ ករណីសិក្សានៃសាកលវិទ្យាល័យសាធារណៈកម្ពុជាចំនួនបី**» នៅមហាវិទ្យាល័យសិក្សាអំពីការអប់រំនៃសាកលវិទ្យាល័យវិទ្យាសាស្ត្រម៉ាឡេស៊ី។ យោបល់ដ៏មានតម្លៃរបស់ប្អូននឹងចូលរួមចំណែកដ៏សំខាន់ ក្នុងការបញ្ចប់គម្រោងស្រាវជ្រាវនេះ។ សូមប្អូនមេត្តាគូសសញ្ញា (✓) ឬសញ្ញារង្វង់នៅពីមុខសំណួរនីមួយៗតាមសេចក្តីណែនាំ។ រាល់ព័ត៌មានដែលប្អូនបានផ្តល់នៅក្នុងកម្រងសំណួរនេះត្រូវបានរក្សាជាការសម្ងាត់ និងត្រូវ បានប្រើប្រាស់សម្រាប់គោលបំណងស្រាវជ្រាវតែប៉ុណ្ណោះ។ អរគុណជាអនេកចំពោះពេលវេលា និងការចូលរួមសហការរបស់ប្អូននិស្សិត។

ដោយក្តីគោរពរាប់អានអំពីខ្ញុំ

សំ រ៉ានី

<u>ជំពូកទី ១៖ អថេរ</u> INPUT

<u>ផ្នែកទី១៖ សាថតារបស់និស្សិត</u>

១. ភេទ ☐ ប្រុស ☐ ស្រី

២. ខ្ញុំជានិស្សិតទទួលបានអាហារូបករណ៍ ☐ បាទ/ចា⁺ ☐ ទេ

៣. សាកលវិទ្យាល័យរបស់ខ្ញុំគឺ៖

☐ **សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ**

☐ សាកលវិទ្យាល័យភូមិន្ទនីតិសាស្ត្រ និងវិទ្យាសាស្ត្រសេដ្ឋកិច្ច

☐ សាកលវិទ្យាល័យជាតិគ្រប់គ្រង

៤. ជំនាញឯកទេសដែលខ្ញុំកំពុងសិក្សាគឺ៖

☐ អក្សរសាស្ត្រខ្មែរ ☐ គណិតវិទ្យា ☐ ចិត្តវិទ្យា ☐ សង្គមវិទ្យា ☐ នីតិសាស្ត្រ ☐ សេដ្ឋកិច្ច ☐ រដ្ឋបាលសាធារណៈ ☐ គ្រប់គ្រងពាណិជ្ជកម្ម ☐ គណនេយ្យ ☐ ធនាគារហិរញ្ញវត្ថុ ☐ ផ្សេងៗ_____

៥. ខ្ញុំមានអាយុ

☐ ១៨-១៩ ឆ្នាំ ☐ ២០-២១ ឆ្នាំ ☐ ២២ -២៣ ឆ្នាំ ☐ លើសពី ២៤ ឆ្នាំ

<u>ផ្នែកទី ២៖ ស្ថានភាពសេដ្ឋកិច្ចសង្គម</u>

៦. ប្រាក់ចំណូលជាមធ្យមប្រចាំខែរបស់ឪពុកម្តាយ ឬអាណាព្យាបាលរបស់ប្អូន

☐ តិចជាង ១៥០ ដុល្លាអាមេរិក ☐ ១៥០-៥០០ ដុល្លាអាមេរិក ☐ លើសពី ៥០០ ដុល្លាអាមេរិក

៧. ប្រាក់ចំណាយជាមធ្យមប្រចាំខែ ដែលប្អូនបានចំណាយលើការសិក្សារបស់ប្អូនចំនួនទឹកប្រាក់គិតជាដុល្លាអាមេរិក _____

៨. កម្រិតអប់រំរបស់ឪពុកម្តាយ ឬអាណាព្យាបាលនៅសាកលវិទ្យាល័យ

ក. ឪពុក/អាណាព្យាបាលរបស់ប្អូនធ្លាប់បានសិក្សានៅសាកលវិទ្យាល័យដែរឬទេ?

☐ បាទ/ចា៎ ☐ ទេ

ខ. ម្តាយ/អាណាព្យាបាលធ្លាប់បានសិក្សានៅសាកលវិទ្យាល័យដែរឬទេ?

☐ បាទ/ចា៎ ☐ ទេ

៩. ចំនួនបងប្អូនបង្កើតនៅក្នុងគ្រួសារ

☐ ១ ☐ ២ ☐ ៣ ☐ ៤ ☐ ៥ ☐ ៦ ☐ ផ្សេងទៀត_____

១០. មុខរបររបស់ឪពុកម្តាយ/អាណាព្យាបាល

ក. ឪពុក/អាណាព្យាបាល

☐ មន្ត្រីរាជការ ☐ អាជីវករ/ក្រុមហ៊ុនឯកជន

☐ កសិករ ☐ គ្មានមុខរបរ

ខ. ម្តាយ/អាណាព្យាបាល

☐ មន្ត្រីរាជការ ☐ អាជីវករ/ក្រុមហ៊ុនឯកជន

☐ កសិករ ☐ មេផ្ទះ

ផ្នែកទី ៣៖ ប្រវត្តិការសិក្សានៅថ្នាក់វិទ្យាល័យ

១១. ខ្ញុំបានសិក្សានៅវិទ្យាល័យ ៖

☐ រដ្ឋ ☐ ឯកជន

☐ តាមខេត្ត ☐ ក្នុងរាជធានីភ្នំពេញ

១២. និទ្ទេស និងពិន្ទុសរុបនៃសញ្ញាបត្រមធ្យមសិក្សាទុតិយភូមិរបស់ប្អូន

និទ្ទេសរួម	ជាប់	មធ្យម	ល្អ	ល្អណាស់	ល្អឥតខ្ចោះ	ឆ្នាំប្រឡង
	E	D	C	B	A	
ពិន្ទុសរុប						

១២. កម្រិតយល់ដឹងភាសាអង់គ្លេសរបស់ប្អូននៅថ្នាក់វិទ្យាល័យ

	ខ្សោយ	មធ្យម	ល្អ	ល្អណាស់
ភាពស្ទាត់ជំនាញខាងភាសាអង់គ្លេស	1	2	3	4

ផ្នែកទី ៤៖ ការលើកទឹកចិត្តក្នុងការបន្តការសិក្សានៅសាកលវិទ្យាល័យ

១៣. ការលើកទឹកចិត្ត (ចំពោះផ្នែកនេះ សូមប្អូនគូសរង្វង់លើ លេខពី ១ ដល់ ៥ ដែលបង្ហាញពីកម្រិតនៃការយល់ស្រប (AGREE) ឬ មិនយល់ស្រប (DISAGREE) ដែលបង្ហាញតាមប្រយោគដូចតទៅនេះ៖

១ = មិនយល់ស្របខ្លាំង (SD) **២** = មិនយល់ស្រប (D) **៣** = មិនប្រាកដ (U) **៤** = យល់ស្រប (Agree) **៥** = យល់ស្របខ្លាំង (SA)

ល.រ	ខ្លឹមសារ	មាត្រដ្ឋាន				
		SD	D	U	A	SA
១៣.១	ខ្ញុំមានបំណងចង់សិក្សានៅសាកលវិទ្យាល័យតាំងពីខ្ញុំកំពុងសិក្សានៅវិទ្យាល័យមកម្ល៉េះ។	១	២	៣	៤	៥
១៣.២	លោកគ្រូអ្នកគ្រូរបស់ខ្ញុំលើកទឹកចិត្តអោយខ្ញុំបន្តការសិក្សាថ្នាក់ឧត្តមសិក្សា។	១	២	៣	៤	៥
១៣.៣	មិត្តភក្តិរបស់ខ្ញុំលើកទឹកចិត្តអោយខ្ញុំបន្តការសិក្សាថ្នាក់ឧត្តមសិក្សា។	១	២	៣	៤	៥
១៣.៤	ឪពុកម្តាយរបស់ខ្ញុំបានលើកទឹកចិត្តអោយខ្ញុំ បន្តការសិក្សាថ្នាក់ឧត្តមសិក្សា។	១	២	៣	៤	៥
១៣.៥	ខ្ញុំបានជ្រើសរើសជំនាញផ្អែកលើចំណាប់អារម្មណ៍របស់ខ្ញុំ។	១	២	៣	៤	៥
១៣.៦	ខ្ញុំបានជ្រើសរើសជំនាញដោយផ្អែកលើយោបល់របស់ឪពុកម្តាយ សាច់ញាតិរបស់ខ្ញុំ។	១	២	៣	៤	៥

<u>ដំណាក់ទី ២៖ សកម្មភាពក្នុងការសិក្សារបស់ប្អូន</u>

សូមប្អូនមេត្តា ឆ្លើយនូវសំណួរដូចតទៅនេះ ៖

<u>សកម្មភាពសិក្សាប្រចាំសប្តាហ៍</u>

_____១. ចំនួនម៉ោងដែលប្អូនបានចំណាយប្រចាំសប្តាហ៍ ក្នុងការសិក្សាក្រៅថ្នាក់ (ក្រៅសាកលវិទ្យាល័យ)

_____២. ចំនួនម៉ោងដែលប្អូនបានចំណាយប្រចាំសប្តាហ៍ ក្នុងការធ្វើកិច្ចការសាលានៅផ្ទះ

_____៣. ចំនួនម៉ោងដែលប្អូនបានចំណាយប្រចាំសប្តាហ៍ ក្នុងការធ្វើកិច្ចការសាលានៅសាលា ឬ បណ្ណាល័យ

_____៤. ចំនួនម៉ោងដែលប្អូនបានចំណាយប្រចាំសប្តាហ៍ ក្នុងការប្រើប្រាស់ប្រព័ន្ធទំនាក់ទំនងសង្គម ដូចជា ហ្វេសប៊ុក ស្កេប ទូរស័ព្ទ

៥. តើប្អូនបានចំណាយរយៈពេលប៉ុន្មានម៉ោងក្នុងមួយសប្តាហ៍នៅក្នុងសកម្មភាពដូចតទៅនេះ?

_____សកម្មភាពស្ម័គ្រចិត្ត (កាកបាទក្រហម សកម្មភាពសង្គម សហគមន៍ សង្គមស៊ីវិល)

_____ការអភិវឌ្ឍន៍ការសិក្សា (សិក្ខាសាលា សន្និសីទ បឋកថា)

_____ល្បែងកំសាន្តនៅក្នុងសាកលវិទ្យាល័យ (កីឡាផ្សេងៗ វាយតិនីស បាត់ទាត់ បាល់បោះ)

_____សកម្មភាពរបស់សាកលវិទ្យាល័យ (ក្លឹប សមាគម សកម្មភាពវប្បធម៌ និងសាសនា)

<u>សកម្មភាពសិក្សាប្រចាំខែ</u>

សំណួរចាប់ពីលេខ ៦ ដល់ លេខ ៩ សួរប្អូនអំពីការចំណាយពេលប៉ុន្មានដងក្នុងមួយខែក្នុងសកម្មភាពជាក់លាក់ណាមួយ

_____៦. តើប្អូនបានចូលបណ្ណាល័យចំនួនប៉ុន្មានដងក្នុងមួយខែ?

_____៧. តើប្អូនបានពិភាក្សាជាមួយមិត្តភក្តិរបស់ប្អូនប៉ុន្មានដងក្នុងមួយខែ?

_____៨. តើប្អូនបានពិភាក្សាជាមួយលោកគ្រូ អ្នកគ្រូរបស់ប្អូនប៉ុន្មានដងក្នុងមួយខែ?

_____៩. តើប្អូនបានចំណាយពេលមកសាកលវិទ្យាល័យនាពេលចុងសប្តាហ៍ប៉ុន្មានដងក្នុងមួយខែ?

<u>សកម្មភាពសិក្សាប្រចាំឆ្នាំ</u>

សំណួរចាប់ពីលេខ ១០ ដល់ លេខ ១៦ សួរប្អូនអំពីការចំណាយពេលប៉ុន្មានដងក្នុងមួយឆ្នាំក្នុងការធ្វើសកម្មភាពជាក់លាក់ណាមួយ

_____១០. តើប្អូនបានអានសៀវភៅចំនួនប៉ុន្មានក្បាល សម្រាប់ការសិក្សា និងលំហែកំសាន្តរបស់ប្អូន?

_____១១. តើប្អូនបានចូលរួមព្រឹត្តការណ៍វប្បធម៌ប៉ុន្មានដង (ឧទាហរណ៍ ការប្រគំតន្ត្រី ការសម្តែង ផ្ទាំងទស្សនីយភាព)

១២. តើប្អូនបានជួបសន្ទនាអំពីផែនការសិក្សា បញ្ហាផ្សេងៗជាមួយនឹងមនុស្សទាំងនេះប៉ុន្មានដងក្នុងមួយឆ្នាំ?

_____ទីប្រឹក្សាសិក្សា គ្រូទទួលបន្ទុកថ្នាក់

_____បុគ្គលិក សាស្ត្រាចារ្យ

_____១៣. តើប្អូនបានជួបសន្ទនាប៉ុន្មានដងអំពីកិច្ចការស្រាវជ្រាវ កិច្ចការផ្ទះនៅក្នុងឆ្នាំសិក្សានេះ?

_____១៤. តើប្អូនបានជួបពិភាក្សាប៉ុន្មានដងជាមួយទីប្រឹក្សាមុខរបរ នៅក្នុងឆ្នាំសិក្សានេះ?

_____១៥. តើប្អូនមានមិត្តភក្តិជិតស្និទ្ធប៉ុន្មាននាក់នៅក្នុងសាកលវិទ្យាល័យរបស់ប្អូន?

<u>បទពិសោធន៍ក្នុងការសិក្សារបស់ប្អូន</u>

១៦. តើមាននិស្សិតសិក្សាជាមធ្យមនៅក្នុងថ្នាក់នីមួយៗចំនួនប៉ុន្មាននាក់? _____ នាក់

១៧. តើប្អូនមានជួបប្រទះសេចក្តីលំបាកផ្នែកហិរញ្ញវត្ថុក្នុងការចំណាយលើការសិក្សាដែរឬទេ?

☐ មិនលំបាក ☐ មិនសូវលំបាក ☐ លំបាកខ្លះៗ ☐ លំបាកគួរសម ☐ លំបាកខ្លាំងណាស់

១៨. ផ្អែកលើបទពិសោធន៍របស់ប្អូន តើប្អូនគួរណែនាំមិត្តភក្តិ ឬ សាច់ញាតិអោយមកចូលរៀនសាកលវិទ្យាល័យរបស់ប្អូនដែរឬទេ?

☐ ទេ (មិនណែនាំ) ☐ បាទ/ចា$^{+}$ (ណែនាំ)

១៩. ហេតុអ្វីបានជាប្អូនជ្រើសរើសចូលរៀននៅសាកលវិទ្យាល័យរដ្ឋ (សាធារណៈ)?

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_____

២០. តើសាកលវិទ្យាល័យរបស់ប្អូនគួរធ្វើអ្វីខ្លះដើម្បីជួយអោយបរិយាកាសសិក្សារបស់ប្អូនទទួលបានជោគជ័យ?

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ដំព្រួកទី ៣៖ បរិយាកាសសិក្សានៅក្នុងសាកលវិទ្យាល័យ

ជំពូកនេះមានគោលបំណងស្វែងយល់ពីទស្សនរបស់ប្អូនៗនិស្សិតអំពីបរិយាកាសសិក្សាដែលជាផ្នែកមួយនៃគោលនយោបាយស្តាប់ននៃសាកលវិទ្យាល័យរដ្ឋដែលជៈឥទ្ធិពលដល់ការសិក្សាប្រកបដោយជោគជ័យរបស់ប្អូនៗនិស្សិត។ កម្រិតនៃការជៈឥទ្ធិពលមានប្រាំ ដូចជា៖ ១= មិនជៈឥទ្ធិពល (Unaffected) ២= មិនសូវជៈឥទ្ធិពល (Slightly Unaffected) ៣ =មិនប្រាកដ (Uncertain) ៤= ជៈឥទ្ធិពលខ្លះៗ (Partially Affected) និង ៥= ជៈឥទ្ធិពលទាំងស្រុង(Fully Affected)

សូមប្អូនៗគូសរង្វង់លើ លេខពី ១ ដល់ ៥ ដែលបង្ហាញពីកម្រិតនៃការ យល់ស្រប (AGREE) ឬ មិនយល់ស្រប (DISAGREE) ដែលបង្ហាញតាមប្រយោគដូចតទៅនេះ៖ ១ = មិនយល់ស្របខ្លាំង (SD) ២ = មិនយល់ស្រប (D) ៣ = មិនប្រាកដ (U) ៤ = យល់ស្រប (A) ៥ = យល់ស្របខ្លាំង (SA)

ល.រ	ខ្លឹមសារ	មាត្រាដ្ឋាន				
		SD	D	U	A	SA
កម្មវិធីសិក្សា(Curriculum Syllabus)						
១	កម្មវិធីសិក្សាទាក់ទងច្រើនទៅនឹងតម្រូវការសេដ្ឋកិច្ច សង្គមបច្ចុប្បន្ន។	១	២	៣	៤	៥
២	កម្មវិធីសិក្សាមានការរៀបចំយ៉ាងល្អសម្រាប់និស្សិត។	១	២	៣	៤	៥
៣	ការរៀបកម្មវិធីសិក្សា មានរចនាសម្ព័ន្ធច្បាស់លាស់ ផ្តល់ឱកាសឲ្យនិស្សិតយល់ពីទ្រឹស្តី និងការអនុវត្ត។	១	២	៣	៤	៥
៤	និស្សិតអាចជ្រើសរើសមុខវិជ្ជាជ្រើសរើសដែលពួកគេចាប់អារម្មណ៍។	១	២	៣	៤	៥
៥	កម្មវិធីសិក្សាមានជំហាន និងវិធីសាស្ត្របង្រៀនច្បាស់លាស់។	១	២	៣	៤	៥
៦	កម្មវិសិក្សាជម្រុញអោយនិស្សិតរីកចម្រើនទាំងបុគ្គលិកលក្ខណៈ និងការសិក្សា។	១	២	៣	៤	៥
៧	កម្មវិធីសិក្សាបានបញ្ចប់តាមពេលវេលាកំណត់។	១	២	៣	៤	៥
៨	កម្មវិធីសិក្សាបានធ្វើបច្ចុប្បន្នភាព (update) ជាញឹកញាប់ក្នុងសាកលវិទ្យាល័យ។	១	២	៣	៤	៥
៩	កម្មវិធីសិក្សាបច្ចុប្បន្នជួយនិស្សិតក្នុងការស្វែងរកការងារនាពេលអនាគត។	១	២	៣	៤	៥
ការបង្រៀនរបស់សាស្ត្រាចារ្យ (Teacher teaching)						

១០	មានសាស្ត្រាចារ្យគ្រប់គ្រាន់ចំពោះមុខវិជ្ជាខ្លះក្នុងសាកលវិទ្យាល័យ។	១	២	៣	៤	៥
១១	សាស្ត្រាចារ្យមានសញ្ញាប័ត្រខ្ពស់ (អនុបណ្ឌិត បណ្ឌិត ក្រោយបណ្ឌិត)។	១	២	៣	៤	៥
១២	សាស្ត្រាចារ្យអាចផ្ទេរចំណេះដឹង ជំនាញរបស់ពួកគាត់បានល្អ។	១	២	៣	៤	៥
១៣	សាស្ត្រាចារ្យ អាចឆ្លើយនូវរាល់សំណួរដែលនិស្សិតមានចម្ងល់។	១	២	៣	៤	៥
១៤	សាស្ត្រាចារ្យ មានទំនាក់ទំនងខ្លាំងជាមួយនិស្សិត។	១	២	៣	៤	៥
១៥	និស្សិតពេញចិត្តនឹងការការបង្រៀនរបស់ សាស្ត្រាចារ្យ។	១	២	៣	៤	៥
១៦	សាស្ត្រាចារ្យមានវិជ្ជាជីវៈក្នុងការបង្រៀន។	១	២	៣	៤	៥
១៧	សាស្ត្រាចារ្យប្រកាន់ខ្ជាប់នូវវិន័យ បទបញ្ជា។	១	២	៣	៤	៥
១៨	សាស្ត្រាចារ្យ ប្រើវិធីសាស្ត្រថ្មី និងបច្ចេកវិជ្ជាព័ត៌មានក្នុងការបង្រៀន។	១	២	៣	៤	៥
១៩	សាស្ត្រាចារ្យ ផ្តោតខ្លាំងលើគុណភាពជាជាងទៅលើបរិមាណ។	១	២	៣	៤	៥
២០	សាស្ត្រាចារ្យអាចផ្តល់ឱកាស បទពិសោធន៍ ដល់និស្សិតដើម្បីសម្រេចជោគជ័យក្នុងការសិក្សារបស់ពួកគេ។	១	២	៣	៤	៥
២១	និស្សិតកោតសរសើរដល់កិច្ចខិតខំប្រឹងប្រែងរបស់សាស្ត្រាចារ្យក្នុងថ្នាក់។	១	២	៣	៤	៥
២២	ជាទូទៅ សាស្ត្រាចារ្យបង្រៀនផ្តែកលើការស្រាវជ្រាវ។	១	២	៣	៤	៥
២៣	សាស្ត្រាចារ្យព្យាយាមរក្សាបរិយាកាសវិជ្ជមាននៅក្នុងថ្នាក់រៀន។	១	២	៣	៤	៥
២៤	ការបង្រៀនផ្តែកលើសិស្សមជ្ឈមណ្ឌល (សិស្សសកម្មក្នុងថ្នាក់)។	១	២	៣	៤	៥
ការវាយតម្លៃ ប្រឡង (Evaluation/Examination)						
២៥	មានការវាយតម្លៃពីការរីកចម្រើនរបស់និស្សិតប្រចាំឆមាស។	១	២	៣	៤	៥
២៦	ការប្រឡងមានភាពត្រឹមត្រូវ យុត្តិធម៌។	១	២	៣	៤	៥
២៧	លទ្ធផលប្រឡងឆ្លុះបញ្ចាំងពិតពីការខិតខំប្រឹងប្រែងរបស់និស្សិត។	១	២	៣	៤	៥
២៨	ប្រព័ន្ធប្រឡងអាចវាយតម្លៃរាល់លទ្ធផលនៃការសិក្សាគ្រប់ប្រភេទ។	១	២	៣	៤	៥

២៩	បច្ចេកទេវាយតម្លៃផ្អែកលើលក្ខណៈវិនិច្ឆ័យជាក់លាក់។	១	២	៣	៤	៥
៣០	វិធីសាស្ត្រដែលប្រើក្នុងប្រព័ន្ធវាយតម្លៃ ឲ្យនិស្សិតដឹងពីកម្រិតនៃការរីកចម្រើនរបស់ពួកគេ។	១	២	៣	៤	៥
៣១	ការប្រឡងធ្វើអោយនិស្សិតយកចិត្តទុកដាក់ខ្លាំងដល់ការរៀនសូត្រ។	១	២	៣	៤	៥
៣២	ការប្រឡងរបស់និស្សិតជាផ្នែកមួយនៃការវាយតម្លៃបន្តរបស់សាកលវិទ្យាល័យ។	១	២	៣	៤	៥
៣៣	សំណួរប្រឡងភាគច្រើនទាក់ទងនឹងមាតិកានៃមុខវិជ្ជាសិក្សា។	១	២	៣	៤	៥
៣៤	សាកលវិទ្យាល័យមានការដាក់ទណ្ឌកម្មរាល់ការលួចចម្លងគ្រប់រូបភាព។	១	២	៣	៤	៥
សម្ភារៈរូបវន្ត (Facilities)						
៣៥	បណ្ណាល័យមានសម្ភារៈថ្មីៗគ្រប់គ្រាន់ (ឧទាហរណ៍៖ សៀវភៅពុម្ពទស្សនាវដ្តី សារណាបទ និក្ខេបបទ ជាដើម)	១	២	៣	៤	៥
៣៦	និស្សិតអាចស្វែងរករាល់ឯកសារសិក្សាស្រាវជ្រាវនៅក្នុងបណ្ណាល័យ។	១	២	៣	៤	៥
៣៧	សៀវភៅមេរៀនភាគច្រើនទៅដល់ដៃនិស្សិតតាមពេលវេលាសមស្រប។	១	២	៣	៤	៥
៣៨	អាគារបន្ទប់រៀនធំទូលាយ សមរម្យក្នុងការរៀនសូត្រ។	១	២	៣	៤	៥
៣៩	មានបំពាក់ធនធានសម្ភារៈរូបវន្តគ្រប់គ្រាន់គ្រប់ថ្នាក់រៀនទាំងអស់។	១	២	៣	៤	៥
៤០	មានចំណតយានយន្តគ្រប់គ្រាន់។	១	២	៣	៤	៥
៤១	មានបង្គន់អានាម័យសម្រាប់និស្សិត និង គ្រូបង្រៀន។	១	២	៣	៤	៥
៤២	មានមណ្ឌលធនធានសិក្សា មន្ទីរពិសោធន៍ និងបន្ទប់សោធទស្សន៍ (ភាសា)។	១	២	៣	៤	៥
៤៣	មានសម្ភារៈរូបវន្តសិក្សាគ្រប់គ្រាន់ ដូចជា អិលស៊ីឌី កំព្យូទ័រ ម៉ាស៊ីនបោះពុម្ព នៅក្នុង សាកលវិទ្យាល័យ។	១	២	៣	៤	៥
៤៤	មានសម្ភារៈរូបវន្តគ្រប់គ្រាន់សម្រាប់ កីឡា វប្បធម៌ និង បណ្តាញសង្គម (សម្ភារៈ ទីលានកីឡា សហសាល ហាងកាហ្វេ អាហារដ្ឋាន ជាដើម)។	១	២	៣	៤	៥
សេវាកម្មទ្រទ្រង់និស្សិត (Student Support Services)						

៤៥	មានសមាគម និងក្លិបផ្សេងៗ (ក្លិបកីឡា ក្រុមវប្បធម៌ និងសង្គម)។	១	២	៣	៤	៥
៤៦	មានសមាគមនិស្សិត ជួយផ្តល់តំបូលន្ទានដល់ និស្សិតក្នុងសាកលវិទ្យាល័យ។	១	២	៣	៤	៥
៤៧	សាកលវិទ្យាល័យមានមណ្ឌលថែរទាំសុខភាពបឋម។	១	២	៣	៤	៥
៤៨	សាកលវិទ្យាល័យមានផ្តល់ទីកន្លែងស្នាក់នៅ ឬអន្តេវាសិកដ្ឋាន។	១	២	៣	៤	៥
៤៩	អាហារដ្ឋាននិស្សិតផ្តល់នូវគុណភាពអាហារក្នុងតម្លៃសមរម្យ។	១	២	៣	៤	៥
៥០	មានមជ្ឈមណ្ឌលស្វែងរកការងារដើម្បីជួយនិស្សិតស្វែងរកការងារ។	១	២	៣	៤	៥
៥១	មានការផ្តល់ប្រឹក្សាផ្នែកសុខភាពផ្លូវចិត្តជូននិស្សិត។	១	២	៣	៤	៥
៥២	ហេដ្ឋារចនាសម្ព័ន្ធរបស់សាកលវិទ្យាល័យមានបទដ្ឋានសុវត្ថិភាព និងសុខមាលភាព។	១	២	៣	៤	៥
៥៣	សាកលវិទ្យាល័យមានផ្តល់អាហារូបករណ៍ និងជំនួយហិរញ្ញវត្ថុ។	១	២	៣	៤	៥
៥៤	សាកលវិទ្យាល័យផ្តល់មូនិធិ និងសម្ភារៈរូបវន្តសម្រាប់ការស្រាវជ្រាវ។	១	២	៣	៤	៥

ចំពូកទី ៤៖ សមាហរណកម្មស្ថាប័ន

សូមប្អូនៗគូសរង្វង់លើ លេខពី ១ ដល់ ៥ ដែលបង្ហាញពីកម្រិតនៃការ យល់ស្រប (AGREE) ឬ មិនយល់ស្រប (DISAGREE) ដែលបង្ហាញតាមប្រយោគដូចតទៅនេះ៖ ១ = មិនយល់ស្របខ្លាំង (SD) ២ = មិនយល់ស្រប (D) ៣ = មិនប្រាកដ (U) ៤ = យល់ស្រប (Agree) ៥ = យល់ស្របខ្លាំង (SA)

ល.រ	ខ្លឹមសារ	មាត្រដ្ឋាន				
		SD	D	U	A	SA
អន្តរសកម្មភាពនៅក្នុងក្រុម (Peer-Group Interaction)						
១	ខ្ញុំមានទំនាក់ទំនងជិតស្និទ្ធជាមួយនិស្សិតដទៃទៀតចាប់តាំងពីខ្ញុំមកដល់សាកលវិទ្យាល័យនេះ។	១	២	៣	៤	៥
២	ខ្ញុំពេញចិត្តនឹងទំនាក់ទំនងក្នុងការណាត់ជួបគ្នា។	១	២	៣	៤	៥
៣	ទំនាក់ទំនងរបស់ខ្ញុំ ជាមួយនិស្សិតដទៃ មានឥទ្ធិពលវិជ្ជមានដល់ការរីកចម្រើនផ្ទាល់ខ្លួន អាកប្បកិរិយា និងតម្លៃរបស់ខ្ញុំ។	១	២	៣	៤	៥

៤	ទំនាក់ទំនងរបស់ខ្ញុំជាមួយនិស្សិតដទៃមានឥទ្ធិពលវិជ្ជមានដល់ការរីកចម្រើនខាងបញ្ញាញាណ និងចិត្តគំនិតរបស់ខ្ញុំ។	១	២	៣	៤	៥
៥	ជាការងាយស្រួលចំពោះខ្ញុំ ក្នុងការជួបជុំ និងបង្កើតមិត្តភក្តិជាមួយនិស្សិតដទៃ។	១	២	៣	៤	៥
៦	និស្សិតជាច្រើនដែលខ្ញុំស្គាល់អាចស្តាប់ខ្ញុំ និងជួយខ្ញុំប្រសិនបើខ្ញុំមានបញ្ហាផ្ទាល់ខ្លួន។	១	២	៣	៤	៥
៧	និស្សិតជាច្រើននៅក្នុងសាកលវិទ្យាល័យនេះ មានតម្លៃនិងអាកប្បកិរិយាស្រដៀងខ្ញុំ។	១	២	៣	៤	៥
៨	ខ្ញុំបានបង្កើតទំនាក់ទំនងយ៉ាងជិតស្និទ្ធជាមួយនិស្សិតដទៃទៀត។	១	២	៣	៤	៥
៩	ខ្ញុំពេញចិត្តបង្កើត មិត្តភាពជាមួយនិស្សិតដទៃទៀត។	១	២	៣	៤	៥
១០	ខ្ញុំពេញចិត្តឱកាសចូលរួមក្នុងសមកិច្ចភាពក្រៅម៉ោងសិក្សានៅក្នុងសាកលវិទ្យាល័យនេះ។	១	២	៣	៤	៥
អន្តរសកម្មភាពជាមួយមហាវិទ្យាល័យ (Interaction with Faculty)						
១១	ទំនាក់ទំនងក្រៅថ្នាក់របស់ខ្ញុំជាមួយបុគ្គលិកសាស្ត្រាចារ្យមានឥទ្ធិពលវិជ្ជមានដល់ការរីក ចម្រើនផ្ទាល់ខ្លួន តម្លៃ និងអាកប្បកិរិយារបស់ខ្ញុំ។	១	២	៣	៤	៥
១២	ទំនាក់ទំនងក្រៅថ្នាក់របស់ខ្ញុំ ជាមួយបុគ្គលិក សាស្ត្រាចារ្យ មានឥទ្ធិពលវិជ្ជ មានដល់ការរីកចម្រើនខាងបញ្ញាញាណ និងចិត្តគំនិតរបស់ខ្ញុំ។	១	២	៣	៤	៥
១៣	ទំនាក់ទំនងក្រៅថ្នាក់របស់ខ្ញុំជាមួយបុគ្គលិក សាស្ត្រាចារ្យមានឥទ្ធិពល វិជ្ជមានដល់ការលើកទឹកចិត្ត និងគោលបំណងការងាររបស់ខ្ញុំ។	១	២	៣	៤	៥
១៤	ខ្ញុំមានទំនាក់ទំនងផ្ទាល់ខ្លួនជិតស្និទ្ធ យ៉ាងហោចណាស់ជាមួយបុគ្គលិកសាស្ត្រាចារ្យម្នាក់។	១	២	៣	៤	៥
១៥	ខ្ញុំពេញចិត្តឱកាសជំនួប និងទំនាក់ទំនងក្រៅផ្លូវការ ជាមួយបុគ្គលិកសាស្ត្រាចារ្យ។	១	២	៣	៤	៥
មហាវិទ្យាល័យយកចិត្តដាក់ចំពោះការអភិវឌ្ឍន៍និស្សិត និងការបង្រៀន						
១៦	បុគ្គលិកសាស្ត្រាចារ្យជាច្រើនដែលខ្ញុំបានទាក់ទងជាមួយមានចំណាប់អារម្មណ៍មែនទែន ជាមួយនិស្សិត។	១	២	៣	៤	៥
១៧	បុគ្គលិកសាស្ត្រាចារ្យជាច្រើនដែលខ្ញុំបានទាក់ទងជាមួយជាសាស្ត្រាចារ្យដ៏ល្អបំផុត។	១	២	៣	៤	៥

១៨	បុគ្គលិកសាស្ត្រាចារ្យជាច្រើនដែលខ្ញុំបានទាក់ទងជាមួយគឺមានឆន្ទៈចំណាយពេលវេលា ក្រៅថ្នាក់ដើម្បីពិភាក្សាអំពីបញ្ហាផលប្រយោជន៍និងសារៈសំខាន់ដល់និស្សិត។	១	២	៣	៤	៥
១៩	បុគ្គលិកសាស្ត្រាចារ្យជាច្រើនដែលខ្ញុំបានទាក់ទងជាមួយគឺចាប់អារម្មណ៍ជួយនិស្សិតអោយ មានការអភិវឌ្ឍន៍ច្រើន ក្រៅពីការមុខវិជ្ជាបង្រៀន។	១	២	៣	៤	៥
២០	បុគ្គលិកសាស្ត្រាចារ្យជាច្រើនដែលខ្ញុំបានទាក់ទងជាមួយគឺមានចំណាប់អារម្មណ៍ខ្លាំងក្នុង ការបង្រៀន។	១	២	៣	៤	៥
	ការរីកចម្រើនផ្នែក បញ្ញាញាណ (Intellectual Development)					
២១	ខ្ញុំពេញចិត្តនឹងការចម្រើនខាងផ្លូវបញ្ញាញាណរបស់ខ្ញុំ។	១	២	៣	៤	៥
២២	ឆ្នាំនេះបទពិសោធន៍ក្នុងការសិក្សារបស់ខ្ញុំមានឥទ្ធិពលវិជ្ជមានលើការរីកចម្រើនខាងបញ្ញាញាណ និងចិត្តគំនិតរបស់ខ្ញុំ។	១	២	៣	៤	៥
២៣	ខ្ញុំពេញចិត្តនឹងបទពិសោធន៍ក្នុងការសិក្សារបស់ខ្ញុំនៅក្នុងសាកលវិទ្យាល័យនេះ។	១	២	៣	៤	៥
២៤	មុខវិជ្ជាភាគច្រើនរបស់ខ្ញុំ បានបណ្តុះឲ្យខ្ញុំមានការរីកចម្រើនខាងបញ្ញាញាណ។	១	២	៣	៤	៥
២៥	ចិត្តគំនិត និងបញ្ហាប្រាជ្ញាញាណរបស់ខ្ញុំមានការរីកចម្រើនចាប់តាំងពីចាប់ផ្តើមសិក្សា។	១	២	៣	៤	៥
២៦	ខ្ញុំចូលចិត្តចូលរួមព្រឹត្តិការប្បធម៌ (ឧទាហរណ៍ តន្ត្រី បបកថា ការបង្ហាញសិល្បៈ) នៅពេលនេះបើ ប្រៀបធៀបទៅ នឹងរយៈពេលពីបីឆ្នាំកន្លងទៅនេះ។	១	២	៣	៤	៥
២៧	ខ្ញុំបានអនុវត្តតាមការសិក្សាដូចដែលខ្ញុំបានរំពឹងទុក។	១	២	៣	៤	៥
២៨	បន្ថែមពីលើកិច្ចការដែលតម្រូវឲ្យអាន ខ្ញុំបានអានសៀវភៅតាមការណែនាំជាច្រើនក្នុងមុខវិជ្ជាសិក្សារបស់ខ្ញុំ។	១	២	៣	៤	៥
	ការប្តេជ្ញារបស់និស្សិត និង ស្ថាប័ន (Institutional and Goal Commitments)					
២៩	វាមិនសំខាន់ចំពោះខ្ញុំទេ ក្នុងការបញ្ចប់ការសិក្សាពីសាកលវិទ្យាល័យនេះ។	១	២	៣	៤	៥
៣០	ខ្ញុំមានទំនុកចិត្តថាខ្ញុំបានធ្វើការសម្រេចចិត្តដ៏ត្រឹមត្រូវក្នុងការជ្រើសរើសចូលរៀនក្នុងសាកលវិទ្យាល័យនេះ។	១	២	៣	៤	៥
៣១	ខ្ញុំនឹងចុះឈ្មោះបន្តចូលរៀននៅក្នុងសាកលវិទ្យាល័យនេះនៅឆមាស	១	២	៣	៤	៥

	ក្រោយ។					
៣២	វាជាការសំខាន់ចំពោះខ្ញុំក្នុងការបញ្ចប់ការសិក្សាពីសាកលវិទ្យាល័យនេះ។	១	២	៣	៤	៥
៣៣	ខ្ញុំមានគំនិតចង់ជ្រើសរើសមុខវិជ្ជាដ៏សំខាន់មួយ។	១	២	៣	៤	៥
៣៤	ការទទួលបានចំណាត់ថ្នាក់ល្អគឺមានសារៈសំខាន់ចំពោះខ្ញុំ។	១	២	៣	៤	៥

ជំពូកទី ៥៖ ភាពជោគជ័យក្នុងការសិក្សា

សូមប្អូនៗគូសរង្វង់លើ លេខពី ១ ដល់ ៥ ដែលបង្ហាញពីកម្រិតនៃការ យល់ស្រប (AGREE) ឬ មិនយល់ស្រប (DISAGREE) ដែលបង្ហាញតាមប្រយោគដូចតទៅនេះ៖ ១ = មិនយល់ស្របខ្លាំង (SD) ២ = មិនយល់ស្រប (D) ៣ = មិនប្រាកដ (U) ៤ = យល់ស្រប (Agree) ៥ = យល់ស្របខ្លាំង (SA)

ល.រ	**ខ្លឹមសារ**	**មាត្រដ្ឋាន**				
		SD	**D**	**U**	**A**	**SA**
ការមិនបោះបង់ការសិក្សា						
១	ខ្ញុំនឹងបន្តចុះឈ្មោះចូលរៀនរហូតបញ្ចប់ការសិក្សារបស់ខ្ញុំ។	១	២	៣	៤	៥
២	ខ្ញុំមានទំនុកចិត្តក្នុងការសិក្សារបស់ខ្ញុំ។	១	២	៣	៤	៥
៣	ខ្ញុំនឹងប្រឡងជាប់គ្រប់មុខវិជ្ជាទាំងអស់។	១	២	៣	៤	៥
៤	ខ្ញុំនឹងបញ្ចប់ការសិក្សារបស់ខ្ញុំតាមពេលវេលាកំណត់។	១	២	៣	៤	៥
៥	ខ្ញុំមានទំនុកចិត្តប្រកួតប្រជែងជាមួយអ្នកដទៃ។	១	២	៣	៤	៥

សូមអរគុណចំពោះការចូលរួមនៅក្នុងការសិក្សានេះ។ ព័ត៌មានដែលប្អូនបានផ្តល់ពិតជាមានតម្លៃដល់អ្នកស្រាវជ្រាវដើម្បីផ្តល់អនុសាសន៍ធ្វើ អោយប្រសើរដល់បរិយាកាសសិក្សានៅក្នុងសាកលវិទ្យាល័យរបស់រដ្ឋ។ ប្រសិនបើប្អូនៗមានចម្ងល់ទាក់ទងនឹងការស្ទាបស្ទង់មតិនេះ សូមប្អូនៗមេត្តាទាក់ទងជាមួយនឹង៖

APPENDIX D: PARTICIPANT'S CONCENT FROM

Sam Rany
School of Educational Studies
11800 USM Pulau Pinang, Malaysia
Mobile: (+60) 17 50 63 234 (Malaysia)
(+855) 12646685 (Cambodia)
Email: samrany82@yahoo.com

PARTICIPANT'S RESEARCH CONSENT FORM

I, _____, agree on participating in doctoral research titled **"Influence of Institutional Factors and Integrations Towards Students' Academic and Intellectual Developments: A Case Study in Cambodian Public Universities"**, being conducted by **Sam Rany**, who is currently studying at the University of Science, Malaysia (USM), for his PhD Degree.

1. I have received a statement explaining the questionnaire involved in this research.

2. I consent to participate in the above research, the particulars of which - including details of the interviews or questionnaires - have been explained to me.

3. I authorize the researcher or his or her assistant to administer a questionnaire.

4. I give my permission to be audio taped/photographed. ☐ Yes ☐ No

5. I give my permission for my name or identity to be used. ☐ Yes ☐ No

_____ ____/____/____
Signature (participant)

_____ ____/____/____
Signature (researcher)

Should you have any questions or concerns regarding this research consent, please contact: Researcher Sam Rany at sr11_edu045@student.usm.my
Main supervisor Prof. Dr. Ahmad Nurulazam Md. Zain at anmz@usm.my
Co- supervisor Assoc. Prof. Dr. Hazri Bin Jamil at hazri@usm.my

APPENDIX E: EXPERTS' PROFILE

No	Expert	Academic Ranking and Area of Specialization	Working place
1	Expert 1	Associate Professor (PhD) Multimedia education, Educational policies, Higher Education	Center for Industrial Technology and Multimedia, Universiti Sains Malaysia, Penang, Malaysia
2	Expert 2	Professor, Rector Khmer Literature, Higher Education	University of Battambang, Cambodia
3	Expert 3	Professor, Rector Educational Management , Higher Education	Royal University of Law and Economics, Phnom Penh, Cambodia
4	Expert 4	Professor, Rector Educational Management and Educational Policies	Chea Sim Kamchay Mear University, Cambodia
5	Expert 5	Professor, Vice Rector Educational Management	National University of Management, Cambodia
6	Expert 6	Professor, Dean Political Science and Public Policies	Royal University of Law and Economics, Cambodia
7	Expert 7	Professor, Vice Rector Educational Management	Royal University of Phnom Penh

APPENDIX F

VALIDATION FORM OF STUDENT QUESTIONNAIR

Expert's Name:_____

University:_____

The items below are based on the ACC's five minimum standard of academic environment: curriculum syllabus, teacher teaching, evaluation/examination, facilities, and student support services. Your answer should indicate your response below related to the components.

Please indicate your response based on the scale of 1 to 4 by keying in your answer next to the expert comment. I am very pleased to welcome suggestions and comments for each of the items below.

1= Not related at all	2	3	4= Most Related

Students' questionnaire (Academic Environment)

Curriculum syllabus					
1	The curriculum is relevant to the social needs and the employment market. ***Expert comment:***	1	2	3	4
2	The curriculum is well -prepared for students. ***Expert comment:***	1	2	3	4
3	The curriculum provides students with an opportunity to understand the concepts and practice the skills gradually. ***Expert comment:***	1	2	3	4
4	The curriculum has the system of credit system and credit transfer. ***Expert comment:***	1	2	3	4
5	The curriculum has specific steps and teaching methodology. ***Expert comment***	1	2	3	4
6	The curriculum challenges me personally and academically. ***Expert comment:***	1	2	3	4
7	The curriculum has been completed in time. ***Expert comment:***	1	2	3	4

8	The curriculum has been updated, reviewed, and assessed frequently. ***Expert comment:***	1	2	3	4
9	The current curriculum helps students to find a prospective job. ***Expert comment:***	1	2	3	4
Teacher Teaching					
1	There are not enough teachers for some courses in my university. ***Expert comment:***	1	2	3	4
2	The teachers are highly qualified (Master, PhD holders). ***Expert comment:***	1	2	3	4
3	The teachers are able to disseminate their expert-knowledge well. ***Expert comment:***	1	2	3	4
4	The teachers are available when I have got questions. ***Expert comment:***	1	2	3	4
5	The teachers are interacting with students. ***Expert comment:***	1	2	3	4
6	Students satisfied with teachers' teaching. ***Expert comment:***	1	2	3	4
7	The teachers are professional for teaching. ***Expert comment:***	1	2	3	4
8	The teacher preserves discipline and professional ethics. ***Expert comment:***	1	2	3	4
9	The teachers use Informatics Communication Technology in teaching. ***Expert comment:***	1	2	3	4
10	Teachers focus more on qualitative rather than quantitative outcome. ***Expert comment:***	1	2	3	4

11	Teachers are able to provide opportunities and experiences for students to achieve success in university. ***Expert comment:***	1	2	3	4
12	Students appreciate the teachers' efforts in the classroom. ***Expert comment:***	1	2	3	4
13	The teachers are generally research based. ***Expert comment:***	1	2	3	4
14	Teachers try to maintain a positive working atmosphere in the classrooms. ***Expert comment:***	1	2	3	4
15	Teaching is based on student-centered approach. ***Expert comment:***	1	2	3	4
Evaluation/Examination					
1	There is an evaluation of students' progress each semester. ***Expert comment:***	1	2	3	4
2	The examination is fair and justice. ***Expert comment:***	1	2	3	4
3	Examination results are true reflection of students' achievement. ***Expert comment:***	1	2	3	4
4	Examination procedure is fully equipped to evaluate all types of learning outcomes. ***Expert comment:***	1	2	3	4
5	Evaluation techniques based on specific criteria. ***Expert comment:***	1	2	3	4
6	Methods used in the evaluation system to inform students of their level of academic progress. ***Expert comment:***	1	2	3	4
7	Exams have made students become more attentive to their lesson. ***Expert comment:***	1	2	3	4

8	Examination for students is part of the continuous evaluation of the university. ***Expert comment:***	1	2	3	4
9	Most examination questions are relevant to the subject content. ***Expert comment:***	1	2	3	4
10	The university has a policy on the punishment of all kinds of academic frauds (cheating, plagiarism…) ***Expert comment:***	1	2	3	4
Facilities					
1	The campus is a great place to study. ***Expert comment:***	1	2	3	4
2	The library has enough up to date materials (e.g. Textbooks, journals, periodicals, thesis) ***Expert comment:***	1	2	3	4
3	Most of textbooks reach the students at the proper time. ***Expert comment:***	1	2	3	4
4	Classroom buildings are large and suitable for learning. ***Expert comment:***	1	2	3	4
5	Resource learning facilities are adequate for all classrooms. ***Expert comment:***	1	2	3	4
6	There are enough parking spaces. ***Expert comment:***	1	2	3	4
7	There are restrooms for students and teachers. ***Expert comment:***	1	2	3	4
8	There are learning resource centers, laboratories, and audio labs. ***Expert comment:***	1	2	3	4
9	There are adequate learning facilities such as LCD projectors, computers, printers, and copying machines available in the university. ***Expert comment:***	1	2	3	4

10	There are adequate physical facilities for sport, culture, and social networking (sport facilities, hall, café, canteen…) ***Expert comment:***	1	2	3	4
Student Support Services					
1	There are a variety of association and clubs (sports, cultural, and social groups). ***Expert comment:***	1	2	3	4
2	Student Association is available to provide useful advice and help. ***Expert comment:***	1	2	3	4
3	The university has a health care center. ***Expert comment:***	1	2	3	4
4	The university has accommodation or hostel. ***Expert comment:***	1	2	3	4
5	The student canteen offered good quality food and drinks at a reasonable price. ***Expert comment:***	1	2	3	4
6	The University's Career Placement Center helps students with job-hunting. ***Expert comment:***	1	2	3	4
7	Student advisors are available to provide useful advices. ***Expert comment:***	1	2	3	4
8	The university's infrastructure is able to meet environmental health and safety standards. ***Expert comment:***	1	2	3	4
9	The university provides scholarship and financial support. ***Expert comment:***	1	2	3	4
10	The university provides funds and facilities for your research project. ***Expert comment:***	1	2	3	4

APPENDIX G

EXPERTS' FEEDBACK OF VALIDITY CONTENT TO THE QUESTIONNAIRE

Components	**Items**	**Scales** **1= Not related at all** **4= Most related** Experts' rating and mean scores								**Comments**
Items		***E1***	***E2***	***E3***	***E4***	***E5***	***E6***	***E7***	**Mean**	
Curricum Sylabus	1	3	3	4	4	3	4	3	3.00	
	2	4	4	3	3	4	2	3	3.00	
	3	3	4	3	3	4	3	3	2.87	
	4	2	4	3	4	3	3	3	2.75	
	5	3	3	4	3	4	3	2	3.00	
	6	3	4	3	2	3	3	4	3.00	
	7	3	4	3	2	3	4	3	2.75	
	8	3	2	3	3	4	2	4	2.87	
	9	3	3	4	3	4	3	3	3.00	
Components	**Items**	**Scales**								**Comments**
Teacher Teaching		***E1***	***E2***	***E3***	***E4***	***E5***	***E6***	***E7***	**Mean**	
	1	4	4	3	4	4	4	4	3.29	
	2	3	4	4	3	4	4	3	3.13	
	3	3	3	4	4	3	3	3	2.88	
	4	4	4	3	3	4	4	4	3.25	
	5	4	4	4	3	4	4	4	3.38	
	6	4	4	4	3	4	3	3	3.13	
	7	3	3	2	4	4	3	3	2.75	
	8	4	4	4	3	4	3	3	3.13	
	9	3	4	4	3	4	3	4	3.13	
	10	4	4	3	4	3	3	4	3.13	
	11	3	3	4	4	3	4	3	3.00	
	12	4	4	3	4	4	4	3	3.25	
	13	4	4	3	3	3	4	3	3.00	
	14	3	4	3	4	4	4	3	3.13	
	15	4	4	4	4	4	3	3	3.25	
Components	**Items**	Scales								**Comments**
Evaluation/Examination		***E1***	***E2***	***E3***	***E4***	***E5***	***E6***	***E7***	Mean	
	1	3	4	3	4	3	4	4	3.13	
	2	3	4	3	4	3	3	4	3.00	
	3	4	4	3	4	4	3	4	3.25	
	4	3	3	4	3	3	4	3	2.88	
	5	4	3	4	4	4	3	4	3.25	

	6	3	4	4	4	4	4	3	3.25	
	7	4	3	4	3		4	4	3.14	
	8	4	3	4	4	3	4	3	3.13	
	9	3	4	3	4	4	3	3	3.00	
	10	4	4	4	4	4	3	4	3.38	
Components	**Items**	Scales								**Comments**
Facilities		***E1***	***E2***	***E3***	***E4***	***E5***	***E6***	***E7***	Mean	
	1	3	4	4	3	4	4	4	3.25	
	2	4	3	4	3	4	4	3	3.13	
	3	3	4	3	4	3	4	4	3.13	
	4	4	3	4	4	3	4	3	3.13	
	5	4	3	3	4	4	3	4	3.13	
	6	3	3	3	3	3	3	4	2.75	
	7	4	4	4	4	4	4	3	3.38	
	8	3	4	2	3	3	3	4	2.75	
	9	4	4	4	4	3	3	3	3.13	
	10	3	4	4	3	3	4	4	3.13	
Components	**Items**	**Scales**								**Comments**
Student Support Services		***E1***	***E2***	***E3***	***E4***	***E5***	***E6***	***E7***	**Mean**	
	1	4	4	4	4	3	4	4	3.38	
	2	3	3	3	4	3	3	3	2.75	
	3	4	4	3	4	4	4	4	3.38	
	4	3	4	4	4	3	3	3	3.00	
	5	3	4	3	3	4	4	4	3.13	
	6	4	4	3	3	3	3	3	2.88	
	7	3	3	3	3	3	3	4	2.75	
	8	4	3	4	4	3	4	3	3.13	
	9	3	4	3	3	4	4	4	3.13	
	10	3	4	4	4	3	4	3	3.13	

APPENDIX H

I. Institutional Factors (During Pilot Study)

N		Component				
		1	2	3	4	5
Construct 1: Curriculum syllabus (Cronbach Alpha= .816)						
1	The curriculum is relevant to the social needs and the employment market.	.346				
2	The curriculum is well -prepared for students.	.602				
3	The curriculum provides students with an opportunity to understand the concepts and practice the skills gradually.	.597				
4	The curriculum has the system of credit system and credit transfer.	.608				
5	The curriculum has specific steps and teaching methodology.	.719				
6	The curriculum challenges me personally and academically.	.773				
7	The curriculum has been completed in time.	.669				
8	The curriculum has been updated, reviewed, and assessed frequently.	.614				
9	The current curriculum helps students to find a prospective job.	.633				
Construct 2: Teacher teaching (Cronbach Alpha= .888)						
1	There are not enough teachers for some courses in my university.		-.156			
2	The teachers are highly qualified (Master, PhD holders).		0.702			
3	The teachers are able to disseminate their expert-knowledge well.		0.632			
4	The teachers are available when I have got questions.		0.699			
5	The teachers are interacting with students.		0.644			
6	Students satisfied with teachers' teaching.		0.679			
7	The teachers are professional for teaching.		0.603			
8	The teacher preserves discipline and professional ethics.		0.466			
9	The teachers use Informatics Communication Technology in teaching.		0.635			
10	Teachers focus more on qualitative rather		0.624			

	than quantitative outcome.					
11	Teachers are able to provide opportunities and experiences for students to achieve success in university.		0.633			
12	Students appreciate the teachers' efforts in the classroom.		0.695			
13	The teachers are generally research based.		0.599			
14	Teachers try to maintain a positive working atmosphere in the classrooms.		0.671			
15	Teaching is based on student-centred approach.		0.631			
Construct 3: Evaluation/Examination (Cronbach Alpha= .843)						
1	There is an evaluation of students' progress each semester.			.562		
2	The examination is fair and justice.			.602		
3	Examination results are true reflection of students' achievement.			.779		
4	Examination procedure is fully equipped to evaluate all types of learning outcomes.			.638		
5	Evaluation techniques based on specific criteria.			.761		
6	Methods used in the evaluation system to inform students of their level of academic progress.			.709		
7	Exams have made students become more attentive to their lesson.			.699		
8	Examination for students is part of the continuous evaluation of the university.			.687		
9	Most examination questions are relevant to the subject content.			.529		
10	The university has a policy on the punishment of all kinds of academic frauds (cheating, plagiarism…)			.447		
Construct 4: Facilities (Cronbach Alpha= .808)						
1	The campus is a great place to study.				.556	
2	The library has enough up to date materials (e.g. Textbooks, journals, periodicals, thesis)				.724	
3	Most of textbooks reach the students at the proper time.				.583	
4	Classroom buildings are large and suitable for learning.				.519	
5	Resource learning facilities are adequate for all classrooms.				.384	

6	There are enough parking spaces.				.767	
7	There are restrooms for students and teachers.				.641	
8	There are learning resource centers, laboratories, and audio labs.				.650	
9	There are adequate learning facilities such as LCD projectors, computers, printers, and copying machines available in the university.				.582	
10	There are adequate physical facilities for sport, culture, and social networking (sport facilities, hall, café, canteen…)				.528	
Construct 5: Student Support Services (Cronbach Alpha= .864)						
1	There are a variety of association and clubs (sports, cultural, and social groups).					.610
2	Student Association is available to provide useful advice and help.					.627
3	The university has a health care center.					.701
4	The university has accommodation or hostel.					.750
5	The student canteen offered good quality food and drinks at a reasonable price.					.696
6	The University's Career Placement Center helps students with job-hunting.					.589
7	Student advisors are available to provide useful advices.					.658
8	The university's infrastructure is able to meet environmental health and safety standards.					.719
9	The university provides scholarship and financial support.					.674
10	The university provides funds and facilities for your research project.					.629

II. Institutional Integration Scale

Nº		Component				
		1	2	3	4	5
Construct 1: Peer-Group Interaction (Cronbach Alpha=.849)						
1	I have developed a close personal relationship with other students.	.695				
2	I am satisfied with dating relationship.	.696				

3	My personal relationships with other students have positively influenced my personal growth, attitudes, and values.	.863				
4	My personal relationships with other students have positively influenced my intellectual growth and interest in ideas.	.888				
5	It has been easy for me to meet and to make friends with other students.	.860				
6	Many students I know would be willing to listen to me and help me if I had a personal problem.	.691				
7	Most students at this University have values and attitudes similar to mine.	.593				
8	I am happy with my living during I study in this university.	.912				
9	The student friendships I have developed have been personally satisfying.	.911				
10	I am satisfied with the opportunities to participate in organized extra-curricular activities at this University.	.803				
Construct 2: Interaction with Faculty (Cronbach Alpha= .708)						
11	My non -classroom interactions with faculty have positively influenced my personal growth, value, and attitudes.		.813			
12	My non- classroom interactions with faculty members have positively influenced my intellectual growth and interest in ideas.		.987			
13	My non- classroom interactions with faculty members have positively influenced my career goals and aspirations		.965			
14	I have developed a close, personal relationship with at least one faculty member.		.655			
15	I am satisfied with the opportunities to meet and interact informally with faculty members.		.544			
Construct 3: Faculty Concern for Student Development and Teaching (α= .745)						
16	Many faculty members I have had contact with are genuinely interested in the students.			.839		
17	Many faculty members I have had contact with are genuinely outstanding or superior teachers.			.928		
18	Many faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.			.832		
19	Many faculty members I have had contact			.905		

	with are interested in helping students grow in more than just academic areas.					
20	Most faculty members I have had contact with are genuinely interested in teaching.			.963		
Construct 4: Institutional and Goal Commitments (Cronbach Alpha= .805)						
21	It is important for me to graduate from college.				.704	
22	I am confident that I made the right decision in choosing to attend this university.				.879	
23	I will mostly register at this university next semester.				.727	
24	It is important to me to graduate from this university.				.598	
25	I have an idea about what I want to major in.				.537	
26	Getting good grades is important to me.				.647	
Construct 5: Academic and Intellectual Development (Cronbach Alpha= .816)						
27	I am satisfied with the extent of my intellectual development.					.930
28	This year, my academic experience has had a positive influence on my intellectual growth and interest in ideas.					.859
29	I am satisfied with my academic experience at this University.					.959
30	Most of my courses have been intellectually stimulating.					.929
31	My interest in ideas and intellectual matters has increased since starting classes.					.795
32	I am more likely to attend a cultural event (e.g., a concert, lecture, or art show) now compared to a few years ago,					.787
33	I have performed academically as well as I anticipated.					.655
34	In addition to required reading assignments, I read many of the recommended books in my courses.					.983

APPENDIX I

PERMISSION LETTER OF STUDY INSTRUMMENT

From: "French, Brian F" <frenchb@wsu.edu>
To: Sam Rany <samrany82@yahoo.com>
Sent: Tuesday, 23 July 2013, 19:37
Subject: RE: From Sam Rany_Research Instrumment Permission

Dear Mr. Sam Rany,

Thanks for your interest in my work. You have my permission to use the **Institional Integration Scales** in your study. I have attached information on the scale; I would appreciate if you would cite the work in the translation work.

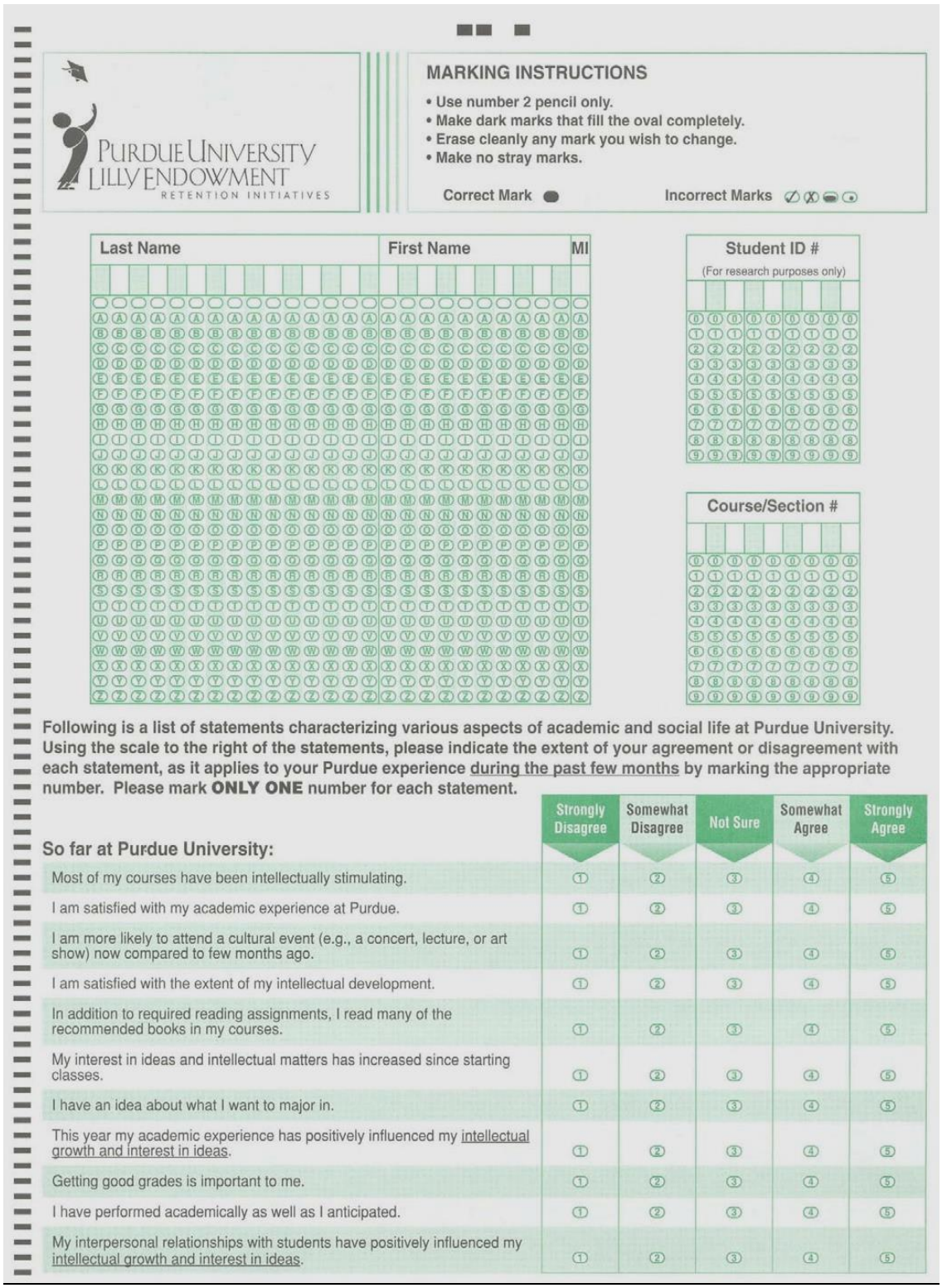
I wish you success in your thesis. I would also very much appreciate a copy of the translated version of the scale. I have interest in test translation and adaption processes.

Best,
Brian French

Brian F. French
Professor
Director-LPRC
Washington State University
Tel: 509-335-8584

APPENDIX J

ORIGINAL INSTRUMMENT OF INSTITUTIONAL INTEGRATION SCALES



PURDUE UNIVERSITY
LILLY ENDOWMENT
RETENTION INITIATIVES

MARKING INSTRUCTIONS

- Use number 2 pencil only.
- Make dark marks that fill the oval completely.
- Erase cleanly any mark you wish to change.
- Make no stray marks.

Correct Mark ● Incorrect Marks ∅ ✗ ◒ ⊙

Last Name | First Name | MI

Student ID #
(For research purposes only)

Course/Section #

Following is a list of statements characterizing various aspects of academic and social life at Purdue University. Using the scale to the right of the statements, please indicate the extent of your agreement or disagreement with each statement, as it applies to your Purdue experience during the past few months by marking the appropriate number. Please mark ONLY ONE number for each statement.

So far at Purdue University:	Strongly Disagree	Somewhat Disagree	Not Sure	Somewhat Agree	Strongly Agree
Most of my courses have been intellectually stimulating.	①	②	③	④	⑤
I am satisfied with my academic experience at Purdue.	①	②	③	④	⑤
I am more likely to attend a cultural event (e.g., a concert, lecture, or art show) now compared to few months ago.	①	②	③	④	⑤
I am satisfied with the extent of my intellectual development.	①	②	③	④	⑤
In addition to required reading assignments, I read many of the recommended books in my courses.	①	②	③	④	⑤
My interest in ideas and intellectual matters has increased since starting classes.	①	②	③	④	⑤
I have an idea about what I want to major in.	①	②	③	④	⑤
This year my academic experience has positively influenced my intellectual growth and interest in ideas.	①	②	③	④	⑤
Getting good grades is important to me.	①	②	③	④	⑤
I have performed academically as well as I anticipated.	①	②	③	④	⑤
My interpersonal relationships with students have positively influenced my intellectual growth and interest in ideas.	①	②	③	④	⑤

	Strongly Disagree	Somewhat Disagree	Not Sure	Somewhat Agree	Strongly Agree
I have developed close personal relationships with other students.	①	②	③	④	⑤
The student friendships I have developed have been personally satisfying.	①	②	③	④	⑤
My personal relationships with other students have positively influenced my personal growth, values, and attitudes.	①	②	③	④	⑤
It has been easy for me to meet and make friends with students.	①	②	③	④	⑤
I am satisfied with my dating relationships.	①	②	③	④	⑤
Many students I know would be willing to listen and help me if I had a personal problem	①	②	③	④	⑤
Most students at Purdue have values and attitudes similar to mine.	①	②	③	④	⑤
I am satisfied with the opportunities to participate in organized extra-curricular activities at Purdue.	①	②	③	④	⑤
I am happy with my living /residence arrangement.	①	②	③	④	⑤
I am satisfied with my opportunities to meet and interact informally with faculty members	①	②	③	④	⑤
Many faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.	①	②	③	④	⑤
I have developed a close, personal relationship with at least one faculty member.	①	②	③	④	⑤
My non-classroom interactions with faculty members have positively influenced my intellectual growth and interest in ideas.	①	②	③	④	⑤
My non-classroom interactions with faculty members have positively influenced my personal growth, values, and attitudes.	①	②	③	④	⑤
My non-classroom interactions with faculty members have positively influenced my career goals and aspirations.	①	②	③	④	⑤
Many faculty members I have had contact with are genuinely outstanding or superior teachers.	①	②	③	④	⑤
Many faculty members I have had contact with are genuinely interested in students.	①	②	③	④	⑤
Many faculty members I have had contact with are genuinely interested in teaching.	①	②	③	④	⑤
Many faculty members I have had contact with are interested in helping students grow in more than just academic areas.	①	②	③	④	⑤
It is important to me to graduate from college.	①	②	③	④	⑤
It is important to me to graduate from Purdue.	①	②	③	④	⑤
I am confident that I made the right decision in choosing to attend Purdue.	①	②	③	④	⑤
I will most likely register at Purdue next fall.	①	②	③	④	⑤

Comments

Mark Reflex® forms by NCS Pearson MM239486-1 654321 ED06 Printed in U.S.A.

APPENDIX K

BRIEF OUTLINE OF THE RESEARCH

Introduction

This study, entitled **"The Influence of Institutional Factors and Integrations Towards Students' Intellectual Developments: A Case Study of Three Cambodian Public Universities"**, is an academic exercise to fulfil the requirements for the degree of Doctor of Philosophy *(PhD in Education)* at Universiti Sains Malaysia *(University of Science Malaysia),* Penang, Malaysia. The study is funded by the USM PhD fellowship scheme and will be conducted solely by the researcher as the doctoral candidate with guidance from two thesis supervisors.

Purpose of the study

The main aim of this research is to investigate the institutional factors and integration that influence students' academic and intellectual development in Cambodian public universities. This research will assist Cambodian higher educational institutions to design academic environment and policies to enhance students' academic outcomes and educational quality. This study also provides useful information and recommendations to the management of institutions on the ways to improve their policies and services.

Research questions

The study is guided by the following research questions:

RQ 1: What are the students' perception of the institutional factors and institutional integrations for students' academic and intellectual developments in Cambodian public universities?

RQ 1.1: What are the students' views on the institutional factors for students' academic and intellectual developments in Cambodian public universities?

RQ 1.2: What are the students' views on institutional integration for students' academic and intellectual developments in Cambodian public universities?

RQ 2: How many times and hours that students are involved in their academic and social activities in Cambodian public universities?

RQ 3: Are there institutional factors significantly influence students' intellectual developments in Cambodian public universities?

RQ3.1: Does curriculum syllabus significantly influences the intellectual development of Cambodian university students?

RQ3.2: Does teacher teaching significantly influences the intellectual development of Cambodian university students?

RQ3.3: Does evaluation and examination significantly influences the intellectual development of Cambodian university students?

RQ3.4: Does facilities significantly influences the intellectual development of Cambodian university students?

RQ3.5: Does Student support services significantly influences the intellectual development of Cambodian university students?

RQ 4: Are there institutional integrations significantly influence students' intellectual developments in Cambodian public universities?

RQ 4.1: Does peer-group interaction significantly influences the intellectual development of Cambodian university students?

RQ 4.2: Does faculty student interaction significantly influences the intellectual development of Cambodian university students?

RQ 4.3: Does faculty concern for student development significantly influences the intellectual development of Cambodian university students?

RQ 4.4: Does Institutional and goal commitments significantly influences the intellectual development of Cambodian university students?

Methods

The method employed for the study is through survey research method known as quantitative research method.

Sampling method

The study is confined to only three top public universities located in the heart of Phnom Penh capital, which are supervised, by the Ministry of Education, Youth, and Sports through selecting using the purposive method.

Confidentially

All information regarding academic institutions will be held in strict confidence and will be used for the purpose of this research only. Names of institutions and individuals will be held anonymously.

Data Collection

The bulk of the data will be from the institutions obtained through questionnaire survey from undergraduate students.

Information Checking

Informants will be invited to review the information given after it has been transcribed/ analyzed to confirm its accuracy before it is incorporated in the report.

The Final Report

The report will be in the form of a thesis. The study will be reported in such a way that the participants in the research, either individuals or institutions, will be held anonymously.

Any question regarding the research can be forwarded to:

Sam Rany (The researcher)

School of educational studies,

University of Science Malaysia

11800 Penang

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E-mail: sr11_edu045@student.usm.my

Prof. Dr. Ahmad Nurulazam Md. Zain (Main Supervisor)

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Assoc. Prof. Dr. Hazri Bin Jamil (Co- Supervisor)

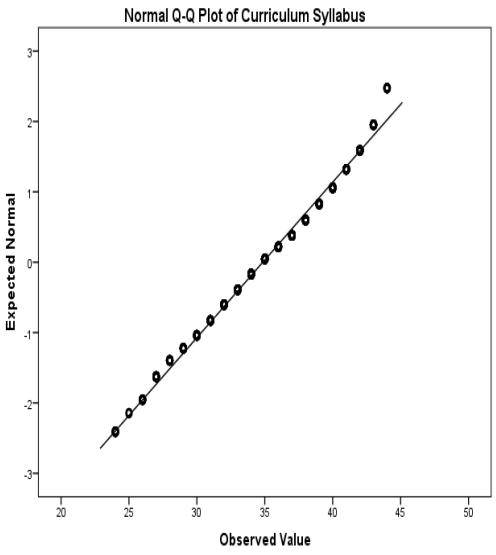
School of educational studies,

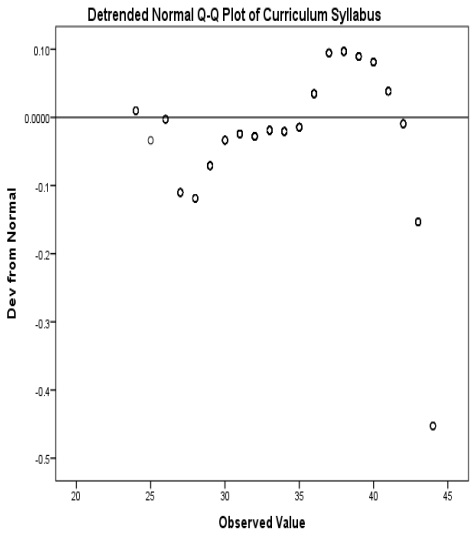
University of Science Malaysia

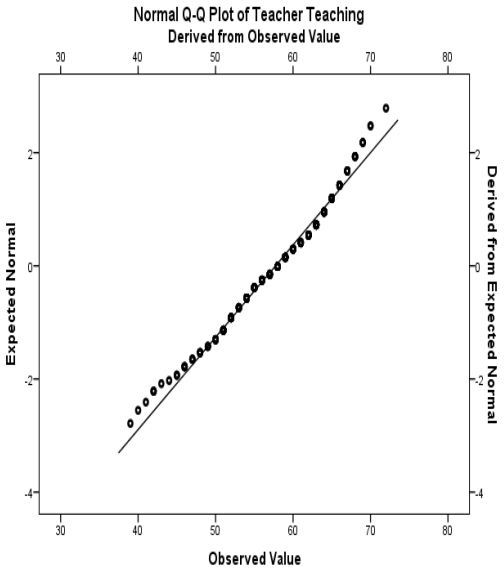
11800 Penang

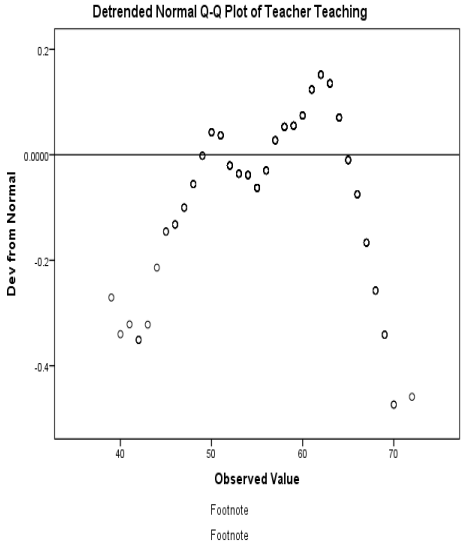
Tel: (+60) 124735019, E-mail: hazri@usm.my

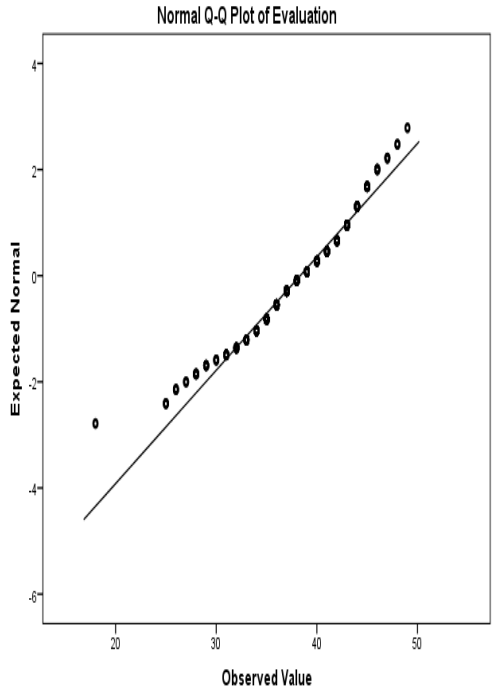
APPENDIX L: UNIVARIATE NORMALITY'S Q-Q PLOT

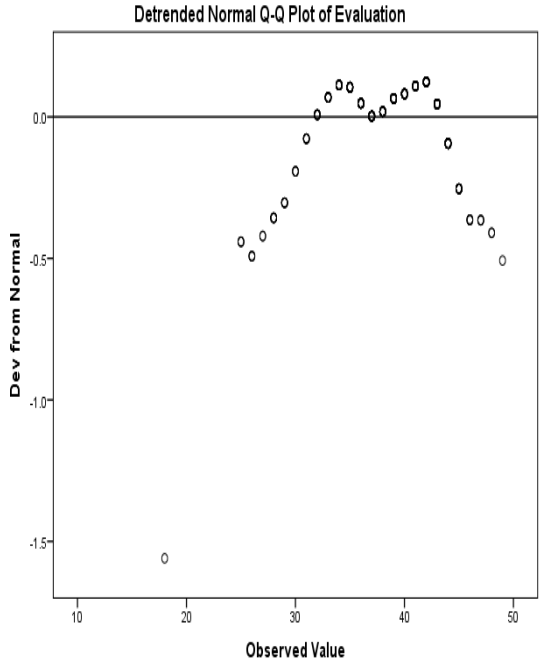


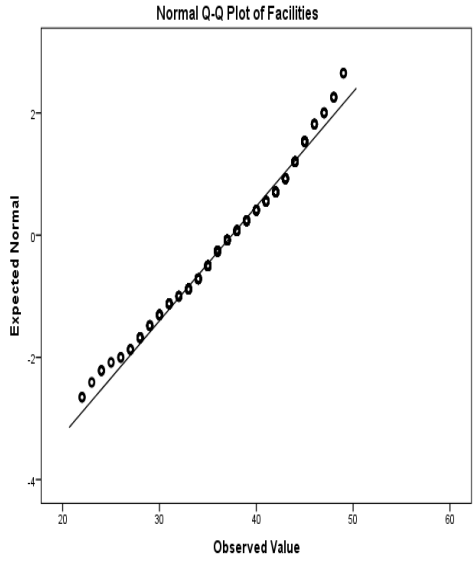


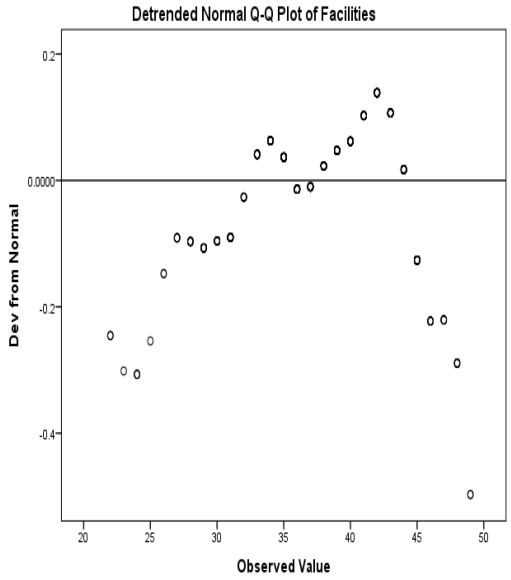


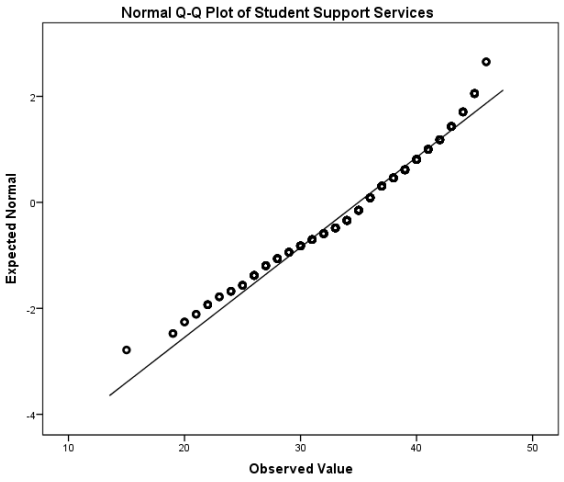


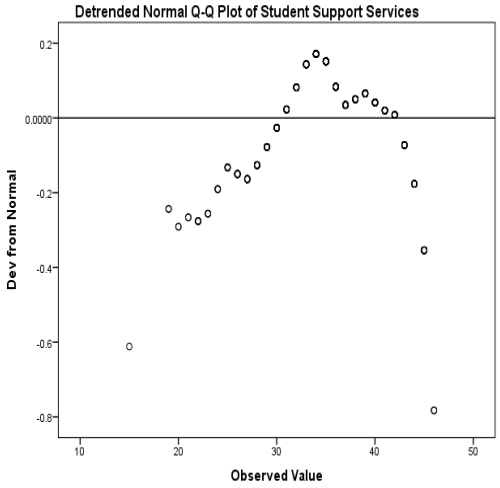

Normal Q-Q Plot of Evaluation
Expected Normal
Observed Value

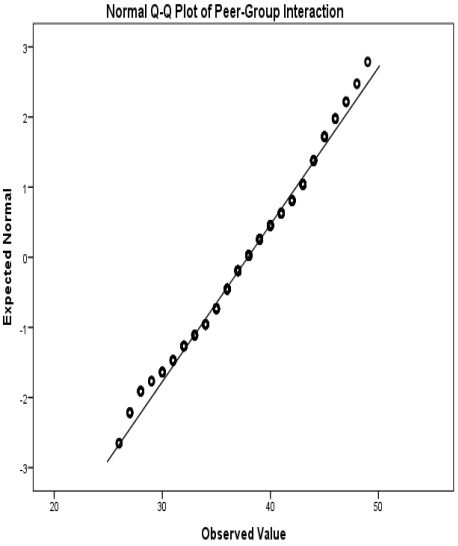

Detrended Normal Q-Q Plot of Evaluation
Dev from Normal
Observed Value

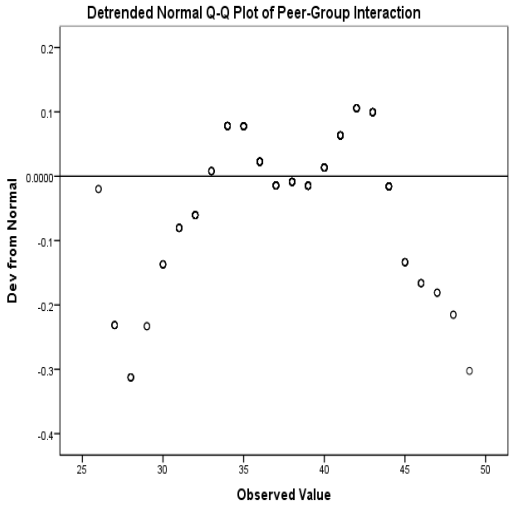

Normal Q-Q Plot of Facilities
Expected Normal
Observed Value

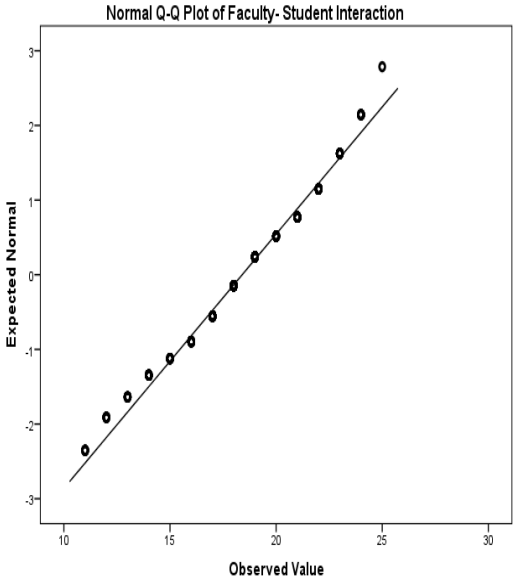

Detrended Normal Q-Q Plot of Facilities
Dev from Normal
Observed Value

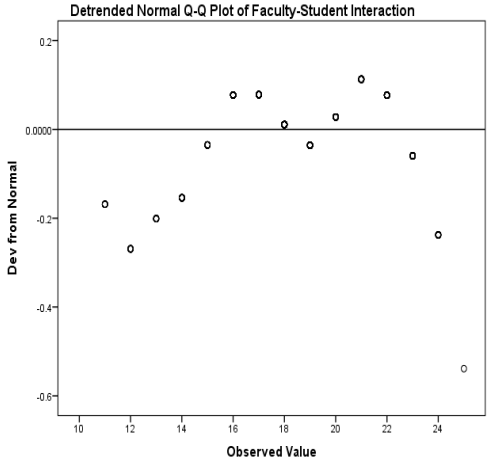

Normal Q-Q Plot of Student Support Services
Expected Normal
Observed Value

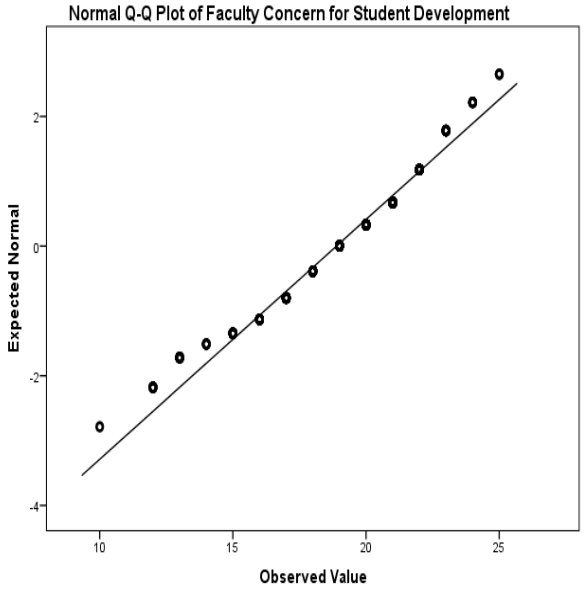

Detrended Normal Q-Q Plot of Student Support Services
Dev from Normal
Observed Value

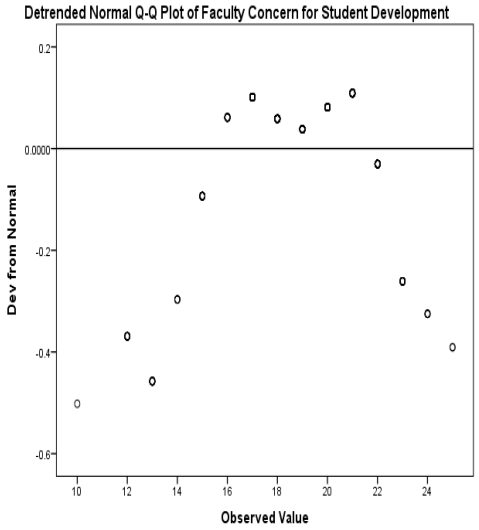

Normal Q-Q Plot of Peer-Group Interaction
Expected Normal
Observed Value

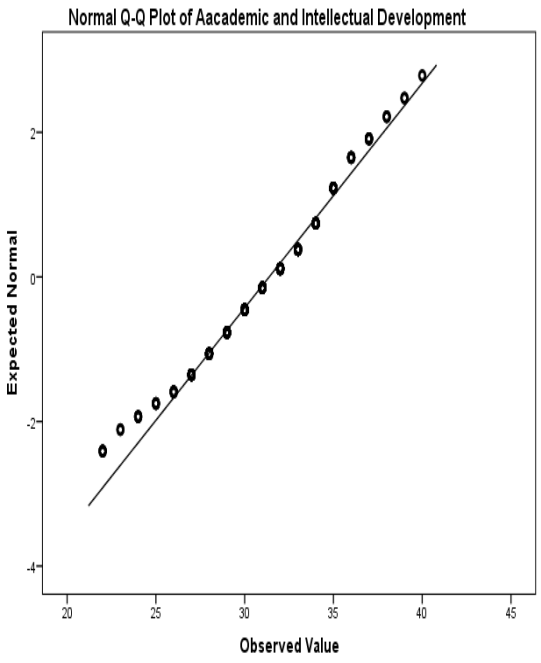

Detrended Normal Q-Q Plot of Peer-Group Interaction
Dev from Normal
Observed Value

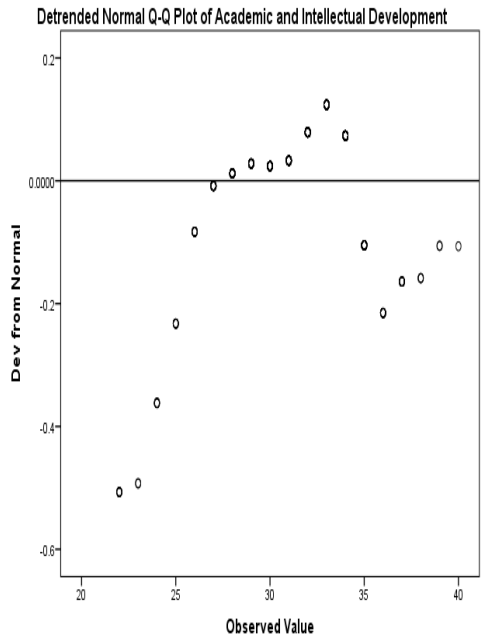

Normal Q-Q Plot of Faculty- Student Interaction
Expected Normal
Observed Value

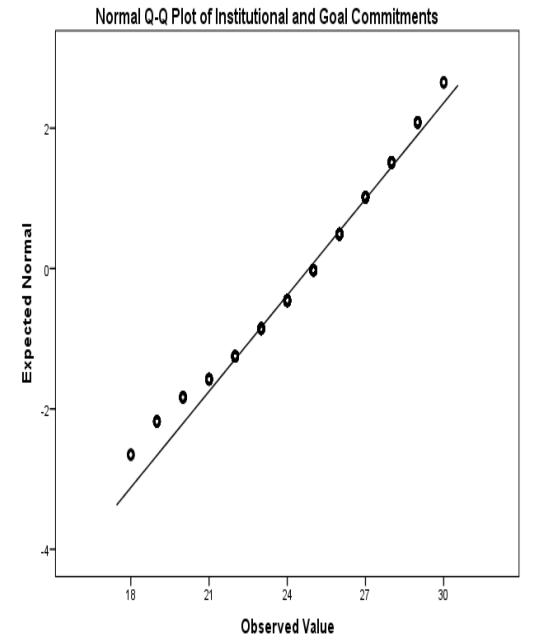

Detrended Normal Q-Q Plot of Faculty-Student Interaction
Dev from Normal
Observed Value

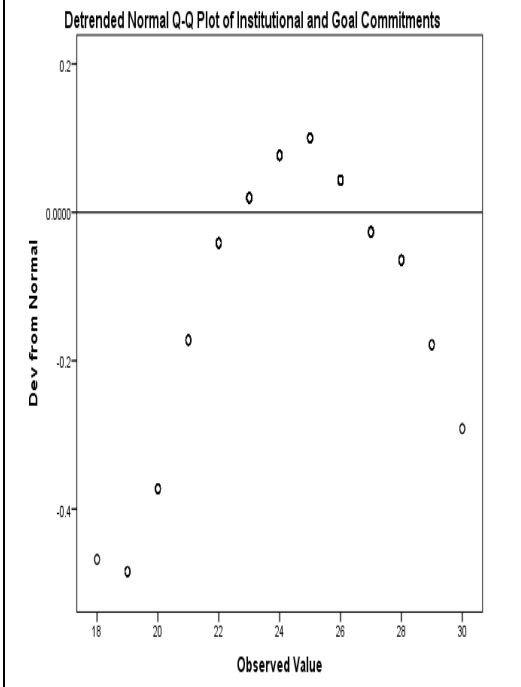

Normal Q-Q Plot of Faculty Concern for Student Development
Expected Normal
Observed Value


Detrended Normal Q-Q Plot of Faculty Concern for Student Development
Dev from Normal
Observed Value


Normal Q-Q Plot of Aacademic and Intellectual Development
Expected Normal
Observed Value
2
0
-2
-4
20
25
30
35
40
45


Detrended Normal Q-Q Plot of Academic and Intellectual Development
Dev from Normal
Observed Value
0.2
0.0000
-0.2
-0.4
-0.6
20
25
30
35
40


Normal Q-Q Plot of Institutional and Goal Commitments
Expected Normal
Observed Value
2
0
-2
-4
18
21
24
27
30


Detrended Normal Q-Q Plot of Institutional and Goal Commitments
Dev from Normal
Observed Value
0.2
0.0000
-0.2
-0.4
18
20
22
24
26
28
30

APPENDIX M
PUBLISHED ARTICLES

Macrothink Institute™

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Cambodia's Higher Education Development in Historical Perspectives (1863-2012)

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Doi: 10.5296/ijld.v2i2.1670 URL: http://dx.doi.org/10.5296/ijld.v2i2.1670

Abstract

Similar to other Southeast Asian countries in the world, Cambodia has established her higher education institutions to develop human capital with high knowledge and professional ethics to serve the country over the period of contemporary history. Clearly, colonization, political ideologies, and global economic development tendencies have directly influenced Cambodian public higher education institutions within her various political regimes and social transformation. The purpose of this study is to examine the Cambodian higher education development in the seven different regimes through historical perspectives from the French colonial period to the present period. This paper uses a predominantly descriptive approach relying on secondary sources such as academic papers, textbooks, government documents, non government organization documents, and development partner reports. Therefore, this research could be significant for researchers, academicians, and policymakers to deepen their understanding about Cambodian higher educational history in order to reform its system to the benefit of education quality and student academic success.

Establishment of Institutional Policies for Enhancing Education Quality in Cambodian Universities

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doi:10.5430/ijhe.v1n1p112 URL: http://dx.doi.org/10.5430/ijhe.v1n1p112

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The first author would like to thank Professor Dr. Roshada Hashim, Dean of the Institute of Postgraduate Studies and Associate Professor Dr. Rozinah Jamaludin, the Centre for Instructional Technology and Multimedia of the Universiti Sains Malaysia (USM) for their kind helps and encouragement.

Abstract

In the context of global and national economic development, higher education in Cambodia plays a significant role to develop human capital with technical knowledge, skills, values, and attitudes for sustainable economic growth, social development, and alleviation of poverty. When the civil war in 1998 was over, the Royal Government of Cambodia considered higher education as a top priority on the list of priorities in order to be integrated into the Association of South East Asian Nations Community by 2015 through implementing numerous mechanisms and policies to promote quality education for the students. This paper will discuss the status of national and institutional policies to promote educational quality to ensure academic success for students in a Cambodian public university. The documents and data of existing government ministries, development partners and higher education institutions will be used in the analysis of policies.

Keywords: Higher education, Institutional policies, Education quality, Academic success, Cambodian public university

1. Introduction

Since 1998, in the aftermath of darkness and destruction, the Royal Government of Cambodia (RGC) has initially created strategic development plans and national policies to facilitate integration into the regional and international economies and to reduce poverty among its people. Surprisingly, Cambodia became the 10th member of the Association of South East Asian Nations (ASEAN) on April 30, 1999 and the 148th member of the World Trade Organization (WTO) on October 13, 2004 respectively. Economically, Cambodia is one of the poorest nations in the world with a population of 14.7 million people with annual gross domestic product (GDP) of 802 USD per capita. Aproximately 55% of population lives on agriculture, and 35% of the population in 2010 lives in poverty (WB, 2011). This situation, according to Jin, is a result of

Investigating the Institutional Policies That Contribute Toward The Students' Academic Success In A Cambodian University

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Hazri Jamil
School of Educational Studies
Universiti Sains Malaysia
11800, Penang, Malaysia

Abstract

The purpose of the study is to investigate the institutional policies that contributed to the enhancement of students' academic success and educational quality in a Cambodian university. In a context of knowledge-based economy, higher education plays an important role to develop the citizen physically, mentally, and spiritually as well as to enhance the economic, social, political and cultural values of the nation. In the aftermath of the civil war in 1998, the Royal Government of Cambodia has strived to restore its education system in order to be integrated into the Association of South East Asian Nations (ASEAN) Community by 2015 through adopting various strategies and policies to advance educational quality for Cambodia students' academic success. This paper will investigate and discuss the status of institutional policies that can facilitate in reforming the educational system in Cambodian tertiary education. Astin's theory (1984, 1993, 1999) is adopted to link the idea of institutional policies and Cambodian student's academic success; the documents and data of governmental ministries, development partners, and higher education institutions will be employed in the study of such policies.

Keywords: Higher education, Institutional policies, Educational quality, Academic success, Support services, Cambodian university

1. Introduction

Geographically, Kingdom of Cambodia is located in the southern portion of Indochina Peninsula in Southeast Asia with a total landmass of 181,035 square kilometers and bordered by Thailand to the northwest, Laos to the northeast, Vietnam to the east, and the Gulf of Thailand to the southwest. Cambodia is one of the poorest nations in the world with a population of over 14.8 million people and annual gross domestic product (GDP) of 802 USD per capita. Approximately 55% of population lives in agriculture, and 35% of the population in 2010 lives in poverty (WB, 2011). In the same vein, a study carried out by Jin (2011) found that low educational quality which is one of the key factors leading to unemployment and poverty in Cambodia.

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Published by Canadian Center of Science and Education

Conceptualizing Institutional Policies for Students' Academic Success in Cambodian Universities: What Matters for Policy?

Rany Sam[1], Thongma Souriyavongsa[1], Ahmad Nurulazam Md Zain[2], Hazri Jamil[1], Xiaojuan Wu[1] & Seng Sovath[3]

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Abstract

The Cambodian government aims to promote students' academic success in the country's tertiary education. In order to reach this goal, it is important to explore possible potential factors that determine the educational attainment of Cambodian students. There has been no previous research on students' academic success in Cambodian higher learning institutions, while this topic has been widely researched in the United States and some developed countries since the 1970's. Accordingly, a number of research models have been developed by famous scholars to determine institutional factors which lead to the outcome of better academic performance in post secondary education. Therefore, this paper intends to conceptualize the academic experiences connected to existing institutional policies for contributing to the enhancement of students' academic success in the specific context of Cambodian higher education institutions. In this paper, Astin's theory (1984, 1993, 1999) and a Tinto's theory (1975, 1993) are employed to link the concept of institutional policies and Cambodian students' academic success because they model the relationship between institutional experiences of students, which are deemed to be relevant to the current status of Cambodian educational policies. Based on these concepts, this paper will propose ten variables as predicting factors that influence institutional policies toward students' academic success and will design a conceptual model to elaborate this influence within the Cambodian educational system. Thus, this model to predict students' academic success is proposed as a result of a literature review among the relationships of theoretical model of student input (pre-entry attributes), academic environment (institutional experiences and policies), and students' academic success. Based on these relationships, ten propositions are developed.

Keywords: conceptualizing, institutional policies, academic success, Cambodian universities

1. Introduction

After 28 turbulent years of civil war (1970-1998), the Royal Government of Cambodia initiated policies to restore its tertiary education system in order to be integrated and competitive at the regional and international levels, especially, in the Association of South East Asian Nations (ASEAN). Cambodian post secondary education has experienced tremendous change as a result of the privatization policies implemented by the Government with the goal to increase access by increasing the number of higher learning institutions throughout the country in 1997 (Chamnan & Ford, 2004). Consequently, there are 97 higher education institutions in which 38 are public universities and 59 are private universities located in 18 provinces and in the capital. The top ten universities, which include the Royal University of Phnom Penh, the Royal University of Law and Economics, the National University of Management, the University of Health Science, the Cambodian Institute of Technology, the Royal University of Agriculture, the Paññāsāstra University of Cambodia, the University of Cambodia, the Norton University, and the Cambodian Mekong University, are located in the capital of Phnom Penh. This expansion is a positive response to the increasing number of students who graduated from secondary education every year; for example, 114,414 high students have finished their studies in the academic year 2011-2012. The total of tertiary student enrollment is 14 percent (WB, 2011). There are 246,069 undergraduate students currently studying in Cambodian universities (MoEYS, 2012; Sam & Jamil, 2012a). Nevertheless, the rapid development of higher

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Academic Adjustment Issues in a Malaysian Research University: The Case of Cambodian, Laotian, Burmese, and Vietnamese Postgraduate Students' Experiences

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Abstract

The Malaysian government aims to help the bottom billion countries, which are its neighbouring countries in the South East Asian region, for their human capital development through providing university postgraduate scholarship projects. Those countries include Cambodia, Laos PDR, Burma or Myanmar, and Vietnam (CLMV), which are favourite countries for its technical assistance. Due to the countries' various educational systems, postgraduate students have experienced some academic difficulties during their studies and research in Malaysian universities. A qualitative research method is employed to investigate students' living strategies, perception of academic success, and academic adjustment problems in a Malaysian university. Research samples were conducted conveniently selected from a total of 17 students made up of 6 Cambodian, 4 Laotian, 2 Myanmar, and 5 Vietnamese postgraduate students (47, 05% females and 52, 94% males) who have studied in the Universiti Sains Malaysia (USM) so called the Research University in the academic year 2012/2013, where they have attended the schools of educational studies, social science, and materials and mineral resource engineering. The result showed that the most difficult problem in term of academic adjustment which is English language difficulty in their new learning environment. In order to remedy such matters, they must strive to study hard, to improve English proficiency, and to make good relations with their academic staff, thesis supervisors, and other postgraduate students. In other words, social adjustment is considered as one of the important strategies that enable them to cope with the context of Malaysian culture. Based on the findings, the researchers provide recommendations to facilitate CLMV students to make better adjustments in a Malaysian research university and to achieve their academic endeavour.

Keyword: academic adjustment, CLMV postgraduate student, Malaysian tertiary institution

1. Introduction

1.1 Scenario of International Students in Malaysian Universities

International students are defined as individuals who move to a country differ from their country of citizenship in order to enrol in the foreign educational institutions (OECD, 2013). There were 2.5 million students who studied outside their home countries (UNESCO, 2009). The most preferred destinations of international students are the United States, United Kingdom, Germany, Australia and France (OECD, 2013). Among prestigious hubs of higher learning institutions in Asia, Malaysia is an excellent educational hub to import foreign students from Asian and African continents. They have decided to continue their higher education in Malaysian higher learning institutions for two main reasons. First, the majority of Malaysian universities uses English language as a medium of instruction at the undergraduate and graduate programmes. Second, Malaysia is a multicultural country with a mixture of Islamism, Buddhism, Hinduism, and Christianity. In addition, based on geographic location, Malaysia is close to South East, Middle East, and East Asian countries. As a result, international

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Factors Causes Students Low English Language Learning: A Case Study in the National University of Laos

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Abstract

It has been generally well-known that most people faced some problems in learning English as a second or foreign language in non-English speaking countries; for example, in Lao People Democratic Republic (Lao PDR). This paper has a main purpose to explore students-teachers' weakness towards English language learning as a foreign language of a Continuing Summer Program for Bachelor's degree of Teacher Education in English at the

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Investigating Learning English Strategies and English Needs of Undergraduate Students at the National University of Laos

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Abstract

This paper aims to investigate learning English strategies and the requirement of English needs of the undergraduate students at the National University of Laos (NUOL). The study employed a survey design which involved in administering questionnaires of rating scales, and adapting the items from (Barakat, 2010; Chengbin, 2008; Kathleen A, 2010; Patama, 2001; Richards, 2001), to measure learning English strategies and the needs of English skills from 160 Lao undergraduate students of NUOL. The findings of this study revealed that speaking skill was the most important skills that students needed to improve in their undergraduate program. All participants reported a medium frequency use of strategy on learning English. The most frequently used strategies involved in using vocabulary books and electronic dictionaries to remember new English words. Based on the research findings, the researchers provided some recommendations for course developers to be reconsidered and redesigned the curriculum and syllabus including the instructional materials, learning behaviours and learning strategies of the English courses in all faculties in order to enhance the quality of learning and teaching activities as well as to meet the learners' needs and social demands for their prospective careers and country's development.

Keywords: undergraduate students, learning English strategies, English needs, NOUL

1. Introduction

After Laos established its independence as *Lao People Democratic Republic* (Lao PDR) in 1975, the English language has played the important role of the country development. Various international organizations were appropriately accepted by the government policy to assistant for developing the Lao country (Thongma, 2013). However, at that moment the English language was limited use, because the majority of the language officially used as Lao language used in official documents of the government and a medium of teaching and learning processes in institutions including secondary schools and higher education levels (Thongma, 2013).

The English language is one of the foreign languages that necessary and needed for the workplace to develop a high level of English skills in business communication. Bouangeune, Sakigawa, & Hirakawa, (2008) identify that the demands for English is increasing among Lao people in the conditions of employments, especially within the government in seeking recruits officers with good command of English skills to attract more foreign capital for economic development. Several of occupations require the applicants who have a good English knowledge (Ratana, 2007; Young, 2008). It is believable that teaching English as a foreign language has become a priority for educational reforms and development strategies (Lazaro & Medalla, 2004). Because of this, Laos is one of the EFL countries focuses on the English language learning in order to develop its possible to be equal to other countries (Phatchara, 2012).

In the past fifteen years, the need to learn English in Lao PDR has been increased because of the inflow of foreign investment from several countries such as China, Vietnam, Singapore, Australia, Malaysia, European Unions, and so on. Those foreign investors hope to use English as a tool for their communication. In 1996, Lao PDR was accepted to become a member of the Association of Southeast East Asian Nations (ASEAN) and World Trade Organization (WTO) members in 2012 and other international submit meetings such as 9th Asia-Europe meeting (ASEM), Round Table Implementation Meeting (RTIM), and etc. has made learning English even more important for Lao people. Now, the English language is taught as a foreign language in schools, universities, and

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A Comparison of Youth's Value Systems: The Case of Vietnamese Ethnic Groups

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Abstract

This paper aimed to examine and compare the value systems of youth from the ethnic minority and majority groups in the South of Vietnam. Rokeach' value theory and value system survey (Rokeach Value Survey – RVS) are employed to investigate these value systems. Research samples were conveniently selected from a total of 102 students (60.6% females) in a youth ethnic minority vocational college and two public universities. The findings were consistent with the previous studies conducted in Vietnam and other developed countries. Results indicated that terminal values of students from both groups tended to have more emphasis on personal and political values that reflected the concern of psychological stability and independence. Youth from minority groups showed less tendency toward a relational and social orientation, whereas youth from ethnic majority group displayed a less concern on values related to hedonistic and individualistic values. For the instrumental values, both groups gave a higher ranking for moral values than competency and intrinsic values. Youth from ethnic minority groups tended to have more emphasize on accomplishment and competent values than youth from ethnic majority group. The terminal values of young people from ethnic minority and majority groups are more alike than their instrumental values. Significant differences between two groups were only found in some values. The findings contribute to the existenting literatures and suggest longitudinal studies on comparing value systems among ethnic groups in order to promote the value exchanged trend happened during the context of globalization in Vietnamese modern society.

Keywords: value system, terminal values, instrumental values, youth, ethnic majority, ethnic minority

1. Introduction

Values play a significant role in people's lives. While animal's actions are mainly based on natural instinct and their responses are preprogrammed, humans act based on free will. It means that to a large extent, people choose for themselves on how to act. Our choices are based on values which are beliefs about what is important in life (Hultman & Gellerman, 2001). Rokeach (1973) considered values as determinant factors which can affect all kinds of human behaviour, especially social behaviour, including social actions, attitudes and ideology, moral judgments and justifications of self and others, comparisons of self with others, presentations of self to others, and attempts to influence others.

According to Golden (2002), values can be considered a complex set of standards which serves as a personal guide, policeman, judge and physician in human life. Our values do not only incite us to take a particular position in society, but also predispose us to prefer one particular philosophical, political or religious ideology than others. They determine the way we present ourselves in front of others and the framework we use in order to persuade and influence others. Our values are the basic assumptions, allowing us to rationalize beliefs, attitudes and actions that would otherwise be unacceptable personally or socially. Because of that, we can reserve our feelings of morality and competence which are one important essential element of self-esteem. Values serve as standards in human life and differentiate a human being from a non-human. In short, it is a distinctive human quality that is not shared with other species.

10TH SINGAPORE GRADUATE FORUM ON SOUTHEAST ASIAN STUDIES
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The Influence of Institutional Integration Factors towards Students' Academic and Intellectual Development: A Case Study of Cambodian Public Universities

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ABSTRACT

After the 28 years of civil war was over in 1998, the number of Cambodian higher education institutions has dramatically increased to 110 in the last two decades (Ministry of Education, Youth, and Sport, 2015). Additionally, due to its integration into the ASEAN economic community in 2015, Cambodia has been paying more attention to reinforcing its educational system in responding to the rapid development of these educational institutions. Therefore, this study examines the influence of institutional integration factors towards students' academic and intellectual developments in three Cambodia public universities. Even though a myriad of research has been conducted in developed countries, few studies have been conducted in developing countries including Cambodia. That is why the research had been designed and conducted to test theories and methods of determining students' academic success in Cambodia. This study might be beneficial for the improvement of better educational experiences at Cambodian public universities. This study also contributes to a more comprehensive understanding of the influence of institutional integration factors on students' academic and intellectual development.

This study uses the quantitative based cross sectional survey method. A self-reported questionnaire was administered. The participants consisted of 381 third-year students chosen equally from the top three Cambodian public universities using a stratified random sampling method. The partial least squares and structural equation modelling (PLS-SEM) tool was employed to analyse the data. Statistical results indicate that three of four factors significantly influence students' academic and intellectual development, whereas another one factor is not significant. The findings provide an indication of potential institutional factors to help students to be actively involved in social and academic programs for their academic development. Furthermore, this paper suggests that Cambodian public universities can resolve their academic- related issues in order to transform students to contribute to helping Cambodia compete regionally and internationally.

Keywords: Institutional integrations, academic and intellectual development, Partial Least Squares, Cambodia, public university

ABOUT THE SPEAKER

Rany Sam is a PhD candidate in the School of Educational Studies, University of Science Malaysia (USM). He graduated with a Bachelor's and Master's Degree in Law (LL.B & LL.M), specialized in International Business Law and Corporate Counsel from the Royal University of Law and Economics (RULE), Cambodia in 2004 and 2007 respectively. He is currently working on his doctoral thesis on "The Influence of Institutional Integration Factors towards Students' Academic and Intellectual Development: A Case Study in Cambodian Public Universities". He is also a lecturer at the University of Battambang (UBB), Cambodia since 2008. His areas of interests include legal studies, public policy and administration, Cambodian educational history, higher education administration, and educational assessment. Email address is samrany82@yahoo.com/samrany82@gmail.com

APPENDIX N:
LIST OF PUBLICATIONS AND CONFERENECES

Journal papers accepted for publication

1 **Sam, R.**, Ahmad, N., & Hazril, J. (2012). Cambodia's Higher Education Development in Historical Perspectives (1863-2012). *International Journal of Learning and Development 2(2),*.http://dx.doi.org/10.5296/ijld.v2i2. 1670, pp 224-241

2 **Sam, R.**, Ahmad, N., & Hazril, J. (2012 a). Establishment of Institutional Policies for Enhancing Education Quality in Cambodian Universities. *International Journal of Higher Education 1(1),* http://dx.doi.org/10.5430/ijhe.v1n1p, pp 112-127

3 **Sam, R.**, Souriyawongsa T., Ahmad, N., & Hazril, J. (2013). Investigating the Institutional Policies that contribute toward the Students' Academic Success in a Cambodian University. *International Journal of Humanities and Social Science 3 (1),* pp 113-124.

4 **Sam, R.**, Souriyawongsa T., Ahmad, N., & Hazril, J. (2013). "Conceptualizing Institutional Policies for Students' Academic Success in Cambodian Universities: What matters for policy?". *Asian Social Science, 9 (10),* pp 283-294.

5 **Sam, R.**, Souriyawongsa T., Ahmad, N., Hazril, J., & Le To Do Quyen (2013). Academic Adjustment Issues in a Malaysian Research University: The Case of Cambodian, Laos, Myanmar, and Vietnamese Postgraduate Students' Experiences. *International Educational Studies*, 6 (9).

6 Souriyawongsa T., **Sam, R.**, Mohamad, J., & Leong, L. (2013). Factors Cause Students Low English Language Learning: A Case Study in the National University of Laos. *International Journal of English Language Education* 1 (1), pp 179-192.

7 Souriyavongsa, T., Mohamad J., **Sam, R.**, Leong, L. & Ithayaraj, B. (2013). Investigating Lao Undergraduate Students' Learning English Strategies and their English needs. *English Language Teaching*, 6 (10), pp 57-71

8 Muhammad J., Lin S. E., Abdul R. M., **Sam, R**. (2013). Comparative Study of the Pakistani and Indonesian Student's Anxiety Towards the English Language Learning. *Middle-East Journal of Scientific Research*, 18 (11), pp 1563-1572.

9 Le To-Do-Quyen, Norzarina Mohd-Zaharim, Intan, **Sam, R.** (2014). A Comparison of Youth's Value Systems: The Case of Vietnamese Ethnic Groups. *International Journal of Psychological Studies, 6 (2)*, pp 128-137

Papers submitted to journals and being reviewed

10 **Sam, R.**, Ahmad, N., & Jamil, H. (2015). The Influence of Institutional Integration towards Students' Academic and Intellectual Developments: A Case of Cambodian Public Universities. *KEDI Journal of Education Policy*.

11 **Sam, R.**, Ahmad, N., & Jamil, H. (2015). The Influence of Institutional Factors towards Students' Academic and Intellectual Developments in Cambodian Public Universities. *SpringerPlus: Social Science Journal.*

Conference Papers

12 **Sam, R.**, Ahmad, N., & Jamil, H. (2013). The National and Institutional Policies for Promoting Educational Quality in Cambodian Higher Educational Institutions. *Proceedings of Current Issues in Educational Research*, Indonesian University of Education, Bandung, Indonesia, 237-255.

13 Souriyavongsa, T., Mohamad J. & **Sam, R.** (2013). An Investigation of EFL Learners Using the ICT: The Case of Laos Undergraduate Students at the National University of Laos. *Proceedings of the 2 International Postgraduate Colloquium on Research in Education,* Universiti Sains Malaysia, Penang, Malaysia, 222-232.

14 **Sam, R.**, Ahmad, N., & Jamil, H. (2013). *Civic Education in Cambodian Educational System*. International Seminar, In Collaboration with Civic Education Department, Faculty of Social Science Education, Indonesia University of Education and School of Educational Studies, Universiti Sains Malaysia. *Theme: Strengthening Academic Culture in Civic Education's Community of Scholar*. School of Educational Studies, Universiti Sains Malaysia. April 25, 2014

Best Research Manuscript Award

15 **Sam, R.**, Ahmad, N., & Jamil, H. (2014). The Influence of Institutional Integration towards Students' Academic and Intellectual Developments in Cambodian Public Universities. **Silvir Award** offered by *the New Enterprise Writer Society (NEWS)*, School of Educational Studies, Universiti Sains Malaysia (USM)